



# Full wwPDB X-ray Structure Validation Report ⓘ

Aug 30, 2020 – 07:58 PM BST

PDB ID : 4U50  
Title : Crystal structure of Verrucarin bound to the yeast 80S ribosome  
Authors : Garreau de Loubresse, N.; Prokhorova, I.; Yusupova, G.; Yusupov, M.  
Deposited on : 2014-07-24  
Resolution : 3.20 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : **FAILED**  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.13

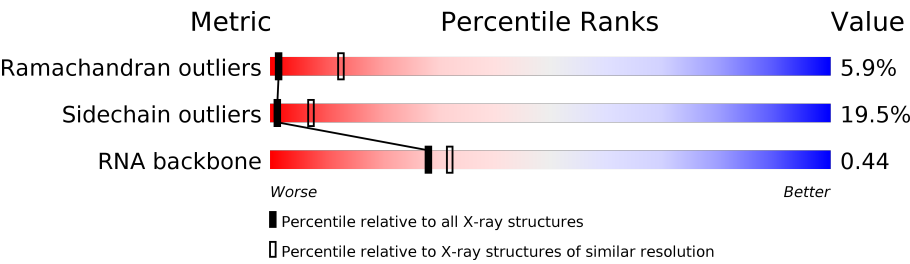
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.20 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RNA backbone	3102	1010 (3.50-2.90)


























The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	2	1800	<div><div>63%</div><div>30%</div><div>5%</div><div>.</div></div>
1	6	1800	<div><div>64%</div><div>31%</div><div>5%</div></div>
2	S0	251	<div><div>62%</div><div>18%</div><div>.</div><div>18%</div></div>
2	s0	251	<div><div>63%</div><div>17%</div><div>.</div><div>18%</div></div>
3	S1	254	<div><div>59%</div><div>24%</div><div>.</div><div>16%</div></div>
3	s1	254	<div><div>64%</div><div>20%</div><div>.</div><div>15%</div></div>
4	S2	253	<div><div>68%</div><div>17%</div><div>.</div><div>14%</div></div>
4	s2	253	<div><div>63%</div><div>22%</div><div>.</div><div>14%</div></div>

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Mol	Chain	Length	Quality of chain
5	S3	239	
5	s3	239	
6	S4	260	
6	s4	260	
7	S5	224	
7	s5	224	
8	S6	236	
8	s6	236	
9	S7	189	
9	s7	189	
10	S8	200	
10	s8	200	
11	S9	196	
11	s9	196	
12	C0	105	
12	c0	105	
13	C1	155	
13	c1	155	
14	C2	142	
14	c2	142	
15	C3	150	
15	c3	150	
16	C4	136	
16	c4	136	
17	C5	141	















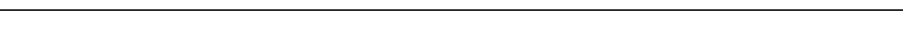




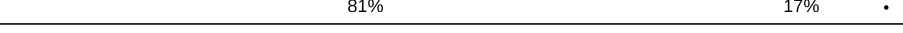





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Mol	Chain	Length	Quality of chain
17	c5	141	
18	C6	142	
18	c6	142	
19	C7	136	
19	c7	136	
20	C8	145	
20	c8	145	
21	C9	143	
21	c9	143	
22	D0	120	
22	d0	120	
23	D1	87	
23	d1	87	
24	D2	129	
24	d2	129	
25	D3	144	
25	d3	144	
26	D4	134	
26	d4	134	
27	D5	107	
27	d5	107	
28	D6	97	
28	d6	97	
29	D7	81	
29	d7	81	


























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Mol	Chain	Length	Quality of chain
30	D8	66	
30	d8	66	
31	D9	55	
31	d9	55	
32	E0	60	
33	E1	76	
33	e1	76	
34	SR	318	
34	sR	318	
35	SM	273	
35	sM	273	
36	1	3396	
36	5	3396	
37	3	121	
37	7	121	
38	4	158	
38	8	158	
39	L2	253	
39	l2	253	
40	L3	386	
40	l3	386	
41	L4	361	
41	l4	361	
42	L5	296	
42	l5	296	












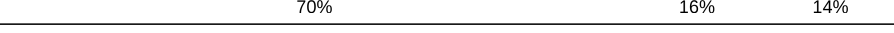



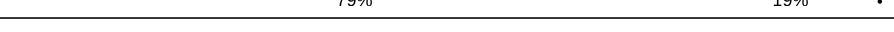



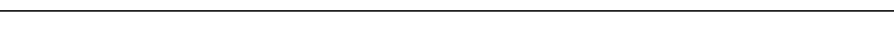
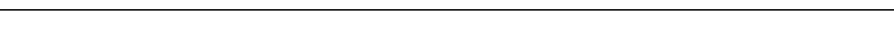

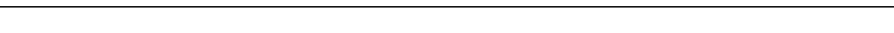
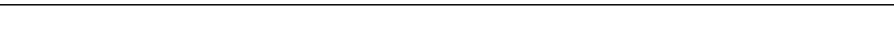

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Mol	Chain	Length	Quality of chain
43	L6	175	
43	l6	175	
44	L7	243	
44	l7	243	
45	L8	255	
45	l8	255	
46	L9	191	
46	l9	191	
47	M0	220	
47	m0	220	
48	M1	173	
48	m1	173	
49	M3	198	
49	m3	198	
50	M4	137	
50	m4	137	
51	M5	203	
51	m5	203	
52	M6	198	
52	m6	198	
53	M7	183	
53	m7	183	
54	M8	185	
54	m8	185	
55	M9	188	















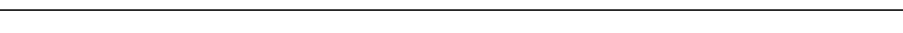




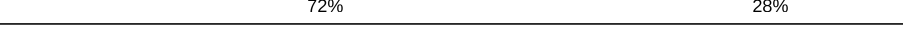





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Mol	Chain	Length	Quality of chain
55	m9	188	
56	N0	172	
56	n0	172	
57	N1	159	
57	n1	159	
58	N2	120	
58	n2	120	
59	N3	136	
59	n3	136	
60	N4	155	
60	n4	155	
61	N5	141	
61	n5	141	
62	N6	126	
62	n6	126	
63	N7	135	
63	n7	135	
64	N8	148	
64	n8	148	
65	N9	58	
65	n9	58	
66	O0	104	
66	o0	104	
67	O1	112	
67	o1	112	

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Mol	Chain	Length	Quality of chain
68	O2	129	 78%19%..
68	o2	129	 79%19%..
69	O3	106	 87%12%.
69	o3	106	 81%18%.
70	O4	120	 77%16%7%.
70	o4	120	 75%16%7%.
71	O5	119	 78%21%.
71	o5	119	 77%22%.
72	O6	99	 76%21%.
72	o6	99	 71%26%.
73	O7	87	 84%14%.
73	o7	87	 86%14%
74	O8	77	 77%23%
74	o8	77	 81%18%.
75	O9	50	 84%16%
75	o9	50	 80%20%
76	Q0	52	 73%25%.
76	q0	52	 75%23%.
77	Q1	25	 72%28%
77	q1	25	 72%28%
78	Q2	105	 75%23%.
78	q2	105	 79%19%.
79	Q3	91	 86%14%
79	q3	91	 79%21%
80	e0	62	 73%26%.

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Mol	Chain	Length	Quality of chain
81	p0	311	
82	m2	160	
83	p1	47	
84	p2	46	

## 2 Entry composition

There are 88 unique types of molecules in this entry. The entry contains 411230 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	2	1750	Total	C	N	O	P	0	0	0
			37283	16668	6591	12274	1750			
1	6	1795	Total	C	N	O	P	0	0	0
			38238	17095	6758	12590	1795			

- Molecule 2 is a protein called 40S ribosomal protein S0-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	S0	206	Total	C	N	O	S	0	0	0
			1577	1014	278	283	2			
2	s0	206	Total	C	N	O	S	0	0	0
			1583	1017	281	283	2			

- Molecule 3 is a protein called 40S ribosomal protein S1-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	S1	214	Total	C	N	O	S	0	0	0
			1709	1084	310	311	4			
3	s1	216	Total	C	N	O	S	0	0	0
			1722	1091	312	315	4			

- Molecule 4 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	S2	217	Total	C	N	O	S	0	0	0
			1635	1047	289	297	2			
4	s2	217	Total	C	N	O	S	0	0	0
			1635	1047	289	297	2			

- Molecule 5 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	S3	223	Total	C	N	O	S	0	0	0
			1734	1101	313	314	6			
5	s3	223	Total	C	N	O	S	0	0	0
			1734	1101	313	314	6			

- Molecule 6 is a protein called 40S ribosomal protein S4-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	S4	260	Total	C	N	O	S	0	0	0
			2068	1316	389	360	3			
6	s4	260	Total	C	N	O	S	0	0	0
			2068	1316	389	360	3			

- Molecule 7 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	S5	206	Total	C	N	O	S	0	0	0
			1609	1007	300	299	3			
7	s5	206	Total	C	N	O	S	0	0	0
			1609	1007	300	299	3			

- Molecule 8 is a protein called 40S ribosomal protein S6-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	S6	226	Total	C	N	O	S	0	0	0
			1799	1129	346	321	3			
8	s6	218	Total	C	N	O	S	0	0	0
			1755	1102	337	313	3			

- Molecule 9 is a protein called 40S ribosomal protein S7-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	S7	184	Total	C	N	O	S	0	0	0
			1481	951	265	265				
9	s7	186	Total	C	N	O	S	0	0	0
			1491	957	267	267				

- Molecule 10 is a protein called 40S ribosomal protein S8-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	S8	188	Total	C	N	O	S	0	0	0
			1489	925	298	264	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	s8	188	Total	C	N	O	S	0	0	0
			1489	925	298	264	2			

- Molecule 11 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	S9	185	Total	C	N	O	S	0	0	0
			1494	943	289	261	1			
11	s9	185	Total	C	N	O	S	0	0	0
			1494	943	289	261	1			

- Molecule 12 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	C0	96	Total	C	N	O	S	0	0	0
			773	500	126	145	2			
12	c0	96	Total	C	N	O	S	0	0	0
			762	491	125	144	2			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C0	89	ALA	GLY	conflict	UNP Q08745
c0	89	ALA	GLY	conflict	UNP Q08745

- Molecule 13 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	C1	155	Total	C	N	O	S	0	0	0
			1214	775	230	206	3			
13	c1	146	Total	C	N	O	S	0	0	0
			1168	747	221	197	3			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C1	147	ALA	GLY	conflict	UNP P0CX47
c1	147	ALA	GLY	conflict	UNP P0CX47

- Molecule 14 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	C2	124	Total	C	N	O	S	0	0	0
			892	562	156	172	2			
14	c2	124	Total	C	N	O	S	0	0	0
			892	562	156	172	2			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C2	104	ALA	GLY	conflict	UNP P48589
C2	110	ALA	GLY	conflict	UNP P48589
c2	104	ALA	GLY	conflict	UNP P48589
c2	110	ALA	GLY	conflict	UNP P48589

- Molecule 15 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	C3	150	Total	C	N	O	S	0	0	0
			1192	759	224	207	2			
15	c3	150	Total	C	N	O	S	0	0	0
			1192	759	224	207	2			

- Molecule 16 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	C4	127	Total	C	N	O	S	0	0	0
			891	545	182	163	1			
16	c4	128	Total	C	N	O	S	0	0	0
			949	582	188	176	3			

- Molecule 17 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	C5	124	Total	C	N	O	S	0	0	0
			977	622	182	166	7			
17	c5	135	Total	C	N	O	S	0	0	0
			1039	658	196	178	7			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C5	137	SER	ARG	conflict	UNP Q01855
c5	137	SER	ARG	conflict	UNP Q01855

- Molecule 18 is a protein called 40S ribosomal protein S16-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	C6	141	Total	C	N	O	0	0	0
			1105	708	203	194			
18	c6	142	Total	C	N	O	0	0	0
			1111	711	204	196			

- Molecule 19 is a protein called 40S ribosomal protein S17-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	C7	120	Total	C	N	O	S	0	0	0
			926	577	177	170	2			
19	c7	117	Total	C	N	O	S	0	0	0
			906	563	174	167	2			

- Molecule 20 is a protein called 40S ribosomal protein S18-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	C8	145	Total	C	N	O	S	0	0	0
			1192	743	237	210	2			
20	c8	145	Total	C	N	O	S	0	0	0
			1192	743	237	210	2			

- Molecule 21 is a protein called 40S ribosomal protein S19-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	C9	143	Total	C	N	O	S	0	0	0
			1112	694	208	208	2			
21	c9	143	Total	C	N	O	S	0	0	0
			1112	694	208	208	2			

- Molecule 22 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	D0	107	Total	C	N	O	S	0	0	0
			855	539	156	159	1			
22	d0	110	Total	C	N	O	S	0	0	0
			882	554	161	166	1			

- Molecule 23 is a protein called 40S ribosomal protein S21-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	D1	87	Total	C	N	O	S	0	0	0
			684	420	125	137	2			
23	d1	87	Total	C	N	O	S	0	0	0
			684	420	125	137	2			

- Molecule 24 is a protein called 40S ribosomal protein S22-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	D2	129	Total	C	N	O	S	0	0	0
			1021	650	188	180	3			
24	d2	129	Total	C	N	O	S	0	0	0
			1021	650	188	180	3			

- Molecule 25 is a protein called 40S ribosomal protein S23-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	D3	144	Total	C	N	O	S	0	0	0
			1121	708	220	191	2			
25	d3	144	Total	C	N	O	S	0	0	0
			1121	708	220	191	2			

- Molecule 26 is a protein called 40S ribosomal protein S24-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	D4	134	Total	C	N	O	0	0	0
			1073	676	208	189			
26	d4	134	Total	C	N	O	0	0	0
			1073	676	208	189			

- Molecule 27 is a protein called 40S ribosomal protein S25-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
27	D5	70	Total	C	N	O	0	0	0
			563	360	104	99			
27	d5	69	Total	C	N	O	0	0	0
			558	357	103	98			

- Molecule 28 is a protein called 40S ribosomal protein S26-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	D6	97	Total	C	N	O	S	0	0	0
			769	475	160	129	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	d6	97	Total	C	N	O	S	0	0	0
			769	475	160	129	5			

- Molecule 29 is a protein called 40S ribosomal protein S27-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	D7	81	Total	C	N	O	S	0	0	0
			610	382	110	113	5			
29	d7	81	Total	C	N	O	S	0	0	0
			610	382	110	113	5			

- Molecule 30 is a protein called 40S ribosomal protein S28-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	D8	63	Total	C	N	O	S	0	0	0
			497	306	99	91	1			
30	d8	63	Total	C	N	O	S	0	0	0
			497	306	99	91	1			

- Molecule 31 is a protein called 40S ribosomal protein S29-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	D9	53	Total	C	N	O	S	0	0	0
			442	274	92	72	4			
31	d9	53	Total	C	N	O	S	0	0	0
			442	274	92	72	4			

- Molecule 32 is a protein called 40S ribosomal protein S30-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	E0	60	Total	C	N	O	S	0	0	0
			475	299	98	77	1			

- Molecule 33 is a protein called Ubiquitin-40S ribosomal protein S31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	E1	71	Total	C	N	O	S	0	0	0
			566	362	106	94	4			
33	e1	76	Total	C	N	O	S	0	0	0
			608	388	117	99	4			

There are 2 discrepancies between the modelled and reference sequences:



Chain	Residue	Modelled	Actual	Comment	Reference
E1	77	ALA	GLY	conflict	UNP P05759
e1	77	ALA	GLY	conflict	UNP P05759

- Molecule 34 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	SR	318	Total	C	N	O	S	0	0	0
			2441	1544	419	470	8			
34	sR	318	Total	C	N	O	S	0	0	0
			2442	1544	418	472	8			

- Molecule 35 is a protein called Suppressor protein STM1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	SM	159	Total	C	N	O		0	0	0
			1104	652	221	231				
35	sM	104	Total	C	N	O		0	0	0
			680	403	140	137				

- Molecule 36 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	1	3149	Total	C	N	O	P	0	0	0
			67355	30086	12142	21978	3149			
36	5	3150	Total	C	N	O	P	0	0	0
			67376	30095	12145	21987	3149			

- Molecule 37 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	3	121	Total	C	N	O	P	0	0	0
			2579	1152	461	845	121			
37	7	121	Total	C	N	O	P	0	0	0
			2579	1152	461	845	121			

- Molecule 38 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	4	158	Total	C	N	O	P	0	0	0
			3353	1500	586	1109	158			
38	8	158	Total	C	N	O	P	0	0	0
			3353	1500	586	1109	158			

- Molecule 39 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	L2	252	Total	C	N	O	S	0	0	0
			1914	1191	388	334	1			
39	l2	252	Total	C	N	O	S	0	0	0
			1912	1190	388	333	1			

- Molecule 40 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	L3	386	Total	C	N	O	S	0	0	0
			3075	1950	584	533	8			
40	l3	386	Total	C	N	O	S	0	0	0
			3075	1950	584	533	8			

- Molecule 41 is a protein called 60S ribosomal protein L4-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	L4	361	Total	C	N	O	S	0	0	0
			2748	1729	522	494	3			
41	l4	361	Total	C	N	O	S	0	0	0
			2748	1729	522	494	3			

- Molecule 42 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	L5	296	Total	C	N	O	S	0	0	0
			2375	1501	414	458	2			
42	l5	294	Total	C	N	O	S	0	0	0
			2359	1489	412	456	2			

- Molecule 43 is a protein called 60S ribosomal protein L6-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	L6	156	Total	C	N	O	S	0	0	0
			1239	800	222	216	1			
43	l6	157	Total	C	N	O	S	0	0	0
			1248	806	224	217	1			

- Molecule 44 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	L7	222	Total	C	N	O	S	0	0	0
			1784	1151	324	308	1			
44	17	223	Total	C	N	O	S	0	0	0
			1791	1155	325	310	1			

- Molecule 45 is a protein called 60S ribosomal protein L8-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	L8	233	Total	C	N	O	S	0	0	0
			1804	1151	323	327	3			
45	18	231	Total	C	N	O	S	0	0	0
			1763	1130	316	314	3			

- Molecule 46 is a protein called 60S ribosomal protein L9-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	L9	191	Total	C	N	O	S	0	0	0
			1518	963	274	277	4			
46	19	191	Total	C	N	O	S	0	0	0
			1518	963	274	277	4			

- Molecule 47 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	M0	211	Total	C	N	O	S	0	0	0
			1705	1083	322	294	6			
47	m0	213	Total	C	N	O	S	0	0	0
			1722	1094	325	297	6			

- Molecule 48 is a protein called 60S ribosomal protein L11-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	M1	169	Total	C	N	O	S	0	0	0
			1353	847	253	249	4			
48	m1	169	Total	C	N	O	S	0	0	0
			1353	847	253	249	4			

- Molecule 49 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	M3	193	Total	C	N	O		0	0	0
			1543	962	315	266				

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	m3	194	Total	C	N	O	0	0	0
			1548	965	316	267			

- Molecule 50 is a protein called 60S ribosomal protein L14-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	M4	136	Total	C	N	O	S	0	0	0
			1053	675	199	177	2			
50	m4	137	Total	C	N	O	S	0	0	0
			1059	678	200	179	2			

- Molecule 51 is a protein called 60S ribosomal protein L15-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	M5	203	Total	C	N	O	S	0	0	0
			1720	1077	361	281	1			
51	m5	203	Total	C	N	O	S	0	0	0
			1720	1077	361	281	1			

- Molecule 52 is a protein called 60S ribosomal protein L16-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	M6	197	Total	C	N	O	S	0	0	0
			1555	1003	289	262	1			
52	m6	197	Total	C	N	O	S	0	0	0
			1555	1003	289	262	1			

- Molecule 53 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
53	M7	183	Total	C	N	O	0	0	0
			1420	882	281	257			
53	m7	155	Total	C	N	O	0	0	0
			1227	764	238	225			

- Molecule 54 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	M8	185	Total	C	N	O	S	0	0	0
			1441	908	290	241	2			
54	m8	185	Total	C	N	O	S	0	0	0
			1441	908	290	241	2			

- Molecule 55 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
55	M9	188	Total	C	N	O	0	0	0
			1521	935	326	260			
55	m9	188	Total	C	N	O	0	0	0
			1521	935	326	260			

- Molecule 56 is a protein called 60S ribosomal protein L20-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	N0	172	Total	C	N	O	S	0	0	0
			1445	930	267	244	4			
56	n0	172	Total	C	N	O	S	0	0	0
			1445	930	267	244	4			

- Molecule 57 is a protein called 60S ribosomal protein L21-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	N1	159	Total	C	N	O	S	0	0	0
			1276	805	246	221	4			
57	n1	159	Total	C	N	O	S	0	0	0
			1276	805	246	221	4			

- Molecule 58 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
58	N2	100	Total	C	N	O	0	0	0
			796	516	131	149			
58	n2	98	Total	C	N	O	0	0	0
			778	505	127	146			

- Molecule 59 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	N3	136	Total	C	N	O	S	0	0	0
			1003	628	189	179	7			
59	n3	136	Total	C	N	O	S	0	0	0
			1003	628	189	179	7			

- Molecule 60 is a protein called 60S ribosomal protein L24-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
60	N4	98	Total	C	N	O	S	0	0	0
			699	443	137	118	1			
60	n4	135	Total	C	N	O	S	0	0	0
			1038	651	206	180	1			

- Molecule 61 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
61	N5	121	Total	C	N	O	S	0	0	0
			964	620	169	173	2			
61	n5	120	Total	C	N	O	S	0	0	0
			959	617	168	172	2			

- Molecule 62 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
62	N6	126	Total	C	N	O	0	0	0
			993	625	192	176			
62	n6	126	Total	C	N	O	0	0	0
			993	625	192	176			

- Molecule 63 is a protein called 60S ribosomal protein L27-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
63	N7	135	Total	C	N	O	0	0	0
			1092	710	202	180			
63	n7	135	Total	C	N	O	0	0	0
			1092	710	202	180			

- Molecule 64 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
64	N8	148	Total	C	N	O	S	0	0	0
			1173	749	231	190	3			
64	n8	148	Total	C	N	O	S	0	0	0
			1173	749	231	190	3			

- Molecule 65 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
65	N9	58	Total	C	N	O	0	0	0
			462	289	100	73			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
65	n9	58	Total	C	N	O	0	0	0
			462	289	100	73			

- Molecule 66 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
66	O0	97	Total	C	N	O	S	0	0	0
			743	479	124	139	1			
66	o0	100	Total	C	N	O	S	0	0	0
			767	492	128	146	1			

- Molecule 67 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
67	O1	109	Total	C	N	O	S	0	0	0
			876	556	167	152	1			
67	o1	109	Total	C	N	O	S	0	0	0
			883	559	167	156	1			

- Molecule 68 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
68	O2	127	Total	C	N	O	S	0	0	0
			1020	647	205	167	1			
68	o2	127	Total	C	N	O	S	0	0	0
			1020	647	205	167	1			

- Molecule 69 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
69	O3	106	Total	C	N	O	S	0	0	0
			850	540	165	144	1			
69	o3	106	Total	C	N	O	S	0	0	0
			850	540	165	144	1			

- Molecule 70 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
70	O4	112	Total	C	N	O	S	0	0	0
			880	545	179	152	4			
70	o4	112	Total	C	N	O	S	0	0	0
			880	545	179	152	4			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
O4	121	LYS	-	expression tag	UNP P87262
o4	121	LYS	-	expression tag	UNP P87262

- Molecule 71 is a protein called 60S ribosomal protein L35-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
71	O5	119	Total	C	N	O	S	0	0	0
			969	615	186	167	1			
71	o5	119	Total	C	N	O	S	0	0	0
			965	612	185	167	1			

- Molecule 72 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
72	O6	99	Total	C	N	O	S	0	0	0
			771	481	156	132	2			
72	o6	99	Total	C	N	O	S	0	0	0
			770	481	156	131	2			

- Molecule 73 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
73	O7	87	Total	C	N	O	S	0	0	0
			681	414	148	114	5			
73	o7	87	Total	C	N	O	S	0	0	0
			681	414	148	114	5			

- Molecule 74 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
74	O8	77	Total	C	N	O	0	0	0
			612	391	115	106			
74	o8	77	Total	C	N	O	0	0	0
			608	388	114	106			

- Molecule 75 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
75	O9	50	Total	C	N	O	S	0	0	0
			436	272	97	65	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
75	o9	50	Total	C	N	O	S	0	0	0
			436	272	97	65	2			

- Molecule 76 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
76	Q0	52	Total	C	N	O	S	0	0	0
			417	259	86	67	5			
76	q0	52	Total	C	N	O	S	0	0	0
			417	259	86	67	5			

- Molecule 77 is a protein called 60S ribosomal protein L41-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
77	Q1	25	Total	C	N	O	S	0	0	0
			233	142	63	27	1			
77	q1	25	Total	C	N	O	S	0	0	0
			233	142	63	27	1			

- Molecule 78 is a protein called 60S ribosomal protein L42-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
78	Q2	105	Total	C	N	O	S	0	0	0
			847	534	170	138	5			
78	q2	105	Total	C	N	O	S	0	0	0
			847	534	170	138	5			

- Molecule 79 is a protein called 60S ribosomal protein L43-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
79	Q3	91	Total	C	N	O	S	0	0	0
			694	429	138	121	6			
79	q3	91	Total	C	N	O	S	0	0	0
			694	429	138	121	6			

- Molecule 80 is a protein called 40S ribosomal protein S30-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
80	e0	62	Total	C	N	O	S	0	0	0
			491	309	101	80	1			

- Molecule 81 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
81	p0	143	Total	C	N	O	S	0	0	0
			1076	686	192	195	3			

- Molecule 82 is a protein called UNKNOWN PROTEIN m2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
82	m2	150	Total	C	N	O		0	0	0
			750	450	150	150				

- Molecule 83 is a protein called UNKNOWN PROTEIN p1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
83	p1	47	Total	C	N	O		0	0	0
			235	141	47	47				

- Molecule 84 is a protein called UNKNOWN PROTEIN p2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
84	p2	46	Total	C	N	O		0	0	0
			230	138	46	46				

- Molecule 85 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
85	L7	4	Total	Mg	0	0
			4	4		
85	n8	5	Total	Mg	0	0
			5	5		
85	o1	1	Total	Mg	0	0
			1	1		
85	N5	2	Total	Mg	0	0
			2	2		
85	6	146	Total	Mg	0	0
			146	146		
85	sM	2	Total	Mg	0	0
			2	2		
85	O4	1	Total	Mg	0	0
			1	1		
85	m5	3	Total	Mg	0	0
			3	3		
85	l3	3	Total	Mg	0	0
			3	3		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
85	C1	1	Total 1	Mg 1	0	0
85	M1	1	Total 1	Mg 1	0	0
85	d6	1	Total 1	Mg 1	0	0
85	2	122	Total 122	Mg 122	0	0
85	n0	3	Total 3	Mg 3	0	0
85	L4	2	Total 2	Mg 2	0	0
85	l7	2	Total 2	Mg 2	0	0
85	M5	1	Total 1	Mg 1	0	0
85	c9	1	Total 1	Mg 1	0	0
85	S2	2	Total 2	Mg 2	0	0
85	L8	1	Total 1	Mg 1	0	0
85	o4	2	Total 2	Mg 2	0	0
85	M9	1	Total 1	Mg 1	0	0
85	q0	1	Total 1	Mg 1	0	0
85	SM	1	Total 1	Mg 1	0	0
85	c8	1	Total 1	Mg 1	0	0
85	M0	2	Total 2	Mg 2	0	0
85	c1	1	Total 1	Mg 1	0	0
85	5	497	Total 497	Mg 497	0	0
85	L5	1	Total 1	Mg 1	0	0
85	O7	1	Total 1	Mg 1	0	0

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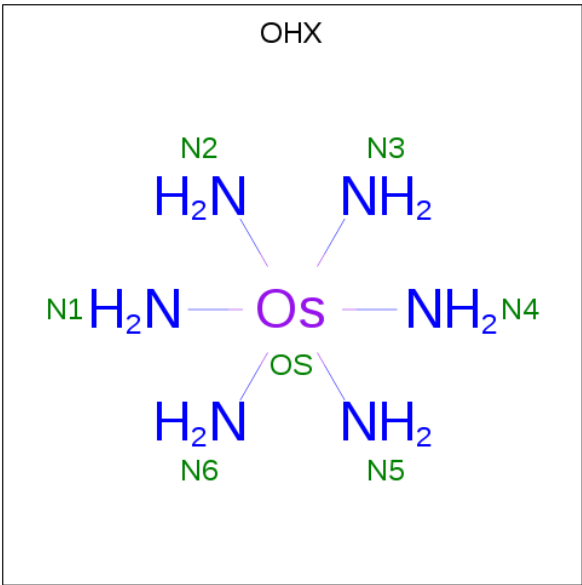
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
85	s6	1	Total 1	Mg 1	0	0
85	Q2	1	Total 1	Mg 1	0	0
85	n9	1	Total 1	Mg 1	0	0
85	1	470	Total 470	Mg 470	0	0
85	D0	1	Total 1	Mg 1	0	0
85	S8	1	Total 1	Mg 1	0	0
85	l2	3	Total 3	Mg 3	0	0
85	O2	1	Total 1	Mg 1	0	0
85	q3	2	Total 2	Mg 2	0	0
85	o3	1	Total 1	Mg 1	0	0
85	d3	3	Total 3	Mg 3	0	0
85	M3	3	Total 3	Mg 3	0	0
85	N3	3	Total 3	Mg 3	0	0
85	4	25	Total 25	Mg 25	0	0
85	n6	1	Total 1	Mg 1	0	0
85	S4	1	Total 1	Mg 1	0	0
85	L2	2	Total 2	Mg 2	0	0
85	m1	2	Total 2	Mg 2	0	0
85	l5	1	Total 1	Mg 1	0	0
85	m7	5	Total 5	Mg 5	0	0
85	M7	3	Total 3	Mg 3	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
85	N8	4	Total 4	Mg 4	0	0
85	s1	1	Total 1	Mg 1	0	0
85	m6	1	Total 1	Mg 1	0	0
85	s8	2	Total 2	Mg 2	0	0
85	l8	1	Total 1	Mg 1	0	0
85	c7	1	Total 1	Mg 1	0	0
85	7	16	Total 16	Mg 16	0	0
85	n3	2	Total 2	Mg 2	0	0
85	q1	1	Total 1	Mg 1	0	0
85	L3	2	Total 2	Mg 2	0	0
85	d4	1	Total 1	Mg 1	0	0
85	N6	2	Total 2	Mg 2	0	0
85	8	15	Total 15	Mg 15	0	0
85	l4	2	Total 2	Mg 2	0	0
85	M6	1	Total 1	Mg 1	0	0
85	N0	1	Total 1	Mg 1	0	0
85	3	14	Total 14	Mg 14	0	0

- Molecule 86 is osmium (III) hexammine (three-letter code: OHX) (formula:  $\text{H}_{12}\text{N}_6\text{Os}$ ).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
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86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	2	1	Total	N	Os	0	0
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			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
			7	6	1		
86	2	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	2	1	Total	N	Os	0	0
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86	2	1	Total	N	Os	0	0
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86	S6	1	Total	N	Os	0	0
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86	S8	1	Total	N	Os	0	0
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86	C3	1	Total	N	Os	0	0
			7	6	1		
86	C5	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	D9	1	Total	N	Os	0	0
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86	SR	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	1	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
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			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
			7	6	1		
86	1	1	Total	N	Os	0	0
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86	1	1	Total	N	Os	0	0
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86	3	1	Total	N	Os	0	0
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			7	6	1		
86	3	1	Total	N	Os	0	0
			7	6	1		
86	3	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	3	1	Total	N	Os	0	0
			7	6	1		
86	3	1	Total	N	Os	0	0
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86	3	1	Total	N	Os	0	0
			7	6	1		
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			7	6	1		
86	4	1	Total	N	Os	0	0
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86	4	1	Total	N	Os	0	0
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86	4	1	Total	N	Os	0	0
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86	4	1	Total	N	Os	0	0
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86	4	1	Total	N	Os	0	0
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86	4	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	4	1	Total 7	N 6	Os 1	0	0
86	4	1	Total 7	N 6	Os 1	0	0
86	L3	1	Total 7	N 6	Os 1	0	0
86	L3	1	Total 7	N 6	Os 1	0	0
86	L3	1	Total 7	N 6	Os 1	0	0
86	L4	1	Total 7	N 6	Os 1	0	0
86	M0	1	Total 7	N 6	Os 1	0	0
86	M5	1	Total 7	N 6	Os 1	0	0
86	M7	1	Total 7	N 6	Os 1	0	0
86	M7	1	Total 7	N 6	Os 1	0	0
86	M9	1	Total 7	N 6	Os 1	0	0
86	N1	1	Total 7	N 6	Os 1	0	0
86	N9	1	Total 7	N 6	Os 1	0	0
86	O3	1	Total 7	N 6	Os 1	0	0
86	O7	1	Total 7	N 6	Os 1	0	0
86	O7	1	Total 7	N 6	Os 1	0	0
86	Q2	1	Total 7	N 6	Os 1	0	0
86	6	1	Total 7	N 6	Os 1	0	0
86	6	1	Total 7	N 6	Os 1	0	0
86	6	1	Total 7	N 6	Os 1	0	0
86	6	1	Total 7	N 6	Os 1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
			7	6	1		
86	6	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
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86	6	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	6	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	s8	1	Total	N	Os	0	0
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86	s9	1	Total	N	Os	0	0
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86	c3	1	Total	N	Os	0	0
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86	c8	1	Total	N	Os	0	0
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86	d4	1	Total	N	Os	0	0
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86	d9	1	Total	N	Os	0	0
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86	sR	1	Total	N	Os	0	0
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86	5	1	Total	N	Os	0	0
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86	5	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	5	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	5	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	5	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	5	1	Total	N	Os	0	0
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
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86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	5	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	7	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		
86	8	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	8	1	Total 7	N 6	Os 1	0	0
86	l3	1	Total 7	N 6	Os 1	0	0
86	l3	1	Total 7	N 6	Os 1	0	0
86	l3	1	Total 7	N 6	Os 1	0	0
86	l4	1	Total 7	N 6	Os 1	0	0
86	l4	1	Total 7	N 6	Os 1	0	0
86	l5	1	Total 7	N 6	Os 1	0	0
86	l5	1	Total 7	N 6	Os 1	0	0
86	l9	1	Total 7	N 6	Os 1	0	0
86	m0	1	Total 7	N 6	Os 1	0	0
86	m0	1	Total 7	N 6	Os 1	0	0
86	m1	1	Total 7	N 6	Os 1	0	0
86	m4	1	Total 7	N 6	Os 1	0	0
86	m5	1	Total 7	N 6	Os 1	0	0
86	m6	1	Total 7	N 6	Os 1	0	0
86	m7	1	Total 7	N 6	Os 1	0	0
86	m8	1	Total 7	N 6	Os 1	0	0
86	n3	1	Total 7	N 6	Os 1	0	0
86	n3	1	Total 7	N 6	Os 1	0	0
86	n6	1	Total 7	N 6	Os 1	0	0
86	n9	1	Total 7	N 6	Os 1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
86	o2	1	Total	N	Os	0	0
			7	6	1		
86	o3	1	Total	N	Os	0	0
			7	6	1		
86	o7	1	Total	N	Os	0	0
			7	6	1		
86	o7	1	Total	N	Os	0	0
			7	6	1		
86	q2	1	Total	N	Os	0	0
			7	6	1		

- Molecule 87 is ZINC ION (three-letter code: ZN) (formula: Zn).

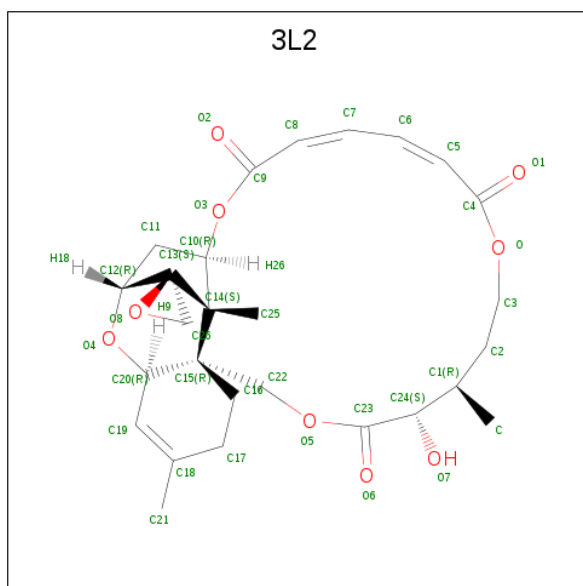
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
87	q0	1	Total	Zn	0	0
			1	1		
87	D6	1	Total	Zn	0	0
			1	1		
87	Q2	1	Total	Zn	0	0
			1	1		
87	e1	1	Total	Zn	0	0
			1	1		
87	Q3	1	Total	Zn	0	0
			1	1		
87	D9	1	Total	Zn	0	0
			1	1		
87	E1	1	Total	Zn	0	0
			1	1		
87	Q0	1	Total	Zn	0	0
			1	1		
87	d7	1	Total	Zn	0	0
			1	1		
87	q3	1	Total	Zn	0	0
			1	1		
87	d9	1	Total	Zn	0	0
			1	1		
87	D7	1	Total	Zn	0	0
			1	1		
87	d6	1	Total	Zn	0	0
			1	1		
87	o7	1	Total	Zn	0	0
			1	1		

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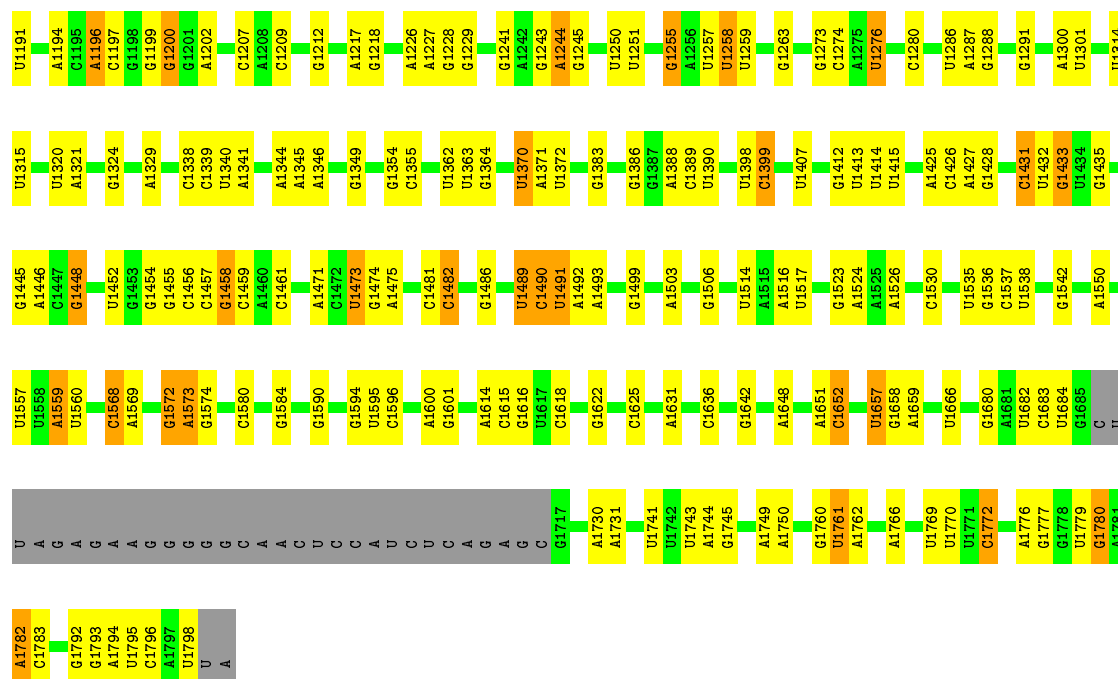
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
87	O7	1	Total	Zn	0	0
			1	1		
87	q2	1	Total	Zn	0	0
			1	1		

- Molecule 88 is (4S,5R,10E,12Z,16R,16aS,17S,18R,19aR,23aR)-4-hydroxy-5,16a,21-trimethyl-4,5,6,7,16,16a,22,23-octahydro-3H,18H,19aH-spiro[16,18-methano[1,6,12]trioxacyclooctadecino[3,4-d]chromene-17,2'-oxirane]-3,9,14-trione (three-letter code: 3L2) (formula: C<sub>27</sub>H<sub>34</sub>O<sub>9</sub>).



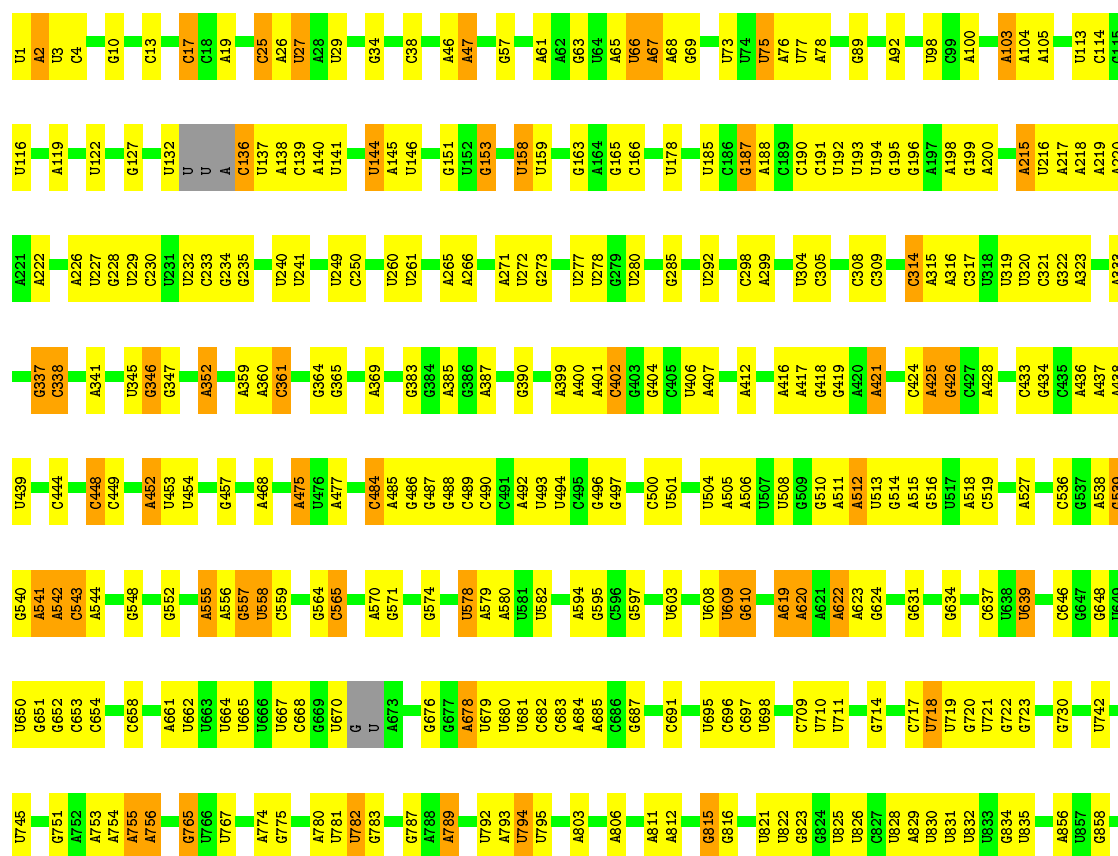
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
88	1	1	Total	C	O	0	0
			36	27	9		
88	5	1	Total	C	O	0	0
			36	27	9		

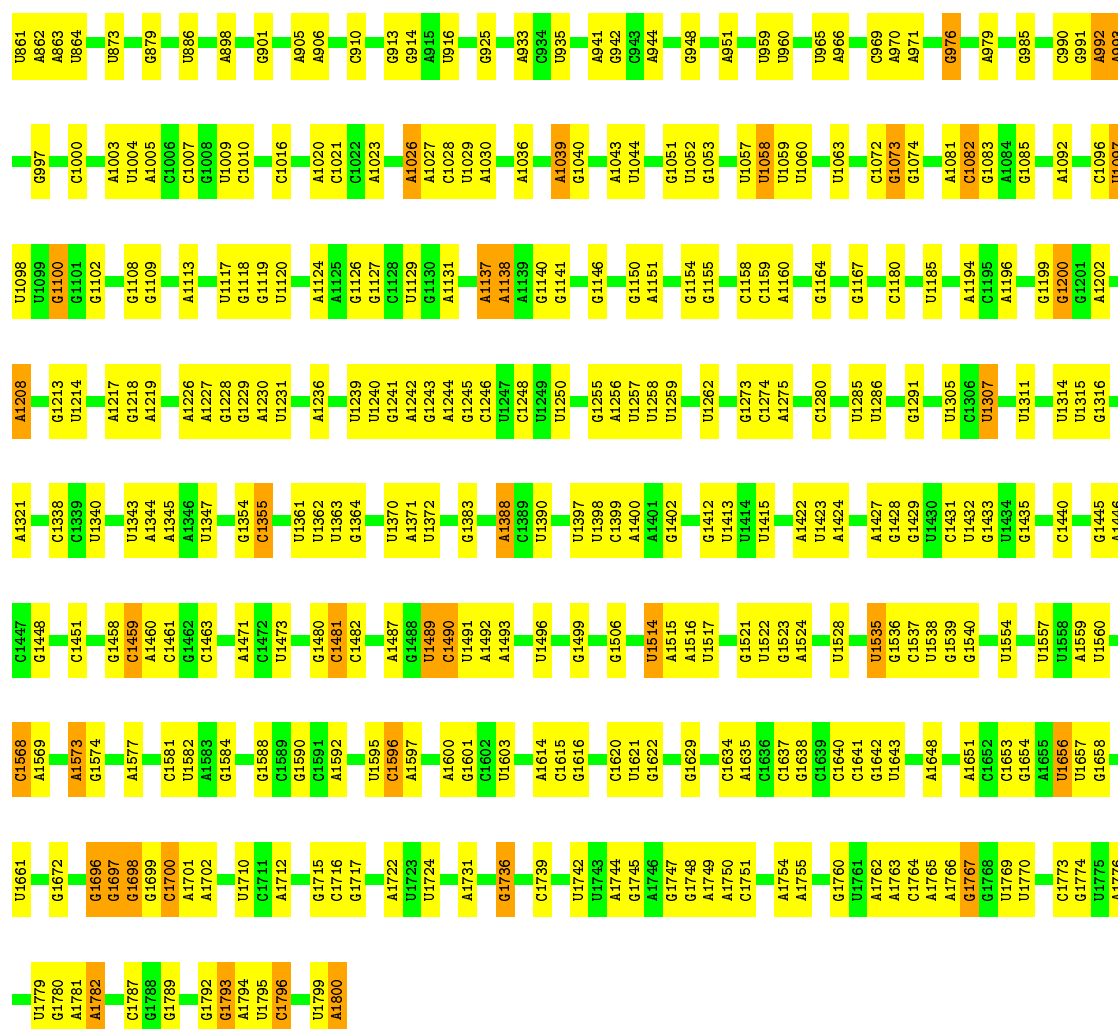




• Molecule 1: 18S ribosomal RNA

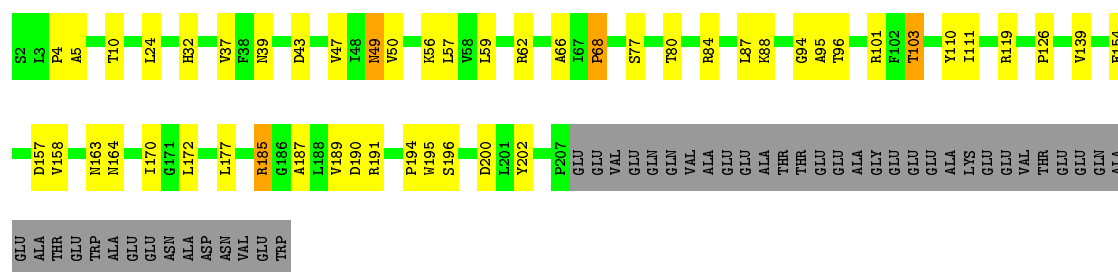
Chain 6: 64% 31% 5%





• Molecule 2: 40S ribosomal protein S0-A

Chain S0: 62% 18% 18%

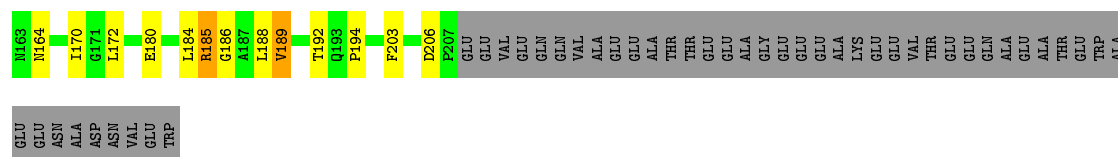


• Molecule 2: 40S ribosomal protein S0-A

Chain s0: 63% 17% 18%

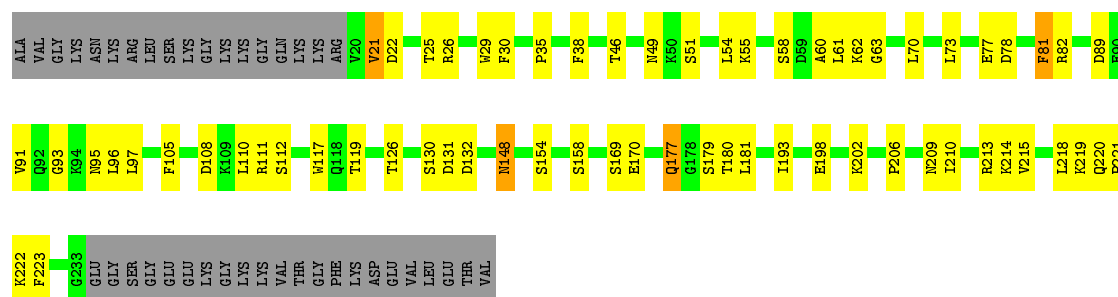






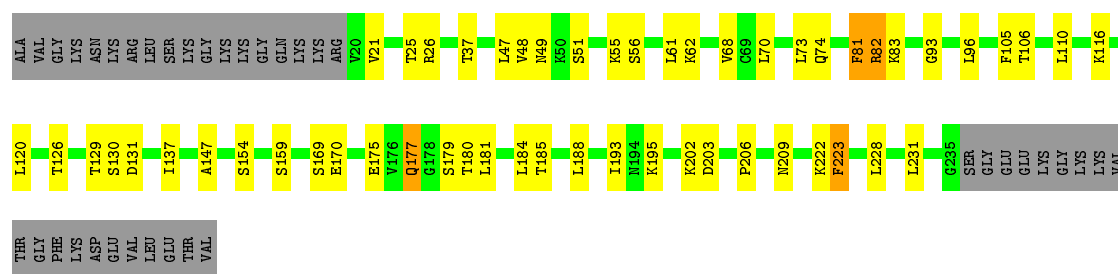
- Molecule 3: 40S ribosomal protein S1-A

Chain S1: 59% 24% 16%



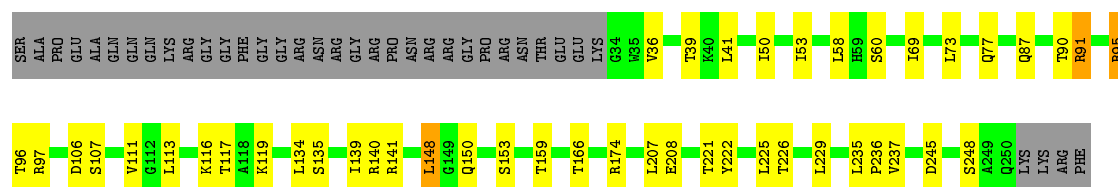
- Molecule 3: 40S ribosomal protein S1-A

Chain s1: 64% 20% 15%



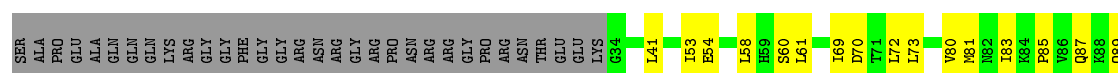
- Molecule 4: 40S ribosomal protein S2

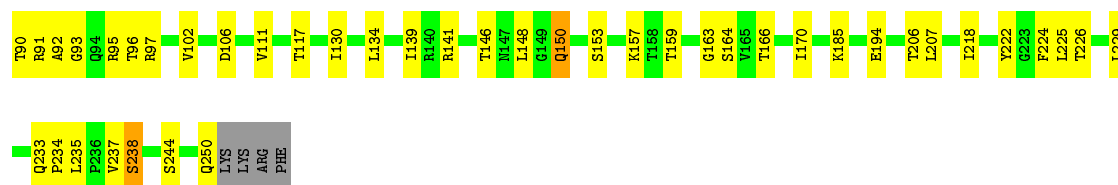
Chain S2: 68% 17% 14%



- Molecule 4: 40S ribosomal protein S2

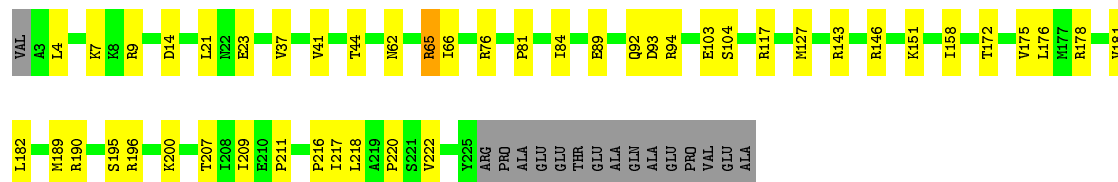
Chain s2: 63% 22% 14%





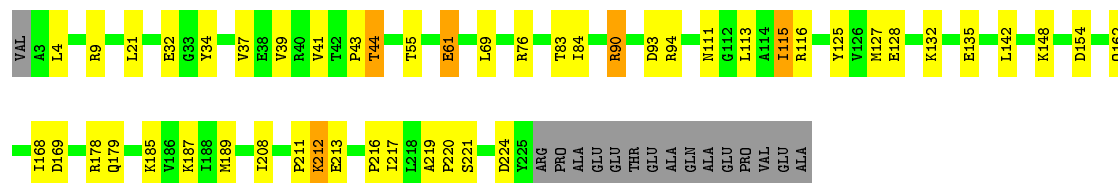
- Molecule 5: 40S ribosomal protein S3

Chain S3: 74% 19% 7%



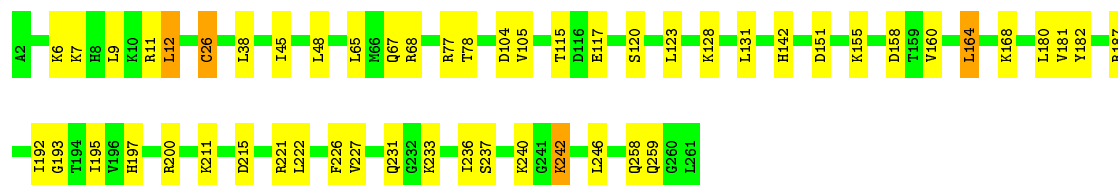
- Molecule 5: 40S ribosomal protein S3

Chain s3: 73% 18% 7%



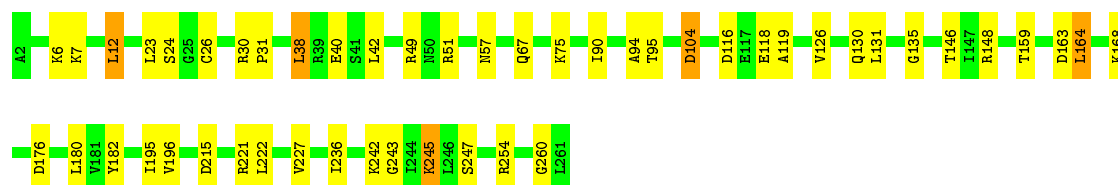
- Molecule 6: 40S ribosomal protein S4-A

Chain S4: 80% 19% 1%



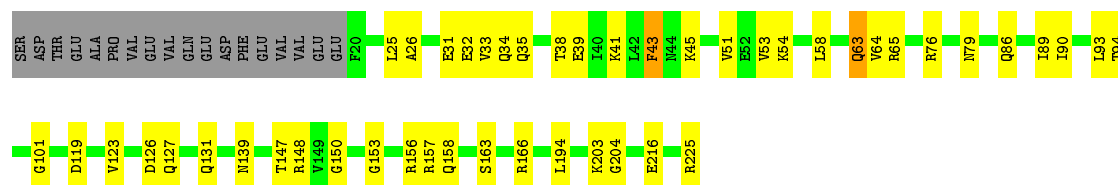
- Molecule 6: 40S ribosomal protein S4-A

Chain s4: 81% 17% 1%



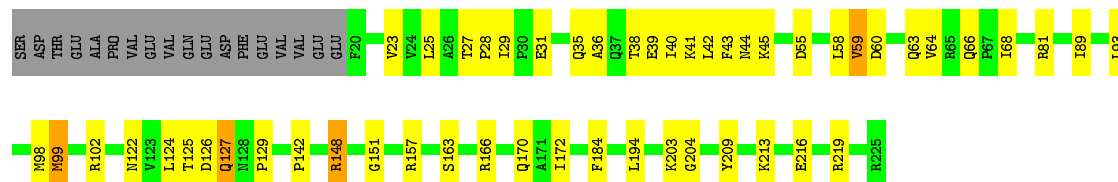
- Molecule 7: 40S ribosomal protein S5

Chain S5: 71% 20% 8%



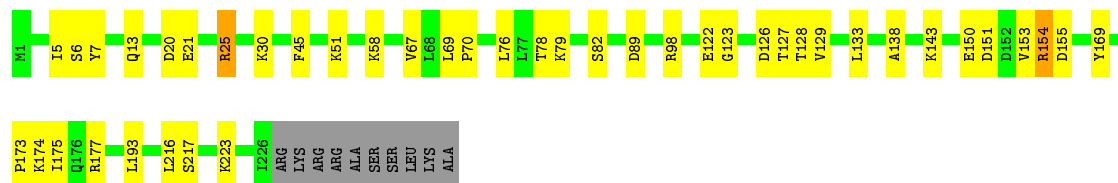
• Molecule 7: 40S ribosomal protein S5

Chain s5:  69% 21% 8%



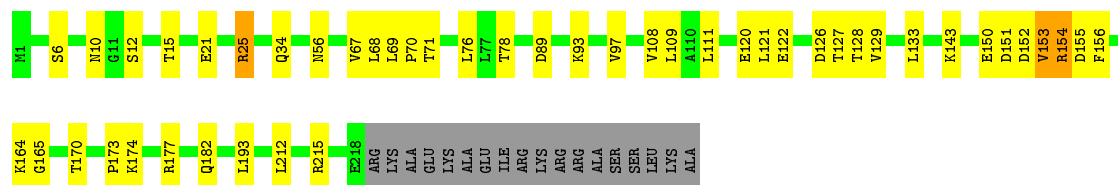
• Molecule 8: 40S ribosomal protein S6-A

Chain S6:  78% 17% . .



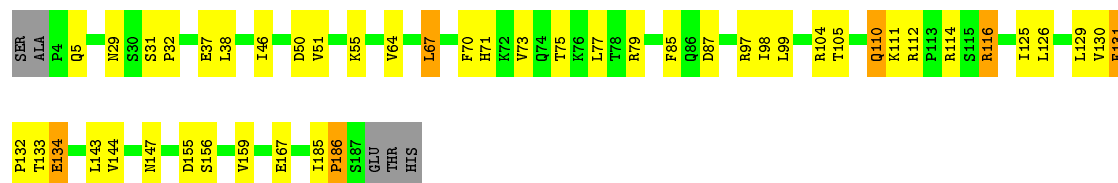
• Molecule 8: 40S ribosomal protein S6-A

Chain s6:  72% 19% 8%



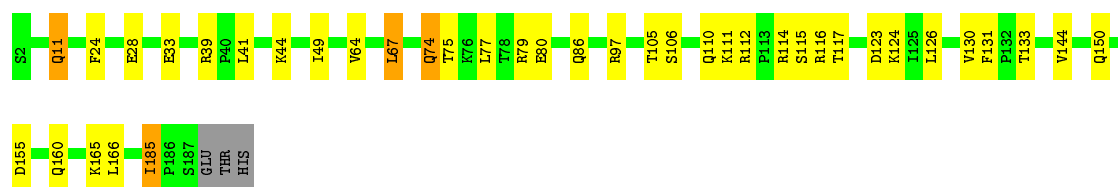
• Molecule 9: 40S ribosomal protein S7-A

Chain S7:  72% 22% . .

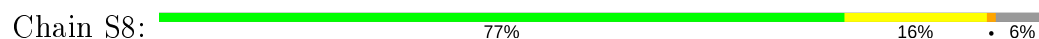


• Molecule 9: 40S ribosomal protein S7-A

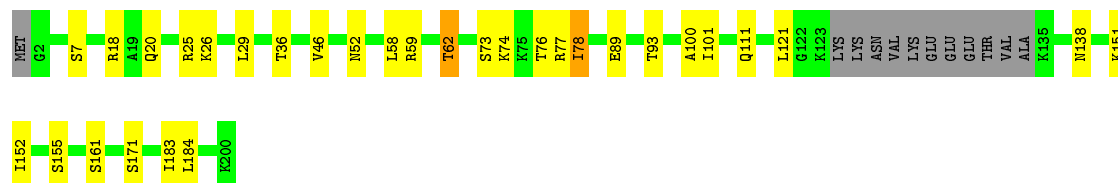
Chain s7:  78% 19% . .



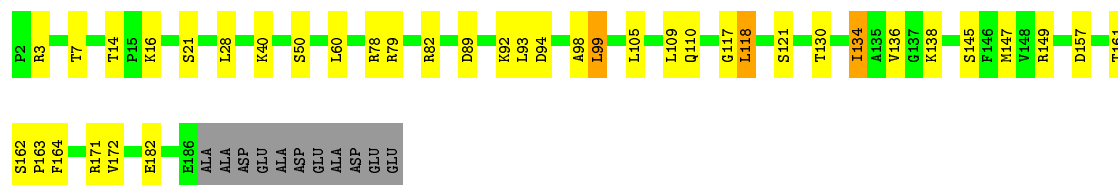
- Molecule 10: 40S ribosomal protein S8-A



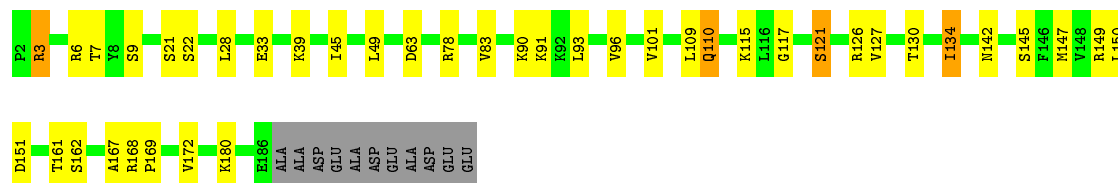
- Molecule 10: 40S ribosomal protein S8-A



- Molecule 11: 40S ribosomal protein S9-A



- Molecule 11: 40S ribosomal protein S9-A



- Molecule 12: 40S ribosomal protein S10-A





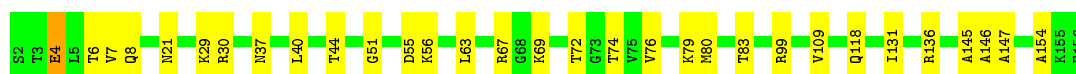
- Molecule 12: 40S ribosomal protein S10-A

Chain c0:  67% 22% • 9%



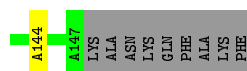
- Molecule 13: 40S ribosomal protein S11-A

Chain C1:  80% 19%



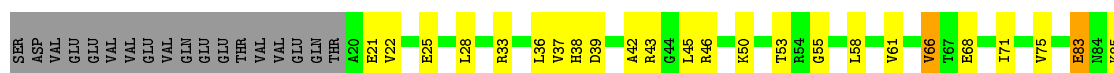
- Molecule 13: 40S ribosomal protein S11-A

Chain c1:  72% 21% • 6%



- Molecule 14: 40S ribosomal protein S12

Chain C2:  56% 28% • 13%

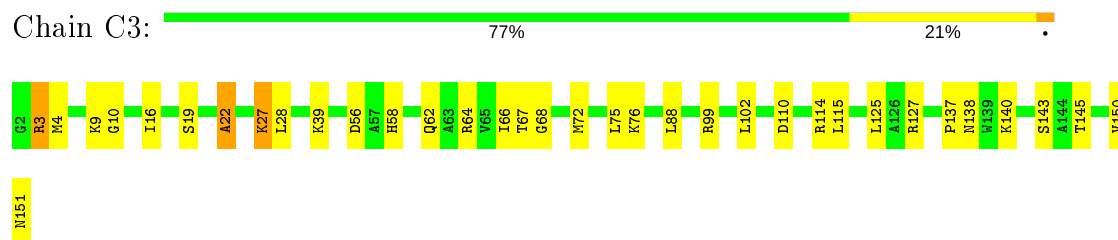


- Molecule 14: 40S ribosomal protein S12

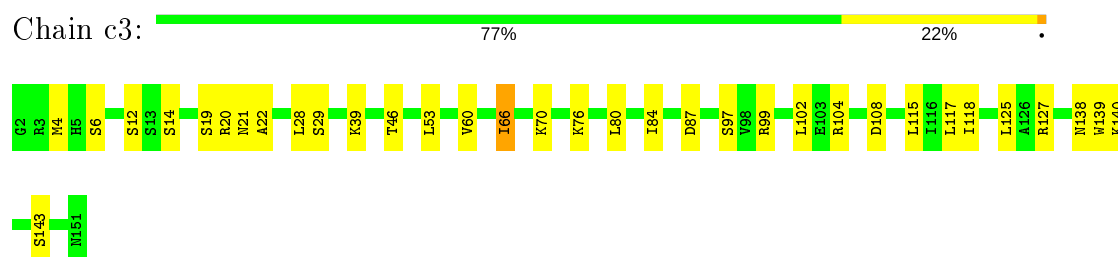
Chain c2:  56% 28% 13%



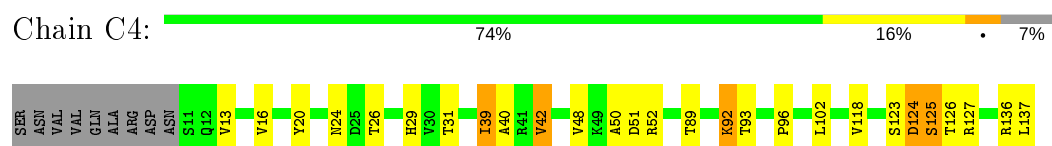
- Molecule 15: 40S ribosomal protein S13



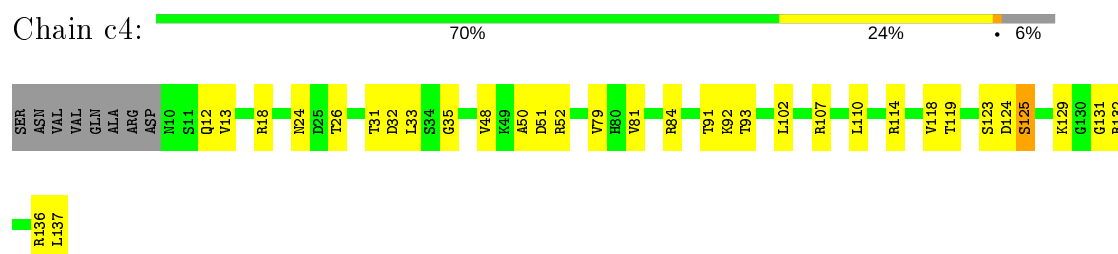
- Molecule 15: 40S ribosomal protein S13



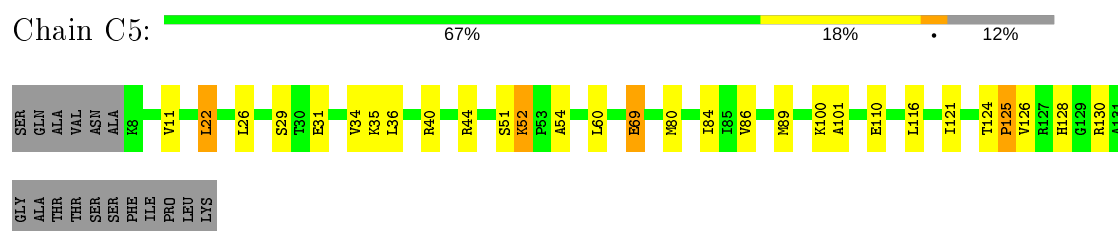
- Molecule 16: 40S ribosomal protein S14-A



- Molecule 16: 40S ribosomal protein S14-A

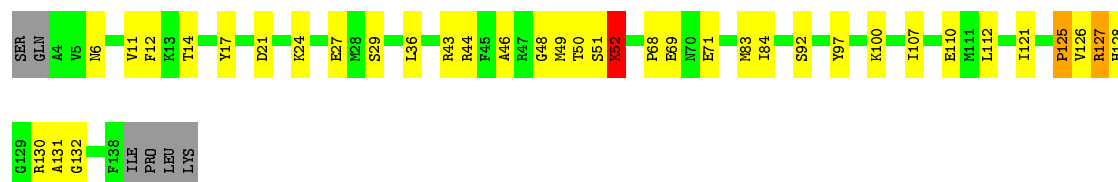


- Molecule 17: 40S ribosomal protein S15



- Molecule 17: 40S ribosomal protein S15





- Molecule 18: 40S ribosomal protein S16-A

Chain C6: 75% 23% ..



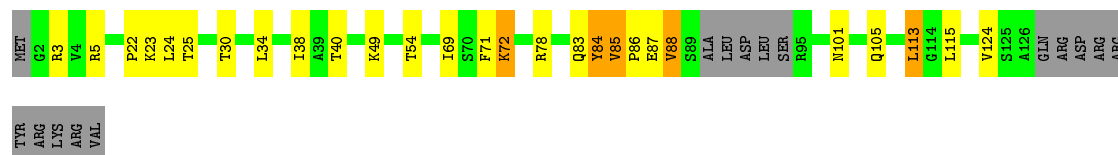
- Molecule 18: 40S ribosomal protein S16-A

Chain c6: 79% 21%



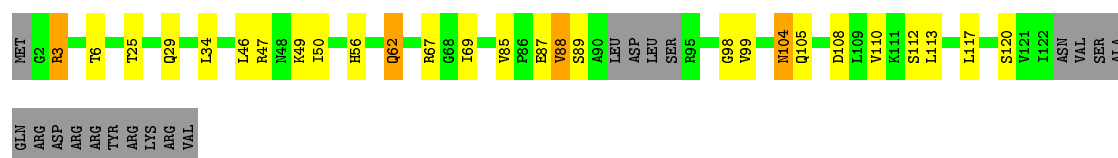
- Molecule 19: 40S ribosomal protein S17-A

Chain C7: 68% 16% 12%



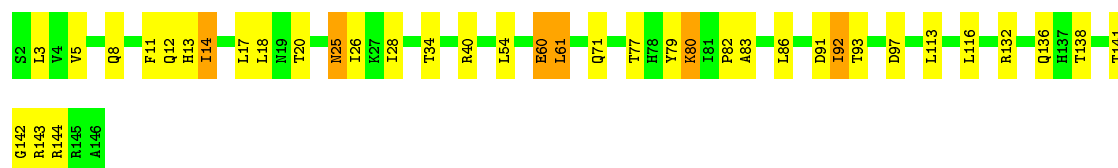
- Molecule 19: 40S ribosomal protein S17-A

Chain c7: 66% 17% 14%

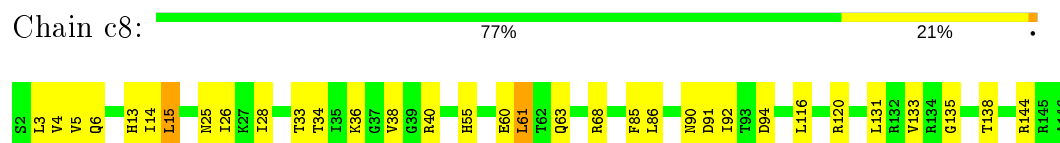


- Molecule 20: 40S ribosomal protein S18-A

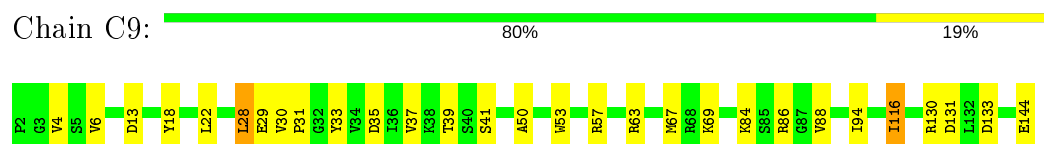
Chain C8: 74% 22%



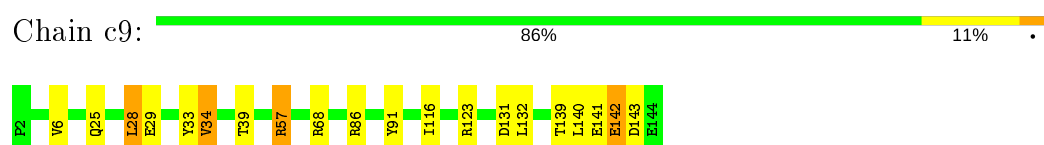
- Molecule 20: 40S ribosomal protein S18-A



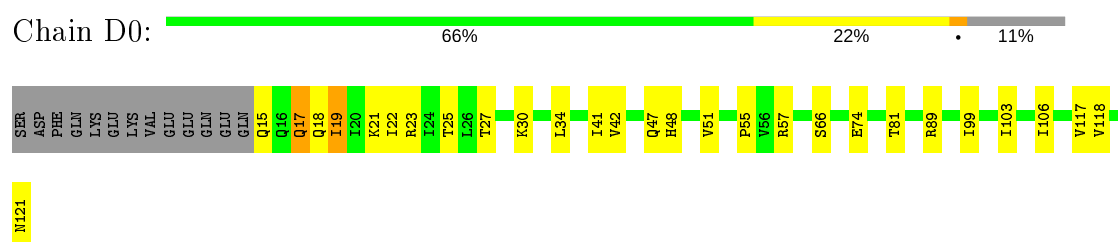
- Molecule 21: 40S ribosomal protein S19-A



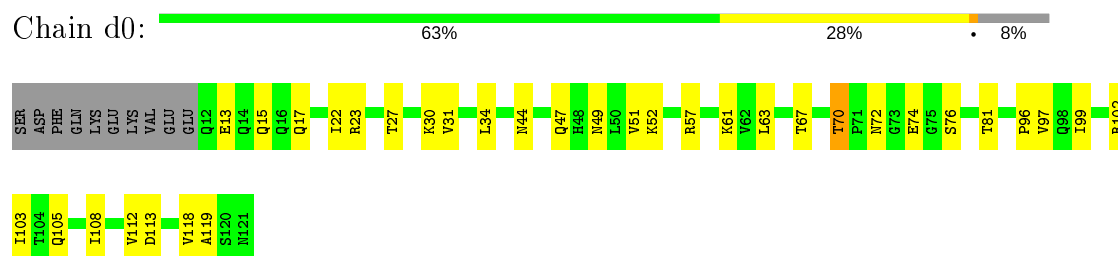
- Molecule 21: 40S ribosomal protein S19-A



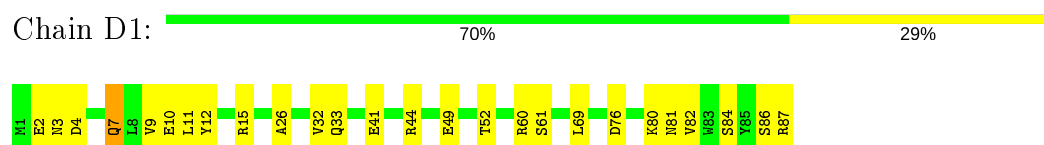
- Molecule 22: 40S ribosomal protein S20



- Molecule 22: 40S ribosomal protein S20



- Molecule 23: 40S ribosomal protein S21-A



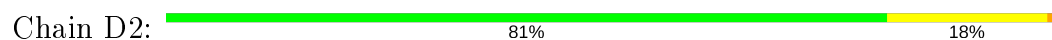
- Molecule 23: 40S ribosomal protein S21-A







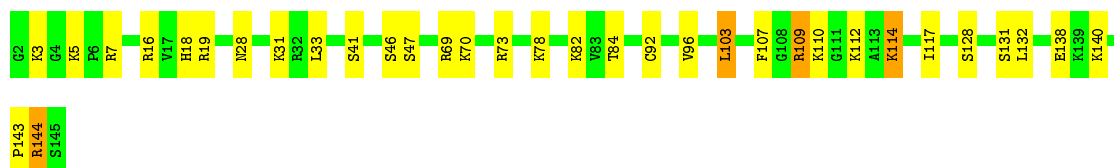
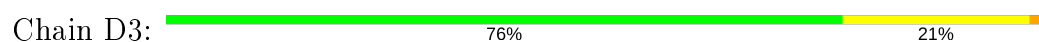
- Molecule 24: 40S ribosomal protein S22-A



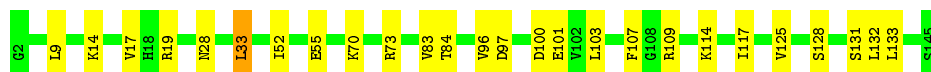
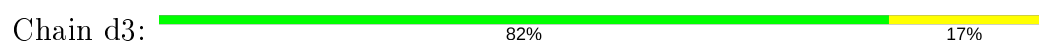
- Molecule 24: 40S ribosomal protein S22-A



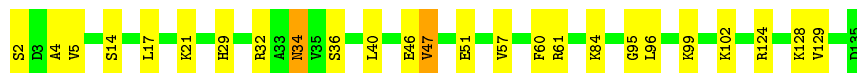
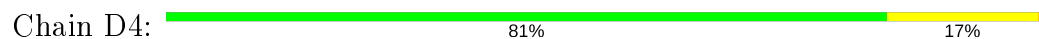
- Molecule 25: 40S ribosomal protein S23-A



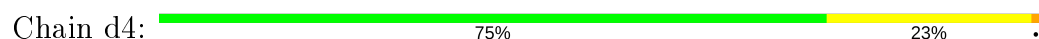
- Molecule 25: 40S ribosomal protein S23-A



- Molecule 26: 40S ribosomal protein S24-A

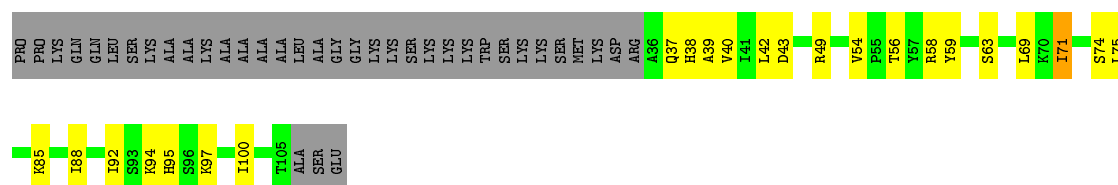


- Molecule 26: 40S ribosomal protein S24-A



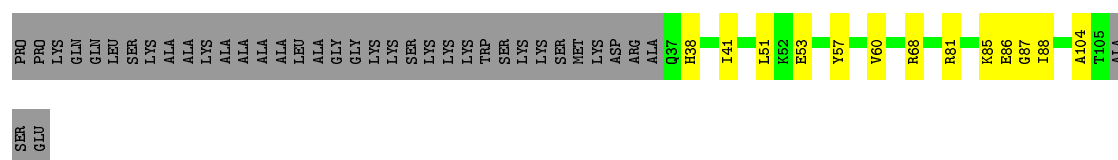
- Molecule 27: 40S ribosomal protein S25-A

Chain D5: 



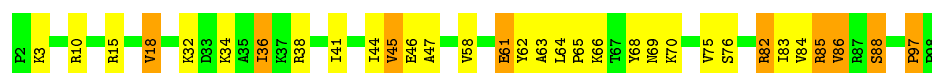
- Molecule 27: 40S ribosomal protein S25-A

Chain d5: 




- Molecule 28: 40S ribosomal protein S26-B

Chain D6: 




- Molecule 28: 40S ribosomal protein S26-B

Chain d6: 




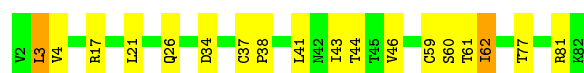
- Molecule 29: 40S ribosomal protein S27-A

Chain D7: 



- Molecule 29: 40S ribosomal protein S27-A

Chain d7: 



- Molecule 30: 40S ribosomal protein S28-A

Chain D8: 



- Molecule 30: 40S ribosomal protein S28-A

Chain d8: 67% 23% 6% 5%



- Molecule 31: 40S ribosomal protein S29-A

Chain D9: 69% 24% • •



- Molecule 31: 40S ribosomal protein S29-A

Chain d9: 67% 29% •



- Molecule 32: 40S ribosomal protein S30-A

Chain E0: 83% 15% •



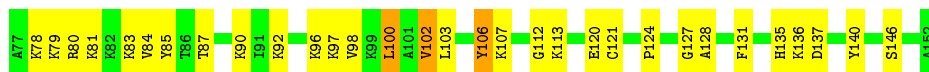
- Molecule 33: Ubiquitin-40S ribosomal protein S31

Chain E1: 50% 42% • 7%



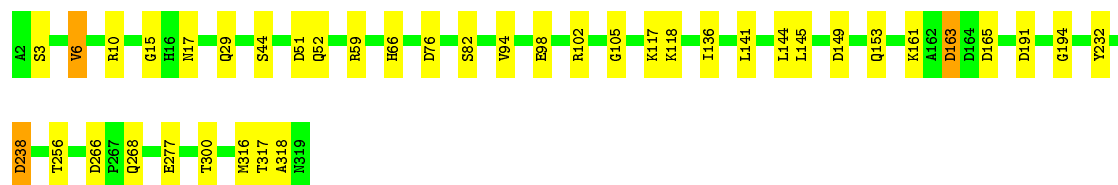
- Molecule 33: Ubiquitin-40S ribosomal protein S31

Chain e1: 59% 37% •



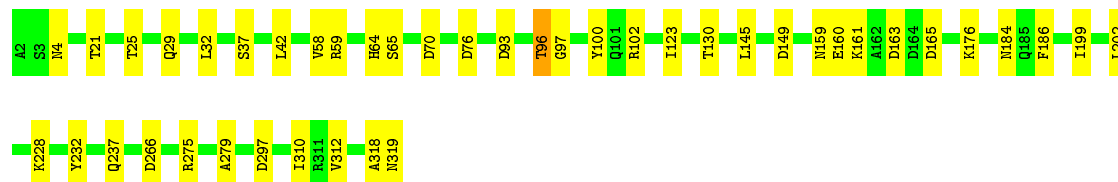
- Molecule 34: Guanine nucleotide-binding protein subunit beta-like protein

Chain SR: 87% 12% •



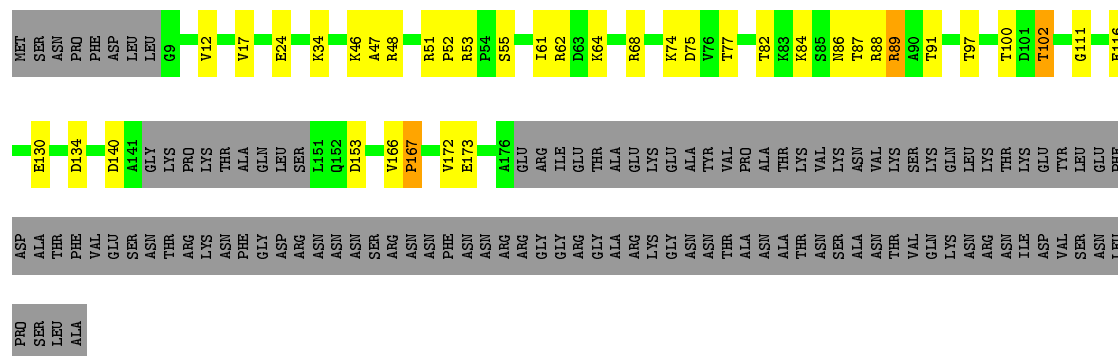
- Molecule 34: Guanine nucleotide-binding protein subunit beta-like protein

Chain sR: 86% 13%



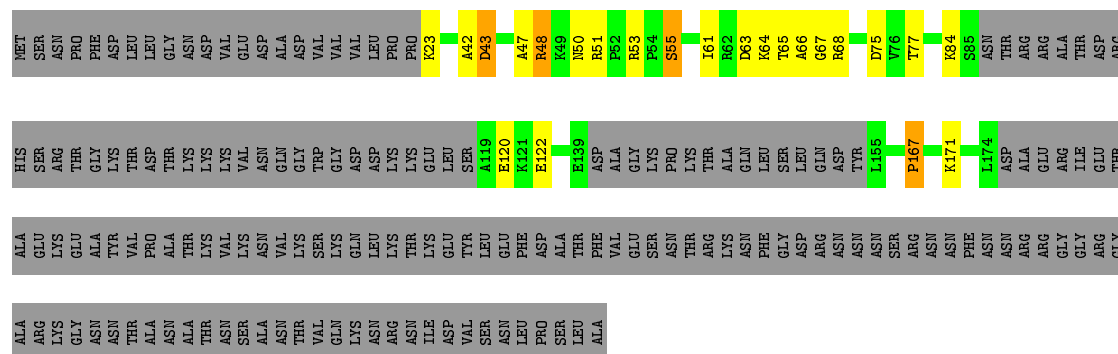
- Molecule 35: Suppressor protein STM1

Chain SM: 44% 13% 42%



- Molecule 35: Suppressor protein STM1

Chain sM: 30% 7% 62%

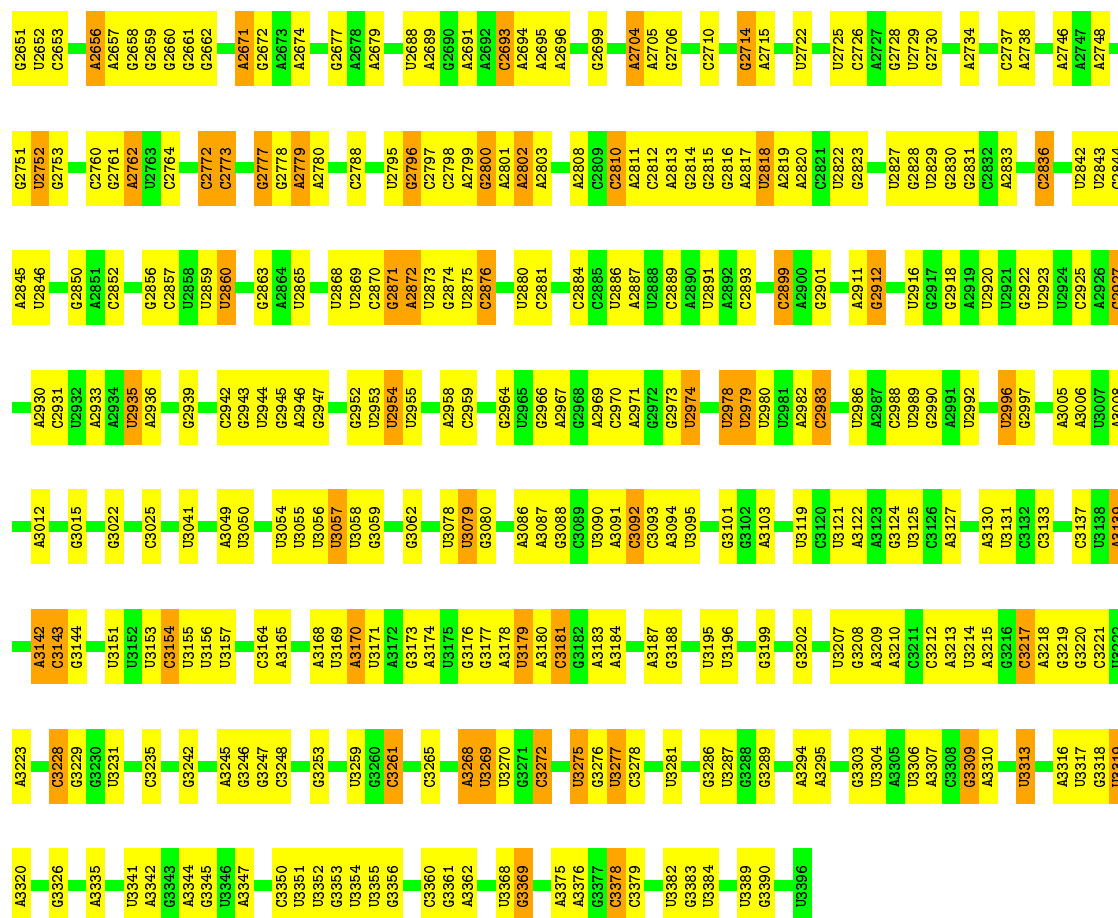


- Molecule 36: 25S ribosomal RNA

Chain 1: 52% 34% 6% 7%

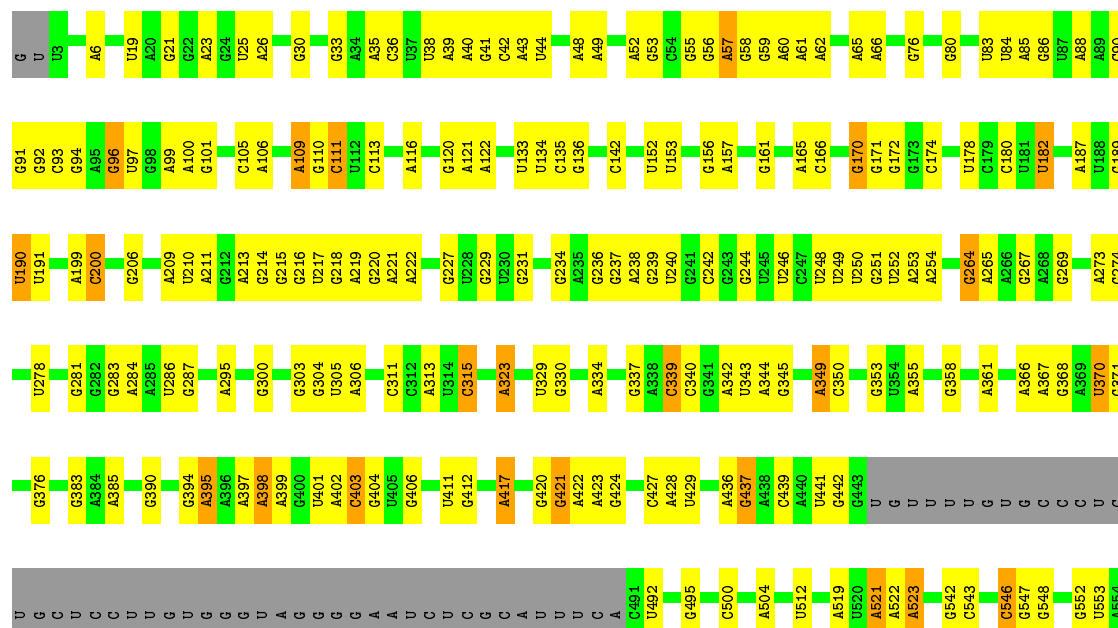
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U1235	A1157	A1094	A917	U822	G723	G652	U556	G	A398	U305	G205	G92	U3
G1236	A1158	U1095	C918	G830	G725	A653	A557	G	A399	G306	G206	G93	G
G1237	C1159	U1096	U919	A831	G726	G654	U558	A	G400	A306	U210	G94	U9
C1238	A1160	A920	A920	G832	G730	G655	A559	G	U401	C311	A211	G95	A
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G1242	U1162	A1098	U922	G834	G732	A657	U561	A	C403	U313	U213	G97	U14
G1243	A1163	C923	C923	G835	G733	G658	U562	C	G404	C314	U214	G98	C15
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G1245	A1165	A825	A825	G837	A744	G660	U564	U	U406	U316	A219	A100	G18
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A1251	C1108	G1018	A933	G857	G758	U666	U583	U	A422	U328	G231	U112	C29
U1258	A1110	G1019	G934	U858	G759	U667	A585	C	A423	U329	G232	C113	G33
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G1264	U1113	G1022	A937	C861	U762	U670	A588	U	U429	G336	A238	A121	G41
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A1270	A1119	G1033	U943	C868	U768	U676	A594	U	U439	C344	G244	U134	A49
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C1290	C1137	A1058	C961	U882	G782	U690	A608	U	U453	C358	G258	U184	C73
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G1306	A1143	A1064	G967	U888	G788	U696	A614	U	U459	C364	G264	G192	U191
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	C1232		A977	A914	A816	U706	A624	U	U469	C374	G274		
			U978			U707	A625	U	U470	C375	G275		
			A980			U708	A626	U	U471	C376	G276		
			U981			U709	A627	U	U472	C377	G277		
			C982			U710	A628	U	U473	C378	G278		
						U711	A629	U	U474	C379	G279		
						U712	A630	U	U475	C380	G280		
						U713	A631	U	U476	C381	G281		
						U714	A632	U	U477	C382	G282		
						U715	A633	U	U478	C383	G283		
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U	G2400	A2317	A2224	A2224	C	G1927	U1822	U1567	A1481	A1386
C	A2401	U2318	U2141	U2141	C	U1928	A1823	U1568	G1389	G1389
G	G2402	U2319	A2142	A2142	C	G1929	U1834	U1569	A1482	A1390
C	G2403	C2230	A2143	A2143	C	U1930	A1835	U1570	G1483	C1391
C	A2404	C2231	A2144	A2144	C	U1931	G1838	U1571	U1484	U1392
C	G2405	C2235	C2145	C2145	C	G1935	U1840	G1576	G1485	A1393
C	C2406	C2235	C2146	C2146	C	G1935	U1840	A1580	G1487	A1394
C	U2327	U2327	A2147	A2147	C	G1935	U1840	A1580	G1487	A1394
A	U2408	C2333	U2148	U2148	C	G1935	U1840	A1580	G1487	A1394
G	G2409	C2333	A2149	A2149	C	G1935	U1840	A1580	G1487	A1394



• Molecule 36: 25S ribosomal RNA

Chain 5: 51% 35% 7% 7%



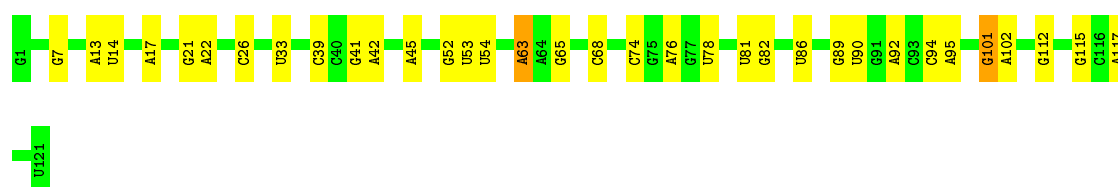




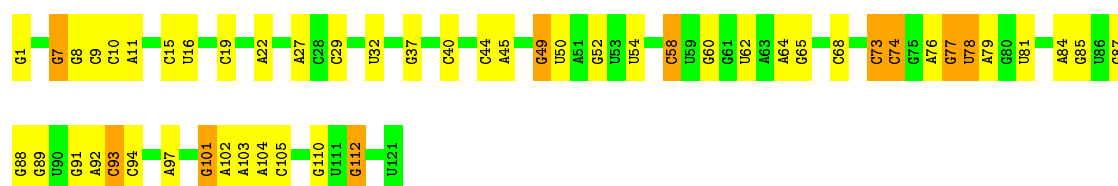
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U3090	C2913	U2771	C2583	G2436	A2361	U2292	U2205	G2123	G
A3091	G2914	C2772	U2584	U2437	G2362	A2294	G2206	G2129	C
C3092	U2915	G2773	G2585	G2438	G2363	U2295	A2208	G2130	A
C3093	G2917	U2774	U2589	A2439	G2364	A2295	U2209	A2131	U
G3098	U2920	U2775	G2589	U2441	C2365	U2298	G2210	G2132	G
G3101	U2921	C2776	A2593	G2442	A2367	G2212	U2211	U2133	U
U3104	G2922	G2777	C2594	A2443	U2301	A2213	A2214	G2134	C
U3105	U2923	U2778	U2597	C2444	G2302	A2215	G2215	A2139	U
U3106	U2924	U2783	G2598	A	A2303	A2222	G2216	U2141	G
U3107	C2927	C2779	C2599	U	G2306	A2223	U2142	A2142	U
U3111	C2928	U2795	G2606	U2504	G2307	A2224	A2143	A2143	G
U3111	C2929	G2796	G2607	U2505	C2308	U2225	A2144	A2144	G
C3104	C2930	C2797	G2608	U2506	A2309	U2226	A2145	A2145	G
A3005	C2931	U2798	G2609	U2507	U2310	C2227	A2146	A2146	G
U3119	A2934	A2799	G2610	C2511	G2311	A2228	U2147	U2148	C
C3120	U2935	G2799	U2611	C2512	A2312	C2231	A2149	A2149	U
U3121	U2936	G2800	U2612	U2513	U2313	A2152	U2154	U2154	U
U3122	A2936	A2801	U2613	U2514	U2314	A2153	G2155	G2155	G
A3122	G2939	G2704	G2614	A2515	C2383	G2234	G2156	G2156	C
U3013	A2940	A2705	C2615	C2518	A2384	G2239	A2157	A2157	U
U3014	A2941	G2706	C2616	A2519	G2385	G2240	A2158	A2158	C
G3015	C2942	C2707	G2617	G2522	C2389	A2244	G2159	G2159	A
U3020	G2943	C2710	G2618	A2523	G2392	G2245	G2161	G2161	U
G3026	U2944	U2810	G2619	A2524	G2393	G2246	A2164	A2164	G
A3027	G2945	A2811	G2620	G2525	G2394	G2247	G2165	G2165	C
G3028	U2946	G2812	G2621	C2526	G2395	G2248	G2166	G2166	G
G3136	G2947	A2813	G2622	G2530	G2396	G2249	A2168	A2168	C
C3137	U2948	U2715	G2623	C2531	A2397	G2250	G2170	G2170	G
G3140	U2949	G2814	A2626	U2532	A2398	G2251	G2171	G2171	C
A3141	G2950	U2724	G2624	U2533	A2399	G2252	U2170	U2170	A
A3142	G2951	C2725	C2627	U2537	G2400	U2254	G2184	G2184	C
C3143	U2953	U2726	U2631	U2538	A2401	A2255	G2185	G2185	U
A3150	G2957	A2727	G2632	U2539	A2402	A2256	U2186	U2186	C
U3151	U2958	G2728	U2633	A2540	G2403	G2257	G2187	G2187	G
U3152	C2959	U2729	U2634	U2541	A2404	U2258	U2188	U2188	U
U3153	U2960	G2732	G2639	U2542	C2405	G2259	U2189	U2189	C
C3154	G2961	A2733	A2640	U2543	C2406	C2263	A2100	A2100	G
U3155	U2965	C2742	U2641	G2549	U2407	G2272	U2101	U2101	C
U3156	G2966	A2748	A2642	U2550	G2409	G2273	U2102	U2102	G
			A2643	U2551	U2411				C



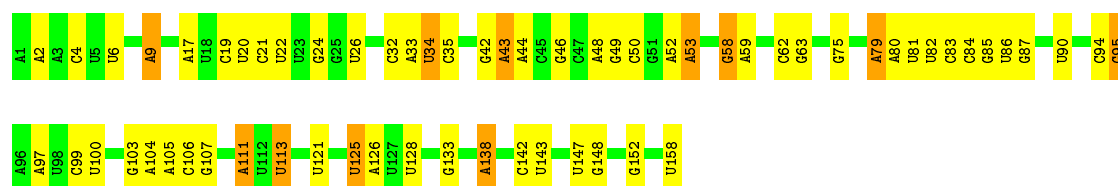
• Molecule 37: 5S ribosomal RNA



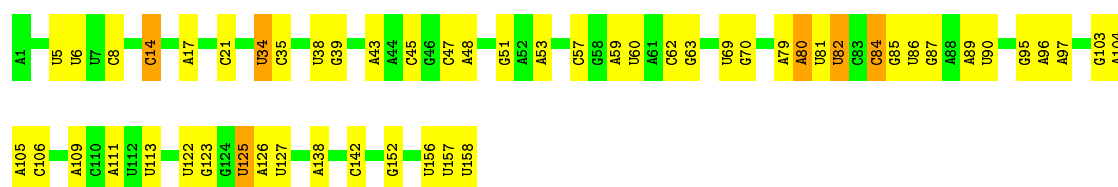
• Molecule 37: 5S ribosomal RNA



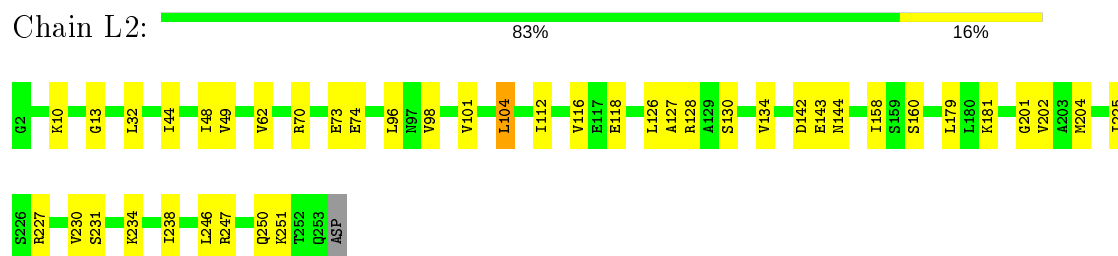
• Molecule 38: 5.8S ribosomal RNA



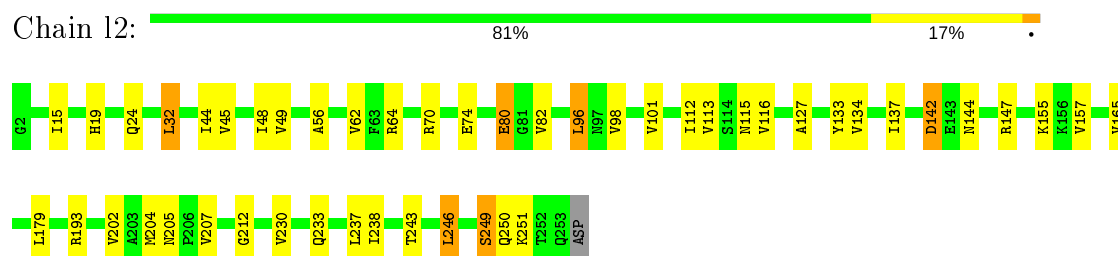
• Molecule 38: 5.8S ribosomal RNA



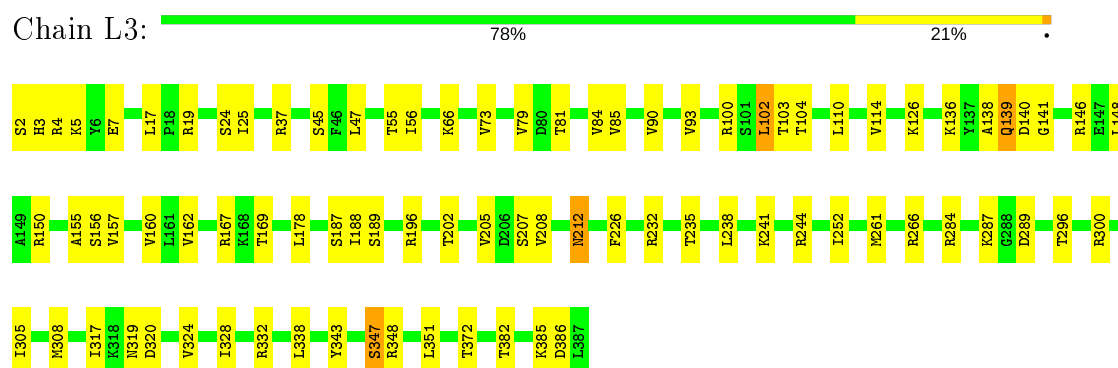
- Molecule 39: 60S ribosomal protein L2-A



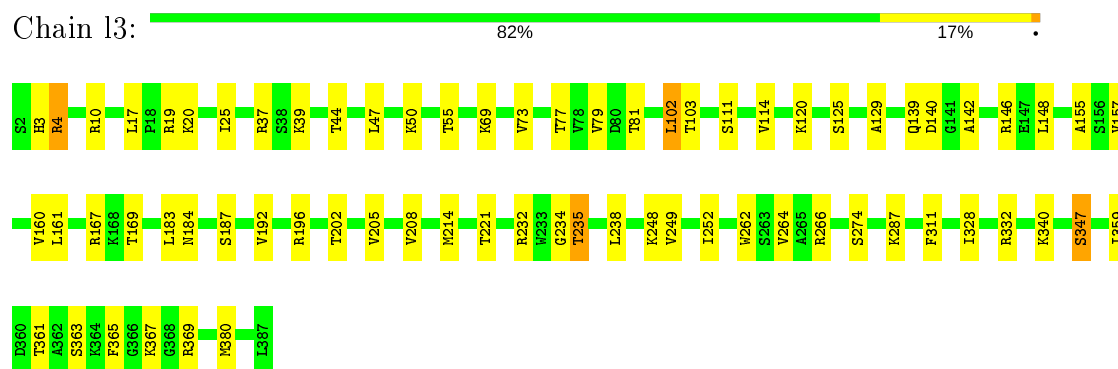
- Molecule 39: 60S ribosomal protein L2-A



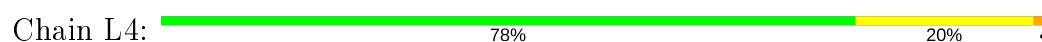
- Molecule 40: 60S ribosomal protein L3

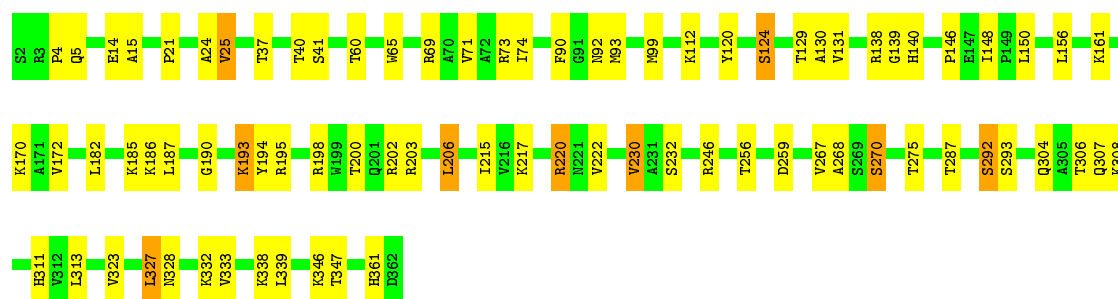


- Molecule 40: 60S ribosomal protein L3

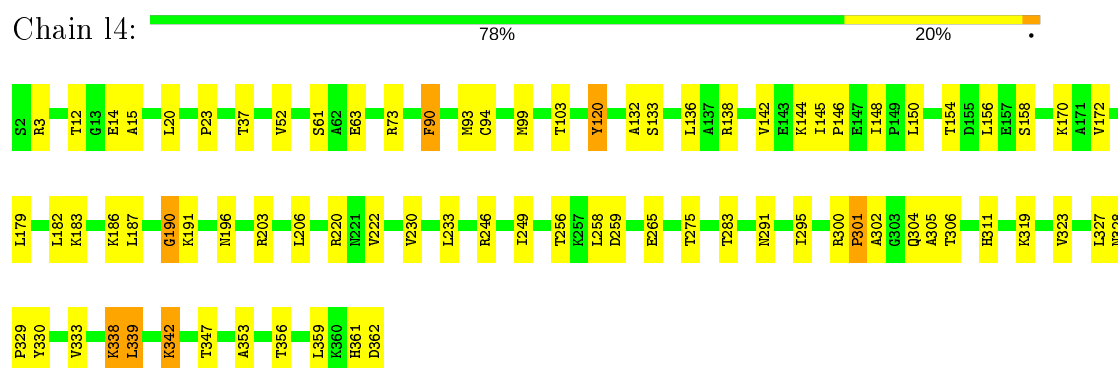


- Molecule 41: 60S ribosomal protein L4-A

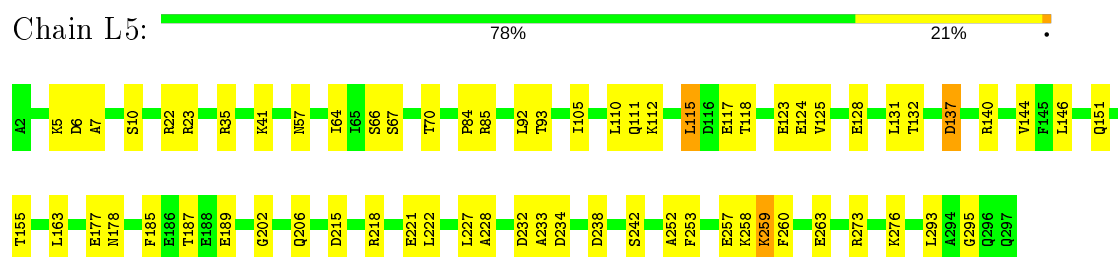




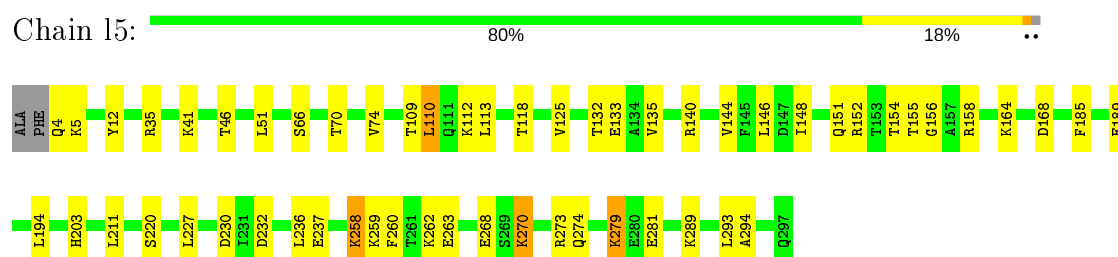
- Molecule 41: 60S ribosomal protein L4-A



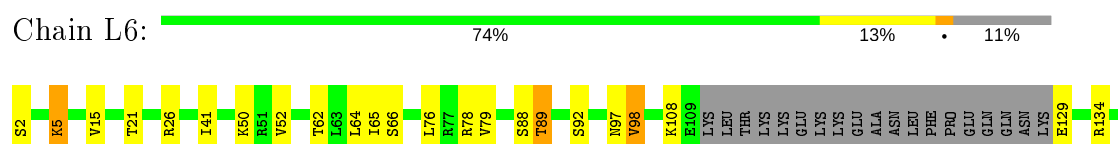
- Molecule 42: 60S ribosomal protein L5



- Molecule 42: 60S ribosomal protein L5



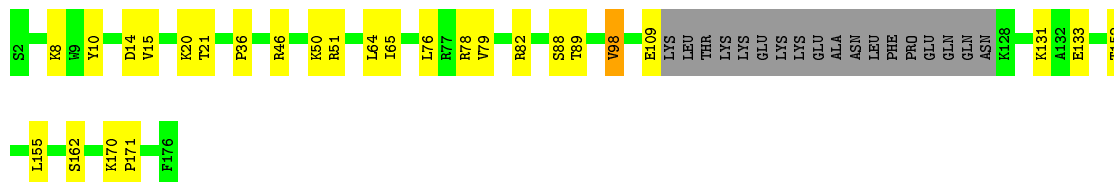
- Molecule 43: 60S ribosomal protein L6-A





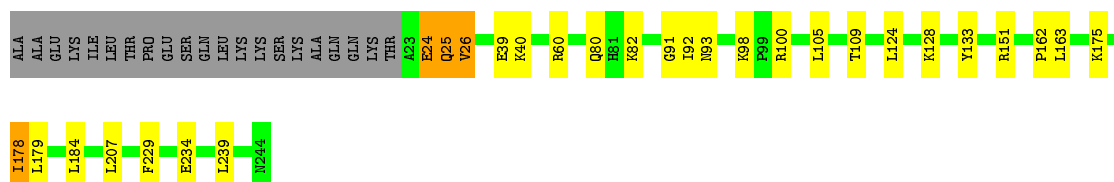
- Molecule 43: 60S ribosomal protein L6-A

Chain 16: 74% 15% 10%



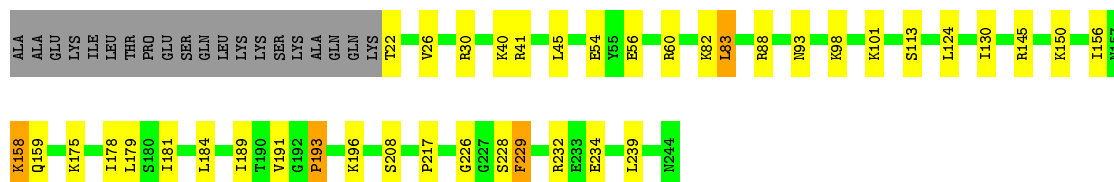
- Molecule 44: 60S ribosomal protein L7-A

Chain L7: 79% 10% 9%



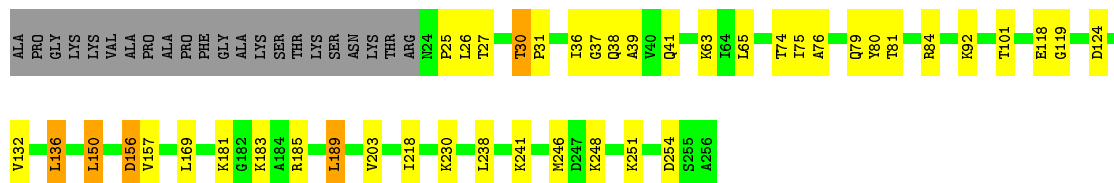
- Molecule 44: 60S ribosomal protein L7-A

Chain 17: 75% 15% 8%



- Molecule 45: 60S ribosomal protein L8-A

Chain L8: 75% 15% 9%



- Molecule 45: 60S ribosomal protein L8-A

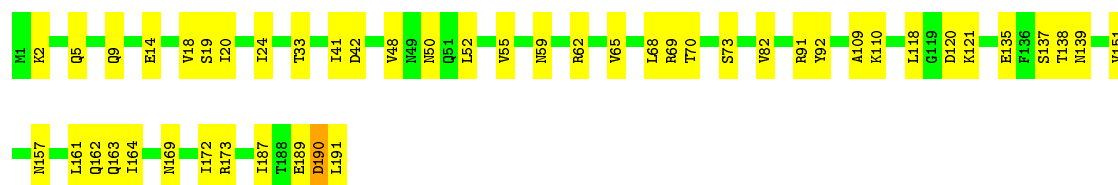
Chain 18: 73% 17% 9%





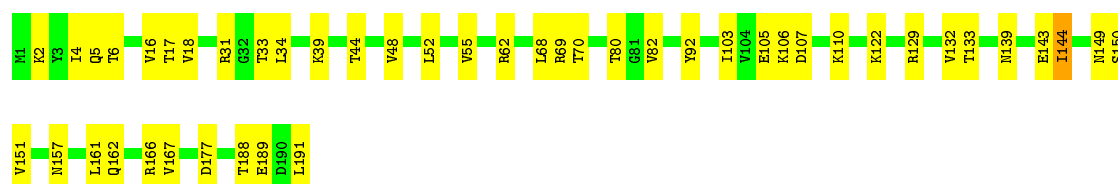
- Molecule 46: 60S ribosomal protein L9-A

Chain L9: 75% 24%



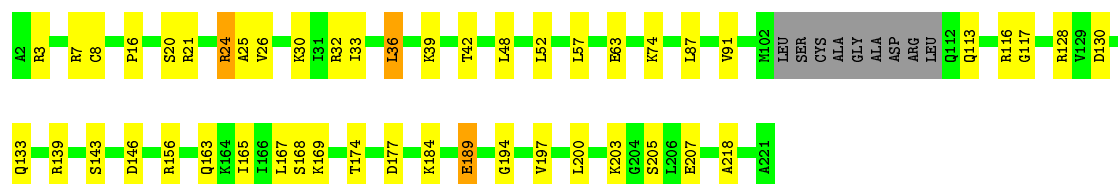
- Molecule 46: 60S ribosomal protein L9-A

Chain l9: 76% 24%



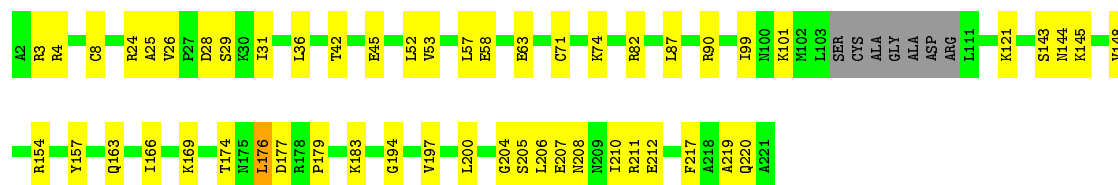
- Molecule 47: 60S ribosomal protein L10

Chain M0: 74% 20%



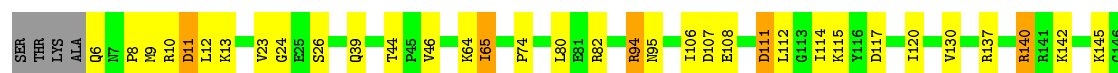
- Molecule 47: 60S ribosomal protein L10

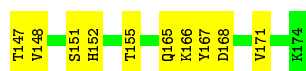
Chain m0: 73% 24%



- Molecule 48: 60S ribosomal protein L11-B

Chain M1: 72% 23%





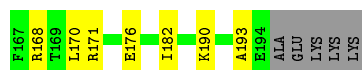
- Molecule 48: 60S ribosomal protein L11-B

Chain m1: 76% 19%



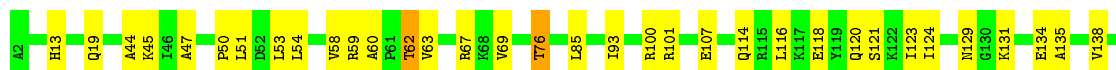
- Molecule 49: 60S ribosomal protein L13-A

Chain M3: 76% 20%



- Molecule 49: 60S ribosomal protein L13-A

Chain m3: 75% 21%



- Molecule 50: 60S ribosomal protein L14-A

Chain M4: 82% 15%




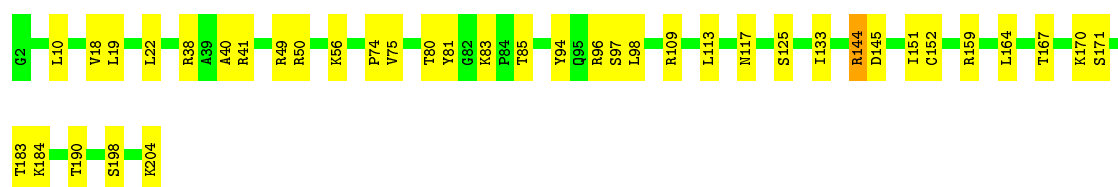
- Molecule 50: 60S ribosomal protein L14-A

Chain m4: 85% 15%




- Molecule 51: 60S ribosomal protein L15-A

Chain M5:  81% 19%



- Molecule 51: 60S ribosomal protein L15-A

Chain m5:  86% 13%




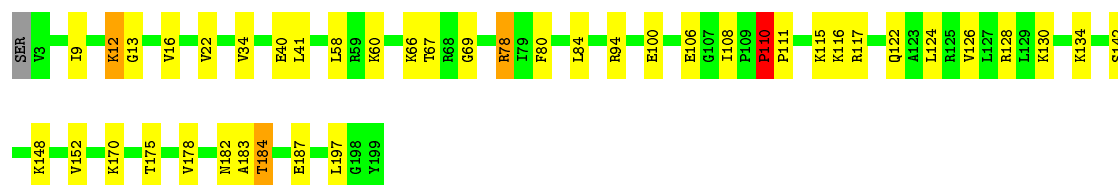
- Molecule 52: 60S ribosomal protein L16-A

Chain M6:  88% 10%




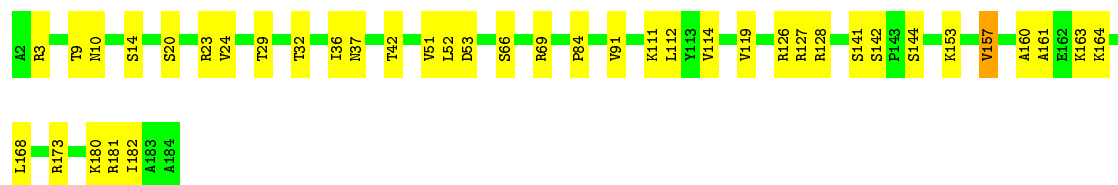
- Molecule 52: 60S ribosomal protein L16-A

Chain m6:  78% 19%



- Molecule 53: 60S ribosomal protein L17-A

Chain M7:  78% 21%



- Molecule 53: 60S ribosomal protein L17-A


Chain m7:  67% 17% 15%






VAL  
ALA  
LYS  
ALA  
ALA  
GLU  
LYS  
LYS  
VAL  
VAL  
ARG  
LEU  
TER  
SER  
ARG  
GLN  
ARG  
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ARG  
TLE  
ALA  
ALA  
GLN  
LYS  
ARG  
TLE  
ALA  
ALA

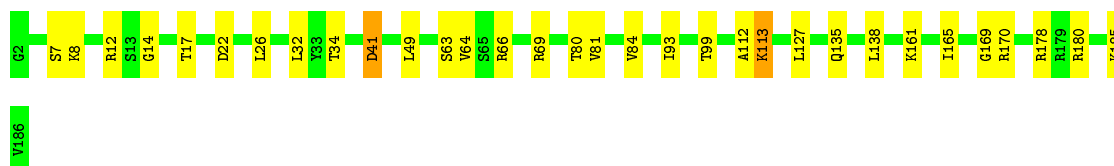
- Molecule 54: 60S ribosomal protein L18-A

Chain M8:  84% 15% .



- Molecule 54: 60S ribosomal protein L18-A

Chain m8:  83% 16% .



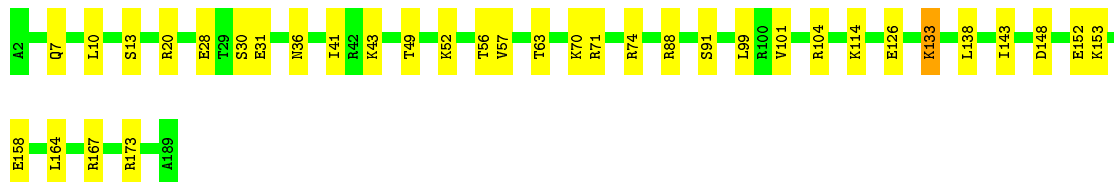
- Molecule 55: 60S ribosomal protein L19-A

Chain M9:  88% 12% .




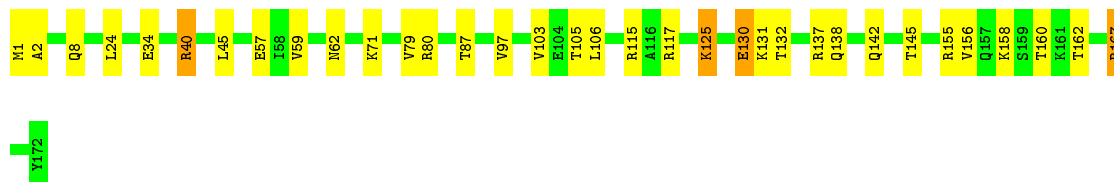
- Molecule 55: 60S ribosomal protein L19-A

Chain m9:  81% 18% .




- Molecule 56: 60S ribosomal protein L20-A

Chain N0:  80% 17% .



- Molecule 56: 60S ribosomal protein L20-A

Chain n0:  83% 17% .



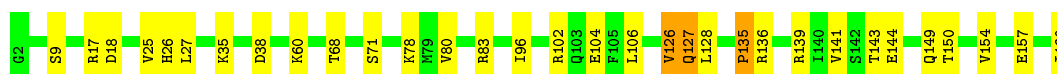
- Molecule 57: 60S ribosomal protein L21-A

Chain N1: 81% 17%



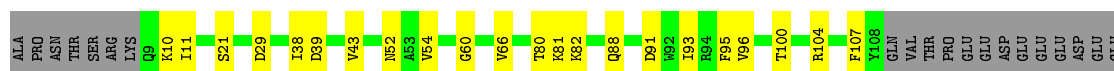
- Molecule 57: 60S ribosomal protein L21-A

Chain n1: 80% 18%



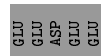
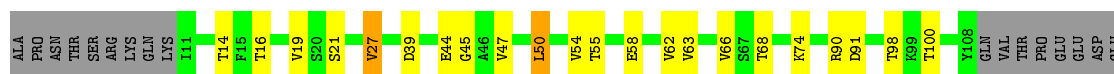
- Molecule 58: 60S ribosomal protein L22-A

Chain N2: 65% 18% 17%



- Molecule 58: 60S ribosomal protein L22-A

Chain n2: 63% 17% 18%



- Molecule 59: 60S ribosomal protein L23-A

Chain N3: 84% 15%



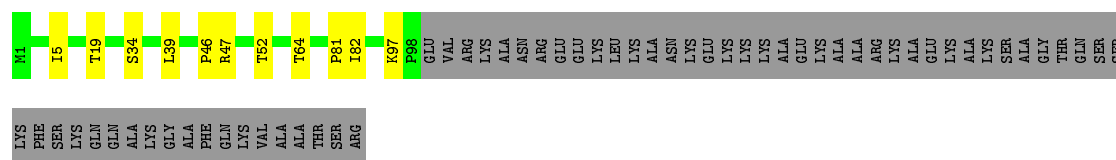
- Molecule 59: 60S ribosomal protein L23-A

Chain n3: 90% 10%



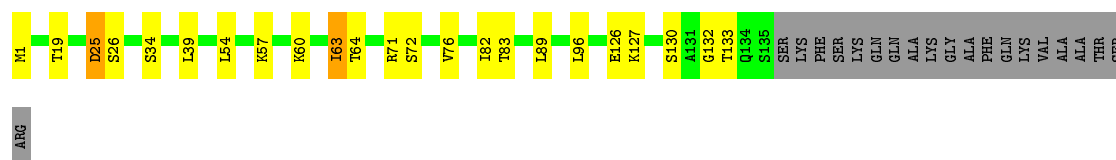
- Molecule 60: 60S ribosomal protein L24-A

Chain N4: 



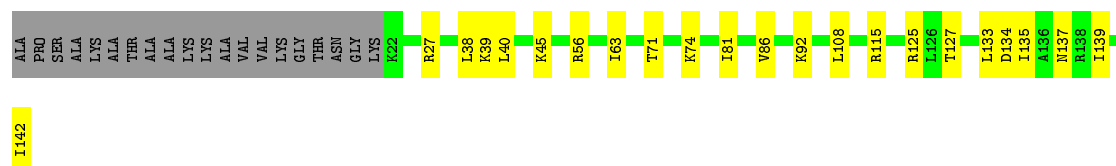
- Molecule 60: 60S ribosomal protein L24-A

Chain n4:  72% 14% • 13%



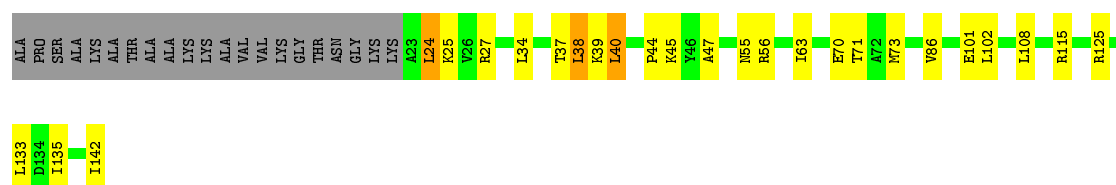
- Molecule 61: 60S ribosomal protein L25

Chain N5: 




- Molecule 61: 60S ribosomal protein L25

Chain n5:  67% 16% • 15%



- Molecule 62: 60S ribosomal protein L26-A

Chain N6:  82% 15% 3%




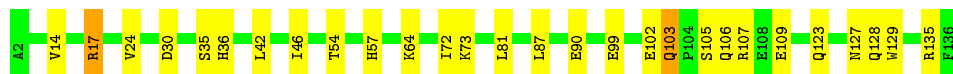
- Molecule 62: 60S ribosomal protein L26-A

Chain n6:  75% 22% .




- Molecule 63: 60S ribosomal protein L27-A

Chain N7:  79% 19%




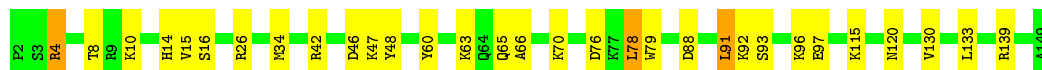
- Molecule 63: 60S ribosomal protein L27-A

Chain n7:  78% 20%




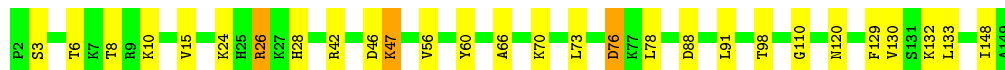
- Molecule 64: 60S ribosomal protein L28

Chain N8:  79% 19%




- Molecule 64: 60S ribosomal protein L28

Chain n8:  81% 17%




- Molecule 65: 60S ribosomal protein L29

Chain N9:  81% 19%




- Molecule 65: 60S ribosomal protein L29

Chain n9:  76% 22%




- Molecule 66: 60S ribosomal protein L30

Chain O0:  76% 17% 7%




- Molecule 66: 60S ribosomal protein L30

Chain o0:  78% 17% ..



- Molecule 67: 60S ribosomal protein L31-A

Chain O1:  76% 20% ..




- Molecule 67: 60S ribosomal protein L31-A

Chain o1:  77% 21% .




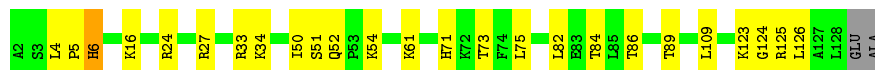
- Molecule 68: 60S ribosomal protein L32

Chain O2:  78% 19% ..




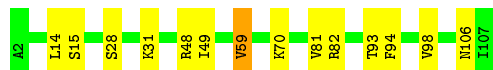
- Molecule 68: 60S ribosomal protein L32

Chain o2:  79% 19% ..




- Molecule 69: 60S ribosomal protein L33-A

Chain O3:  87% 12% .




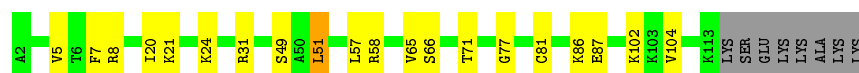
- Molecule 69: 60S ribosomal protein L33-A

Chain o3:  81% 18% .



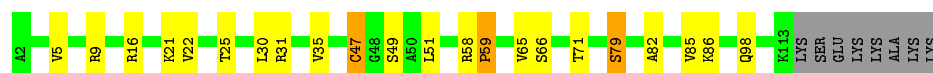
- Molecule 70: 60S ribosomal protein L34-A

Chain O4:  77% 16% 7%




- Molecule 70: 60S ribosomal protein L34-A

Chain o4:  75% 16% 7%



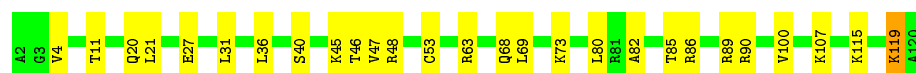
- Molecule 71: 60S ribosomal protein L35-A

Chain O5:  78% 21% 1%




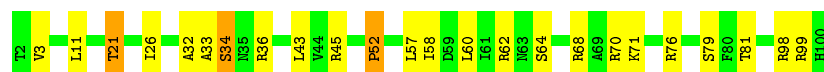
- Molecule 71: 60S ribosomal protein L35-A

Chain o5:  77% 22% 1%



- Molecule 72: 60S ribosomal protein L36-A

Chain O6:  76% 21% 3%




- Molecule 72: 60S ribosomal protein L36-A

Chain o6:  71% 26% 3%




- Molecule 73: 60S ribosomal protein L37-A

Chain O7:  84% 14% 2%




- Molecule 73: 60S ribosomal protein L37-A

Chain o7:  86% 14%




- Molecule 74: 60S ribosomal protein L38

Chain O8:  77% 23%



- Molecule 74: 60S ribosomal protein L38

Chain o8:  81% 18%



- Molecule 75: 60S ribosomal protein L39

Chain O9:  84% 16%



- Molecule 75: 60S ribosomal protein L39

Chain o9:  80% 20%



- Molecule 76: Ubiquitin-60S ribosomal protein L40

Chain Q0:  73% 25%



- Molecule 76: Ubiquitin-60S ribosomal protein L40

Chain q0:  75% 23%



- Molecule 77: 60S ribosomal protein L41-A

Chain Q1:  72% 28%




- Molecule 77: 60S ribosomal protein L41-A

Chain q1:  72% 28%




- Molecule 78: 60S ribosomal protein L42-A

Chain Q2:  75% 23%




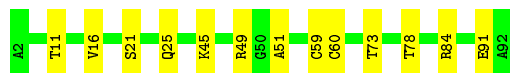
- Molecule 78: 60S ribosomal protein L42-A

Chain q2:  79% 19%




- Molecule 79: 60S ribosomal protein L43-A

Chain Q3:  86% 14%



- Molecule 79: 60S ribosomal protein L43-A

Chain q3:  79% 21%



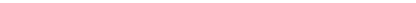
- Molecule 80: 40S ribosomal protein S30-A

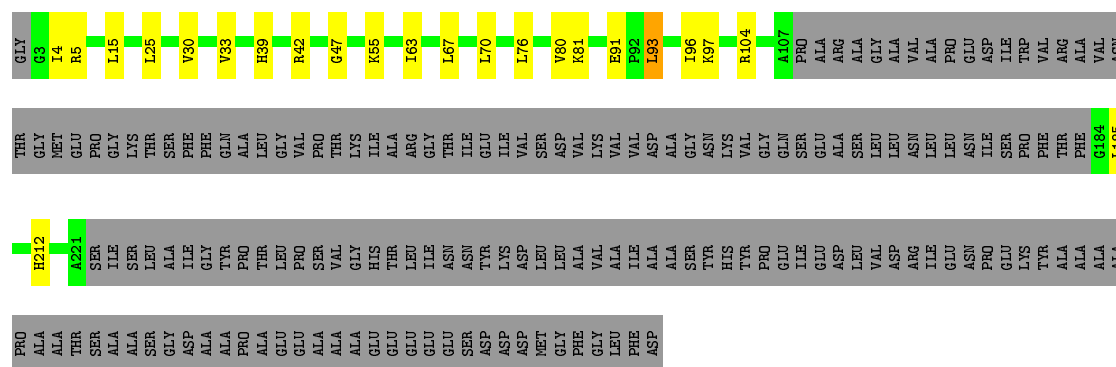
Chain e0:  73% 26%



- Molecule 81: 60S acidic ribosomal protein P0

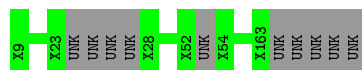


Chain p0:  39% 7% 54%



- Molecule 82: UNKNOWN PROTEIN m2

Chain m2: 



- Molecule 83: UNKNOWN PROTEIN p1

Chain p1:  100%

There are no outlier residues recorded for this chain.

- Molecule 84: UNKNOWN PROTEIN p2

Chain p2:  100%

There are no outlier residues recorded for this chain.

## 4 Data and refinement statistics

EDS failed to run properly - this section is therefore incomplete.

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	434.39Å 285.58Å 303.06Å 90.00° 98.99° 90.00°	Depositor
Resolution (Å)	49.88 – 3.20	Depositor
% Data completeness (in resolution range)	99.9 (49.88-3.20)	Depositor
$R_{merge}$	0.34	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.30 (at 3.19Å)	Xtriage
Refinement program	PHENIX (phenix.refine: dev_1702)	Depositor
R, $R_{free}$	0.212 , 0.262	Depositor
Wilson B-factor (Å <sup>2</sup> )	72.4	Xtriage
Anisotropy	0.130	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	411230	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	65.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.43% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, OHX, MG, 3L2

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	2	0.70	1/41698 (0.0%)	1.28	289/64972 (0.4%)
1	6	0.80	10/42765 (0.0%)	1.35	400/66634 (0.6%)
2	S0	0.45	0/1617	0.66	0/2215
2	s0	0.45	0/1623	0.68	0/2222
3	S1	0.38	0/1735	0.63	0/2335
3	s1	0.49	0/1748	0.69	0/2352
4	S2	0.48	0/1665	0.66	0/2263
4	s2	0.56	0/1665	0.74	0/2263
5	S3	0.47	0/1759	0.64	0/2368
5	s3	0.39	0/1759	0.59	0/2368
6	S4	0.46	0/2109	0.69	1/2839 (0.0%)
6	s4	0.49	0/2109	0.74	1/2839 (0.0%)
7	S5	0.37	0/1629	0.58	0/2202
7	s5	0.42	0/1629	0.66	1/2202 (0.0%)
8	S6	0.45	0/1823	0.65	0/2439
8	s6	0.49	0/1779	0.68	0/2379
9	S7	0.42	0/1506	0.65	0/2028
9	s7	0.43	0/1516	0.62	0/2043
10	S8	0.52	0/1514	0.67	0/2021
10	s8	0.58	0/1514	0.73	0/2021
11	S9	0.46	0/1519	0.65	0/2035
11	s9	0.52	0/1519	0.75	1/2035 (0.0%)
12	C0	0.43	0/790	0.70	1/1069 (0.1%)
12	c0	0.36	0/777	0.64	3/1049 (0.3%)
13	C1	0.55	0/1240	0.67	0/1675
13	c1	0.58	0/1194	0.71	0/1610
14	C2	0.35	0/900	0.63	0/1224
14	c2	0.30	0/900	0.60	1/1224 (0.1%)
15	C3	0.47	0/1215	0.69	2/1638 (0.1%)
15	c3	0.53	0/1215	0.69	0/1638
16	C4	0.40	0/901	0.70	0/1217
16	c4	0.49	0/960	0.74	0/1290

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	C5	0.43	0/998	0.64	0/1341
17	c5	0.44	0/1060	0.67	0/1426
18	C6	0.42	0/1125	0.69	2/1510 (0.1%)
18	c6	0.43	0/1131	0.67	0/1518
19	C7	0.43	0/935	0.64	0/1254
19	c7	0.43	0/914	0.67	0/1224
20	C8	0.41	0/1211	0.64	0/1628
20	c8	0.44	0/1211	0.68	1/1628 (0.1%)
21	C9	0.42	0/1130	0.65	0/1517
21	c9	0.44	0/1130	0.68	2/1517 (0.1%)
22	D0	0.42	0/865	0.64	0/1169
22	d0	0.43	0/892	0.64	0/1205
23	D1	0.44	0/693	0.63	0/935
23	d1	0.49	0/693	0.65	0/935
24	D2	0.50	0/1038	0.73	2/1395 (0.1%)
24	d2	0.56	0/1038	0.74	1/1395 (0.1%)
25	D3	0.59	0/1139	0.75	1/1518 (0.1%)
25	d3	0.66	0/1139	0.82	2/1518 (0.1%)
26	D4	0.43	0/1087	0.63	0/1449
26	d4	0.48	0/1087	0.69	0/1449
27	D5	0.38	0/571	0.69	0/768
27	d5	0.38	0/566	0.63	0/761
28	D6	0.48	0/782	0.73	0/1047
28	d6	0.59	0/782	0.73	0/1047
29	D7	0.42	0/620	0.65	0/838
29	d7	0.45	0/620	0.69	0/838
30	D8	0.35	0/499	0.59	0/670
30	d8	0.43	0/499	0.69	0/670
31	D9	0.52	0/452	0.71	1/600 (0.2%)
31	d9	0.45	0/452	0.67	0/600
32	E0	0.45	0/483	0.57	0/643
33	E1	0.42	0/577	0.76	0/770
33	e1	0.38	0/619	0.72	0/822
34	SR	0.36	0/2494	0.56	0/3393
34	sR	0.36	0/2495	0.58	0/3395
35	SM	0.51	0/1113	0.69	2/1502 (0.1%)
35	sM	0.47	0/683	0.67	1/923 (0.1%)
36	1	1.08	76/75394 (0.1%)	1.62	1625/117545 (1.4%)
36	5	1.10	110/75414 (0.1%)	1.64	1765/117575 (1.5%)
37	3	0.90	3/2883 (0.1%)	1.38	19/4491 (0.4%)
37	7	1.03	1/2883 (0.0%)	1.66	70/4491 (1.6%)
38	4	1.00	0/3746	1.57	67/5832 (1.1%)
38	8	0.90	2/3746 (0.1%)	1.41	29/5832 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
39	L2	0.67	0/1948	0.81	1/2617 (0.0%)
39	l2	0.65	0/1946	0.82	1/2614 (0.0%)
40	L3	0.70	0/3146	0.81	1/4228 (0.0%)
40	l3	0.77	0/3146	0.85	3/4228 (0.1%)
41	L4	0.77	0/2800	0.91	5/3790 (0.1%)
41	l4	0.72	1/2800 (0.0%)	0.87	2/3790 (0.1%)
42	L5	0.52	0/2425	0.69	0/3271
42	l5	0.67	0/2408	0.77	1/3248 (0.0%)
43	L6	0.71	0/1260	0.82	1/1694 (0.1%)
43	l6	0.71	0/1269	0.78	0/1705
44	L7	0.73	0/1821	0.84	0/2451
44	l7	0.82	0/1828	0.86	2/2461 (0.1%)
45	L8	0.53	0/1836	0.68	1/2481 (0.0%)
45	l8	0.49	0/1795	0.66	0/2429
46	L9	0.64	0/1539	0.75	0/2073
46	l9	0.73	0/1539	0.81	0/2073
47	M0	0.69	1/1741 (0.1%)	0.81	5/2335 (0.2%)
47	m0	0.70	1/1758 (0.1%)	0.85	1/2358 (0.0%)
48	M1	0.51	0/1374	0.69	1/1842 (0.1%)
48	m1	0.64	0/1374	0.78	2/1842 (0.1%)
49	M3	0.71	0/1568	0.83	2/2106 (0.1%)
49	m3	0.62	0/1573	0.80	0/2113
50	M4	0.70	0/1068	0.79	0/1438
50	m4	0.76	0/1074	0.80	1/1446 (0.1%)
51	M5	0.72	1/1757 (0.1%)	0.84	2/2354 (0.1%)
51	m5	0.63	0/1757	0.83	3/2354 (0.1%)
52	M6	0.81	0/1585	0.84	2/2128 (0.1%)
52	m6	0.96	2/1585 (0.1%)	0.95	4/2128 (0.2%)
53	M7	0.73	0/1443	0.80	1/1944 (0.1%)
53	m7	0.86	0/1250	0.84	0/1683
54	M8	0.75	0/1465	0.88	0/1965
54	m8	0.67	0/1465	0.85	0/1965
55	M9	0.53	0/1538	0.66	0/2050
55	m9	0.54	0/1538	0.65	0/2050
56	N0	0.73	0/1481	0.79	1/1990 (0.1%)
56	n0	0.82	0/1481	0.86	0/1990
57	N1	0.71	0/1300	0.80	1/1743 (0.1%)
57	n1	0.80	1/1300 (0.1%)	0.83	2/1743 (0.1%)
58	N2	0.40	0/812	0.60	0/1099
58	n2	0.46	0/794	0.67	0/1076
59	N3	0.70	0/1018	0.87	2/1369 (0.1%)
59	n3	0.79	0/1018	0.84	0/1369
60	N4	0.52	0/712	0.67	0/958

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
60	n4	0.58	0/1052	0.72	0/1398
61	N5	0.62	0/979	0.77	0/1321
61	n5	0.58	0/974	0.77	0/1314
62	N6	0.68	0/1004	0.85	2/1341 (0.1%)
62	n6	0.66	0/1004	0.82	1/1341 (0.1%)
63	N7	0.48	0/1118	0.67	0/1497
63	n7	0.47	0/1118	0.66	1/1497 (0.1%)
64	N8	0.73	0/1204	0.90	1/1612 (0.1%)
64	n8	0.72	0/1204	0.83	0/1612
65	N9	0.66	0/473	0.76	0/629
65	n9	0.71	0/473	0.94	1/629 (0.2%)
66	O0	0.49	0/751	0.63	0/1008
66	o0	0.46	0/775	0.63	0/1040
67	O1	0.61	0/890	0.73	0/1196
67	o1	0.72	0/897	0.80	0/1205
68	O2	0.76	0/1041	0.86	1/1394 (0.1%)
68	o2	0.79	0/1041	0.87	0/1394
69	O3	0.90	0/868	0.95	2/1168 (0.2%)
69	o3	0.87	0/868	0.90	0/1168
70	O4	0.56	0/890	0.75	1/1189 (0.1%)
70	o4	0.51	0/890	0.73	0/1189
71	O5	0.66	0/978	0.80	1/1301 (0.1%)
71	o5	0.53	0/974	0.68	0/1297
72	O6	0.62	0/778	0.78	0/1034
72	o6	0.54	0/777	0.72	0/1033
73	O7	0.73	0/696	1.03	4/923 (0.4%)
73	o7	0.61	0/696	0.80	0/923
74	O8	0.52	0/618	0.61	0/826
74	o8	0.45	0/614	0.59	0/822
75	O9	0.71	0/443	0.83	0/588
75	o9	0.67	0/443	0.81	0/588
76	Q0	0.65	0/423	0.80	0/562
76	q0	0.84	0/423	0.91	1/562 (0.2%)
77	Q1	0.63	0/234	0.93	0/300
77	q1	0.68	0/234	0.91	0/300
78	Q2	0.82	1/860 (0.1%)	0.80	0/1136
78	q2	0.76	1/860 (0.1%)	0.82	1/1136 (0.1%)
79	Q3	0.71	0/701	0.82	0/934
79	q3	0.66	0/701	0.76	2/934 (0.2%)
80	e0	0.56	0/499	0.72	0/665
81	p0	4.55	1/1091 (0.1%)	1.38	2/1472 (0.1%)
All	All	0.87	213/430073 (0.0%)	1.28	4359/631362 (0.7%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
7	s5	0	2
9	S7	0	1
9	s7	0	1
16	C4	0	1
17	c5	0	1
18	c6	0	1
19	C7	0	2
19	c7	0	1
22	d0	0	1
27	D5	0	1
28	D6	0	1
33	E1	0	1
39	l2	0	1
40	l3	0	1
41	L4	0	1
42	l5	0	1
43	L6	0	1
43	l6	0	1
44	l7	0	1
45	L8	0	1
49	M3	0	1
52	M6	0	1
52	m6	0	1
54	m8	0	2
56	n0	0	2
57	N1	0	1
64	n8	0	2
65	N9	0	1
65	n9	0	1
72	o6	0	1
81	p0	1	0
All	All	1	35

All (213) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	p0	212	HIS	CA-CB	149.59	4.83	1.53
78	Q2	17	CYS	CB-SG	13.09	2.04	1.82
36	5	1152	G	N9-C4	-11.55	1.28	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
78	q2	17	CYS	CB-SG	9.39	1.98	1.82
36	1	656	A	N3-C4	-7.83	1.30	1.34
36	1	3181	C	N3-C4	-7.79	1.28	1.33
36	1	2296	A	N9-C4	-7.79	1.33	1.37
51	M5	152	CYS	CB-SG	-7.70	1.69	1.82
41	14	94	CYS	CB-SG	-7.66	1.69	1.82
36	5	914	A	N9-C4	-7.60	1.33	1.37
1	6	1744	A	N9-C4	-7.32	1.33	1.37
36	5	367	A	N9-C4	-7.29	1.33	1.37
36	5	1152	G	N9-C8	7.17	1.42	1.37
36	5	1143	A	N9-C4	-7.12	1.33	1.37
36	5	2640	A	N9-C4	-7.08	1.33	1.37
36	5	2358	A	N9-C4	-7.07	1.33	1.37
36	1	2873	U	C2-N3	-7.04	1.32	1.37
36	5	2943	G	N7-C5	-7.03	1.35	1.39
52	m6	40	GLU	CG-CD	7.02	1.62	1.51
36	1	919	U	C2-N3	-6.96	1.32	1.37
36	5	1874	A	N9-C4	-6.93	1.33	1.37
36	1	2601	A	N9-C4	-6.86	1.33	1.37
36	1	817	A	N9-C4	6.81	1.42	1.37
36	5	2971	A	N9-C4	6.81	1.42	1.37
36	5	3008	A	N9-C4	-6.81	1.33	1.37
36	1	1103	A	N3-C4	6.76	1.39	1.34
36	1	1394	A	N9-C4	-6.74	1.33	1.37
36	5	883	A	N3-C4	-6.73	1.30	1.34
36	1	1103	A	N9-C4	6.71	1.41	1.37
36	5	1432	C	N3-C4	-6.69	1.29	1.33
36	1	2800	G	C6-N1	-6.69	1.34	1.39
36	5	652	G	N3-C4	-6.66	1.30	1.35
36	1	2147	A	C5-C4	-6.60	1.34	1.38
36	1	1154	A	N7-C5	-6.59	1.35	1.39
36	1	2986	U	N1-C2	-6.47	1.32	1.38
1	6	17	C	N3-C4	-6.46	1.29	1.33
36	1	1149	G	N3-C4	-6.43	1.30	1.35
36	5	1152	G	N3-C4	-6.41	1.30	1.35
36	5	2799	A	C6-N1	-6.41	1.31	1.35
36	1	3006	A	N3-C4	-6.38	1.31	1.34
36	5	1103	A	N9-C4	6.36	1.41	1.37
37	3	89	G	N9-C8	-6.36	1.33	1.37
36	5	2342	U	C2-N3	-6.34	1.33	1.37
36	5	808	A	N3-C4	-6.31	1.31	1.34
36	1	2714	G	N9-C4	-6.29	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	1	1330	A	N9-C4	-6.27	1.34	1.37
36	1	1114	U	C2-N3	-6.21	1.33	1.37
36	5	2147	A	C5-C6	-6.18	1.35	1.41
36	5	2626	A	N3-C4	-6.14	1.31	1.34
36	1	1326	A	N9-C4	-6.13	1.34	1.37
36	5	955	U	C2-N3	-6.10	1.33	1.37
36	1	1103	A	N7-C5	6.10	1.43	1.39
36	5	2726	C	N3-C4	-6.10	1.29	1.33
36	5	1456	A	N9-C4	-6.09	1.34	1.37
36	5	2980	U	C2-N3	-6.09	1.33	1.37
52	m6	80	PHE	CB-CG	-6.06	1.41	1.51
1	6	1750	A	N9-C4	-6.05	1.34	1.37
47	m0	8	CYS	CB-SG	-6.01	1.72	1.82
37	3	89	G	C5-C4	-6.00	1.34	1.38
36	1	2355	G	N7-C5	-5.94	1.35	1.39
1	6	1027	A	N9-C4	-5.93	1.34	1.37
36	5	523	A	N9-C4	-5.92	1.34	1.37
36	5	2343	C	N1-C6	-5.87	1.33	1.37
36	5	1177	G	C6-N1	-5.87	1.35	1.39
36	5	2403	G	C6-N1	5.86	1.43	1.39
36	5	2858	U	C2-N3	-5.84	1.33	1.37
36	1	1367	G	C5-C4	-5.83	1.34	1.38
36	5	3106	A	N7-C5	-5.83	1.35	1.39
36	1	1445	U	N1-C2	-5.83	1.33	1.38
36	5	2401	A	C5-C4	5.82	1.42	1.38
36	5	3120	C	N3-C4	-5.80	1.29	1.33
36	1	3006	A	N9-C4	-5.80	1.34	1.37
36	5	2379	U	C2-N3	-5.79	1.33	1.37
36	1	1116	G	N3-C4	-5.78	1.31	1.35
36	5	943	U	N1-C2	-5.73	1.33	1.38
36	1	2363	A	N9-C4	-5.73	1.34	1.37
1	6	163	G	N9-C4	-5.73	1.33	1.38
36	1	421	G	N1-C2	-5.72	1.33	1.37
36	5	1476	G	N3-C4	-5.71	1.31	1.35
36	1	2409	G	C5-C4	-5.70	1.34	1.38
36	1	951	A	N9-C4	-5.70	1.34	1.37
36	1	744	A	N9-C4	-5.69	1.34	1.37
36	5	807	A	N9-C4	-5.68	1.34	1.37
36	5	343	U	C2-N3	-5.67	1.33	1.37
36	1	1379	G	C6-N1	-5.66	1.35	1.39
36	1	2314	U	C2-O2	5.66	1.27	1.22
1	6	1800	A	N9-C4	5.64	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	1	921	A	N7-C5	-5.62	1.35	1.39
36	5	397	A	N3-C4	-5.60	1.31	1.34
36	1	3306	U	N3-C4	-5.59	1.33	1.38
36	5	3274	A	N9-C4	-5.58	1.34	1.37
36	1	1547	G	C5-C4	-5.58	1.34	1.38
1	6	399	A	N9-C4	-5.58	1.34	1.37
36	1	900	G	N9-C4	-5.57	1.33	1.38
36	5	660	A	N3-C4	-5.57	1.31	1.34
36	1	339	C	N3-C4	-5.57	1.30	1.33
36	1	919	U	N3-C4	-5.56	1.33	1.38
36	5	521	A	N9-C4	-5.55	1.34	1.37
36	5	2399	A	N9-C4	-5.55	1.34	1.37
36	1	2281	A	N9-C4	-5.55	1.34	1.37
36	1	359	U	C4-O4	5.54	1.28	1.23
36	1	282	G	N1-C2	-5.53	1.33	1.37
38	8	5	U	N1-C2	-5.53	1.33	1.38
47	M0	8	CYS	CB-SG	-5.52	1.72	1.81
36	5	1159	A	N9-C4	-5.52	1.34	1.37
36	5	2627	C	N3-C4	-5.52	1.30	1.33
36	1	423	A	N3-C4	-5.51	1.31	1.34
36	5	1887	A	C5-C4	-5.49	1.34	1.38
36	5	1867	A	N3-C4	-5.49	1.31	1.34
36	5	92	G	C8-N7	-5.48	1.27	1.30
36	5	953	G	C5-C4	-5.48	1.34	1.38
36	5	2879	C	N1-C6	-5.48	1.33	1.37
36	5	345	G	N9-C8	-5.47	1.34	1.37
36	5	3048	A	N7-C5	-5.46	1.35	1.39
36	5	345	G	N7-C5	-5.46	1.35	1.39
36	5	3040	A	N9-C4	-5.46	1.34	1.37
36	5	2934	A	C6-N1	-5.45	1.31	1.35
36	1	206	G	C5-C4	-5.44	1.34	1.38
36	5	908	G	N7-C5	-5.43	1.35	1.39
37	7	88	G	C6-N1	-5.43	1.35	1.39
36	5	706	A	N9-C4	-5.42	1.34	1.37
36	1	2169	G	C5-C6	5.42	1.47	1.42
36	5	847	A	N9-C4	-5.42	1.34	1.37
36	5	2881	C	N1-C6	-5.41	1.33	1.37
36	5	366	A	N3-C4	-5.40	1.31	1.34
36	5	2409	G	C5-C4	-5.40	1.34	1.38
36	1	2419	A	N9-C4	-5.40	1.34	1.37
36	5	1116	G	N3-C4	-5.39	1.31	1.35
36	5	2847	A	N9-C4	-5.39	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	1	1157	G	C6-N1	-5.39	1.35	1.39
36	5	802	C	N1-C6	-5.39	1.33	1.37
36	1	885	U	C2-N3	-5.38	1.33	1.37
36	5	3004	C	N1-C6	-5.38	1.33	1.37
36	5	2244	A	N9-C4	-5.37	1.34	1.37
36	1	2333	C	N3-C4	-5.35	1.30	1.33
36	5	971	G	N9-C8	-5.35	1.34	1.37
36	5	1174	G	C5-C4	-5.34	1.34	1.38
57	n1	104	GLU	CB-CG	5.32	1.62	1.52
36	5	2902	A	N3-C4	-5.32	1.31	1.34
36	1	1116	G	N7-C5	-5.31	1.36	1.39
36	5	421	G	C6-N1	-5.30	1.35	1.39
36	1	3208	G	N9-C4	-5.30	1.33	1.38
36	5	941	G	C6-N1	-5.28	1.35	1.39
36	1	1395	G	C5-C4	-5.27	1.34	1.38
1	6	1765	A	N9-C4	-5.27	1.34	1.37
36	1	2762	A	N3-C4	-5.25	1.31	1.34
36	1	2944	U	C4-O4	-5.25	1.19	1.23
36	1	699	A	N9-C4	-5.25	1.34	1.37
36	5	2733	A	N3-C4	-5.25	1.31	1.34
36	1	2846	U	N3-C4	-5.24	1.33	1.38
36	5	424	G	C5-C4	-5.24	1.34	1.38
36	1	2969	A	N7-C5	-5.23	1.36	1.39
36	1	2820	A	N9-C4	-5.23	1.34	1.37
36	5	1195	A	N9-C4	-5.23	1.34	1.37
1	6	119	A	N9-C4	-5.23	1.34	1.37
36	5	2134	G	C6-N1	-5.22	1.35	1.39
36	1	2761	G	N7-C5	-5.22	1.36	1.39
36	5	1152	G	C5-C6	-5.22	1.37	1.42
36	5	522	A	N7-C5	-5.22	1.36	1.39
36	5	2302	G	C6-N1	-5.21	1.35	1.39
36	5	417	A	N9-C4	-5.19	1.34	1.37
36	1	1905	G	C2-N3	-5.19	1.28	1.32
36	1	654	C	N1-C6	-5.19	1.34	1.37
36	5	3048	A	N9-C4	-5.18	1.34	1.37
1	6	1137	A	C5-C4	-5.18	1.35	1.38
36	5	2957	G	C8-N7	-5.18	1.27	1.30
36	5	1295	G	N3-C4	-5.18	1.31	1.35
36	1	2911	A	N9-C4	-5.17	1.34	1.37
36	5	2993	G	C5-C4	-5.17	1.34	1.38
36	5	2145	A	N7-C5	-5.17	1.36	1.39
36	5	2715	A	N3-C4	-5.17	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	5	3093	C	N1-C6	-5.17	1.34	1.37
36	5	1476	G	N9-C4	-5.16	1.33	1.38
36	1	71	A	N3-C4	-5.15	1.31	1.34
36	5	1184	A	N9-C4	-5.15	1.34	1.37
36	5	1506	A	N3-C4	-5.14	1.31	1.34
36	5	1177	G	N3-C4	-5.13	1.31	1.35
36	1	1367	G	C5-C6	-5.13	1.37	1.42
36	5	646	A	C6-N1	-5.12	1.31	1.35
1	2	1730	A	N9-C4	-5.11	1.34	1.37
37	3	82	G	C6-N1	-5.11	1.35	1.39
36	5	1435	A	C5-C4	-5.11	1.35	1.38
36	1	649	A	N3-C4	-5.11	1.31	1.34
36	5	914	A	N3-C4	-5.11	1.31	1.34
36	5	1897	G	N3-C4	-5.10	1.31	1.35
36	1	1134	G	N7-C5	-5.09	1.36	1.39
36	1	1142	G	N1-C2	-5.08	1.33	1.37
36	5	1199	C	N1-C6	-5.07	1.34	1.37
36	5	2403	G	N7-C5	-5.07	1.36	1.39
36	1	3306	U	C2-N3	-5.07	1.34	1.37
36	1	2377	G	C6-N1	-5.07	1.36	1.39
36	1	1865	A	N3-C4	-5.06	1.31	1.34
36	5	2910	A	N3-C4	-5.05	1.31	1.34
36	5	1462	A	N9-C4	-5.05	1.34	1.37
36	5	88	A	N9-C4	-5.05	1.34	1.37
36	5	818	C	N1-C6	-5.05	1.34	1.37
36	5	2943	G	C5-C6	-5.05	1.37	1.42
36	5	2953	U	C4-O4	5.05	1.27	1.23
36	1	3277	U	N1-C2	5.05	1.43	1.38
36	5	962	A	C5-C6	-5.04	1.36	1.41
36	1	2911	A	N3-C4	-5.04	1.31	1.34
36	1	754	G	N9-C8	-5.04	1.34	1.37
36	5	39	A	N9-C4	-5.04	1.34	1.37
36	1	422	A	N3-C4	-5.03	1.31	1.34
38	8	96	A	N9-C4	-5.03	1.34	1.37
36	1	948	C	N1-C6	-5.03	1.34	1.37
36	5	1587	A	N9-C4	-5.03	1.34	1.37
36	5	2797	C	N1-C6	-5.02	1.34	1.37
36	5	2279	A	N9-C4	-5.02	1.34	1.37
36	5	2976	A	N9-C4	-5.02	1.34	1.37
36	5	2316	G	N9-C8	-5.01	1.34	1.37
36	1	1142	G	C6-N1	-5.00	1.36	1.39
36	5	2370	G	C6-N1	-5.00	1.36	1.39

All (4359) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	p0	212	HIS	N-CA-CB	-47.24	25.57	110.60
36	5	1152	G	N3-C4-C5	23.22	140.21	128.60
36	5	1152	G	N3-C4-N9	-22.85	112.29	126.00
36	5	1152	G	C2-N3-C4	-18.92	102.44	111.90
36	5	780	A	O5'-P-OP1	-14.51	92.64	105.70
36	5	2971	A	O5'-P-OP2	-14.33	92.80	105.70
36	5	1116	G	O5'-P-OP1	-14.06	93.04	105.70
36	1	3306	U	N3-C4-O4	-13.94	109.64	119.40
36	5	2871	G	O5'-P-OP2	-13.44	93.61	105.70
36	1	2846	U	C5-C4-O4	13.32	133.89	125.90
1	6	163	G	N3-C4-N9	-13.07	118.16	126.00
36	1	3278	C	N1-C2-O2	12.85	126.61	118.90
36	5	2943	G	C6-C5-N7	-12.77	122.74	130.40
36	5	1897	G	N1-C6-O6	12.61	127.47	119.90
36	1	960	U	C5-C6-N1	-12.61	116.40	122.70
36	5	1152	G	C5-N7-C8	-12.56	98.02	104.30
36	5	580	C	C6-N1-C2	-12.55	115.28	120.30
36	5	424	G	C5-C6-O6	-12.31	121.21	128.60
36	1	2846	U	N3-C2-O2	-12.29	113.60	122.20
36	1	3306	U	C5-C4-O4	12.13	133.18	125.90
36	1	2617	U	C5-C4-O4	12.06	133.14	125.90
36	5	2117	A	N1-C6-N6	-12.04	111.38	118.60
36	5	2943	G	N1-C6-O6	12.03	127.11	119.90
36	1	2819	A	O5'-P-OP2	-12.01	94.89	105.70
36	1	960	U	C2-N1-C1'	-11.97	103.33	117.70
36	5	2147	A	N1-C6-N6	11.89	125.73	118.60
36	1	960	U	C6-N1-C2	11.84	128.10	121.00
36	1	2873	U	N3-C4-O4	-11.81	111.14	119.40
36	1	960	U	N3-C4-O4	-11.78	111.15	119.40
36	1	2412	G	C5-C6-O6	-11.74	121.55	128.60
36	5	1481	A	C8-N9-C4	-11.71	101.12	105.80
36	5	922	U	N3-C2-O2	-11.70	114.01	122.20
36	1	3212	C	C6-N1-C2	11.64	124.95	120.30
36	1	922	U	N1-C2-O2	11.57	130.90	122.80
36	5	2385	G	O5'-P-OP1	-11.55	95.31	105.70
36	1	1367	G	O5'-P-OP1	-11.52	95.33	105.70
36	1	1149	G	N1-C6-O6	11.49	126.80	119.90
36	1	1891	A	C8-N9-C4	11.44	110.38	105.80
36	5	3245	A	C2-N3-C4	-11.34	104.93	110.60
36	5	1152	G	C8-N9-C1'	11.34	141.74	127.00
36	1	639	G	N1-C6-O6	11.31	126.69	119.90
36	5	2648	G	N1-C6-O6	-11.17	113.20	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2609	A	O5'-P-OP2	-11.16	95.66	105.70
36	1	2714	G	N3-C4-C5	10.97	134.09	128.60
36	1	2283	G	N1-C6-O6	10.95	126.47	119.90
36	5	2852	C	C6-N1-C2	10.92	124.67	120.30
36	1	1495	U	C5-C6-N1	-10.91	117.24	122.70
37	7	101	G	N1-C6-O6	10.91	126.45	119.90
36	5	1589	A	N1-C6-N6	10.88	125.13	118.60
36	5	2403	G	O5'-P-OP2	-10.83	95.95	105.70
36	1	3181	C	C5-C4-N4	10.82	127.78	120.20
36	5	2354	C	N1-C2-O2	-10.82	112.41	118.90
1	2	553	G	N1-C6-O6	10.79	126.37	119.90
36	1	2379	U	C5-C4-O4	-10.79	119.43	125.90
1	6	1773	C	N3-C4-C5	-10.68	117.63	121.90
36	1	2714	G	N3-C4-N9	-10.66	119.60	126.00
36	5	1292	C	C6-N1-C2	10.62	124.55	120.30
36	5	227	G	O5'-P-OP2	-10.61	96.15	105.70
36	1	3095	U	O5'-P-OP1	-10.57	96.19	105.70
36	1	2352	A	O5'-P-OP2	-10.53	96.22	105.70
36	5	1160	C	N1-C2-O2	-10.48	112.61	118.90
36	5	2971	A	C2-N3-C4	10.44	115.82	110.60
36	5	3123	A	C8-N9-C4	10.41	109.97	105.80
36	5	2524	A	O4'-C1'-N9	10.36	116.49	108.20
36	1	282	G	C8-N9-C4	-10.35	102.26	106.40
36	1	1389	G	C4-C5-N7	10.34	114.93	110.80
36	1	2827	U	C5-C6-N1	-10.31	117.54	122.70
36	1	1367	G	N1-C6-O6	10.30	126.08	119.90
38	4	21	C	C6-N1-C2	10.29	124.42	120.30
36	1	1849	C	N1-C2-O2	-10.29	112.73	118.90
36	5	776	U	C5-C6-N1	-10.23	117.58	122.70
36	5	2879	C	C6-N1-C2	10.19	124.38	120.30
1	6	163	G	N3-C4-C5	10.19	133.69	128.60
36	1	2930	A	N1-C6-N6	10.18	124.71	118.60
36	1	709	A	C8-N9-C4	10.18	109.87	105.80
1	2	639	U	N3-C2-O2	-10.17	115.08	122.20
36	5	612	U	O5'-P-OP1	-10.17	96.55	105.70
36	1	3181	C	N3-C4-N4	-10.15	110.89	118.00
36	1	2873	U	C5-C4-O4	10.14	131.98	125.90
36	5	1158	A	C2-N3-C4	-10.13	105.53	110.60
36	1	1125	U	O5'-P-OP1	-10.12	96.59	105.70
36	1	2873	U	N3-C2-O2	-10.08	115.14	122.20
36	5	3306	U	O5'-P-OP2	-10.07	96.64	105.70
36	5	1481	A	N7-C8-N9	10.04	118.82	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2808	A	N9-C4-C5	-10.02	101.79	105.80
36	5	2726	C	C5-C4-N4	10.02	127.22	120.20
36	5	2797	C	N1-C2-O2	-10.01	112.89	118.90
1	2	1039	A	O4'-C1'-N9	9.99	116.19	108.20
36	5	2848	G	N1-C6-O6	9.95	125.87	119.90
1	6	543	C	N1-C2-O2	9.94	124.86	118.90
36	5	877	C	N3-C4-C5	9.94	125.87	121.90
36	5	1902	G	C5-C6-O6	-9.93	122.64	128.60
36	5	2820	A	N1-C6-N6	-9.93	112.64	118.60
36	1	1104	G	O5'-P-OP1	-9.92	96.78	105.70
36	1	1107	C	C6-N1-C2	9.91	124.26	120.30
36	1	2617	U	N1-C2-N3	9.89	120.84	114.90
37	7	101	G	C6-C5-N7	-9.89	124.46	130.40
36	1	2209	U	C5-C6-N1	9.88	127.64	122.70
36	5	3245	A	C5-N7-C8	-9.86	98.97	103.90
36	1	2964	G	O5'-P-OP2	-9.86	96.82	105.70
36	5	2726	C	C6-N1-C2	-9.84	116.36	120.30
36	1	218	G	O5'-P-OP2	-9.82	96.86	105.70
36	5	1852	G	C8-N9-C4	-9.82	102.47	106.40
1	6	352	A	O5'-P-OP2	-9.79	96.89	105.70
36	5	2351	U	N3-C2-O2	-9.75	115.38	122.20
36	5	1306	G	C5-C6-O6	-9.73	122.76	128.60
36	1	2169	G	C4-C5-N7	-9.69	106.92	110.80
36	5	398	A	O5'-P-OP2	-9.66	97.00	105.70
73	O7	45	ARG	NE-CZ-NH1	-9.66	115.47	120.30
36	5	2199	G	N1-C6-O6	9.61	125.67	119.90
36	5	2820	A	N9-C4-C5	9.58	109.63	105.80
1	6	385	A	N1-C6-N6	-9.56	112.87	118.60
1	6	453	U	N3-C2-O2	-9.55	115.52	122.20
36	5	1473	G	C8-N9-C4	9.52	110.21	106.40
36	1	2412	G	C4-C5-N7	9.50	114.60	110.80
36	5	2865	U	C2-N3-C4	9.48	132.69	127.00
36	1	2355	G	N1-C6-O6	9.48	125.59	119.90
36	5	3245	A	N7-C8-N9	9.48	118.54	113.80
36	5	1520	G	C5-C6-O6	-9.44	122.93	128.60
36	5	3217	C	C6-N1-C2	9.44	124.08	120.30
36	5	2383	C	N3-C4-C5	-9.43	118.13	121.90
36	5	2421	U	N1-C2-O2	-9.41	116.21	122.80
36	5	2943	G	C5-C6-O6	-9.41	122.95	128.60
36	5	1192	C	N3-C2-O2	-9.40	115.32	121.90
36	1	2983	C	C5-C6-N1	-9.40	116.30	121.00
36	5	2928	C	O5'-P-OP1	-9.38	97.26	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	395	A	O5'-P-OP2	-9.36	97.27	105.70
36	1	2870	C	C2-N1-C1'	-9.36	108.50	118.80
36	5	1433	A	C8-N9-C4	-9.36	102.06	105.80
36	5	3306	U	C5-C4-O4	-9.34	120.30	125.90
36	5	283	G	C5-C6-O6	-9.33	123.00	128.60
36	5	1841	A	O5'-P-OP1	-9.33	97.30	105.70
36	5	2117	A	C5-C6-N6	9.33	131.16	123.70
36	5	969	C	C6-N1-C2	9.31	124.02	120.30
36	5	1152	G	C4-N9-C1'	-9.31	114.40	126.50
36	5	2818	U	O5'-P-OP1	-9.31	97.32	105.70
36	1	3344	A	N7-C8-N9	9.27	118.44	113.80
36	1	671	U	O5'-P-OP2	-9.24	97.38	105.70
36	5	3270	U	O5'-P-OP1	-9.24	97.38	105.70
36	5	1148	G	C5-C6-O6	-9.23	123.06	128.60
1	6	756	A	C8-N9-C4	-9.23	102.11	105.80
36	5	3115	C	N1-C2-O2	-9.23	113.36	118.90
36	5	1881	A	N1-C6-N6	9.22	124.14	118.60
36	5	651	G	C8-N9-C4	-9.22	102.71	106.40
36	5	2948	C	N3-C4-C5	9.21	125.59	121.90
36	5	3143	C	N3-C4-N4	9.20	124.44	118.00
36	1	1192	C	N1-C2-O2	9.20	124.42	118.90
36	1	2800	G	N1-C6-O6	-9.19	114.38	119.90
36	5	2383	C	C6-N1-C2	-9.19	116.62	120.30
36	5	2290	C	C6-N1-C2	9.18	123.97	120.30
36	1	1381	A	O5'-P-OP1	-9.17	97.44	105.70
36	1	2617	U	C4-C5-C6	9.17	125.20	119.70
36	1	2816	G	C5-C6-O6	-9.17	123.10	128.60
73	O7	65	ARG	NE-CZ-NH1	9.16	124.88	120.30
36	1	3248	C	C6-N1-C2	-9.15	116.64	120.30
36	5	3140	G	C4-C5-N7	9.15	114.46	110.80
36	1	3217	C	N3-C2-O2	-9.13	115.51	121.90
36	5	2353	G	N1-C6-O6	9.13	125.38	119.90
36	5	2572	C	N1-C2-O2	9.13	124.38	118.90
36	1	2621	G	N3-C2-N2	-9.10	113.53	119.90
36	5	1116	G	N9-C4-C5	9.09	109.04	105.40
36	5	650	C	N1-C2-O2	-9.08	113.45	118.90
36	5	2905	U	C5-C6-N1	-9.08	118.16	122.70
1	6	1137	A	C8-N9-C4	9.06	109.42	105.80
36	1	2930	A	C5-C6-N6	-9.04	116.47	123.70
36	5	1150	A	O5'-P-OP2	-9.04	97.56	105.70
36	5	1178	G	N1-C6-O6	9.04	125.32	119.90
36	5	1189	C	N1-C2-O2	-9.03	113.48	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2309	A	N1-C6-N6	-9.03	113.18	118.60
36	1	922	U	N3-C2-O2	-9.01	115.89	122.20
36	5	546	C	N1-C2-O2	9.00	124.30	118.90
36	1	281	G	C5-C6-O6	-8.99	123.20	128.60
36	1	2621	G	N1-C6-O6	8.99	125.30	119.90
36	5	1192	C	N1-C2-O2	8.99	124.30	118.90
36	5	952	A	N1-C6-N6	8.99	123.99	118.60
36	5	952	A	C5-C6-N6	-8.98	116.52	123.70
36	1	1156	C	C4-C5-C6	8.97	121.88	117.40
36	1	3278	C	N3-C2-O2	-8.96	115.63	121.90
36	1	2808	A	N1-C6-N6	8.92	123.95	118.60
36	5	1306	G	N1-C6-O6	8.91	125.25	119.90
36	1	2314	U	C5-C4-O4	-8.91	120.55	125.90
1	6	47	A	O5'-P-OP1	-8.90	97.69	105.70
1	6	609	U	N1-C2-N3	8.89	120.24	114.90
36	1	1308	A	C8-N9-C4	-8.89	102.24	105.80
36	1	1367	G	C5-C6-O6	-8.89	123.27	128.60
36	5	2943	G	C4-C5-N7	8.89	114.36	110.80
36	1	1556	C	C6-N1-C2	-8.88	116.75	120.30
36	1	2317	A	O5'-P-OP2	-8.87	97.71	105.70
36	5	3218	A	N1-C6-N6	8.87	123.92	118.60
36	5	1879	A	N1-C6-N6	8.86	123.92	118.60
36	1	2370	G	C5-C6-O6	-8.85	123.29	128.60
36	1	2808	A	C8-N9-C4	8.85	109.34	105.80
37	7	73	C	C6-N1-C2	-8.85	116.76	120.30
36	1	2617	U	C5-C6-N1	-8.84	118.28	122.70
38	4	94	C	C6-N1-C2	8.84	123.83	120.30
36	5	1507	G	O5'-P-OP1	-8.82	97.76	105.70
36	5	2147	A	C5-C6-N6	-8.82	116.64	123.70
36	5	1589	A	C5-C6-N6	-8.81	116.65	123.70
36	1	2868	U	N1-C2-O2	8.80	128.96	122.80
36	5	1657	C	N1-C2-O2	8.80	124.18	118.90
36	5	2860	U	C6-N1-C2	8.80	126.28	121.00
1	6	1280	C	N3-C4-C5	-8.79	118.39	121.90
36	1	54	C	C6-N1-C2	8.78	123.81	120.30
36	1	2169	G	N1-C6-O6	-8.78	114.63	119.90
36	1	3181	C	N3-C2-O2	-8.78	115.76	121.90
36	5	3154	C	N1-C2-O2	8.78	124.17	118.90
36	1	398	A	O5'-P-OP2	-8.77	97.80	105.70
36	1	1450	G	C5-C6-O6	-8.77	123.34	128.60
36	5	48	A	C8-N9-C4	-8.77	102.29	105.80
36	1	1556	C	N3-C2-O2	-8.76	115.77	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2244	A	C8-N9-C4	8.75	109.30	105.80
1	6	1634	C	C2-N1-C1'	8.75	128.42	118.80
36	5	2953	U	N3-C4-O4	8.75	125.52	119.40
36	1	2306	C	N1-C2-O2	8.74	124.14	118.90
36	1	2846	U	N3-C4-O4	-8.73	113.29	119.40
36	1	3057	U	C5-C4-O4	8.73	131.14	125.90
1	6	1274	C	C6-N1-C2	-8.73	116.81	120.30
36	1	439	C	N1-C2-O2	8.73	124.14	118.90
36	1	648	C	O5'-P-OP1	-8.71	97.86	105.70
36	1	2831	G	N1-C6-O6	8.71	125.13	119.90
36	1	2602	G	C8-N9-C4	8.69	109.88	106.40
36	5	1158	A	N1-C2-N3	8.69	133.64	129.30
36	5	1902	G	N1-C6-O6	8.69	125.11	119.90
36	1	2815	G	C8-N9-C4	8.68	109.87	106.40
36	5	1152	G	C4-C5-N7	8.68	114.27	110.80
36	5	636	C	C5-C6-N1	-8.67	116.67	121.00
36	1	2983	C	C4-C5-C6	8.66	121.73	117.40
36	5	283	G	C4-C5-N7	8.66	114.26	110.80
36	5	2704	A	O5'-P-OP1	-8.65	97.92	105.70
36	5	2341	A	C8-N9-C4	8.62	109.25	105.80
1	2	639	U	N1-C2-O2	8.61	128.83	122.80
36	5	952	A	N9-C4-C5	-8.61	102.36	105.80
36	1	1103	A	C2-N3-C4	8.60	114.90	110.60
36	1	793	C	N1-C2-O2	-8.57	113.75	118.90
36	1	901	G	N1-C6-O6	8.57	125.05	119.90
36	5	2820	A	C8-N9-C4	-8.57	102.37	105.80
36	1	91	G	C5-C6-O6	-8.56	123.46	128.60
37	7	79	A	N1-C6-N6	8.56	123.74	118.60
36	1	3217	C	N1-C2-O2	8.55	124.03	118.90
36	1	3344	A	C5-N7-C8	-8.55	99.63	103.90
36	1	1326	A	C8-N9-C4	8.54	109.22	105.80
36	5	1305	U	O5'-P-OP1	-8.54	98.02	105.70
36	5	2147	A	C6-C5-N7	-8.54	126.32	132.30
36	1	2959	C	N1-C2-O2	-8.52	113.79	118.90
36	1	3180	A	C8-N9-C4	8.52	109.21	105.80
36	5	1132	C	O5'-P-OP1	-8.51	98.04	105.70
36	1	2314	U	N1-C2-N3	-8.51	109.79	114.90
36	1	3269	U	O5'-P-OP2	-8.51	98.05	105.70
36	5	2403	G	O5'-P-OP1	8.50	120.90	110.70
36	1	957	C	O5'-P-OP2	-8.50	98.05	105.70
36	1	3208	G	N3-C4-N9	-8.49	120.90	126.00
36	5	1875	G	N1-C6-O6	-8.49	114.80	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1308	A	N7-C8-N9	8.49	118.05	113.80
36	1	802	C	O5'-P-OP1	-8.48	98.07	105.70
1	6	453	U	N1-C2-O2	8.47	128.73	122.80
36	5	2152	A	N1-C6-N6	8.47	123.69	118.60
36	1	644	G	C6-C5-N7	-8.47	125.32	130.40
36	1	2121	G	N1-C6-O6	-8.47	114.82	119.90
36	5	2992	U	C5-C6-N1	8.47	126.93	122.70
36	5	2342	U	C5-C6-N1	-8.46	118.47	122.70
36	5	2403	G	N1-C6-O6	8.46	124.98	119.90
36	5	38	U	C6-N1-C2	8.46	126.07	121.00
36	5	3204	C	C6-N1-C2	8.46	123.68	120.30
36	1	1906	G	N1-C6-O6	8.44	124.96	119.90
36	1	2412	G	N1-C6-O6	8.44	124.96	119.90
1	2	1200	G	N1-C6-O6	8.43	124.96	119.90
12	C0	88	PRO	N-CA-CB	8.42	113.41	103.30
36	1	2944	U	N3-C4-C5	8.42	119.65	114.60
36	5	2392	C	C5-C6-N1	-8.41	116.79	121.00
36	5	411	U	C5-C6-N1	-8.41	118.50	122.70
36	1	3208	G	C4-N9-C1'	-8.40	115.57	126.50
36	1	1175	C	C6-N1-C2	8.40	123.66	120.30
36	1	2642	A	C5-C6-N1	-8.40	113.50	117.70
36	5	2385	G	C8-N9-C4	8.39	109.76	106.40
36	1	790	U	N3-C2-O2	-8.38	116.33	122.20
36	5	2345	A	C8-N9-C4	8.38	109.15	105.80
1	6	1	U	C2-N1-C1'	8.38	127.76	117.70
36	1	1838	G	C5-C6-O6	-8.38	123.57	128.60
36	5	2334	U	O5'-P-OP2	-8.37	98.16	105.70
36	1	2194	G	C6-C5-N7	-8.37	125.38	130.40
1	6	756	A	N7-C8-N9	8.35	117.98	113.80
36	5	1868	G	C6-C5-N7	-8.35	125.39	130.40
36	1	3242	G	O5'-P-OP2	-8.35	98.19	105.70
36	5	421	G	N3-C4-N9	8.34	131.00	126.00
36	5	2403	G	C5-C6-O6	-8.34	123.60	128.60
36	5	2385	G	C5-C6-O6	-8.33	123.60	128.60
36	5	3245	A	C8-N9-C4	-8.33	102.47	105.80
70	O4	51	LEU	CA-CB-CG	8.33	134.46	115.30
36	1	2572	C	C2-N1-C1'	8.32	127.95	118.80
36	1	2986	U	N1-C2-O2	-8.32	116.98	122.80
36	1	1838	G	N1-C6-O6	8.31	124.89	119.90
1	6	609	U	C4-C5-C6	8.31	124.69	119.70
36	5	2371	G	C8-N9-C4	8.31	109.72	106.40
36	5	647	A	C8-N9-C4	8.31	109.12	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1513	G	C8-N9-C4	-8.31	103.08	106.40
36	1	2761	G	N1-C6-O6	8.30	124.88	119.90
36	1	2412	G	C6-C5-N7	-8.30	125.42	130.40
36	5	1444	G	C5-C6-O6	-8.30	123.62	128.60
36	1	2642	A	C6-N1-C2	8.30	123.58	118.60
36	5	2283	G	C5-C6-O6	-8.29	123.63	128.60
36	5	2698	G	C8-N9-C4	8.29	109.72	106.40
36	5	546	C	N3-C2-O2	-8.28	116.10	121.90
36	5	2900	A	N1-C6-N6	-8.28	113.63	118.60
36	5	1117	G	O5'-P-OP1	-8.28	98.25	105.70
36	1	2946	A	N9-C4-C5	-8.28	102.49	105.80
36	1	91	G	N1-C6-O6	8.27	124.86	119.90
1	6	543	C	N3-C2-O2	-8.27	116.11	121.90
36	1	2169	G	N9-C4-C5	8.27	108.71	105.40
38	4	24	G	C8-N9-C4	8.27	109.71	106.40
36	5	3215	A	C2-N3-C4	-8.27	106.47	110.60
36	5	1307	G	P-O3'-C3'	8.26	129.62	119.70
36	5	1506	A	N9-C4-C5	8.26	109.11	105.80
36	5	776	U	N1-C2-N3	8.26	119.85	114.90
36	5	41	G	C4-C5-N7	8.25	114.10	110.80
36	5	1321	G	N1-C6-O6	8.25	124.85	119.90
36	5	2278	C	N1-C2-O2	8.25	123.85	118.90
36	5	1148	G	N1-C6-O6	8.24	124.84	119.90
36	1	2618	G	N1-C6-O6	-8.24	114.96	119.90
36	5	2819	A	O5'-P-OP2	-8.23	98.29	105.70
36	1	435	C	C6-N1-C2	8.23	123.59	120.30
36	1	716	A	N1-C6-N6	8.21	123.53	118.60
1	6	1596	C	N3-C2-O2	-8.21	116.15	121.90
1	2	380	U	N3-C2-O2	-8.20	116.46	122.20
1	6	552	G	C5-C6-O6	-8.19	123.69	128.60
36	5	3093	C	N1-C2-O2	-8.19	113.99	118.90
36	5	952	A	C8-N9-C4	8.19	109.08	105.80
1	6	453	U	C2-N1-C1'	8.18	127.52	117.70
36	5	424	G	N1-C6-O6	8.18	124.81	119.90
36	1	3217	C	C2-N1-C1'	8.18	127.80	118.80
36	5	85	A	C8-N9-C4	8.18	109.07	105.80
36	5	1496	C	C2-N1-C1'	8.18	127.80	118.80
1	2	590	C	C6-N1-C2	-8.17	117.03	120.30
36	5	914	A	C2-N3-C4	-8.17	106.52	110.60
36	5	2965	U	N1-C2-O2	-8.16	117.08	122.80
1	6	1773	C	N1-C2-O2	-8.16	114.00	118.90
1	6	609	U	C5-C6-N1	-8.16	118.62	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2379	U	C5-C6-N1	-8.16	118.62	122.70
38	4	9	A	O5'-P-OP2	-8.16	98.36	105.70
36	5	592	A	O5'-P-OP1	-8.15	98.36	105.70
38	8	80	A	C8-N9-C4	-8.15	102.54	105.80
38	8	8	C	N1-C2-O2	-8.14	114.02	118.90
36	1	1175	C	C5-C6-N1	-8.14	116.93	121.00
36	1	2816	G	N1-C6-O6	8.13	124.78	119.90
36	5	2354	C	N3-C2-O2	8.12	127.59	121.90
36	1	856	G	N1-C6-O6	8.11	124.76	119.90
36	1	1319	G	N1-C6-O6	-8.10	115.04	119.90
36	5	1146	C	C6-N1-C2	8.10	123.54	120.30
36	5	1316	C	N1-C2-O2	-8.09	114.04	118.90
36	5	2283	G	N1-C6-O6	8.09	124.75	119.90
36	5	2385	G	N1-C6-O6	8.09	124.76	119.90
36	5	3014	U	O5'-P-OP2	8.09	120.41	110.70
36	1	2585	G	N3-C4-C5	-8.09	124.56	128.60
1	2	507	U	N1-C2-O2	8.07	128.45	122.80
36	1	1846	C	N1-C2-O2	-8.07	114.06	118.90
1	2	507	U	N3-C2-O2	-8.06	116.56	122.20
36	1	2816	G	N9-C4-C5	-8.06	102.18	105.40
40	l3	4	ARG	NE-CZ-NH1	8.05	124.33	120.30
65	n9	23	LYS	C-N-CD	8.05	145.30	128.40
1	2	321	C	C6-N1-C2	-8.04	117.08	120.30
36	5	1506	A	N1-C6-N6	-8.04	113.78	118.60
36	5	2616	C	N3-C2-O2	8.04	127.53	121.90
36	1	3208	G	C8-N9-C1'	8.03	137.44	127.00
36	5	938	C	N3-C4-C5	8.03	125.11	121.90
36	1	2946	A	N1-C6-N6	8.03	123.42	118.60
36	5	437	G	C8-N9-C4	-8.02	103.19	106.40
36	1	1901	A	N1-C6-N6	-8.01	113.80	118.60
38	4	99	C	C6-N1-C2	8.01	123.50	120.30
36	1	3344	A	C8-N9-C4	-8.01	102.60	105.80
36	5	2245	C	C6-N1-C2	-8.01	117.10	120.30
36	5	2372	A	P-O3'-C3'	8.00	129.30	119.70
36	1	2982	A	C8-N9-C4	8.00	109.00	105.80
39	l2	246	LEU	CA-CB-CG	8.00	133.69	115.30
36	1	2408	U	O5'-P-OP1	-8.00	98.50	105.70
36	5	1160	C	C2-N1-C1'	-7.99	110.01	118.80
36	5	2849	C	N3-C2-O2	7.98	127.49	121.90
36	1	1495	U	C2-N3-C4	-7.97	122.22	127.00
36	1	2393	G	C5-C6-O6	-7.97	123.81	128.60
36	1	2606	G	N3-C4-N9	7.97	130.78	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1908	A	O5'-P-OP2	-7.97	98.52	105.70
36	1	1450	G	N1-C6-O6	7.97	124.68	119.90
36	1	1891	A	N7-C8-N9	-7.96	109.82	113.80
36	1	1043	C	C6-N1-C2	7.96	123.48	120.30
36	5	2406	C	N3-C2-O2	7.96	127.47	121.90
36	1	716	A	N9-C4-C5	-7.96	102.62	105.80
36	1	3362	A	N7-C8-N9	7.96	117.78	113.80
36	5	2152	A	C5-C6-N6	-7.96	117.34	123.70
36	5	2392	C	C6-N1-C2	7.95	123.48	120.30
36	5	2640	A	C2-N3-C4	-7.95	106.62	110.60
36	5	644	G	C4-C5-N7	-7.95	107.62	110.80
36	1	1510	G	C6-C5-N7	-7.94	125.64	130.40
36	5	3181	C	N3-C2-O2	-7.94	116.34	121.90
36	5	2848	G	C6-C5-N7	-7.94	125.64	130.40
36	1	1849	C	N3-C2-O2	7.94	127.45	121.90
36	1	2827	U	N3-C4-O4	-7.93	113.85	119.40
36	5	86	G	O5'-P-OP2	-7.93	98.56	105.70
36	1	706	A	C8-N9-C4	7.93	108.97	105.80
36	5	922	U	N1-C2-O2	7.93	128.35	122.80
36	1	1124	U	N3-C4-O4	-7.92	113.85	119.40
36	1	3139	A	OP1-P-OP2	7.92	131.49	119.60
36	1	1364	C	N3-C4-C5	7.92	125.07	121.90
36	1	3139	A	O5'-P-OP2	-7.91	98.58	105.70
36	5	1881	A	C5-C6-N6	-7.91	117.37	123.70
36	5	1846	C	C6-N1-C2	7.91	123.46	120.30
36	5	1803	C	C6-N1-C2	7.90	123.46	120.30
36	1	1792	C	N1-C2-O2	-7.90	114.16	118.90
37	7	32	U	C5-C6-N1	-7.90	118.75	122.70
1	6	1773	C	C6-N1-C2	-7.89	117.14	120.30
36	5	3377	G	C5-C6-O6	-7.89	123.87	128.60
1	6	976	G	C6-C5-N7	-7.89	125.67	130.40
36	5	1805	C	C6-N1-C2	7.89	123.45	120.30
36	1	1556	C	N1-C2-O2	7.89	123.63	118.90
36	1	2931	C	C6-N1-C2	7.88	123.45	120.30
36	5	1189	C	N3-C2-O2	7.88	127.42	121.90
36	5	2825	C	C6-N1-C2	7.87	123.45	120.30
36	5	3217	C	C2-N1-C1'	-7.86	110.16	118.80
36	5	3377	G	N1-C6-O6	7.86	124.61	119.90
36	5	3136	G	C2-N3-C4	-7.85	107.97	111.90
1	2	959	U	N3-C2-O2	-7.84	116.71	122.20
36	1	2870	C	C6-N1-C1'	7.84	130.21	120.80
1	6	571	G	C8-N9-C4	-7.83	103.27	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2145	A	O5'-P-OP2	-7.83	98.65	105.70
36	5	2353	G	C5-C6-O6	-7.83	123.90	128.60
36	1	2145	A	O5'-P-OP2	-7.83	98.66	105.70
36	1	406	G	O4'-C1'-N9	7.82	114.46	108.20
36	5	504	A	N1-C6-N6	7.82	123.29	118.60
36	1	3188	G	N1-C6-O6	7.81	124.59	119.90
52	m6	94	ARG	NE-CZ-NH1	-7.80	116.40	120.30
36	1	1365	G	C8-N9-C4	-7.79	103.28	106.40
36	1	3101	G	C8-N9-C4	7.78	109.51	106.40
36	1	339	C	N3-C4-N4	-7.77	112.56	118.00
1	6	1150	G	C8-N9-C4	7.77	109.51	106.40
36	5	2732	G	O5'-P-OP2	-7.77	98.71	105.70
36	1	1148	G	C8-N9-C4	7.76	109.50	106.40
36	1	1911	A	N1-C6-N6	7.76	123.26	118.60
36	1	3362	A	C5-N7-C8	-7.76	100.02	103.90
36	1	1389	G	N9-C4-C5	-7.75	102.30	105.40
36	5	1924	U	C6-N1-C2	7.75	125.65	121.00
36	1	1389	G	C5-C6-O6	-7.74	123.96	128.60
36	1	3125	U	C6-N1-C2	7.73	125.64	121.00
36	1	1303	A	N1-C6-N6	7.73	123.24	118.60
36	5	588	G	C5-C6-O6	-7.73	123.96	128.60
36	5	2865	U	C5-C4-O4	7.73	130.54	125.90
1	2	1100	G	C6-C5-N7	-7.72	125.77	130.40
1	2	1280	C	C6-N1-C2	-7.71	117.22	120.30
37	7	101	G	N9-C4-C5	-7.71	102.32	105.40
36	1	1835	A	C8-N9-C4	7.71	108.88	105.80
36	1	2283	G	C5-C6-O6	-7.71	123.98	128.60
36	5	1604	G	C8-N9-C1'	-7.71	116.98	127.00
1	6	976	G	C4-C5-N7	7.70	113.88	110.80
21	c9	57	ARG	NE-CZ-NH1	7.70	124.15	120.30
36	5	2899	C	N1-C2-N3	7.69	124.58	119.20
36	5	3050	U	N3-C2-O2	-7.69	116.82	122.20
1	6	1634	C	C5-C6-N1	7.69	124.84	121.00
36	5	390	G	N1-C6-O6	7.69	124.51	119.90
36	1	2572	C	N1-C2-O2	7.68	123.51	118.90
36	5	3204	C	N3-C2-O2	7.68	127.28	121.90
36	1	966	U	C5-C4-O4	-7.68	121.29	125.90
1	2	1745	G	N3-C4-N9	7.68	130.60	126.00
36	1	1397	C	C2-N3-C4	-7.68	116.06	119.90
36	1	2280	A	N1-C6-N6	7.67	123.20	118.60
36	5	1339	C	C6-N1-C2	-7.67	117.23	120.30
36	1	2156	C	C6-N1-C2	7.67	123.37	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2678	A	N1-C6-N6	-7.67	114.00	118.60
36	1	2379	U	N3-C4-O4	7.66	124.76	119.40
36	5	1116	G	N3-C2-N2	-7.66	114.54	119.90
36	5	2833	A	C8-N9-C4	7.66	108.86	105.80
36	5	3008	A	C2-N3-C4	-7.66	106.77	110.60
36	5	2699	G	C8-N9-C4	7.66	109.46	106.40
36	1	1165	A	C8-N9-C4	7.66	108.86	105.80
36	1	932	U	N1-C2-O2	-7.66	117.44	122.80
36	1	3248	C	C5-C6-N1	7.66	124.83	121.00
36	1	1192	C	C2-N1-C1'	7.65	127.22	118.80
36	1	1148	G	N1-C6-O6	7.65	124.49	119.90
36	1	914	A	N1-C6-N6	-7.64	114.01	118.60
36	1	343	U	O5'-P-OP2	-7.64	98.82	105.70
36	5	1116	G	C4-C5-N7	-7.62	107.75	110.80
1	6	1568	C	C6-N1-C2	-7.62	117.25	120.30
1	2	577	G	N3-C4-C5	7.62	132.41	128.60
36	1	2865	U	N3-C4-C5	7.62	119.17	114.60
36	5	838	G	N1-C6-O6	-7.61	115.33	119.90
38	4	111	A	N1-C6-N6	7.61	123.17	118.60
1	6	1085	G	N1-C6-O6	-7.61	115.33	119.90
36	5	3050	U	C5-C4-O4	7.61	130.47	125.90
36	1	1445	U	N1-C2-O2	-7.61	117.47	122.80
36	1	639	G	C2-N3-C4	-7.60	108.10	111.90
1	6	992	A	O5'-P-OP1	-7.60	98.86	105.70
36	1	3050	U	N3-C2-O2	-7.60	116.88	122.20
36	5	667	C	C6-N1-C2	7.60	123.34	120.30
36	1	1136	A	N1-C6-N6	7.59	123.16	118.60
36	5	648	C	O5'-P-OP1	-7.59	98.87	105.70
36	5	1367	G	N1-C6-O6	7.59	124.45	119.90
36	5	3217	C	C5-C6-N1	-7.59	117.20	121.00
36	1	1405	U	C6-N1-C2	7.59	125.55	121.00
36	1	409	A	O5'-P-OP2	-7.59	98.87	105.70
36	1	932	U	N3-C2-O2	7.59	127.51	122.20
36	1	2621	G	C5-C6-O6	-7.58	124.05	128.60
1	6	1748	G	C8-N9-C4	7.58	109.43	106.40
36	1	960	U	N3-C4-C5	7.58	119.15	114.60
36	5	59	G	C8-N9-C4	-7.58	103.37	106.40
1	2	1280	C	N3-C4-C5	-7.58	118.87	121.90
36	5	2808	A	O5'-P-OP2	-7.58	98.88	105.70
38	4	99	C	N3-C4-C5	7.57	124.93	121.90
36	5	2860	U	C5-C6-N1	-7.57	118.91	122.70
36	1	1417	G	C8-N9-C4	7.57	109.43	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2609	A	O5'-P-OP1	7.56	119.77	110.70
36	5	1370	G	N1-C6-O6	-7.56	115.37	119.90
36	5	1450	G	C5-C6-O6	-7.56	124.07	128.60
36	1	3344	A	O4'-C1'-N9	7.55	114.24	108.20
20	c8	15	LEU	CA-CB-CG	7.55	132.68	115.30
36	1	1417	G	N3-C4-C5	7.55	132.38	128.60
36	1	959	C	C6-N1-C2	7.55	123.32	120.30
36	5	1793	C	O5'-P-OP1	-7.55	98.91	105.70
36	5	1869	C	C6-N1-C2	7.54	123.32	120.30
36	5	3136	G	N3-C2-N2	-7.54	114.62	119.90
1	2	992	A	C2-N3-C4	-7.54	106.83	110.60
36	5	3298	C	O5'-P-OP2	-7.54	98.92	105.70
36	1	3214	U	N3-C2-O2	-7.53	116.93	122.20
1	6	163	G	N3-C2-N2	-7.53	114.63	119.90
36	5	1152	G	C5-C6-N1	-7.53	107.73	111.50
36	5	2327	U	C6-N1-C2	7.53	125.52	121.00
36	1	937	G	O5'-P-OP2	-7.53	98.93	105.70
36	1	3008	A	N1-C6-N6	-7.53	114.08	118.60
1	6	194	U	C2-N1-C1'	7.53	126.73	117.70
36	5	2832	C	C5-C6-N1	-7.53	117.24	121.00
36	5	3004	C	C6-N1-C2	7.52	123.31	120.30
51	m5	96	ARG	NE-CZ-NH1	7.52	124.06	120.30
36	5	709	A	N1-C6-N6	7.52	123.11	118.60
24	d2	93	LEU	CA-CB-CG	7.52	132.59	115.30
36	1	2827	U	C5-C4-O4	7.52	130.41	125.90
36	5	1519	G	N1-C6-O6	7.51	124.41	119.90
36	1	1429	G	N3-C4-N9	7.51	130.50	126.00
36	5	2941	A	O4'-C1'-N9	-7.51	102.19	108.20
36	5	2978	U	C4-C5-C6	7.50	124.20	119.70
36	1	1213	G	N3-C2-N2	-7.50	114.65	119.90
36	5	283	G	N9-C4-C5	-7.50	102.40	105.40
36	5	776	U	C4-C5-C6	7.49	124.20	119.70
36	5	1592	G	C5-C6-N1	-7.49	107.75	111.50
36	5	2726	C	N3-C4-N4	-7.49	112.75	118.00
36	1	1362	G	C8-N9-C4	7.49	109.40	106.40
1	6	610	G	C8-N9-C1'	-7.49	117.26	127.00
36	1	2606	G	N9-C4-C5	-7.49	102.40	105.40
36	5	1454	A	C8-N9-C4	7.49	108.80	105.80
36	1	1407	A	N1-C6-N6	-7.48	114.11	118.60
36	5	1178	G	C5-C6-O6	-7.48	124.11	128.60
31	D9	36	LEU	CA-CB-CG	7.48	132.50	115.30
36	1	1429	G	N3-C4-C5	-7.48	124.86	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2364	G	N1-C2-N2	-7.47	109.48	116.20
36	1	919	U	O5'-P-OP2	-7.47	98.98	105.70
36	5	404	G	O5'-P-OP2	-7.47	98.98	105.70
36	5	2928	C	N3-C4-N4	7.47	123.23	118.00
36	1	2954	U	C5-C6-N1	7.46	126.43	122.70
1	2	380	U	N1-C2-O2	7.46	128.02	122.80
36	1	1377	G	C8-N9-C4	7.46	109.38	106.40
36	1	639	G	C5-C6-N1	-7.46	107.77	111.50
36	5	1604	G	N3-C4-N9	7.46	130.47	126.00
36	1	1368	U	C6-N1-C2	7.45	125.47	121.00
36	1	636	C	N3-C4-C5	7.45	124.88	121.90
36	1	1445	U	C2-N1-C1'	-7.45	108.77	117.70
36	5	2572	C	C2-N1-C1'	7.45	126.99	118.80
36	1	1317	A	C8-N9-C4	-7.44	102.82	105.80
36	5	2989	U	O5'-P-OP1	-7.44	99.00	105.70
36	1	1484	U	P-O3'-C3'	7.44	128.63	119.70
1	6	687	G	N3-C4-N9	-7.44	121.53	126.00
36	1	1139	G	O5'-P-OP1	-7.44	99.00	105.70
1	6	976	G	N1-C6-O6	7.44	124.36	119.90
36	1	2714	G	C5-N7-C8	-7.43	100.58	104.30
36	5	2870	C	C2-N1-C1'	-7.43	110.62	118.80
1	2	577	G	C4-C5-N7	7.43	113.77	110.80
36	1	1163	A	N1-C2-N3	7.43	133.01	129.30
36	1	2996	U	C2-N1-C1'	7.42	126.61	117.70
36	5	1502	C	N1-C2-O2	7.42	123.36	118.90
36	5	1879	A	C6-C5-N7	-7.42	127.10	132.30
36	1	1495	U	C4-C5-C6	7.42	124.15	119.70
36	5	1117	G	N1-C6-O6	7.42	124.35	119.90
36	5	631	U	C6-N1-C2	7.42	125.45	121.00
36	5	2342	U	C2-N3-C4	-7.42	122.55	127.00
36	1	350	C	N3-C2-O2	-7.41	116.72	121.90
36	1	2395	G	N1-C6-O6	7.41	124.34	119.90
36	5	1426	C	C6-N1-C2	7.41	123.26	120.30
38	4	20	U	O5'-P-OP2	-7.41	99.03	105.70
36	1	2606	G	C6-C5-N7	-7.41	125.96	130.40
38	4	113	U	C5-C4-O4	7.41	130.34	125.90
36	5	2953	U	N3-C2-O2	7.40	127.38	122.20
36	5	2648	G	C5-C6-N1	7.40	115.20	111.50
1	2	421	A	C8-N9-C4	7.40	108.76	105.80
36	5	692	A	O5'-P-OP1	-7.40	99.04	105.70
36	5	2904	U	C5-C6-N1	-7.39	119.00	122.70
36	5	2385	G	N9-C4-C5	-7.39	102.44	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1519	G	C6-C5-N7	-7.39	125.97	130.40
36	1	907	G	N3-C4-N9	7.39	130.43	126.00
1	6	518	A	N1-C6-N6	-7.39	114.17	118.60
36	1	2180	G	C8-N9-C4	7.38	109.35	106.40
36	1	1307	G	N1-C6-O6	-7.38	115.47	119.90
36	1	24	G	C6-C5-N7	-7.38	125.97	130.40
1	6	421	A	C8-N9-C4	7.38	108.75	105.80
36	5	1311	G	O5'-P-OP2	-7.38	99.06	105.70
36	5	1208	U	N3-C2-O2	-7.37	117.04	122.20
36	1	281	G	N1-C6-O6	7.37	124.32	119.90
37	3	101	G	C8-N9-C4	7.37	109.35	106.40
36	5	1160	C	N3-C2-O2	7.37	127.06	121.90
36	5	2278	C	C4-C5-C6	-7.37	113.72	117.40
36	5	3092	C	C6-N1-C2	7.37	123.25	120.30
36	1	2241	U	O5'-P-OP1	-7.36	99.07	105.70
36	5	1305	U	C5-C4-O4	-7.36	121.48	125.90
36	1	406	G	N1-C6-O6	-7.36	115.48	119.90
36	5	2700	G	C5-C6-O6	-7.36	124.18	128.60
1	6	631	G	C5-C6-O6	-7.36	124.19	128.60
1	6	976	G	C5-C6-O6	-7.36	124.19	128.60
38	8	5	U	N1-C2-O2	-7.36	117.65	122.80
36	1	2859	U	C5-C6-N1	-7.35	119.02	122.70
1	2	73	U	O4'-C1'-N1	7.35	114.08	108.20
1	2	1782	A	C8-N9-C4	-7.34	102.86	105.80
36	1	2953	U	N1-C2-O2	-7.33	117.67	122.80
36	5	1156	C	N1-C2-O2	-7.33	114.50	118.90
38	4	46	G	N1-C6-O6	-7.33	115.50	119.90
36	5	636	C	C6-N1-C2	7.33	123.23	120.30
36	1	646	A	N1-C2-N3	7.32	132.96	129.30
36	1	3212	C	C5-C6-N1	-7.32	117.34	121.00
36	5	1903	U	OP1-P-OP2	-7.32	108.62	119.60
36	1	3177	G	C5-C6-O6	-7.32	124.21	128.60
36	5	342	A	O5'-P-OP2	-7.32	99.11	105.70
36	5	2944	U	N1-C2-O2	7.32	127.92	122.80
36	5	776	U	N3-C2-O2	-7.32	117.08	122.20
36	5	3056	U	N1-C2-O2	-7.32	117.68	122.80
1	6	314	C	C6-N1-C2	-7.31	117.37	120.30
38	4	43	A	O5'-P-OP1	-7.31	99.12	105.70
36	5	816	A	N1-C6-N6	-7.31	114.22	118.60
36	5	1604	G	C4-N9-C1'	7.30	136.00	126.50
36	5	3245	A	C4-C5-N7	7.30	114.35	110.70
36	1	2314	U	C6-N1-C2	7.30	125.38	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	215	G	N3-C4-C5	-7.30	124.95	128.60
36	5	3245	A	C6-C5-N7	-7.30	127.19	132.30
36	1	881	C	N1-C2-O2	7.30	123.28	118.90
36	1	2619	G	O5'-P-OP1	-7.29	99.14	105.70
36	1	651	G	N3-C4-N9	7.29	130.37	126.00
36	1	1179	A	O5'-P-OP1	-7.29	99.14	105.70
1	6	1119	G	O5'-P-OP2	-7.29	99.14	105.70
36	1	942	U	O5'-P-OP2	-7.29	99.14	105.70
36	5	859	G	C4-C5-N7	7.28	113.71	110.80
36	1	1307	G	C5-C6-O6	7.28	132.97	128.60
1	6	448	C	C6-N1-C2	-7.28	117.39	120.30
36	5	2943	G	N9-C4-C5	-7.28	102.49	105.40
36	1	1099	A	N1-C6-N6	7.28	122.97	118.60
36	1	1161	G	C8-N9-C4	7.28	109.31	106.40
36	5	2156	C	C6-N1-C2	7.27	123.21	120.30
36	5	2351	U	C6-N1-C2	-7.27	116.64	121.00
36	1	1604	G	C4-N9-C1'	7.27	135.95	126.50
36	5	1110	U	N1-C2-O2	7.26	127.89	122.80
36	5	2192	C	O5'-P-OP2	-7.26	99.16	105.70
36	1	1403	C	C6-N1-C2	7.26	123.20	120.30
36	1	62	A	O5'-P-OP2	-7.26	99.17	105.70
36	5	2965	U	N3-C4-O4	7.26	124.48	119.40
52	m6	78	ARG	NE-CZ-NH1	7.25	123.93	120.30
36	1	423	A	C4-C5-C6	7.25	120.62	117.00
36	5	776	U	C5-C4-O4	7.25	130.25	125.90
11	s9	3	ARG	NE-CZ-NH2	7.25	123.92	120.30
36	1	2811	A	N1-C6-N6	-7.24	114.26	118.60
1	2	1241	G	C6-C5-N7	-7.23	126.06	130.40
36	1	895	A	C2-N3-C4	-7.23	106.98	110.60
36	5	2869	U	N3-C2-O2	-7.23	117.14	122.20
36	1	229	G	N3-C2-N2	-7.23	114.84	119.90
36	5	799	G	O5'-P-OP1	-7.23	99.19	105.70
36	1	3057	U	N3-C4-O4	-7.22	114.34	119.40
36	5	2142	A	N1-C6-N6	-7.22	114.27	118.60
36	1	2374	C	N3-C2-O2	-7.22	116.85	121.90
1	6	433	C	C5-C4-N4	-7.22	115.15	120.20
38	8	6	U	C6-N1-C2	7.22	125.33	121.00
36	1	2873	U	N1-C2-N3	7.21	119.23	114.90
36	1	2358	A	C8-N9-C4	7.21	108.68	105.80
36	5	661	G	N9-C4-C5	-7.21	102.52	105.40
36	5	1897	G	C5-C6-O6	-7.21	124.28	128.60
36	5	981	U	C5-C6-N1	7.20	126.30	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	883	A	C6-N1-C2	-7.20	114.28	118.60
36	5	580	C	N3-C4-C5	-7.20	119.02	121.90
36	5	2978	U	C5-C6-N1	-7.20	119.10	122.70
36	1	2954	U	P-O3'-C3'	7.19	128.33	119.70
36	1	709	A	N7-C8-N9	-7.19	110.20	113.80
36	1	2874	G	C5-C6-N1	-7.19	107.91	111.50
36	1	776	U	C4-C5-C6	7.18	124.01	119.70
36	5	3080	G	N1-C6-O6	7.18	124.21	119.90
59	N3	48	ARG	NE-CZ-NH1	7.18	123.89	120.30
36	5	1897	G	N3-C2-N2	-7.18	114.87	119.90
37	7	77	G	N1-C6-O6	7.18	124.21	119.90
36	1	397	A	N1-C6-N6	-7.17	114.30	118.60
36	5	2971	A	N1-C2-N3	-7.17	125.71	129.30
36	1	14	U	O5'-P-OP2	-7.17	99.25	105.70
36	1	780	A	N1-C2-N3	7.17	132.88	129.30
36	1	2355	G	C5-C6-O6	-7.17	124.30	128.60
36	1	2726	C	N3-C4-N4	-7.17	112.98	118.00
36	1	2846	U	N1-C2-O2	7.17	127.82	122.80
36	1	885	U	C5-C6-N1	-7.17	119.11	122.70
36	1	1556	C	C2-N1-C1'	7.17	126.68	118.80
36	5	2860	U	O5'-P-OP2	-7.16	99.26	105.70
36	5	41	G	C5-C6-O6	-7.16	124.31	128.60
36	1	2996	U	N1-C2-O2	7.16	127.81	122.80
36	1	924	G	O5'-P-OP1	-7.15	99.26	105.70
36	1	908	G	O4'-C1'-N9	-7.15	102.48	108.20
36	1	2831	G	C5-C6-O6	-7.15	124.31	128.60
36	1	3188	G	C5-C6-O6	-7.14	124.31	128.60
36	5	3245	A	N1-C2-N3	7.14	132.87	129.30
36	1	1136	A	C5-C6-N6	-7.14	117.99	123.70
36	1	1134	G	C5-C6-O6	-7.14	124.31	128.60
1	2	1456	C	N3-C2-O2	-7.14	116.90	121.90
36	1	1581	C	N1-C2-O2	7.14	123.18	118.90
36	5	437	G	N7-C8-N9	7.14	116.67	113.10
36	1	1139	G	C2-N3-C4	-7.14	108.33	111.90
36	5	2283	G	O5'-P-OP2	-7.14	99.28	105.70
36	1	580	C	N1-C2-O2	-7.13	114.62	118.90
36	5	1710	C	C6-N1-C2	7.13	123.15	120.30
36	1	1495	U	N1-C2-N3	7.13	119.18	114.90
36	5	886	C	C5-C4-N4	-7.13	115.21	120.20
36	5	2848	G	C5-C6-O6	-7.13	124.32	128.60
36	1	3306	U	N3-C2-O2	-7.13	117.21	122.20
36	5	3020	U	N1-C2-O2	-7.12	117.81	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1820	U	P-O3'-C3'	7.12	128.25	119.70
36	1	2120	A	O5'-P-OP2	-7.12	99.29	105.70
36	5	2957	G	N9-C4-C5	-7.12	102.55	105.40
36	5	2849	C	O5'-P-OP1	-7.12	99.29	105.70
36	5	718	G	C6-C5-N7	-7.12	126.13	130.40
1	2	1241	G	O4'-C1'-N9	7.12	113.89	108.20
36	5	1444	G	N1-C6-O6	7.12	124.17	119.90
36	5	424	G	C4-C5-N7	7.11	113.64	110.80
36	5	911	C	C6-N1-C2	7.11	123.14	120.30
36	1	970	A	N1-C6-N6	-7.11	114.33	118.60
36	5	23	A	C5-C6-N6	-7.11	118.01	123.70
36	5	2307	G	N3-C2-N2	7.11	124.88	119.90
36	5	2272	G	O4'-C1'-N9	7.11	113.89	108.20
36	1	1168	U	O5'-P-OP1	7.10	119.22	110.70
1	2	1745	G	C5-C6-O6	-7.10	124.34	128.60
36	1	1132	C	O5'-P-OP1	-7.10	99.31	105.70
36	1	2884	C	N3-C4-C5	7.10	124.74	121.90
36	5	2662	G	N3-C4-C5	-7.10	125.05	128.60
36	1	2714	G	C2-N3-C4	-7.10	108.35	111.90
1	2	553	G	C5-C6-O6	-7.10	124.34	128.60
1	2	1100	G	N1-C6-O6	7.09	124.16	119.90
36	1	2114	C	O5'-P-OP2	-7.09	99.32	105.70
36	1	3261	C	N1-C2-O2	-7.09	114.65	118.90
36	1	47	C	C6-N1-C2	7.09	123.14	120.30
36	1	1149	G	N3-C2-N2	-7.09	114.94	119.90
1	6	452	A	N1-C6-N6	7.09	122.85	118.60
36	1	3269	U	N3-C2-O2	-7.08	117.24	122.20
36	5	1170	A	C8-N9-C4	7.08	108.63	105.80
36	5	3005	A	O5'-P-OP2	-7.08	99.33	105.70
36	1	1124	U	N3-C2-O2	-7.08	117.24	122.20
36	5	2953	U	N1-C2-O2	-7.08	117.84	122.80
37	7	32	U	C6-N1-C2	7.08	125.25	121.00
1	6	113	U	C5-C6-N1	-7.08	119.16	122.70
36	1	2298	U	N3-C4-O4	-7.07	114.45	119.40
1	6	19	A	N1-C6-N6	7.07	122.84	118.60
36	1	1131	G	N1-C6-O6	7.07	124.14	119.90
36	1	726	G	N7-C8-N9	7.06	116.63	113.10
36	5	1789	G	N3-C4-C5	7.06	132.13	128.60
36	5	2356	A	C2-N3-C4	-7.06	107.07	110.60
36	1	3101	G	N1-C6-O6	-7.06	115.66	119.90
36	5	718	G	C4-N9-C1'	7.06	135.68	126.50
36	5	2409	G	N3-C2-N2	-7.06	114.96	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1437	C	O5'-P-OP1	-7.06	99.35	105.70
36	5	1079	A	N1-C6-N6	-7.06	114.37	118.60
36	5	3188	G	N1-C6-O6	-7.06	115.67	119.90
36	5	578	A	N1-C6-N6	7.05	122.83	118.60
36	5	1897	G	C6-C5-N7	-7.05	126.17	130.40
36	5	222	A	O5'-P-OP2	-7.05	99.35	105.70
1	2	337	G	C5-C6-O6	-7.05	124.37	128.60
36	1	2361	A	O5'-P-OP1	-7.05	99.36	105.70
36	1	3050	U	N1-C2-O2	7.05	127.74	122.80
36	1	1530	U	C6-N1-C2	7.05	125.23	121.00
36	5	217	U	C5-C6-N1	-7.05	119.18	122.70
36	5	2351	U	N1-C2-N3	7.05	119.13	114.90
1	6	979	A	N1-C6-N6	-7.05	114.37	118.60
36	5	1137	C	C6-N1-C2	7.04	123.12	120.30
36	1	2760	C	N3-C4-C5	-7.04	119.08	121.90
36	1	1179	A	N1-C6-N6	7.04	122.82	118.60
36	1	2197	C	C6-N1-C2	7.04	123.12	120.30
36	1	2899	C	C2-N1-C1'	7.04	126.55	118.80
1	2	334	G	N3-C4-C5	7.03	132.12	128.60
36	1	2922	G	N9-C4-C5	-7.03	102.59	105.40
36	5	370	U	N3-C2-O2	-7.03	117.28	122.20
36	5	2572	C	N3-C2-O2	-7.03	116.98	121.90
36	5	2820	A	C6-N1-C2	-7.03	114.38	118.60
36	5	2865	U	C5-C6-N1	7.03	126.22	122.70
36	1	667	C	N3-C4-C5	7.03	124.71	121.90
36	5	1874	A	C2-N3-C4	-7.03	107.08	110.60
36	5	3043	C	C6-N1-C2	7.03	123.11	120.30
36	1	2636	A	C8-N9-C4	-7.03	102.99	105.80
36	5	2707	C	C6-N1-C2	7.03	123.11	120.30
36	1	1161	G	N9-C4-C5	-7.02	102.59	105.40
36	1	2714	G	O5'-P-OP1	-7.02	99.38	105.70
1	6	687	G	N3-C2-N2	-7.02	114.98	119.90
36	1	718	G	C4-C5-N7	7.02	113.61	110.80
36	1	406	G	O5'-P-OP2	-7.02	99.38	105.70
36	1	636	C	C5-C4-N4	-7.02	115.29	120.20
36	1	3344	A	C2-N3-C4	-7.02	107.09	110.60
37	7	15	C	C6-N1-C2	7.01	123.11	120.30
36	1	2868	U	N3-C2-O2	-7.01	117.29	122.20
36	5	2389	C	O5'-P-OP1	-7.01	99.39	105.70
36	1	1467	A	C8-N9-C4	-7.01	103.00	105.80
36	5	3078	U	N3-C2-O2	-7.01	117.30	122.20
36	5	1886	A	O5'-P-OP2	-7.00	99.39	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1399	A	N1-C6-N6	7.00	122.80	118.60
1	6	1634	C	C6-N1-C2	-7.00	117.50	120.30
36	5	313	A	N1-C6-N6	7.00	122.80	118.60
36	5	1589	A	N9-C4-C5	-7.00	103.00	105.80
6	s4	38	LEU	CA-CB-CG	7.00	131.39	115.30
36	5	2395	G	O5'-P-OP2	-7.00	99.40	105.70
1	6	1700	C	N1-C2-O2	7.00	123.10	118.90
36	1	833	G	C8-N9-C4	6.99	109.20	106.40
1	2	864	U	C5-C4-O4	6.99	130.09	125.90
36	5	942	U	N3-C4-O4	6.99	124.29	119.40
36	5	1379	G	C2-N3-C4	-6.99	108.41	111.90
36	5	2775	U	C5-C6-N1	-6.99	119.20	122.70
36	5	2288	G	N1-C2-N3	6.99	128.09	123.90
36	5	2978	U	O4'-C1'-N1	6.99	113.79	108.20
36	5	2756	C	N3-C4-C5	6.98	124.69	121.90
1	6	314	C	N3-C4-C5	-6.98	119.11	121.90
15	C3	22	ALA	C-N-CD	-6.98	105.24	120.60
1	6	858	G	O4'-C1'-N9	6.98	113.78	108.20
36	5	1725	C	N1-C2-O2	-6.98	114.71	118.90
38	4	32	C	N3-C2-O2	6.98	126.79	121.90
36	1	2800	G	N1-C2-N3	6.98	128.09	123.90
36	5	1852	G	N7-C8-N9	6.97	116.59	113.10
36	1	1296	C	N3-C4-C5	-6.97	119.11	121.90
36	1	2800	G	N1-C2-N2	-6.97	109.92	116.20
36	1	3269	U	C5-C4-O4	6.97	130.08	125.90
36	1	934	G	C4-N9-C1'	6.97	135.56	126.50
36	5	96	G	C2-N3-C4	-6.96	108.42	111.90
36	5	412	G	N3-C4-C5	-6.96	125.12	128.60
36	5	1222	G	P-O3'-C3'	6.96	128.06	119.70
36	5	1473	G	N7-C8-N9	-6.96	109.62	113.10
1	6	552	G	N1-C6-O6	6.96	124.08	119.90
36	5	2852	C	N3-C4-C5	6.96	124.68	121.90
36	1	1103	A	N1-C2-N3	-6.96	125.82	129.30
36	1	3362	A	N1-C6-N6	6.96	122.78	118.60
36	5	909	G	N1-C6-O6	-6.96	115.73	119.90
1	2	447	U	C6-N1-C2	-6.95	116.83	121.00
36	5	3150	A	C2-N3-C4	-6.95	107.12	110.60
36	5	832	G	N3-C4-C5	-6.95	125.12	128.60
1	2	507	U	C2-N1-C1'	6.95	126.04	117.70
36	1	1313	G	C4-C5-N7	6.94	113.58	110.80
1	2	542	A	O4'-C1'-N9	6.94	113.75	108.20
36	5	884	A	C4-C5-N7	6.94	114.17	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	3123	A	N7-C8-N9	-6.94	110.33	113.80
36	1	1475	A	C8-N9-C4	6.94	108.58	105.80
36	5	2728	G	O4'-C1'-N9	6.94	113.75	108.20
36	5	2931	C	C6-N1-C2	6.93	123.07	120.30
36	5	2877	G	C5-C6-O6	6.93	132.76	128.60
36	5	2324	A	N1-C6-N6	6.92	122.75	118.60
36	5	2327	U	C5-C6-N1	-6.92	119.24	122.70
36	5	1200	A	N1-C6-N6	6.92	122.75	118.60
38	4	125	U	C2-N1-C1'	6.92	126.00	117.70
1	2	1426	C	N3-C2-O2	6.92	126.74	121.90
1	6	67	A	N1-C6-N6	6.92	122.75	118.60
1	6	1137	A	N7-C8-N9	-6.92	110.34	113.80
36	5	1116	G	C8-N9-C4	-6.91	103.64	106.40
36	1	1003	A	N1-C6-N6	6.91	122.75	118.60
36	5	1239	C	C5-C6-N1	6.91	124.45	121.00
36	5	2847	A	C8-N9-C4	6.91	108.56	105.80
36	5	718	G	N3-C2-N2	6.90	124.73	119.90
36	1	2944	U	C5-C4-O4	-6.90	121.76	125.90
1	2	577	G	C5-N7-C8	-6.90	100.85	104.30
36	1	2800	G	C5-C6-O6	6.90	132.74	128.60
1	6	622	A	O5'-P-OP1	-6.90	99.49	105.70
36	1	744	A	C8-N9-C4	6.90	108.56	105.80
47	M0	57	LEU	CA-CB-CG	6.89	131.16	115.30
36	5	2931	C	O5'-P-OP1	-6.89	99.50	105.70
1	6	603	U	N1-C2-O2	-6.89	117.97	122.80
1	6	1700	C	C2-N1-C1'	6.89	126.38	118.80
37	3	33	U	N3-C2-O2	-6.89	117.38	122.20
36	5	2821	C	O5'-P-OP1	-6.89	99.50	105.70
1	6	426	G	O5'-P-OP2	-6.88	99.50	105.70
36	5	2626	A	N1-C2-N3	6.88	132.74	129.30
36	5	2880	U	C6-N1-C2	-6.88	116.87	121.00
36	5	1160	C	C6-N1-C1'	6.88	129.05	120.80
36	5	2905	U	N1-C2-O2	-6.88	117.98	122.80
36	5	1424	C	O5'-P-OP1	-6.88	99.51	105.70
36	1	369	A	C8-N9-C4	-6.87	103.05	105.80
1	6	163	G	N9-C4-C5	6.87	108.15	105.40
36	1	636	C	C6-N1-C2	6.87	123.05	120.30
36	1	934	G	C8-N9-C1'	-6.87	118.07	127.00
36	5	2728	G	O5'-P-OP2	-6.87	99.52	105.70
36	1	979	U	N3-C2-O2	-6.87	117.39	122.20
36	1	2374	C	C6-N1-C2	-6.87	117.55	120.30
36	5	2764	C	C6-N1-C2	6.87	123.05	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	726	G	C8-N9-C4	-6.87	103.65	106.40
36	5	1316	C	N3-C4-N4	6.87	122.81	118.00
36	5	1321	G	C5-C6-N1	-6.87	108.07	111.50
36	5	2205	U	O4'-C1'-N1	6.86	113.69	108.20
36	1	1886	A	O5'-P-OP2	-6.86	99.53	105.70
1	6	1097	U	P-O3'-C3'	6.86	127.93	119.70
36	1	672	A	N1-C6-N6	6.85	122.71	118.60
36	1	1869	C	C6-N1-C2	6.85	123.04	120.30
36	1	790	U	N1-C2-N3	6.85	119.01	114.90
36	5	2291	A	N1-C6-N6	6.84	122.71	118.60
36	1	65	A	P-O3'-C3'	6.84	127.91	119.70
36	5	3143	C	N3-C4-C5	-6.84	119.16	121.90
36	1	811	U	N3-C2-O2	-6.84	117.41	122.20
36	5	2343	C	C2-N3-C4	-6.84	116.48	119.90
36	1	54	C	N3-C4-C5	6.84	124.64	121.90
36	1	2706	G	N1-C6-O6	6.84	124.00	119.90
36	5	90	C	C6-N1-C2	-6.84	117.57	120.30
36	5	804	C	C4-C5-C6	6.83	120.82	117.40
36	5	2943	G	C4-C5-C6	6.83	122.90	118.80
36	1	2169	G	C5-C6-O6	6.83	132.70	128.60
38	8	70	G	C5-C6-O6	6.83	132.70	128.60
36	5	216	G	N1-C6-O6	6.83	124.00	119.90
36	1	131	C	C6-N1-C2	-6.83	117.57	120.30
36	5	2147	A	N9-C4-C5	-6.83	103.07	105.80
36	5	2699	G	C5-C6-O6	-6.83	124.50	128.60
36	1	2373	A	C8-N9-C4	-6.82	103.07	105.80
36	5	963	G	O5'-P-OP2	-6.82	99.56	105.70
36	5	1301	A	N1-C6-N6	6.82	122.69	118.60
36	1	3101	G	C5-C6-N1	6.82	114.91	111.50
36	5	3307	A	N1-C6-N6	6.82	122.69	118.60
36	1	1437	C	C2-N1-C1'	6.82	126.30	118.80
1	6	552	G	C4-C5-N7	6.82	113.53	110.80
36	1	2874	G	C6-C5-N7	-6.82	126.31	130.40
36	5	2439	A	O5'-P-OP1	6.82	118.88	110.70
36	5	358	G	N3-C4-C5	6.81	132.01	128.60
36	1	979	U	C6-N1-C2	-6.81	116.91	121.00
36	5	3204	C	N1-C2-O2	-6.81	114.81	118.90
38	4	21	C	N3-C2-O2	6.81	126.67	121.90
36	5	2255	A	O5'-P-OP1	-6.81	99.57	105.70
36	1	884	A	N1-C6-N6	6.80	122.68	118.60
36	5	1897	G	N1-C2-N3	6.80	127.98	123.90
37	7	37	G	C4-C5-N7	6.80	113.52	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2773	C	N3-C4-C5	6.80	124.62	121.90
36	1	2349	U	N3-C4-O4	-6.80	114.64	119.40
36	1	3015	G	C8-N9-C4	6.80	109.12	106.40
36	5	2726	C	N1-C2-N3	6.80	123.96	119.20
36	5	1056	U	O5'-P-OP2	-6.80	99.58	105.70
36	5	2948	C	C2-N3-C4	-6.79	116.50	119.90
36	5	671	U	C6-N1-C2	6.79	125.08	121.00
36	5	804	C	N3-C4-C5	-6.79	119.18	121.90
36	5	2700	G	C4-C5-N7	6.78	113.51	110.80
36	1	1518	U	N1-C2-N3	6.78	118.97	114.90
36	5	2639	G	N1-C6-O6	6.78	123.97	119.90
36	1	3178	A	N1-C6-N6	6.78	122.67	118.60
36	5	1016	C	O5'-P-OP1	-6.78	99.60	105.70
36	1	2996	U	C6-N1-C1'	-6.78	111.71	121.20
1	2	1782	A	N9-C4-C5	6.78	108.51	105.80
36	1	2606	G	N1-C2-N2	-6.78	110.10	116.20
36	5	1837	U	O5'-P-OP1	-6.78	99.60	105.70
18	C6	40	GLU	C-N-CD	-6.78	105.69	120.60
36	1	1419	A	O5'-P-OP1	6.78	118.83	110.70
36	5	1879	A	C4-C5-N7	6.77	114.09	110.70
1	2	448	C	C6-N1-C2	-6.77	117.59	120.30
36	1	2761	G	C6-C5-N7	-6.77	126.34	130.40
38	4	32	C	N1-C2-O2	-6.77	114.84	118.90
36	5	2169	G	N1-C6-O6	-6.77	115.84	119.90
36	5	2850	G	C5-C6-O6	-6.77	124.54	128.60
36	5	345	G	N1-C6-O6	6.77	123.96	119.90
36	5	2707	C	C5-C4-N4	-6.76	115.46	120.20
36	1	394	G	C4-C5-N7	-6.76	108.09	110.80
36	5	92	G	N3-C4-N9	6.76	130.06	126.00
36	5	659	G	C5-C6-N1	6.76	114.88	111.50
36	5	640	U	N3-C2-O2	6.76	126.93	122.20
36	5	931	C	N3-C4-C5	6.76	124.61	121.90
36	5	2648	G	C6-C5-N7	6.76	134.46	130.40
36	5	1117	G	C5-C6-O6	-6.76	124.54	128.60
36	5	1520	G	N1-C6-O6	6.76	123.96	119.90
36	5	2147	A	C4-C5-N7	6.76	114.08	110.70
37	3	68	C	C6-N1-C2	6.76	123.00	120.30
36	5	2155	G	C8-N9-C4	6.76	109.10	106.40
36	5	3245	A	N1-C6-N6	6.76	122.66	118.60
36	1	362	U	N1-C2-N3	6.75	118.95	114.90
36	5	1430	U	C6-N1-C2	6.75	125.05	121.00
36	1	523	A	C8-N9-C4	6.75	108.50	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	702	C	N3-C4-C5	6.75	124.60	121.90
36	5	718	G	N3-C4-N9	6.75	130.05	126.00
36	5	3181	C	N1-C2-O2	6.74	122.95	118.90
1	2	1100	G	C5-C6-O6	-6.74	124.56	128.60
36	1	2343	C	C6-N1-C2	6.74	123.00	120.30
1	6	1739	C	N1-C2-O2	-6.74	114.86	118.90
36	1	421	G	C5-C6-N1	6.74	114.87	111.50
36	5	3080	G	C5-C6-O6	-6.74	124.56	128.60
36	1	2136	C	N1-C2-O2	-6.74	114.86	118.90
36	1	2983	C	C5-C4-N4	6.74	124.92	120.20
36	5	3137	C	C5-C6-N1	-6.74	117.63	121.00
36	1	648	C	C2-N1-C1'	6.73	126.21	118.80
38	8	80	A	N7-C8-N9	6.73	117.17	113.80
36	1	1390	A	C8-N9-C4	-6.73	103.11	105.80
1	6	308	C	C2-N1-C1'	-6.73	111.39	118.80
36	5	1516	C	N3-C4-C5	6.73	124.59	121.90
36	5	522	A	N1-C6-N6	6.73	122.64	118.60
36	5	2943	G	C8-N9-C1'	-6.73	118.25	127.00
36	5	961	C	O5'-P-OP1	-6.72	99.65	105.70
36	5	2886	U	C5-C6-N1	-6.72	119.34	122.70
38	8	103	G	N3-C4-N9	6.72	130.03	126.00
36	1	2893	C	N3-C4-C5	6.72	124.59	121.90
36	5	283	G	N3-C4-N9	6.72	130.03	126.00
36	5	3140	G	C5-C6-O6	-6.72	124.57	128.60
36	1	968	G	N3-C4-C5	-6.72	125.24	128.60
36	5	718	G	O4'-C1'-N9	6.72	113.58	108.20
36	1	2169	G	C6-C5-N7	6.72	134.43	130.40
36	5	1145	G	O5'-P-OP2	-6.72	99.65	105.70
36	1	1200	A	C6-N1-C2	-6.72	114.57	118.60
36	5	1480	G	N3-C4-C5	6.72	131.96	128.60
36	5	3107	U	C5-C6-N1	-6.72	119.34	122.70
36	5	1370	G	C5-C6-O6	6.71	132.63	128.60
38	4	125	U	N1-C2-O2	6.71	127.50	122.80
36	5	2309	A	N9-C4-C5	6.71	108.48	105.80
36	5	2385	G	C4-C5-N7	6.71	113.48	110.80
37	7	79	A	C5-C6-N6	-6.71	118.33	123.70
36	5	1513	G	N7-C8-N9	6.70	116.45	113.10
36	5	2283	G	C8-N9-C4	6.70	109.08	106.40
36	5	97	U	N3-C2-O2	6.70	126.89	122.20
36	1	300	G	O5'-P-OP1	-6.70	99.67	105.70
36	1	721	G	C4-C5-N7	6.70	113.48	110.80
36	5	406	G	O4'-C1'-N9	6.70	113.56	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2871	G	N3-C4-C5	-6.70	125.25	128.60
37	7	101	G	C4-C5-N7	6.70	113.48	110.80
48	m1	12	LEU	CA-CB-CG	6.70	130.71	115.30
36	5	1010	G	O5'-P-OP2	-6.70	99.67	105.70
1	2	1657	U	O4'-C1'-N1	6.70	113.56	108.20
36	1	3362	A	C6-C5-N7	-6.70	127.61	132.30
1	6	1745	G	C8-N9-C4	6.69	109.08	106.40
36	5	2874	G	O5'-P-OP2	-6.69	99.67	105.70
1	6	163	G	C8-N9-C1'	6.69	135.70	127.00
1	2	577	G	N1-C6-O6	6.69	123.92	119.90
36	5	2324	A	C5-N7-C8	-6.69	100.55	103.90
36	1	2646	C	C6-N1-C2	6.69	122.98	120.30
36	1	400	G	C5-C6-O6	-6.69	124.59	128.60
36	1	923	C	N3-C4-C5	-6.69	119.22	121.90
1	6	163	G	C2-N3-C4	-6.69	108.56	111.90
36	5	1410	U	C6-N1-C2	6.69	125.01	121.00
1	2	1745	G	C5-C6-N1	6.68	114.84	111.50
36	1	664	U	C5-C6-N1	-6.68	119.36	122.70
36	5	48	A	N9-C4-C5	6.68	108.47	105.80
36	5	941	G	N1-C6-O6	-6.68	115.89	119.90
36	1	644	G	N1-C6-O6	6.68	123.91	119.90
36	1	2410	U	N1-C2-O2	-6.68	118.12	122.80
36	5	1178	G	C4-C5-N7	6.68	113.47	110.80
36	5	2211	U	N3-C2-O2	-6.68	117.53	122.20
1	2	1777	G	C6-C5-N7	-6.67	126.39	130.40
36	1	651	G	C5-N7-C8	6.67	107.64	104.30
36	1	1321	G	O5'-P-OP1	-6.67	99.69	105.70
36	5	1156	C	N3-C4-N4	6.67	122.67	118.00
36	5	152	U	N3-C2-O2	-6.67	117.53	122.20
36	5	2369	G	C5-C6-O6	-6.67	124.60	128.60
36	5	3362	A	O4'-C1'-N9	6.67	113.54	108.20
36	5	1520	G	C4-C5-N7	6.67	113.47	110.80
36	5	3119	U	N3-C2-O2	6.67	126.87	122.20
36	1	1389	G	N1-C6-O6	6.67	123.90	119.90
36	1	2284	C	N1-C2-O2	6.67	122.90	118.90
36	5	610	G	O5'-P-OP1	-6.66	99.70	105.70
36	5	3153	U	N3-C2-O2	-6.66	117.53	122.20
38	8	82	U	C5-C4-O4	6.66	129.90	125.90
36	1	2813	A	OP1-P-OP2	-6.66	109.61	119.60
36	1	2869	U	N1-C2-O2	-6.66	118.14	122.80
36	1	667	C	C6-N1-C2	6.66	122.96	120.30
36	1	1100	U	C6-N1-C2	6.66	125.00	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2816	G	N3-C4-N9	6.66	130.00	126.00
36	5	1448	U	C6-N1-C2	6.66	125.00	121.00
36	1	1365	G	N3-C4-C5	-6.66	125.27	128.60
36	5	2244	A	N7-C8-N9	-6.66	110.47	113.80
36	1	2355	G	C6-C5-N7	-6.65	126.41	130.40
1	2	601	A	N1-C6-N6	6.65	122.59	118.60
1	2	831	U	C5-C6-N1	6.65	126.03	122.70
36	1	933	A	N1-C2-N3	6.65	132.63	129.30
36	1	2334	U	C5-C6-N1	-6.65	119.37	122.70
36	5	2875	U	O5'-P-OP2	-6.65	99.71	105.70
36	1	1269	U	C2-N1-C1'	6.65	125.68	117.70
36	1	1307	G	P-O3'-C3'	6.65	127.67	119.70
36	1	2624	G	N1-C6-O6	6.64	123.89	119.90
36	1	2899	C	N3-C2-O2	-6.64	117.25	121.90
1	6	1140	G	N1-C6-O6	-6.64	115.91	119.90
36	5	2278	C	C5-C6-N1	6.64	124.32	121.00
36	1	2283	G	C5-N7-C8	-6.64	100.98	104.30
36	5	2199	G	C6-C5-N7	-6.64	126.42	130.40
36	1	1849	C	C5-C4-N4	-6.64	115.55	120.20
36	5	3154	C	C2-N1-C1'	6.64	126.10	118.80
36	1	388	G	N3-C2-N2	-6.64	115.25	119.90
36	1	925	A	C6-N1-C2	-6.64	114.62	118.60
36	1	2653	C	N1-C2-O2	6.63	122.88	118.90
36	5	2283	G	N9-C4-C5	-6.63	102.75	105.40
36	5	2643	A	C8-N9-C4	6.63	108.45	105.80
36	5	2988	C	N1-C2-O2	-6.62	114.92	118.90
36	1	229	G	N1-C6-O6	6.62	123.87	119.90
36	5	871	U	C5-C4-O4	6.62	129.87	125.90
36	5	1897	G	C2-N3-C4	-6.62	108.59	111.90
36	5	546	C	C6-N1-C2	-6.62	117.65	120.30
1	2	864	U	N3-C2-O2	-6.62	117.57	122.20
38	4	49	G	C8-N9-C4	6.62	109.05	106.40
36	1	683	U	C6-N1-C2	6.62	124.97	121.00
36	1	2860	U	C4-C5-C6	-6.62	115.73	119.70
1	2	1241	G	N1-C6-O6	6.61	123.87	119.90
36	1	1116	G	C6-C5-N7	-6.61	126.43	130.40
36	1	2818	U	O5'-P-OP1	-6.61	99.75	105.70
36	5	358	G	C2-N3-C4	-6.61	108.60	111.90
36	1	2364	G	N9-C4-C5	-6.61	102.76	105.40
1	6	2	A	O5'-P-OP2	-6.61	99.75	105.70
36	5	3093	C	C6-N1-C2	6.61	122.94	120.30
36	1	1510	G	N3-C4-N9	6.61	129.96	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2211	U	C4-C5-C6	6.61	123.66	119.70
36	5	3317	U	C5-C4-O4	6.61	129.86	125.90
36	5	1209	G	C5-C6-O6	-6.60	124.64	128.60
36	5	1302	A	O5'-P-OP2	6.60	118.62	110.70
36	5	2359	C	C5-C6-N1	-6.60	117.70	121.00
36	5	3153	U	N1-C2-O2	6.60	127.42	122.80
36	5	1163	A	N1-C6-N6	-6.60	114.64	118.60
36	5	2231	C	O4'-C1'-N1	6.60	113.48	108.20
36	5	2928	C	N3-C4-C5	-6.60	119.26	121.90
36	1	1178	G	C5-C6-O6	-6.59	124.64	128.60
36	5	884	A	N1-C6-N6	6.59	122.56	118.60
36	1	29	C	C6-N1-C2	6.59	122.94	120.30
36	1	1166	G	N1-C6-O6	6.59	123.86	119.90
37	3	82	G	N1-C2-N3	6.59	127.85	123.90
36	5	3104	U	O5'-P-OP2	-6.59	99.77	105.70
37	7	49	G	N1-C6-O6	6.59	123.85	119.90
36	1	49	A	N1-C6-N6	6.59	122.55	118.60
36	5	838	G	C5-C6-O6	6.59	132.55	128.60
36	5	955	U	N3-C4-O4	-6.59	114.79	119.40
36	5	1448	U	C5-C6-N1	-6.59	119.41	122.70
36	1	2284	C	C2-N1-C1'	6.58	126.04	118.80
36	5	1519	G	C5-C6-O6	-6.58	124.65	128.60
36	1	396	A	O5'-P-OP1	-6.58	99.77	105.70
36	1	648	C	N3-C4-N4	6.58	122.61	118.00
36	1	1137	C	N3-C4-N4	6.58	122.61	118.00
1	6	539	G	N7-C8-N9	6.58	116.39	113.10
1	6	858	G	C4-N9-C1'	6.58	135.06	126.50
36	1	3049	A	C5-C6-N1	-6.58	114.41	117.70
1	6	116	U	N1-C2-N3	6.58	118.85	114.90
1	6	1634	C	N1-C2-O2	6.58	122.85	118.90
36	1	3209	A	C5-C6-N1	-6.58	114.41	117.70
36	5	2944	U	N3-C4-C5	6.58	118.55	114.60
1	2	1180	C	N3-C2-O2	-6.58	117.30	121.90
36	5	2818	U	C5-C4-O4	-6.58	121.95	125.90
36	1	959	C	C5-C4-N4	-6.58	115.60	120.20
36	5	2404	A	N1-C6-N6	6.57	122.55	118.60
36	5	3154	C	N3-C2-O2	-6.57	117.30	121.90
36	5	1158	A	N1-C6-N6	6.57	122.54	118.60
36	1	421	G	C2-N3-C4	6.57	115.18	111.90
36	1	1433	A	C8-N9-C4	-6.57	103.17	105.80
36	1	2816	G	C6-C5-N7	-6.57	126.46	130.40
36	1	2699	G	N1-C6-O6	6.57	123.84	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2943	G	C4-N9-C1'	6.57	135.03	126.50
36	1	1114	U	C4-C5-C6	-6.56	115.76	119.70
36	1	1897	G	N1-C6-O6	6.56	123.84	119.90
1	6	346	G	C8-N9-C4	-6.56	103.78	106.40
36	1	2306	C	N3-C4-N4	-6.56	113.41	118.00
36	5	3218	A	C4-C5-N7	6.56	113.98	110.70
36	5	1131	G	O5'-P-OP2	-6.56	99.80	105.70
36	5	1708	C	C6-N1-C2	6.56	122.92	120.30
36	1	325	A	OP1-P-OP2	-6.56	109.76	119.60
36	1	339	C	C5-C4-N4	6.56	124.79	120.20
36	5	421	G	C8-N9-C1'	-6.56	118.48	127.00
36	5	1449	A	N1-C6-N6	6.56	122.53	118.60
36	1	1604	G	C8-N9-C1'	-6.56	118.48	127.00
36	1	1801	U	C5-C6-N1	-6.55	119.42	122.70
36	1	2412	G	N9-C4-C5	-6.55	102.78	105.40
36	1	2283	G	C6-C5-N7	-6.55	126.47	130.40
69	O3	82	ARG	NE-CZ-NH2	-6.55	117.02	120.30
36	5	2643	A	N9-C4-C5	-6.55	103.18	105.80
36	1	1136	A	C6-C5-N7	-6.55	127.72	132.30
36	5	971	G	C8-N9-C4	6.55	109.02	106.40
1	2	458	G	N3-C4-C5	6.54	131.87	128.60
36	1	3344	A	C6-C5-N7	-6.54	127.72	132.30
36	5	1127	G	C5-C6-N1	6.54	114.77	111.50
36	5	2381	G	C5-C6-O6	-6.54	124.67	128.60
36	5	645	A	C6-N1-C2	-6.54	114.67	118.60
36	1	908	G	C8-N9-C1'	-6.54	118.50	127.00
36	1	2602	G	N7-C8-N9	-6.54	109.83	113.10
1	2	307	G	C8-N9-C4	6.54	109.02	106.40
36	1	776	U	N1-C2-N3	6.54	118.82	114.90
36	1	2139	A	N1-C6-N6	-6.54	114.68	118.60
36	5	1365	G	C6-C5-N7	-6.54	126.48	130.40
36	1	908	G	N3-C2-N2	-6.54	115.32	119.90
36	1	2194	G	N1-C6-O6	6.54	123.82	119.90
1	6	1490	C	O5'-P-OP1	-6.53	99.82	105.70
36	5	227	G	N1-C6-O6	6.53	123.82	119.90
36	5	3142	A	N1-C6-N6	6.53	122.52	118.60
36	1	1367	G	C8-N9-C4	6.53	109.01	106.40
36	1	1840	U	C5-C4-O4	-6.53	121.98	125.90
36	5	2931	C	OP1-P-OP2	6.53	129.39	119.60
1	2	553	G	C6-C5-N7	-6.52	126.49	130.40
36	5	1452	A	O5'-P-OP1	-6.52	99.83	105.70
36	5	3306	U	N3-C4-C5	6.52	118.51	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	922	U	C2-N1-C1'	6.52	125.52	117.70
35	SM	167	PRO	N-CA-CB	6.52	111.12	103.30
36	5	960	U	N3-C4-C5	6.52	118.51	114.60
1	2	728	U	C2-N1-C1'	6.51	125.52	117.70
36	5	2283	G	C4-C5-N7	6.51	113.41	110.80
36	5	1156	C	C5-C4-N4	-6.51	115.64	120.20
36	1	282	G	N1-C6-O6	-6.51	115.99	119.90
36	1	1156	C	N3-C2-O2	-6.51	117.34	121.90
1	6	565	C	C6-N1-C2	6.51	122.90	120.30
38	4	95	G	C8-N9-C4	6.50	109.00	106.40
1	6	619	A	N1-C6-N6	-6.50	114.70	118.60
36	5	809	G	N1-C6-O6	6.50	123.80	119.90
1	2	831	U	C2-N1-C1'	6.50	125.50	117.70
36	5	1897	G	C5-C6-N1	-6.50	108.25	111.50
36	5	2874	G	C5-C6-O6	6.50	132.50	128.60
1	2	704	C	N1-C2-O2	6.50	122.80	118.90
36	1	1196	C	C6-N1-C2	6.50	122.90	120.30
36	1	1604	G	N3-C4-N9	6.50	129.90	126.00
1	6	609	U	O5'-P-OP2	-6.50	99.85	105.70
1	2	1454	G	N1-C6-O6	-6.50	116.00	119.90
36	1	780	A	C4-C5-C6	6.50	120.25	117.00
36	5	610	G	C8-N9-C4	-6.50	103.80	106.40
1	6	1124	A	N1-C6-N6	6.50	122.50	118.60
36	5	840	C	C6-N1-C2	-6.50	117.70	120.30
36	5	2834	G	O5'-P-OP2	-6.50	99.85	105.70
1	2	74	U	O5'-P-OP1	-6.50	99.86	105.70
36	5	3213	A	C5-C6-N6	-6.50	118.50	123.70
36	1	3277	U	N3-C2-O2	-6.49	117.66	122.20
36	5	656	A	O5'-P-OP2	-6.49	99.86	105.70
36	5	2288	G	O5'-P-OP2	-6.49	99.86	105.70
36	1	1100	U	C5-C6-N1	-6.49	119.45	122.70
1	2	321	C	N3-C2-O2	-6.49	117.36	121.90
36	1	859	G	C5-C6-O6	6.49	132.49	128.60
1	6	1480	G	C6-C5-N7	-6.49	126.51	130.40
36	1	267	G	N1-C6-O6	6.48	123.79	119.90
36	5	23	A	N1-C6-N6	6.48	122.49	118.60
36	1	2710	C	N1-C2-O2	-6.48	115.01	118.90
36	5	2362	C	N3-C4-N4	-6.48	113.46	118.00
37	7	15	C	N3-C4-C5	6.48	124.49	121.90
1	6	767	U	N3-C2-O2	-6.48	117.67	122.20
1	2	1241	G	C4-C5-N7	6.48	113.39	110.80
1	6	1150	G	N9-C4-C5	-6.48	102.81	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	969	C	C5-C6-N1	-6.47	117.76	121.00
36	5	1057	A	C8-N9-C4	6.47	108.39	105.80
1	6	1274	C	C2-N1-C1'	6.47	125.92	118.80
36	1	3079	U	C2-N1-C1'	-6.47	109.94	117.70
37	3	89	G	N7-C8-N9	-6.47	109.86	113.10
1	6	1643	U	N3-C2-O2	-6.47	117.67	122.20
36	5	152	U	C2-N1-C1'	6.47	125.46	117.70
36	1	2662	G	N1-C6-O6	6.47	123.78	119.90
36	1	2812	C	O5'-P-OP2	6.47	118.46	110.70
36	5	2367	A	C8-N9-C4	-6.47	103.21	105.80
36	5	2165	G	N3-C4-N9	6.47	129.88	126.00
36	5	2324	A	C4-C5-N7	6.47	113.93	110.70
36	5	2923	U	N3-C2-O2	-6.47	117.67	122.20
36	1	2873	U	C5-C6-N1	-6.46	119.47	122.70
38	4	94	C	N3-C4-C5	6.46	124.49	121.90
36	5	2417	U	C5-C6-N1	-6.46	119.47	122.70
36	5	2821	C	N1-C2-O2	-6.46	115.02	118.90
36	1	1404	G	C5-C6-O6	6.46	132.48	128.60
1	6	1463	C	C6-N1-C2	6.46	122.89	120.30
36	5	3184	A	N1-C2-N3	-6.46	126.07	129.30
36	5	1480	G	C8-N9-C4	6.46	108.98	106.40
36	1	921	A	C6-N1-C2	-6.46	114.73	118.60
36	1	1845	G	OP2-P-O3'	6.46	119.40	105.20
36	1	2302	G	N1-C2-N2	-6.46	110.39	116.20
1	6	1124	A	N9-C4-C5	-6.46	103.22	105.80
36	5	1152	G	N7-C8-N9	6.46	116.33	113.10
36	1	2357	A	C5-C6-N6	-6.45	118.54	123.70
36	5	958	C	N3-C4-C5	6.45	124.48	121.90
36	1	2693	C	C5-C4-N4	-6.45	115.69	120.20
1	6	17	C	N1-C2-O2	6.45	122.77	118.90
38	4	46	G	N3-C4-C5	-6.45	125.38	128.60
36	1	2827	U	C2-N3-C4	-6.44	123.13	127.00
36	5	1496	C	C6-N1-C1'	-6.44	113.07	120.80
36	1	1189	C	N1-C2-O2	-6.44	115.03	118.90
36	1	1669	C	C6-N1-C2	6.44	122.88	120.30
1	6	119	A	C2-N3-C4	-6.44	107.38	110.60
36	5	1184	A	N1-C6-N6	-6.44	114.73	118.60
38	8	70	G	N1-C6-O6	-6.44	116.03	119.90
1	2	294	C	C6-N1-C2	6.44	122.88	120.30
36	1	3184	A	N1-C6-N6	6.44	122.47	118.60
1	6	558	U	N1-C2-O2	6.44	127.31	122.80
36	5	2927	C	OP2-P-O3'	6.44	119.37	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	7	73	C	C5-C6-N1	6.44	124.22	121.00
36	1	1007	U	C5-C4-O4	-6.44	122.04	125.90
1	2	56	U	N3-C2-O2	-6.44	117.69	122.20
36	1	2279	A	N9-C4-C5	-6.44	103.22	105.80
36	5	343	U	C5-C6-N1	-6.44	119.48	122.70
36	5	591	G	C8-N9-C4	6.44	108.97	106.40
1	6	610	G	N3-C4-N9	6.43	129.86	126.00
36	1	3278	C	C2-N1-C1'	6.43	125.88	118.80
38	4	24	G	N9-C4-C5	-6.43	102.83	105.40
36	5	2316	G	N1-C2-N3	6.43	127.76	123.90
36	1	368	G	C6-C5-N7	-6.43	126.54	130.40
36	1	2617	U	N3-C2-O2	-6.43	117.70	122.20
36	1	2811	A	C6-N1-C2	-6.43	114.74	118.60
36	5	1138	U	N1-C2-O2	-6.43	118.30	122.80
36	5	421	G	N9-C4-C5	-6.43	102.83	105.40
36	5	1420	C	N1-C2-O2	-6.43	115.05	118.90
36	1	2808	A	O4'-C1'-N9	-6.42	103.06	108.20
1	6	610	G	C4-N9-C1'	6.42	134.85	126.50
36	5	368	G	C5-C6-O6	6.42	132.45	128.60
36	5	3178	A	O5'-P-OP1	-6.42	99.92	105.70
1	2	694	U	N1-C2-O2	6.42	127.30	122.80
36	1	655	C	C4-C5-C6	6.42	120.61	117.40
36	1	923	C	C4-C5-C6	6.42	120.61	117.40
1	6	1773	C	N3-C4-N4	6.42	122.50	118.00
36	5	1328	C	C4-C5-C6	6.42	120.61	117.40
1	2	969	C	C6-N1-C2	6.42	122.87	120.30
36	5	3127	A	C5-C6-N1	6.42	120.91	117.70
36	1	2361	A	N1-C6-N6	-6.42	114.75	118.60
36	5	3197	G	N3-C4-N9	-6.42	122.15	126.00
1	2	93	A	O5'-P-OP2	-6.41	99.93	105.70
36	1	371	G	C5-C6-O6	-6.41	124.75	128.60
36	1	510	G	N3-C2-N2	-6.41	115.41	119.90
36	1	2585	G	N3-C4-N9	6.41	129.85	126.00
1	6	437	A	N1-C6-N6	-6.41	114.75	118.60
36	1	940	G	C5-C6-N1	6.41	114.71	111.50
36	1	1177	G	C5-C6-O6	-6.41	124.75	128.60
36	1	2836	C	N3-C2-O2	-6.41	117.41	121.90
69	O3	82	ARG	NE-CZ-NH1	6.41	123.50	120.30
36	5	1178	G	C5-N7-C8	-6.41	101.10	104.30
36	1	1207	G	C5-C6-O6	-6.41	124.76	128.60
36	5	2643	A	C5-C6-N6	-6.40	118.58	123.70
24	D2	104	LEU	CA-CB-CG	6.40	130.02	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2836	C	C5-C4-N4	6.40	124.68	120.20
36	5	412	G	N3-C4-N9	6.40	129.84	126.00
36	1	1148	G	N7-C8-N9	-6.40	109.90	113.10
36	1	43	A	C2-N3-C4	-6.40	107.40	110.60
36	5	1326	A	C2-N3-C4	6.40	113.80	110.60
36	1	59	G	N1-C6-O6	6.39	123.74	119.90
36	1	1117	G	O5'-P-OP1	-6.39	99.94	105.70
1	2	453	U	C2-N1-C1'	6.39	125.37	117.70
36	1	188	U	N3-C4-C5	-6.39	110.76	114.60
36	5	2928	C	C2-N1-C1'	6.39	125.83	118.80
36	5	2405	C	N3-C2-O2	-6.39	117.43	121.90
36	1	2661	G	C6-C5-N7	-6.39	126.57	130.40
1	6	1355	C	C6-N1-C2	-6.39	117.75	120.30
36	1	1297	C	C6-N1-C2	6.38	122.85	120.30
1	6	1747	G	O5'-P-OP2	-6.38	99.95	105.70
36	5	2812	C	C6-N1-C2	-6.38	117.75	120.30
36	1	699	A	C2-N3-C4	-6.38	107.41	110.60
36	1	1192	C	C5-C6-N1	6.38	124.19	121.00
36	5	264	G	C4-C5-N7	6.38	113.35	110.80
36	5	767	U	O4'-C1'-N1	6.38	113.31	108.20
36	5	3374	U	N3-C4-O4	-6.38	114.93	119.40
36	1	2802	A	OP2-P-O3'	6.38	119.23	105.20
36	5	1875	G	C5-C6-O6	6.38	132.43	128.60
36	5	2943	G	N3-C4-N9	6.38	129.83	126.00
36	5	3374	U	N3-C4-C5	6.38	118.43	114.60
36	1	1445	U	N3-C2-O2	6.38	126.66	122.20
36	5	3209	A	O4'-C1'-N9	6.38	113.30	108.20
36	1	961	C	C4-C5-C6	6.37	120.59	117.40
36	1	2916	U	N1-C2-O2	6.37	127.26	122.80
36	5	2715	A	N9-C4-C5	6.37	108.35	105.80
36	5	2772	C	P-O3'-C3'	6.37	127.34	119.70
36	1	2410	U	C5-C4-O4	-6.37	122.08	125.90
36	1	2626	A	C6-N1-C2	-6.37	114.78	118.60
1	6	767	U	C5-C4-O4	6.37	129.72	125.90
1	2	1086	A	O5'-P-OP2	-6.37	99.97	105.70
36	1	1395	G	C8-N9-C4	6.37	108.95	106.40
36	5	592	A	N9-C4-C5	-6.37	103.25	105.80
36	1	1414	G	C4-C5-N7	6.36	113.34	110.80
36	5	968	G	O5'-P-OP1	-6.36	99.97	105.70
1	2	123	G	C8-N9-C4	6.36	108.94	106.40
36	1	833	G	N7-C8-N9	-6.36	109.92	113.10
1	6	1124	A	C4-C5-N7	6.36	113.88	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	836	A	O5'-P-OP2	-6.36	99.97	105.70
36	5	3213	A	N1-C6-N6	6.36	122.42	118.60
36	1	2364	G	C6-C5-N7	-6.36	126.58	130.40
36	5	97	U	C6-N1-C2	6.36	124.81	121.00
36	5	1152	G	C8-N9-C4	-6.36	103.86	106.40
36	5	1496	C	N3-C4-N4	6.36	122.45	118.00
36	5	884	A	C2-N3-C4	-6.36	107.42	110.60
36	5	2808	A	N9-C4-C5	-6.36	103.26	105.80
36	1	1534	A	N1-C6-N6	6.35	122.41	118.60
36	5	911	C	N1-C2-O2	-6.35	115.09	118.90
36	5	2550	U	C5-C4-O4	6.35	129.71	125.90
36	5	2820	A	OP2-P-O3'	6.35	119.17	105.20
36	1	2671	A	O5'-P-OP2	-6.35	99.98	105.70
36	5	1368	U	O5'-P-OP1	-6.35	99.98	105.70
36	5	2873	U	C2-N3-C4	-6.35	123.19	127.00
1	6	1120	U	N3-C4-C5	-6.35	110.79	114.60
35	sM	167	PRO	N-CA-CB	6.35	110.92	103.30
36	5	1116	G	OP2-P-O3'	6.35	119.16	105.20
36	1	969	C	C4-C5-C6	6.34	120.57	117.40
36	1	1346	G	N3-C2-N2	-6.34	115.46	119.90
36	5	2325	G	N3-C2-N2	-6.34	115.46	119.90
36	5	2820	A	C5-C6-N1	6.34	120.87	117.70
36	1	2874	G	C4-C5-C6	6.34	122.61	118.80
36	1	3326	G	C8-N9-C4	6.34	108.94	106.40
36	5	2276	G	N1-C6-O6	-6.34	116.10	119.90
36	1	1149	G	C5-C6-N1	-6.34	108.33	111.50
36	1	1791	C	N1-C2-O2	-6.34	115.10	118.90
1	6	98	U	C5-C4-O4	6.34	129.70	125.90
36	1	1534	A	C5-C6-N6	-6.33	118.63	123.70
36	1	645	A	C6-N1-C2	-6.33	114.80	118.60
36	5	2935	U	O5'-P-OP2	-6.33	100.00	105.70
36	5	3136	G	N3-C4-C5	6.33	131.77	128.60
36	1	574	U	C5-C6-N1	-6.33	119.53	122.70
36	1	968	G	C5-C6-N1	6.33	114.67	111.50
36	1	2343	C	O5'-P-OP2	-6.33	100.00	105.70
36	5	2158	A	C5-C6-N1	6.33	120.87	117.70
36	1	960	U	C5-C4-O4	6.33	129.70	125.90
36	5	1881	A	C4-C5-N7	6.33	113.86	110.70
37	7	101	G	C5-C6-N1	-6.33	108.33	111.50
1	2	1761	U	P-O3'-C3'	6.33	127.29	119.70
36	5	1444	G	C6-C5-N7	-6.33	126.60	130.40
36	5	1723	A	C6-N1-C2	-6.33	114.80	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2140	U	N3-C4-C5	-6.32	110.81	114.60
36	5	2860	U	N3-C4-C5	6.32	118.39	114.60
36	5	3184	A	N1-C6-N6	6.32	122.39	118.60
36	5	598	A	C8-N9-C4	6.32	108.33	105.80
36	5	1848	G	C5-C6-N1	6.32	114.66	111.50
36	5	3177	G	C8-N9-C4	6.32	108.93	106.40
36	5	2808	A	C8-N9-C4	6.32	108.33	105.80
1	6	1796	C	C4-C5-C6	6.31	120.56	117.40
36	1	2761	G	C5-C6-O6	-6.31	124.81	128.60
36	5	799	G	N1-C6-O6	-6.31	116.11	119.90
36	5	1316	C	N3-C4-C5	-6.31	119.38	121.90
36	5	1124	U	N3-C4-O4	-6.31	114.98	119.40
36	5	2129	U	N3-C2-O2	-6.31	117.78	122.20
36	1	2656	A	N1-C6-N6	-6.31	114.82	118.60
37	7	84	A	OP1-P-O3'	6.31	119.07	105.20
36	5	2678	A	C5-C6-N6	6.30	128.74	123.70
36	5	2836	C	O4'-C1'-N1	6.30	113.24	108.20
36	1	2121	G	C5-C6-O6	6.30	132.38	128.60
36	1	3344	A	C4-C5-N7	6.30	113.85	110.70
1	6	1280	C	C6-N1-C2	-6.30	117.78	120.30
36	5	637	C	C2-N3-C4	-6.30	116.75	119.90
36	1	2978	U	O4'-C1'-N1	6.30	113.24	108.20
1	6	1568	C	P-O3'-C3'	6.30	127.26	119.70
36	5	1143	A	C2-N3-C4	-6.30	107.45	110.60
36	5	1548	C	N1-C2-O2	-6.30	115.12	118.90
1	2	1324	G	N3-C4-N9	-6.30	122.22	126.00
36	1	398	A	C8-N9-C4	6.30	108.32	105.80
36	1	1606	U	C2-N1-C1'	-6.30	110.14	117.70
36	5	1209	G	C4-C5-N7	6.30	113.32	110.80
36	5	1900	A	O5'-P-OP1	-6.30	100.03	105.70
36	5	3195	U	N1-C2-O2	6.30	127.21	122.80
36	1	2395	G	C5-C6-O6	-6.29	124.82	128.60
36	1	2811	A	N9-C4-C5	6.29	108.32	105.80
36	5	189	G	N1-C6-O6	-6.29	116.12	119.90
36	1	197	G	C5-C6-O6	-6.29	124.82	128.60
36	1	2850	G	C4-C5-N7	6.29	113.32	110.80
1	6	65	A	C2-N3-C4	-6.29	107.45	110.60
36	5	25	U	N1-C2-O2	-6.29	118.39	122.80
36	5	718	G	C4-C5-N7	6.29	113.32	110.80
36	5	2403	G	N3-C2-N2	-6.29	115.50	119.90
1	6	457	G	N1-C6-O6	6.29	123.67	119.90
36	5	706	A	C8-N9-C4	6.29	108.32	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2883	U	O5'-P-OP2	-6.29	100.04	105.70
36	1	1606	U	C6-N1-C2	6.29	124.77	121.00
1	2	994	G	C5-C6-N1	-6.29	108.36	111.50
36	1	3362	A	O4'-C1'-N9	6.29	113.23	108.20
36	5	2941	A	N1-C6-N6	-6.29	114.83	118.60
36	5	2944	U	C4-C5-C6	-6.29	115.93	119.70
36	1	2139	A	C6-N1-C2	-6.29	114.83	118.60
36	5	343	U	O5'-P-OP1	-6.29	100.04	105.70
36	1	810	A	N1-C6-N6	-6.29	114.83	118.60
36	5	1437	C	C2-N1-C1'	6.29	125.71	118.80
36	1	2391	G	N1-C2-N3	6.28	127.67	123.90
36	5	1365	G	N1-C2-N3	6.28	127.67	123.90
36	5	2643	A	C4-C5-N7	6.28	113.84	110.70
1	6	1311	U	N1-C2-O2	-6.28	118.40	122.80
1	2	772	G	N1-C6-O6	6.28	123.67	119.90
36	1	503	C	C6-N1-C2	6.28	122.81	120.30
36	1	960	U	C2-N3-C4	-6.28	123.23	127.00
1	2	831	U	C6-N1-C2	-6.28	117.23	121.00
36	1	57	A	C2-N3-C4	-6.28	107.46	110.60
36	1	716	A	C4-C5-N7	6.28	113.84	110.70
38	4	53	A	C5-C6-N1	6.28	120.84	117.70
36	1	1547	G	N7-C8-N9	-6.27	109.96	113.10
36	5	2385	G	N3-C4-C5	6.27	131.74	128.60
36	1	67	A	O5'-P-OP1	-6.27	100.06	105.70
36	1	2344	U	C5-C6-N1	-6.27	119.57	122.70
1	6	1763	A	N1-C6-N6	6.27	122.36	118.60
36	1	1330	A	C2-N3-C4	-6.27	107.47	110.60
36	5	390	G	C5-C6-O6	-6.27	124.84	128.60
36	5	995	U	O5'-P-OP1	-6.27	100.06	105.70
36	5	2553	U	N3-C2-O2	-6.27	117.81	122.20
36	5	1907	C	O5'-P-OP2	-6.26	100.06	105.70
36	1	226	C	N3-C4-N4	6.26	122.38	118.00
1	6	886	U	N3-C2-O2	-6.26	117.82	122.20
36	1	1439	U	C2-N3-C4	6.26	130.76	127.00
36	5	969	C	N3-C4-N4	-6.26	113.62	118.00
52	m6	78	ARG	NE-CZ-NH2	-6.26	117.17	120.30
36	1	1303	A	C5-C6-N6	-6.26	118.69	123.70
36	1	2660	G	C5-C6-O6	-6.26	124.84	128.60
36	5	3056	U	N3-C2-O2	6.26	126.58	122.20
36	1	2930	A	C4-C5-N7	6.26	113.83	110.70
36	5	2914	G	C8-N9-C1'	-6.26	118.87	127.00
37	3	89	G	C8-N9-C4	6.25	108.90	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2191	U	N3-C4-O4	-6.25	115.02	119.40
36	1	40	A	O5'-P-OP1	-6.25	100.07	105.70
36	1	1149	G	C5-C6-O6	-6.25	124.85	128.60
49	M3	85	LEU	CA-CB-CG	6.25	129.68	115.30
36	5	2349	U	OP1-P-O3'	6.25	118.96	105.20
1	6	387	A	O5'-P-OP2	-6.25	100.08	105.70
36	5	2340	U	C5-C4-O4	-6.25	122.15	125.90
36	5	2905	U	C2-N3-C4	-6.25	123.25	127.00
36	5	3050	U	N1-C2-O2	6.25	127.17	122.80
36	5	2531	C	C2-N1-C1'	6.25	125.67	118.80
36	5	2879	C	C5-C4-N4	-6.25	115.83	120.20
36	1	2418	G	OP1-P-O3'	6.25	118.94	105.20
1	6	1000	C	C2-N1-C1'	6.25	125.67	118.80
1	6	1499	G	C5-C6-O6	6.25	132.35	128.60
36	1	1213	G	N1-C2-N2	6.25	121.82	116.20
36	5	2816	G	C8-N9-C4	6.25	108.90	106.40
36	1	2401	A	C5-C6-N1	-6.24	114.58	117.70
36	1	2823	G	C4-C5-N7	-6.24	108.30	110.80
36	5	2707	C	N3-C4-C5	6.24	124.40	121.90
36	1	361	A	N1-C6-N6	-6.24	114.86	118.60
36	1	1081	U	C5-C6-N1	6.24	125.82	122.70
1	2	92	A	N1-C6-N6	-6.24	114.86	118.60
36	1	62	A	C5-C6-N1	6.24	120.82	117.70
36	5	810	A	O5'-P-OP1	-6.24	100.08	105.70
36	5	1782	U	C5-C6-N1	6.24	125.82	122.70
36	5	3107	U	O5'-P-OP2	-6.24	100.08	105.70
36	1	2230	C	C6-N1-C2	-6.24	117.80	120.30
36	1	2283	G	N3-C2-N2	-6.24	115.53	119.90
36	1	2797	C	C6-N1-C2	6.24	122.80	120.30
36	5	1589	A	C4-C5-N7	6.24	113.82	110.70
81	p0	212	HIS	CB-CA-C	6.24	122.88	110.40
37	3	63	A	O5'-P-OP1	-6.24	100.09	105.70
36	1	545	U	C2-N1-C1'	6.24	125.18	117.70
36	5	283	G	C5-C6-N1	6.24	114.62	111.50
36	1	24	G	N9-C4-C5	-6.23	102.91	105.40
36	1	2715	A	O5'-P-OP1	-6.23	100.09	105.70
36	5	88	A	C8-N9-C4	6.23	108.29	105.80
1	2	959	U	N1-C2-O2	6.23	127.16	122.80
36	1	558	U	O5'-P-OP1	-6.23	100.09	105.70
1	6	1108	G	C4-C5-N7	6.23	113.29	110.80
36	1	2172	A	C5-N7-C8	-6.23	100.78	103.90
36	1	2174	G	C6-C5-N7	-6.23	126.66	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2323	G	C8-N9-C4	-6.23	103.91	106.40
37	7	68	C	N3-C2-O2	-6.23	117.54	121.90
37	7	77	G	C5-C6-O6	-6.23	124.86	128.60
36	1	3378	C	C6-N1-C2	6.23	122.79	120.30
1	6	1000	C	N3-C2-O2	-6.23	117.54	121.90
36	5	264	G	C5-C6-O6	-6.23	124.86	128.60
36	5	1419	A	O5'-P-OP2	-6.23	100.10	105.70
36	5	2897	A	N1-C2-N3	6.23	132.41	129.30
57	n1	106	LEU	CA-CB-CG	-6.23	100.98	115.30
78	q2	17	CYS	CA-CB-SG	6.23	125.21	114.00
36	5	3308	C	N1-C2-O2	-6.23	115.16	118.90
1	2	782	U	P-O3'-C3'	6.22	127.17	119.70
36	1	3272	C	C6-N1-C2	-6.22	117.81	120.30
36	5	1219	C	C6-N1-C2	6.22	122.79	120.30
1	2	942	G	N1-C6-O6	-6.22	116.17	119.90
36	1	1114	U	O5'-P-OP2	-6.22	100.10	105.70
36	1	2827	U	N3-C2-O2	-6.22	117.84	122.20
36	1	2872	A	C6-N1-C2	-6.22	114.87	118.60
36	5	2394	G	C8-N9-C4	6.22	108.89	106.40
36	1	867	G	C5-C6-O6	6.22	132.33	128.60
36	5	960	U	N1-C2-O2	6.22	127.15	122.80
1	2	1291	G	N3-C4-N9	-6.22	122.27	126.00
36	1	281	G	C6-C5-N7	-6.22	126.67	130.40
36	5	1316	C	N3-C2-O2	6.22	126.25	121.90
36	1	2177	G	C5-C6-N1	6.22	114.61	111.50
1	6	1528	U	N1-C2-O2	-6.22	118.45	122.80
36	5	869	G	N1-C6-O6	-6.22	116.17	119.90
38	4	143	U	O5'-P-OP1	-6.21	100.11	105.70
36	5	718	G	C8-N9-C1'	-6.21	118.92	127.00
41	L4	327	LEU	CA-CB-CG	6.21	129.59	115.30
36	5	1006	A	O5'-P-OP2	-6.21	100.11	105.70
36	5	1116	G	N1-C2-N3	6.21	127.63	123.90
36	5	1868	G	C4-C5-N7	6.21	113.28	110.80
36	1	510	G	N1-C6-O6	6.21	123.63	119.90
36	5	2203	U	C6-N1-C2	-6.21	117.28	121.00
36	1	1780	G	C5-C6-O6	-6.21	124.88	128.60
36	1	1364	C	C6-N1-C2	6.20	122.78	120.30
36	5	2795	U	N1-C2-O2	-6.20	118.46	122.80
36	5	2372	A	OP2-P-O3'	6.20	118.84	105.20
36	1	1118	C	N1-C2-O2	-6.20	115.18	118.90
36	1	1534	A	N9-C4-C5	-6.20	103.32	105.80
36	5	889	U	C5-C4-O4	-6.20	122.18	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2301	U	O5'-P-OP2	-6.20	100.12	105.70
36	5	884	A	C5-N7-C8	-6.20	100.80	103.90
36	5	1846	C	C6-N1-C1'	-6.20	113.36	120.80
1	2	1651	A	C8-N9-C4	6.20	108.28	105.80
36	5	1314	C	N3-C4-C5	6.20	124.38	121.90
36	5	2421	U	N1-C2-N3	6.20	118.62	114.90
1	6	1672	G	C6-C5-N7	-6.19	126.68	130.40
36	5	2806	U	C5-C6-N1	-6.19	119.60	122.70
36	1	24	G	C2-N3-C4	-6.19	108.80	111.90
36	1	1094	U	C5-C6-N1	6.19	125.80	122.70
36	1	2172	A	C4-C5-N7	6.19	113.80	110.70
36	5	816	A	N9-C4-C5	6.19	108.28	105.80
36	5	1144	U	OP1-P-OP2	6.19	128.89	119.60
36	5	2115	G	C5-C6-O6	-6.19	124.89	128.60
36	1	350	C	C6-N1-C2	-6.19	117.82	120.30
36	1	2527	G	N3-C4-N9	-6.19	122.29	126.00
36	1	2306	C	N3-C2-O2	-6.19	117.57	121.90
73	O7	67	LEU	CA-CB-CG	6.19	129.53	115.30
36	5	1782	U	C6-N1-C2	-6.19	117.29	121.00
1	2	623	A	O5'-P-OP1	-6.18	100.13	105.70
36	1	636	C	C5-C6-N1	-6.18	117.91	121.00
36	1	1175	C	C2-N3-C4	-6.18	116.81	119.90
36	5	644	G	C5-N7-C8	6.18	107.39	104.30
36	1	720	A	C8-N9-C4	-6.18	103.33	105.80
36	1	394	G	N1-C6-O6	-6.18	116.19	119.90
36	5	961	C	N3-C4-N4	6.18	122.33	118.00
36	5	2759	U	N1-C2-N3	6.18	118.61	114.90
36	5	2836	C	C4-C5-C6	6.18	120.49	117.40
37	7	101	G	C2-N3-C4	-6.18	108.81	111.90
36	1	1331	U	C6-N1-C2	6.18	124.71	121.00
36	5	943	U	O5'-P-OP1	-6.18	100.14	105.70
36	1	369	A	O5'-P-OP2	-6.18	100.14	105.70
36	1	1389	G	C6-C5-N7	-6.18	126.69	130.40
38	4	100	U	C2-N1-C1'	6.18	125.11	117.70
36	5	306	A	O4'-C1'-N9	-6.18	103.26	108.20
36	5	1116	G	C5-C6-N1	-6.18	108.41	111.50
36	5	3218	A	C6-C5-N7	-6.18	127.98	132.30
36	1	908	G	C4-N9-C1'	6.17	134.53	126.50
36	5	661	G	O5'-P-OP1	-6.17	100.14	105.70
36	1	856	G	C4-C5-N7	6.17	113.27	110.80
38	4	113	U	C2-N1-C1'	-6.17	110.29	117.70
1	2	1657	U	OP2-P-O3'	6.17	118.77	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1180	A	O4'-C1'-N9	-6.17	103.26	108.20
36	1	2646	C	C5-C6-N1	-6.17	117.92	121.00
36	1	3309	G	C6-C5-N7	-6.17	126.70	130.40
1	6	337	G	N3-C2-N2	6.17	124.22	119.90
36	1	2706	G	C5-C6-O6	-6.17	124.90	128.60
36	5	92	G	N1-C2-N2	-6.17	110.65	116.20
36	5	313	A	C5-C6-N6	-6.17	118.77	123.70
36	5	1450	G	N1-C6-O6	6.17	123.60	119.90
36	1	618	C	C6-N1-C2	-6.16	117.83	120.30
36	1	3092	C	C6-N1-C2	6.16	122.77	120.30
36	5	2134	G	C8-N9-C4	6.16	108.86	106.40
36	5	2374	C	N1-C2-O2	-6.16	115.20	118.90
36	5	677	A	N1-C6-N6	6.16	122.30	118.60
36	5	2807	U	C6-N1-C2	6.16	124.70	121.00
36	1	669	U	O5'-P-OP1	-6.16	100.16	105.70
36	1	2153	U	N1-C2-N3	6.16	118.60	114.90
36	1	3209	A	N1-C6-N6	6.16	122.30	118.60
36	5	2117	A	N9-C4-C5	6.16	108.26	105.80
36	1	969	C	C5-C6-N1	-6.16	117.92	121.00
36	1	2706	G	C6-C5-N7	-6.16	126.71	130.40
36	1	2874	G	N1-C6-O6	6.16	123.59	119.90
38	4	32	C	N3-C4-C5	6.16	124.36	121.90
36	5	964	G	N1-C2-N3	6.16	127.59	123.90
36	5	2392	C	C2-N3-C4	-6.16	116.82	119.90
50	m4	135	LEU	CA-CB-CG	6.16	129.46	115.30
36	5	2430	A	C2-N3-C4	-6.15	107.52	110.60
1	2	1600	A	C2-N3-C4	-6.15	107.52	110.60
36	5	651	G	OP2-P-O3'	6.15	118.73	105.20
36	5	2298	U	C5-C6-N1	-6.15	119.62	122.70
36	5	2899	C	C6-N1-C2	-6.15	117.84	120.30
36	5	2931	C	C5-C4-N4	-6.15	115.89	120.20
36	5	1496	C	O5'-P-OP2	-6.15	100.17	105.70
36	1	25	U	N1-C2-O2	-6.15	118.50	122.80
36	1	2412	G	N3-C4-N9	6.15	129.69	126.00
1	6	1124	A	C5-C6-N6	-6.15	118.78	123.70
37	7	91	G	N3-C4-C5	-6.15	125.53	128.60
1	2	16	G	N3-C4-N9	6.14	129.69	126.00
36	5	2191	U	N1-C2-O2	6.14	127.10	122.80
36	5	2359	C	C6-N1-C2	6.14	122.76	120.30
36	5	2868	U	C2-N3-C4	6.14	130.69	127.00
37	7	29	C	C6-N1-C2	6.14	122.76	120.30
36	1	340	C	N3-C4-C5	6.14	124.36	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	937	G	C8-N9-C4	6.14	108.86	106.40
36	1	1838	G	C4-C5-N7	6.14	113.26	110.80
1	6	1007	C	N3-C4-C5	6.14	124.36	121.90
1	6	1200	G	N1-C6-O6	6.14	123.58	119.90
36	5	2639	G	C6-C5-N7	-6.14	126.72	130.40
36	5	3306	U	C6-N1-C2	6.14	124.68	121.00
36	1	2846	U	N1-C2-N3	6.14	118.58	114.90
1	6	17	C	N3-C2-O2	-6.14	117.60	121.90
36	1	1117	G	N3-C4-N9	-6.14	122.32	126.00
36	5	2991	A	C5-C6-N1	6.14	120.77	117.70
36	1	704	U	O5'-P-OP2	-6.13	100.18	105.70
36	1	1156	C	C5-C6-N1	-6.13	117.93	121.00
36	1	1380	G	C2-N3-C4	-6.13	108.83	111.90
37	3	117	A	N1-C6-N6	6.13	122.28	118.60
36	1	2314	U	N3-C4-C5	6.13	118.28	114.60
36	5	3306	U	N1-C2-N3	-6.13	111.22	114.90
36	1	1000	C	N3-C4-C5	6.13	124.35	121.90
36	1	2399	A	C5-N7-C8	-6.13	100.83	103.90
36	1	2876	C	N3-C4-C5	-6.13	119.45	121.90
36	5	973	A	N1-C6-N6	6.13	122.28	118.60
36	5	2343	C	C5-C6-N1	-6.13	117.93	121.00
36	5	2763	U	C5-C4-O4	-6.13	122.22	125.90
36	5	2870	C	C6-N1-C1'	6.13	128.16	120.80
36	1	1306	G	C8-N9-C4	6.13	108.85	106.40
36	1	1798	A	C8-N9-C4	6.13	108.25	105.80
36	5	832	G	N3-C4-N9	6.13	129.68	126.00
1	2	447	U	C5-C6-N1	6.13	125.76	122.70
36	5	1852	G	N9-C4-C5	6.13	107.85	105.40
36	5	2856	G	C4-C5-N7	6.13	113.25	110.80
36	5	2868	U	C5-C6-N1	6.13	125.76	122.70
36	1	1424	C	C6-N1-C2	-6.13	117.85	120.30
36	1	2899	C	C2-N3-C4	-6.12	116.84	119.90
36	5	1847	A	O5'-P-OP2	-6.12	100.19	105.70
36	1	2550	U	C5-C4-O4	6.12	129.57	125.90
36	1	3213	A	N1-C2-N3	6.12	132.36	129.30
36	5	2877	G	N1-C6-O6	-6.12	116.22	119.90
36	5	607	A	N1-C6-N6	-6.12	114.93	118.60
36	5	2613	U	N1-C2-O2	-6.12	118.52	122.80
1	6	1749	A	C2-N3-C4	-6.12	107.54	110.60
36	1	2364	G	N3-C4-N9	6.12	129.67	126.00
36	5	1323	G	C4-C5-N7	6.12	113.25	110.80
1	2	1241	G	C4-N9-C1'	6.12	134.45	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2	1659	A	C8-N9-C4	-6.12	103.35	105.80
36	5	2341	A	N7-C8-N9	-6.12	110.74	113.80
36	1	510	G	C5-C6-O6	-6.12	124.93	128.60
36	1	612	U	N3-C4-O4	-6.11	115.12	119.40
36	1	968	G	C6-N1-C2	-6.11	121.43	125.10
36	1	1134	G	C6-C5-N7	-6.11	126.73	130.40
36	1	2410	U	C2-N3-C4	-6.11	123.33	127.00
1	2	13	C	C2-N3-C4	-6.11	116.84	119.90
1	2	1324	G	N3-C2-N2	-6.11	115.62	119.90
36	5	2250	G	O5'-P-OP2	-6.11	100.20	105.70
36	5	1420	C	C2-N1-C1'	-6.10	112.08	118.80
36	1	2284	C	C6-N1-C1'	-6.10	113.48	120.80
36	5	2134	G	N1-C6-O6	-6.10	116.24	119.90
38	8	39	G	N3-C4-N9	6.10	129.66	126.00
1	6	19	A	C8-N9-C4	6.10	108.24	105.80
1	6	1736	G	N3-C4-N9	-6.10	122.34	126.00
36	5	686	G	OP1-P-OP2	-6.10	110.45	119.60
36	5	2311	G	C8-N9-C4	6.10	108.84	106.40
36	5	2333	C	N3-C4-C5	6.10	124.34	121.90
36	1	1390	A	N9-C4-C5	6.10	108.24	105.80
36	5	1064	A	P-O3'-C3'	6.10	127.02	119.70
36	1	663	C	N3-C4-N4	6.09	122.27	118.00
1	6	610	G	C5-C6-O6	-6.09	124.94	128.60
1	6	558	U	C2-N1-C1'	6.09	125.01	117.70
1	6	1102	G	N3-C4-C5	6.09	131.65	128.60
36	5	2195	C	C6-N1-C2	-6.09	117.86	120.30
36	5	2115	G	N1-C6-O6	6.09	123.56	119.90
1	2	334	G	N3-C4-N9	-6.09	122.35	126.00
36	1	1115	G	C6-C5-N7	-6.09	126.75	130.40
36	1	1151	U	N1-C2-O2	-6.09	118.54	122.80
1	6	1641	C	N1-C2-O2	-6.09	115.25	118.90
36	5	2257	C	C6-N1-C2	-6.09	117.86	120.30
36	5	2257	C	C5-C6-N1	6.09	124.04	121.00
12	c0	83	PRO	N-CA-CB	6.08	110.60	103.30
36	5	2328	U	N1-C2-O2	-6.08	118.54	122.80
36	1	770	G	O4'-C1'-N9	6.08	113.07	108.20
36	1	2916	U	N1-C2-N3	-6.08	111.25	114.90
36	5	2641	U	C2-N1-C1'	6.08	125.00	117.70
36	5	2904	U	C2-N3-C4	-6.08	123.35	127.00
38	4	79	A	C8-N9-C4	-6.08	103.37	105.80
36	5	2811	A	C8-N9-C4	6.08	108.23	105.80
36	1	2231	C	C6-N1-C2	6.08	122.73	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	41	G	N1-C6-O6	6.08	123.55	119.90
1	6	1592	A	C2-N3-C4	-6.08	107.56	110.60
38	8	84	C	C6-N1-C2	-6.08	117.87	120.30
36	1	2952	G	C5-C6-O6	-6.08	124.95	128.60
36	5	1710	C	N3-C4-C5	6.08	124.33	121.90
36	1	93	C	O5'-P-OP1	-6.08	100.23	105.70
36	1	1858	A	C8-N9-C4	-6.08	103.37	105.80
36	5	153	U	N3-C4-C5	-6.08	110.95	114.60
36	5	2273	G	C8-N9-C4	6.08	108.83	106.40
36	5	2927	C	C2-N3-C4	-6.08	116.86	119.90
36	5	3137	C	C2-N3-C4	-6.08	116.86	119.90
36	5	2726	C	N3-C2-O2	-6.07	117.65	121.90
36	5	2950	G	O4'-C1'-N9	6.07	113.06	108.20
36	1	796	U	N1-C2-N3	6.07	118.54	114.90
36	1	907	G	N9-C4-C5	-6.07	102.97	105.40
36	1	1134	G	N1-C6-O6	6.07	123.54	119.90
36	1	2966	G	C6-C5-N7	-6.07	126.76	130.40
36	1	2177	G	C5-C6-O6	-6.07	124.96	128.60
36	1	2297	U	C5-C4-O4	6.07	129.54	125.90
36	1	2833	A	C8-N9-C4	6.07	108.23	105.80
36	5	1077	U	C6-N1-C2	6.07	124.64	121.00
36	5	2634	U	O5'-P-OP1	-6.07	100.24	105.70
36	1	1391	C	N3-C4-N4	6.07	122.25	118.00
1	6	1085	G	C5-C6-O6	6.07	132.24	128.60
36	5	1302	A	N9-C4-C5	6.07	108.23	105.80
36	5	1339	C	N3-C4-N4	6.07	122.25	118.00
36	1	1369	A	O5'-P-OP1	-6.06	100.24	105.70
36	1	2296	A	C2-N3-C4	-6.06	107.57	110.60
25	d3	132	LEU	CA-CB-CG	-6.06	101.36	115.30
36	5	1710	C	C5-C6-N1	-6.06	117.97	121.00
36	1	1145	G	C6-C5-N7	-6.06	126.76	130.40
51	M5	152	CYS	CA-CB-SG	-6.06	103.09	114.00
1	6	144	U	N3-C2-O2	-6.06	117.96	122.20
36	5	2194	G	N1-C2-N3	6.06	127.54	123.90
36	5	2307	G	N9-C4-C5	-6.06	102.97	105.40
36	5	2314	U	N3-C4-O4	6.06	123.64	119.40
36	1	2250	G	N7-C8-N9	-6.06	110.07	113.10
36	5	403	C	C6-N1-C2	-6.06	117.88	120.30
36	1	1346	G	N3-C4-N9	-6.06	122.36	126.00
1	6	1340	U	N3-C2-O2	-6.06	117.96	122.20
36	5	1433	A	OP2-P-O3'	6.06	118.53	105.20
1	2	192	U	N1-C2-O2	6.05	127.04	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	1581	C	N3-C4-C5	6.05	124.32	121.90
36	5	1194	G	O5'-P-OP1	-6.05	100.25	105.70
36	5	1197	A	N1-C6-N6	6.05	122.23	118.60
36	5	41	G	N9-C4-C5	-6.05	102.98	105.40
36	5	1370	G	C4-C5-N7	-6.05	108.38	110.80
1	2	579	A	O4'-C1'-N9	6.05	113.04	108.20
36	1	406	G	N3-C2-N2	6.05	124.14	119.90
36	1	701	G	N1-C6-O6	6.05	123.53	119.90
36	1	1117	G	N3-C4-C5	6.05	131.62	128.60
36	1	2660	G	C8-N9-C4	6.05	108.82	106.40
36	1	3181	C	C6-N1-C2	-6.05	117.88	120.30
1	6	1629	G	OP2-P-O3'	6.05	118.52	105.20
36	5	651	G	N9-C4-C5	6.05	107.82	105.40
36	5	2807	U	C5-C6-N1	-6.05	119.67	122.70
36	1	716	A	C2-N3-C4	-6.05	107.58	110.60
36	1	3275	U	C5-C6-N1	6.05	125.72	122.70
36	1	545	U	N1-C2-O2	6.05	127.03	122.80
36	1	2688	U	N1-C2-N3	-6.05	111.27	114.90
36	5	962	A	N1-C6-N6	6.05	122.23	118.60
36	5	1392	G	C8-N9-C4	6.05	108.82	106.40
1	2	1761	U	C6-N1-C2	-6.04	117.37	121.00
36	1	2297	U	N3-C2-O2	-6.04	117.97	122.20
36	5	56	G	N1-C6-O6	-6.04	116.27	119.90
36	1	1508	C	C6-N1-C2	-6.04	117.88	120.30
1	6	1614	A	C2-N3-C4	-6.04	107.58	110.60
36	5	2231	C	C2-N1-C1'	6.04	125.45	118.80
36	5	2435	G	N9-C4-C5	-6.04	102.98	105.40
36	5	2724	U	C6-N1-C2	-6.04	117.37	121.00
36	5	3004	C	C5-C4-N4	-6.04	115.97	120.20
36	1	281	G	N9-C4-C5	-6.04	102.98	105.40
36	1	651	G	C8-N9-C4	6.04	108.82	106.40
36	1	1906	G	C5-C6-O6	-6.04	124.97	128.60
36	1	3217	C	C6-N1-C2	-6.04	117.88	120.30
37	3	94	C	N3-C2-O2	6.04	126.13	121.90
1	6	1	U	C6-N1-C1'	-6.04	112.74	121.20
1	6	1634	C	C2-N3-C4	6.04	122.92	119.90
36	5	969	C	N3-C4-C5	6.04	124.32	121.90
36	1	920	A	N1-C2-N3	6.04	132.32	129.30
1	6	1082	C	C5-C6-N1	6.04	124.02	121.00
36	5	962	A	C5-C6-N6	-6.04	118.87	123.70
36	1	2188	A	C8-N9-C4	6.04	108.22	105.80
36	1	2958	A	C5-C6-N6	-6.04	118.87	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	3307	A	N1-C6-N6	6.04	122.22	118.60
36	5	886	C	N1-C2-O2	-6.04	115.28	118.90
36	5	2608	G	N1-C6-O6	-6.04	116.28	119.90
36	5	3308	C	C4-C5-C6	6.04	120.42	117.40
1	6	1736	G	N3-C2-N2	-6.04	115.67	119.90
36	1	1441	G	C4-C5-N7	-6.04	108.39	110.80
37	3	89	G	C5-N7-C8	6.04	107.32	104.30
36	5	1116	G	C4-C5-C6	6.04	122.42	118.80
38	8	38	U	C2-N1-C1'	6.04	124.94	117.70
36	1	3277	U	N1-C2-O2	6.03	127.02	122.80
36	5	2552	C	N3-C2-O2	-6.03	117.68	121.90
36	5	3055	U	O5'-P-OP2	-6.03	100.27	105.70
38	8	17	A	N1-C6-N6	6.03	122.22	118.60
36	5	1306	G	C6-N1-C2	-6.03	121.48	125.10
36	5	2412	G	N3-C4-N9	6.03	129.62	126.00
36	1	285	A	N1-C6-N6	6.03	122.22	118.60
36	1	1165	A	N7-C8-N9	-6.03	110.78	113.80
36	1	2281	A	O4'-C1'-N9	6.03	113.02	108.20
1	6	555	A	C8-N9-C4	-6.03	103.39	105.80
36	5	91	G	C4-C5-N7	6.03	113.21	110.80
36	5	429	U	O5'-P-OP2	-6.03	100.27	105.70
36	5	2227	C	O5'-P-OP1	-6.03	100.27	105.70
36	1	957	C	N1-C2-O2	-6.03	115.28	118.90
1	6	433	C	N3-C4-N4	6.03	122.22	118.00
36	5	640	U	N1-C2-O2	-6.03	118.58	122.80
37	3	94	C	N1-C2-O2	-6.03	115.28	118.90
36	5	366	A	N1-C2-N3	6.03	132.31	129.30
36	5	3214	U	N3-C2-O2	-6.03	117.98	122.20
36	1	232	G	N3-C4-C5	-6.03	125.59	128.60
36	1	648	C	OP1-P-OP2	6.03	128.64	119.60
36	5	718	G	N1-C2-N2	-6.03	110.78	116.20
36	5	3120	C	O5'-P-OP1	-6.03	100.28	105.70
37	7	78	U	O5'-P-OP2	-6.03	100.28	105.70
36	1	2257	C	O4'-C1'-N1	6.02	113.02	108.20
36	5	2316	G	N3-C4-C5	-6.02	125.59	128.60
36	1	910	G	O5'-P-OP2	-6.02	100.28	105.70
1	6	1150	G	N3-C4-C5	6.02	131.61	128.60
36	5	2354	C	N3-C4-C5	-6.02	119.49	121.90
36	5	2413	A	C2-N3-C4	-6.02	107.59	110.60
36	5	278	U	N1-C2-O2	-6.02	118.59	122.80
36	5	1305	U	N3-C4-O4	6.02	123.61	119.40
36	5	1457	U	N1-C2-O2	-6.02	118.59	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	1473	U	C5-C4-O4	6.02	129.51	125.90
36	1	229	G	C5-C6-O6	-6.01	124.99	128.60
36	1	2305	G	C5-C6-O6	-6.01	124.99	128.60
36	1	2722	U	N3-C2-O2	-6.01	117.99	122.20
1	2	1122	G	N1-C6-O6	6.01	123.51	119.90
36	1	116	A	N1-C6-N6	6.01	122.21	118.60
36	1	915	A	O5'-P-OP1	-6.01	100.29	105.70
1	2	830	U	N3-C2-O2	-6.01	117.99	122.20
1	2	1386	G	C8-N9-C4	6.01	108.80	106.40
36	1	661	G	C5-C6-O6	6.01	132.21	128.60
38	4	44	A	C8-N9-C4	6.01	108.20	105.80
36	5	661	G	C4-C5-N7	6.01	113.20	110.80
36	5	1389	G	C5-C6-O6	-6.01	124.99	128.60
36	5	2245	C	N3-C2-O2	-6.01	117.69	121.90
36	5	2421	U	C5-C6-N1	-6.01	119.69	122.70
36	5	3001	C	C2-N1-C1'	-6.01	112.19	118.80
1	2	1473	U	N1-C2-O2	6.01	127.00	122.80
36	1	45	A	O5'-P-OP1	6.01	117.91	110.70
36	1	878	G	N3-C4-N9	-6.01	122.40	126.00
36	5	1306	G	C6-C5-N7	-6.01	126.80	130.40
36	5	1440	G	C5-C6-O6	6.01	132.20	128.60
36	5	1604	G	C6-C5-N7	-6.01	126.80	130.40
36	5	3035	A	C8-N9-C4	6.00	108.20	105.80
38	4	19	C	N1-C2-O2	-6.00	115.30	118.90
36	1	350	C	N1-C2-O2	6.00	122.50	118.90
36	1	1116	G	C8-N9-C4	-6.00	104.00	106.40
36	5	640	U	N3-C4-O4	6.00	123.60	119.40
38	4	107	G	N1-C6-O6	-6.00	116.30	119.90
36	1	941	G	C8-N9-C4	-6.00	104.00	106.40
36	1	1367	G	N9-C4-C5	-6.00	103.00	105.40
36	1	2246	G	C2-N3-C4	6.00	114.90	111.90
36	1	1269	U	N1-C2-O2	6.00	127.00	122.80
36	5	800	G	N3-C4-N9	6.00	129.60	126.00
36	5	2957	G	O5'-P-OP1	-6.00	100.30	105.70
36	1	1112	A	C5-C6-N1	6.00	120.70	117.70
36	1	2257	C	C6-N1-C2	-6.00	117.90	120.30
36	5	2140	U	C4-C5-C6	6.00	123.30	119.70
36	5	3394	U	N3-C4-O4	-6.00	115.20	119.40
36	1	1103	A	O5'-P-OP1	-5.99	100.31	105.70
36	5	283	G	O4'-C1'-N9	-5.99	103.41	108.20
36	5	2849	C	N1-C2-O2	-5.99	115.31	118.90
36	5	1208	U	N3-C4-O4	-5.99	115.21	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2130	G	C4-C5-N7	-5.99	108.41	110.80
1	2	144	U	N3-C2-O2	-5.99	118.01	122.20
36	5	371	G	C5-C6-O6	-5.99	125.01	128.60
36	5	1888	U	N3-C4-O4	5.99	123.59	119.40
36	5	2828	G	C4-N9-C1'	5.99	134.28	126.50
1	6	103	A	P-O3'-C3'	5.98	126.88	119.70
36	1	2886	U	N3-C4-O4	5.98	123.59	119.40
36	5	3317	U	N3-C2-O2	-5.98	118.01	122.20
36	1	315	C	N3-C4-N4	5.98	122.19	118.00
36	1	1174	G	C8-N9-C1'	-5.98	119.22	127.00
36	5	2710	C	N3-C2-O2	5.98	126.09	121.90
1	6	782	U	N3-C2-O2	-5.98	118.02	122.20
36	1	655	C	N3-C4-C5	-5.98	119.51	121.90
36	5	1141	C	N3-C4-C5	5.98	124.29	121.90
36	5	1156	C	N3-C2-O2	5.98	126.08	121.90
36	5	1141	C	C6-N1-C2	5.97	122.69	120.30
36	5	3188	G	N9-C4-C5	5.97	107.79	105.40
36	1	304	G	N9-C4-C5	5.97	107.79	105.40
36	1	1838	G	C6-C5-N7	-5.97	126.82	130.40
36	1	2730	G	N1-C6-O6	5.97	123.48	119.90
36	5	1152	G	N3-C2-N2	-5.97	115.72	119.90
36	1	97	U	OP2-P-O3'	5.97	118.34	105.20
1	6	136	C	C2-N1-C1'	5.97	125.37	118.80
36	5	1155	C	O5'-P-OP1	-5.97	100.33	105.70
36	5	1834	U	N3-C4-C5	-5.97	111.02	114.60
1	6	215	A	C8-N9-C4	-5.97	103.41	105.80
42	l5	110	LEU	CA-CB-CG	5.97	129.03	115.30
36	1	639	G	C6-C5-N7	-5.97	126.82	130.40
36	1	3188	G	C6-C5-N7	-5.97	126.82	130.40
36	1	1405	U	N3-C2-O2	5.96	126.38	122.20
36	1	3361	G	N3-C4-N9	5.96	129.58	126.00
36	5	1373	A	C5-C6-N1	5.96	120.68	117.70
36	5	1239	C	C6-N1-C2	-5.96	117.92	120.30
36	1	282	G	N9-C4-C5	5.96	107.78	105.40
36	1	1518	U	C4-C5-C6	5.96	123.28	119.70
1	6	941	A	C2-N3-C4	5.96	113.58	110.60
36	5	907	G	N9-C4-C5	-5.96	103.02	105.40
36	1	3142	A	O5'-P-OP1	-5.96	100.34	105.70
52	m6	69	GLY	N-CA-C	-5.96	98.20	113.10
1	6	421	A	N9-C4-C5	-5.96	103.42	105.80
37	7	7	G	N1-C6-O6	-5.96	116.33	119.90
36	1	2773	C	C6-N1-C2	5.96	122.68	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	1200	G	N3-C4-C5	5.96	131.58	128.60
36	5	3188	G	N3-C4-C5	-5.96	125.62	128.60
36	1	606	C	N1-C2-O2	-5.96	115.33	118.90
1	6	194	U	N1-C2-O2	5.96	126.97	122.80
1	6	552	G	C6-C5-N7	-5.96	126.83	130.40
1	6	1573	A	P-O3'-C3'	5.96	126.85	119.70
36	1	2301	U	N1-C2-O2	5.95	126.97	122.80
36	1	2406	C	C6-N1-C2	5.95	122.68	120.30
36	1	2952	G	N1-C6-O6	5.95	123.47	119.90
1	6	1273	G	O4'-C1'-N9	5.95	112.96	108.20
36	5	1373	A	C5-C6-N6	-5.95	118.94	123.70
36	5	1589	A	C6-C5-N7	-5.95	128.13	132.30
36	1	856	G	C5-C6-O6	-5.95	125.03	128.60
36	1	2364	G	N1-C2-N3	5.95	127.47	123.90
36	1	430	U	N1-C2-N3	5.95	118.47	114.90
36	5	2724	U	N3-C2-O2	-5.95	118.03	122.20
37	7	93	C	N3-C2-O2	-5.95	117.73	121.90
1	2	321	C	N1-C2-O2	5.95	122.47	118.90
1	2	1145	U	N3-C4-O4	5.95	123.56	119.40
36	1	2298	U	C5-C6-N1	-5.95	119.73	122.70
36	5	2953	U	N3-C4-C5	-5.95	111.03	114.60
37	7	40	C	N1-C2-O2	-5.95	115.33	118.90
36	5	776	U	C2-N3-C4	-5.95	123.43	127.00
36	5	2345	A	N7-C8-N9	-5.95	110.83	113.80
1	6	385	A	C5-C6-N6	5.95	128.46	123.70
36	1	2366	C	C4-C5-C6	-5.94	114.43	117.40
36	1	2833	A	O5'-P-OP2	-5.94	100.35	105.70
36	1	3361	G	N3-C4-C5	-5.94	125.63	128.60
36	5	1846	C	OP2-P-O3'	5.94	118.27	105.20
36	5	2796	G	O5'-P-OP2	-5.94	100.35	105.70
1	2	1648	A	N1-C6-N6	5.94	122.16	118.60
36	1	968	G	C8-N9-C4	-5.94	104.02	106.40
36	1	2392	C	C6-N1-C2	5.94	122.68	120.30
1	6	1305	U	N1-C2-O2	-5.94	118.64	122.80
36	5	1789	G	N3-C4-N9	-5.94	122.44	126.00
36	5	3176	G	N3-C4-C5	-5.94	125.63	128.60
36	1	971	G	C8-N9-C4	5.94	108.78	106.40
36	5	802	C	C4-C5-C6	5.94	120.37	117.40
36	5	3298	C	C5-C6-N1	-5.94	118.03	121.00
36	1	2886	U	C5-C4-O4	-5.93	122.34	125.90
36	1	3049	A	N1-C6-N6	5.93	122.16	118.60
1	6	539	G	C8-N9-C4	-5.93	104.03	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	59	G	N9-C4-C5	5.93	107.77	105.40
36	5	3184	A	C4-C5-N7	5.93	113.67	110.70
36	5	886	C	N3-C4-N4	5.93	122.15	118.00
36	5	998	A	OP2-P-O3'	5.93	118.25	105.20
36	1	1791	C	N3-C2-O2	5.93	126.05	121.90
36	5	648	C	N3-C2-O2	-5.93	117.75	121.90
36	1	801	A	N1-C2-N3	-5.93	126.33	129.30
36	1	1116	G	OP2-P-O3'	5.93	118.25	105.20
36	1	2281	A	C2-N3-C4	-5.93	107.64	110.60
73	O7	65	ARG	NE-CZ-NH2	-5.93	117.33	120.30
36	5	96	G	N1-C6-O6	5.93	123.46	119.90
36	5	344	A	O5'-P-OP1	-5.93	100.36	105.70
36	5	2695	A	C5-C6-N6	-5.93	118.96	123.70
36	5	200	C	N1-C2-O2	-5.93	115.34	118.90
36	5	2828	G	C8-N9-C1'	-5.93	119.30	127.00
1	2	311	U	N3-C2-O2	-5.92	118.05	122.20
36	5	925	A	C8-N9-C4	5.92	108.17	105.80
36	5	970	A	C5-C6-N1	5.92	120.66	117.70
36	5	1294	A	N1-C6-N6	-5.92	115.05	118.60
36	5	3130	A	C8-N9-C4	5.92	108.17	105.80
36	1	406	G	C5-C6-O6	5.92	132.15	128.60
1	6	19	A	N9-C4-C5	-5.92	103.43	105.80
36	5	2931	C	N3-C4-C5	5.92	124.27	121.90
36	5	3317	U	P-O3'-C3'	5.92	126.81	119.70
37	7	97	A	C5-C6-N6	-5.92	118.96	123.70
36	1	2126	A	C8-N9-C4	5.92	108.17	105.80
36	5	109	A	O5'-P-OP2	-5.92	100.37	105.70
36	1	203	G	C6-C5-N7	5.92	133.95	130.40
36	1	1322	U	N1-C2-O2	-5.92	118.66	122.80
36	5	3324	C	O5'-P-OP2	-5.92	100.38	105.70
1	2	1456	C	C6-N1-C2	-5.92	117.93	120.30
36	5	3181	C	C2-N1-C1'	5.92	125.31	118.80
36	1	979	U	N1-C2-N3	5.91	118.45	114.90
36	1	2624	G	C5-C6-O6	-5.91	125.05	128.60
36	1	720	A	N1-C6-N6	-5.91	115.05	118.60
36	1	2283	G	C4-C5-N7	5.91	113.16	110.80
36	5	952	A	C4-C5-N7	5.91	113.66	110.70
36	5	2856	G	N1-C6-O6	5.91	123.45	119.90
1	2	192	U	C2-N1-C1'	5.91	124.79	117.70
25	D3	103	LEU	CA-CB-CG	5.91	128.89	115.30
36	1	364	G	N3-C4-N9	-5.91	122.45	126.00
36	1	2378	C	N1-C2-O2	-5.91	115.35	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	822	G	N3-C2-N2	-5.91	115.77	119.90
36	1	2954	U	N3-C4-O4	5.91	123.53	119.40
36	5	2662	G	N3-C4-N9	5.91	129.54	126.00
37	7	105	C	N3-C2-O2	-5.91	117.77	121.90
1	6	1058	U	OP1-P-O3'	5.91	118.19	105.20
36	1	515	C	N3-C4-N4	5.90	122.13	118.00
36	1	2636	A	N7-C8-N9	5.90	116.75	113.80
36	5	2356	A	C5-C6-N1	-5.90	114.75	117.70
36	1	104	G	C5-C6-O6	-5.90	125.06	128.60
36	1	817	A	C4-C5-C6	5.90	119.95	117.00
36	1	2250	G	C8-N9-C4	5.90	108.76	106.40
36	1	2772	C	P-O3'-C3'	5.90	126.78	119.70
36	1	3307	A	C5-N7-C8	-5.90	100.95	103.90
36	5	859	G	C6-C5-N7	-5.90	126.86	130.40
1	6	1043	A	N1-C6-N6	5.90	122.14	118.60
36	5	644	G	N3-C4-C5	-5.90	125.65	128.60
36	1	941	G	OP1-P-O3'	5.90	118.18	105.20
1	6	449	C	C6-N1-C2	5.90	122.66	120.30
36	5	1305	U	C6-N1-C1'	-5.90	112.94	121.20
36	1	335	G	O5'-P-OP2	5.90	117.78	110.70
36	1	1420	C	N3-C2-O2	-5.90	117.77	121.90
1	6	1642	G	C5-C6-O6	-5.90	125.06	128.60
36	5	1881	A	C6-C5-N7	-5.90	128.17	132.30
38	8	5	U	N3-C2-O2	5.90	126.33	122.20
36	1	304	G	C8-N9-C4	-5.89	104.04	106.40
36	1	635	G	C5-C6-O6	-5.89	125.06	128.60
36	1	1124	U	OP1-P-O3'	5.89	118.17	105.20
36	1	1154	A	O5'-P-OP1	-5.89	100.39	105.70
36	1	2980	U	N1-C2-N3	5.89	118.44	114.90
36	5	1315	U	N3-C4-C5	-5.89	111.06	114.60
36	5	229	G	N1-C6-O6	5.89	123.44	119.90
36	1	1518	U	N3-C2-O2	-5.89	118.08	122.20
36	5	2950	G	O5'-P-OP1	-5.89	100.40	105.70
36	5	1209	G	N1-C6-O6	5.89	123.43	119.90
1	6	639	U	C2-N1-C1'	5.89	124.76	117.70
36	5	1258	U	C5-C4-O4	5.89	129.43	125.90
36	5	3115	C	C6-N1-C2	-5.89	117.94	120.30
36	1	2846	U	C6-N1-C2	-5.88	117.47	121.00
36	5	2853	A	O5'-P-OP1	-5.88	100.41	105.70
1	6	364	G	N3-C4-C5	-5.88	125.66	128.60
37	7	79	A	N9-C4-C5	-5.88	103.45	105.80
36	1	347	G	C4-C5-N7	5.88	113.15	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	956	U	N1-C2-O2	-5.88	118.69	122.80
1	6	1697	G	N3-C4-C5	-5.88	125.66	128.60
36	5	1008	U	C2-N1-C1'	-5.88	110.65	117.70
36	5	1803	C	N3-C4-C5	5.88	124.25	121.90
36	1	1450	G	C4-C5-N7	5.88	113.15	110.80
1	6	620	A	O5'-P-OP2	-5.87	100.41	105.70
36	5	647	A	C8-N9-C1'	-5.87	117.13	127.70
36	5	3167	A	C8-N9-C4	-5.87	103.45	105.80
1	2	1776	A	C8-N9-C4	5.87	108.15	105.80
36	1	407	A	O5'-P-OP2	-5.87	100.42	105.70
36	1	3303	G	C8-N9-C4	5.87	108.75	106.40
1	6	364	G	C6-N1-C2	-5.87	121.58	125.10
36	1	47	C	C5-C6-N1	-5.87	118.07	121.00
36	1	335	G	C5-C6-N1	5.87	114.43	111.50
36	1	644	G	C4-C5-C6	5.87	122.32	118.80
36	1	2146	C	C6-N1-C2	-5.87	117.95	120.30
1	6	153	G	C4-C5-N7	5.87	113.15	110.80
36	5	1117	G	OP2-P-O3'	5.87	118.11	105.20
36	5	2914	G	C4-N9-C1'	5.87	134.13	126.50
36	5	890	C	O5'-P-OP2	-5.86	100.42	105.70
36	5	1301	A	C6-C5-N7	-5.86	128.20	132.30
36	1	959	C	N1-C2-O2	-5.86	115.38	118.90
36	1	2620	G	C2-N3-C4	-5.86	108.97	111.90
36	5	2914	G	N3-C4-N9	5.86	129.52	126.00
36	1	1586	G	O5'-P-OP2	-5.86	100.43	105.70
36	1	2899	C	C6-N1-C1'	-5.86	113.77	120.80
36	1	2988	C	O5'-P-OP2	-5.86	100.43	105.70
38	4	42	G	OP1-P-O3'	5.86	118.09	105.20
36	5	726	G	N1-C6-O6	5.86	123.42	119.90
36	5	1792	C	C5-C6-N1	-5.86	118.07	121.00
36	5	2865	U	N1-C2-O2	5.86	126.90	122.80
1	2	1100	G	C4-C5-N7	5.86	113.14	110.80
36	1	790	U	C5-C4-O4	5.86	129.41	125.90
36	1	895	A	C5-N7-C8	-5.86	100.97	103.90
36	1	2752	U	O4'-C1'-N1	-5.86	103.52	108.20
1	6	782	U	N1-C2-O2	5.86	126.90	122.80
1	6	1481	C	N3-C2-O2	-5.85	117.80	121.90
36	5	92	G	N9-C4-C5	-5.85	103.06	105.40
36	5	2346	C	C5-C4-N4	-5.85	116.10	120.20
36	5	3309	G	N3-C4-C5	-5.85	125.67	128.60
36	1	936	A	O5'-P-OP2	-5.85	100.43	105.70
36	5	592	A	C2-N3-C4	-5.85	107.67	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1510	G	C5-C6-O6	-5.85	125.09	128.60
36	5	808	A	C8-N9-C4	-5.85	103.46	105.80
36	5	1846	C	N3-C4-C5	5.85	124.24	121.90
36	1	1187	C	C6-N1-C2	5.85	122.64	120.30
36	1	2349	U	N3-C4-C5	5.85	118.11	114.60
38	4	138	A	N1-C2-N3	5.85	132.22	129.30
1	6	1635	A	N1-C6-N6	5.85	122.11	118.60
47	M0	24	ARG	NE-CZ-NH1	5.85	123.22	120.30
36	5	1725	C	N3-C2-O2	5.85	125.99	121.90
36	1	802	C	O5'-P-OP2	5.84	117.71	110.70
36	1	1306	G	N1-C6-O6	5.84	123.41	119.90
1	6	25	C	P-O3'-C3'	5.84	126.71	119.70
36	5	190	U	N3-C2-O2	-5.84	118.11	122.20
36	5	306	A	C8-N9-C1'	-5.84	117.18	127.70
36	1	878	G	C2-N3-C4	-5.84	108.98	111.90
36	5	1321	G	C2-N3-C4	-5.84	108.98	111.90
36	5	1909	A	C8-N9-C4	5.84	108.14	105.80
36	1	959	C	C5-C6-N1	-5.84	118.08	121.00
36	1	2121	G	N3-C2-N2	5.84	123.99	119.90
36	5	908	G	C6-C5-N7	-5.84	126.89	130.40
36	5	1307	G	C5-C6-N1	5.84	114.42	111.50
1	2	1761	U	C5-C4-O4	5.84	129.40	125.90
36	1	806	A	O4'-C1'-N9	-5.84	103.53	108.20
1	6	1030	A	O5'-P-OP1	-5.84	100.45	105.70
36	5	631	U	C5-C6-N1	-5.84	119.78	122.70
36	5	1122	U	N3-C2-O2	-5.84	118.11	122.20
36	5	694	C	N3-C2-O2	-5.83	117.82	121.90
36	1	1110	U	C5-C4-O4	-5.83	122.40	125.90
36	5	2284	C	N1-C2-O2	5.83	122.40	118.90
1	2	913	G	OP1-P-O3'	5.83	118.03	105.20
36	1	967	A	C2-N3-C4	-5.83	107.68	110.60
36	1	1404	G	C2-N3-C4	-5.83	108.98	111.90
36	1	2183	A	N1-C2-N3	5.83	132.22	129.30
1	6	412	A	C8-N9-C4	-5.83	103.47	105.80
36	5	1475	A	N1-C6-N6	5.83	122.10	118.60
36	5	2383	C	N3-C4-N4	5.83	122.08	118.00
36	5	1308	A	OP1-P-OP2	-5.83	110.86	119.60
1	2	192	U	N3-C2-O2	-5.83	118.12	122.20
36	1	25	U	N3-C4-O4	5.83	123.48	119.40
36	1	2357	A	N1-C6-N6	5.83	122.10	118.60
36	1	2808	A	C4-C5-N7	5.83	113.61	110.70
36	1	3124	G	OP1-P-O3'	5.83	118.02	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1387	G	N3-C2-N2	-5.83	115.82	119.90
36	1	124	U	N3-C2-O2	-5.83	118.12	122.20
36	1	3310	A	C8-N9-C4	5.83	108.13	105.80
36	5	1178	G	C6-C5-N7	-5.83	126.90	130.40
1	2	359	A	C8-N9-C4	5.83	108.13	105.80
36	1	965	A	N1-C6-N6	5.83	122.09	118.60
1	6	29	U	C5-C4-O4	5.83	129.40	125.90
1	6	1108	G	C5-N7-C8	-5.83	101.39	104.30
36	5	592	A	C8-N9-C4	5.83	108.13	105.80
36	1	2844	C	C6-N1-C2	5.82	122.63	120.30
36	1	3144	G	C5-C6-O6	-5.82	125.11	128.60
36	5	2552	C	N1-C2-O2	5.82	122.39	118.90
36	5	2991	A	C2-N3-C4	5.82	113.51	110.60
36	1	1404	G	C5-C6-N1	-5.82	108.59	111.50
36	1	2156	C	C5-C4-N4	-5.82	116.12	120.20
36	1	648	C	C6-N1-C1'	-5.82	113.81	120.80
36	1	765	C	N3-C2-O2	-5.82	117.83	121.90
36	1	1145	G	N1-C6-O6	5.82	123.39	119.90
36	5	2889	C	C2-N3-C4	-5.82	116.99	119.90
37	7	37	G	N9-C4-C5	-5.82	103.07	105.40
36	1	2301	U	N3-C2-O2	-5.82	118.13	122.20
36	1	2964	G	N3-C4-N9	-5.82	122.51	126.00
36	5	1433	A	N9-C4-C5	5.82	108.13	105.80
36	1	2302	G	N1-C6-O6	-5.82	116.41	119.90
1	2	1560	U	N3-C2-O2	-5.82	118.13	122.20
36	1	679	U	C5-C4-O4	5.82	129.39	125.90
36	1	2836	C	N3-C4-N4	-5.82	113.93	118.00
36	5	1313	G	O5'-P-OP2	-5.82	100.47	105.70
36	5	1842	A	O5'-P-OP2	-5.82	100.47	105.70
36	1	870	G	C4-C5-N7	-5.81	108.47	110.80
37	7	89	G	OP2-P-O3'	5.81	117.99	105.20
36	5	2531	C	C6-N1-C2	-5.81	117.97	120.30
36	5	2553	U	C2-N1-C1'	5.81	124.68	117.70
36	5	3080	G	C6-C5-N7	-5.81	126.91	130.40
1	6	1009	U	C5-C6-N1	-5.81	119.80	122.70
36	5	1307	G	C2-N3-C4	5.81	114.81	111.90
36	5	1451	C	N1-C2-O2	-5.81	115.41	118.90
1	2	42	G	C4-C5-N7	-5.81	108.48	110.80
36	1	1724	U	OP1-P-O3'	5.81	117.98	105.20
36	1	1820	U	N3-C2-O2	-5.81	118.13	122.20
36	5	2409	G	N9-C4-C5	5.81	107.72	105.40
36	1	646	A	C2-N3-C4	-5.81	107.70	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	767	U	O4'-C1'-N1	5.81	112.85	108.20
36	1	1121	U	C5-C6-N1	-5.81	119.80	122.70
36	1	1924	U	C5-C6-N1	-5.81	119.80	122.70
1	6	1180	C	C6-N1-C2	-5.81	117.98	120.30
36	5	1306	G	N3-C2-N2	-5.81	115.83	119.90
36	5	2996	U	N1-C2-O2	5.81	126.87	122.80
36	1	2572	C	C6-N1-C1'	-5.81	113.83	120.80
38	4	20	U	C2-N1-C1'	-5.80	110.73	117.70
36	5	345	G	C6-C5-N7	-5.80	126.92	130.40
36	5	588	G	C4-C5-N7	5.80	113.12	110.80
36	5	1373	A	O5'-P-OP2	-5.80	100.48	105.70
36	5	2951	G	N9-C4-C5	-5.80	103.08	105.40
38	8	39	G	N1-C2-N2	-5.80	110.98	116.20
36	1	281	G	C4-C5-N7	5.80	113.12	110.80
36	1	2604	U	N1-C2-N3	-5.80	111.42	114.90
36	1	2852	C	C6-N1-C2	5.80	122.62	120.30
36	1	3231	U	C5-C4-O4	5.80	129.38	125.90
36	5	945	C	N3-C2-O2	-5.80	117.84	121.90
36	5	2597	U	C6-N1-C2	5.80	124.48	121.00
36	1	933	A	C4-C5-C6	5.80	119.90	117.00
36	1	2873	U	C2-N3-C4	-5.80	123.52	127.00
36	5	740	G	N1-C6-O6	-5.80	116.42	119.90
1	2	458	G	N3-C4-N9	-5.80	122.52	126.00
1	6	308	C	C5-C6-N1	-5.80	118.10	121.00
36	1	942	U	O5'-P-OP1	5.80	117.66	110.70
36	1	1541	G	N9-C4-C5	-5.80	103.08	105.40
1	6	879	G	N1-C6-O6	-5.80	116.42	119.90
36	5	3136	G	N3-C4-N9	-5.80	122.52	126.00
37	7	11	A	N1-C6-N6	5.80	122.08	118.60
1	6	1118	G	OP2-P-O3'	5.79	117.95	105.20
36	1	716	A	C8-N9-C4	5.79	108.12	105.80
1	6	1000	C	C6-N1-C2	-5.79	117.98	120.30
1	6	1208	A	C8-N9-C4	-5.79	103.48	105.80
36	5	2992	U	C6-N1-C2	-5.79	117.52	121.00
51	m5	96	ARG	NE-CZ-NH2	-5.79	117.40	120.30
1	2	47	A	C8-N9-C4	-5.79	103.48	105.80
1	2	1456	C	O4'-C1'-N1	5.79	112.83	108.20
1	2	1473	U	N3-C2-O2	-5.79	118.15	122.20
36	1	2624	G	C6-C5-N7	-5.79	126.92	130.40
1	6	542	A	O4'-C1'-N9	5.79	112.83	108.20
36	5	1854	C	C6-N1-C2	-5.79	117.98	120.30
36	5	3215	A	C5-C6-N1	-5.79	114.80	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2	1196	A	P-O3'-C3'	5.79	126.65	119.70
36	5	591	G	OP1-P-O3'	5.79	117.94	105.20
1	6	1767	G	C8-N9-C4	5.79	108.72	106.40
36	5	610	G	N9-C4-C5	5.79	107.72	105.40
36	5	1115	G	N3-C4-N9	5.79	129.47	126.00
36	5	3308	C	C2-N3-C4	-5.79	117.00	119.90
36	5	2112	U	C2-N1-C1'	5.79	124.64	117.70
36	5	2834	G	OP1-P-OP2	5.79	128.28	119.60
36	1	359	U	N3-C4-C5	-5.79	111.13	114.60
36	5	2965	U	N3-C2-O2	5.79	126.25	122.20
36	1	2863	G	N1-C6-O6	-5.78	116.43	119.90
36	1	3022	G	O4'-C1'-N9	5.78	112.83	108.20
36	5	1900	A	OP1-P-OP2	5.78	128.27	119.60
37	7	110	G	N3-C4-C5	5.78	131.49	128.60
1	2	1782	A	C5-C6-N6	5.78	128.32	123.70
36	5	909	G	C5-C6-O6	5.78	132.07	128.60
36	5	395	A	N1-C6-N6	5.78	122.07	118.60
36	5	1324	U	N3-C2-O2	-5.78	118.15	122.20
36	1	1144	U	N3-C4-O4	-5.78	115.35	119.40
36	5	808	A	N9-C4-C5	5.78	108.11	105.80
36	5	2928	C	C4-C5-C6	5.78	120.29	117.40
36	1	3228	C	C2-N1-C1'	5.78	125.16	118.80
36	1	2850	G	N9-C4-C5	-5.78	103.09	105.40
36	1	933	A	C6-N1-C2	-5.77	115.14	118.60
36	5	3188	G	C4-C5-N7	-5.77	108.49	110.80
36	1	1376	C	C5-C6-N1	-5.77	118.11	121.00
36	1	2124	G	N1-C6-O6	5.77	123.36	119.90
36	1	1341	U	O5'-P-OP2	-5.77	100.51	105.70
1	6	1424	A	C8-N9-C4	5.77	108.11	105.80
36	5	882	A	N1-C2-N3	5.77	132.19	129.30
37	7	37	G	C6-C5-N7	-5.77	126.94	130.40
36	1	2527	G	C4-N9-C1'	-5.77	119.00	126.50
36	5	1200	A	OP1-P-O3'	5.77	117.89	105.20
36	5	2415	C	N3-C4-C5	5.77	124.21	121.90
1	2	1324	G	C8-N9-C1'	5.77	134.50	127.00
36	1	2816	G	C8-N9-C4	5.77	108.71	106.40
1	6	608	U	N3-C2-O2	-5.77	118.16	122.20
36	5	3313	U	O5'-P-OP2	-5.77	100.51	105.70
1	2	986	G	N3-C4-C5	-5.77	125.72	128.60
36	1	1411	C	OP1-P-O3'	5.77	117.89	105.20
37	3	90	U	O5'-P-OP2	-5.77	100.51	105.70
36	5	939	U	C5-C6-N1	-5.77	119.82	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1114	U	N3-C4-O4	-5.76	115.36	119.40
1	2	720	G	OP1-P-O3'	5.76	117.88	105.20
36	1	3362	A	C4-C5-N7	5.76	113.58	110.70
36	1	3208	G	N9-C4-C5	5.76	107.70	105.40
36	5	2156	C	N3-C4-C5	5.76	124.20	121.90
36	5	789	A	O5'-P-OP2	-5.76	100.52	105.70
36	5	2623	G	C5-C6-O6	-5.76	125.14	128.60
1	2	1033	C	N3-C2-O2	-5.76	117.87	121.90
36	1	2296	A	C8-N9-C4	5.76	108.10	105.80
36	1	1157	G	N1-C2-N3	5.75	127.35	123.90
1	6	158	U	P-O3'-C3'	5.75	126.61	119.70
36	1	2651	G	C4-C5-N7	-5.75	108.50	110.80
36	5	658	G	C8-N9-C4	-5.75	104.10	106.40
36	5	1495	U	C2-N1-C1'	5.75	124.60	117.70
36	5	1878	G	C4-N9-C1'	5.75	133.98	126.50
36	5	2850	G	N9-C4-C5	-5.75	103.10	105.40
36	5	3216	G	O5'-P-OP2	-5.75	100.52	105.70
36	1	18	G	C5-C6-O6	-5.75	125.15	128.60
36	1	1156	C	N1-C2-N3	5.75	123.23	119.20
1	6	1796	C	C5-C6-N1	-5.75	118.12	121.00
1	2	1291	G	C2-N3-C4	-5.75	109.03	111.90
36	1	586	C	N3-C2-O2	5.75	125.92	121.90
36	1	1163	A	OP1-P-OP2	5.75	128.22	119.60
36	5	1869	C	C2-N1-C1'	-5.75	112.48	118.80
36	1	3306	U	N1-C2-O2	5.74	126.82	122.80
36	5	33	G	C8-N9-C4	-5.74	104.10	106.40
36	5	423	A	C4-C5-C6	5.74	119.87	117.00
36	5	1379	G	C8-N9-C4	5.74	108.70	106.40
37	7	9	C	C2-N1-C1'	-5.74	112.48	118.80
36	1	2760	C	N1-C2-O2	-5.74	115.45	118.90
36	5	963	G	N1-C6-O6	-5.74	116.45	119.90
36	5	997	A	C8-N9-C4	-5.74	103.50	105.80
57	n1	136	ARG	NE-CZ-NH2	-5.74	117.43	120.30
36	1	1346	G	N3-C4-C5	5.74	131.47	128.60
36	1	2381	G	N3-C4-C5	-5.74	125.73	128.60
1	6	631	G	C6-C5-N7	-5.74	126.96	130.40
36	5	2699	G	N9-C4-C5	-5.74	103.10	105.40
37	7	92	A	N9-C4-C5	-5.74	103.50	105.80
1	2	913	G	P-O3'-C3'	5.74	126.58	119.70
36	1	651	G	O5'-P-OP2	-5.74	100.53	105.70
1	6	1030	A	C8-N9-C4	5.74	108.09	105.80
36	5	106	A	C8-N9-C4	5.74	108.09	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2246	G	C8-N9-C4	-5.74	104.11	106.40
36	5	969	C	C2-N1-C1'	-5.74	112.49	118.80
36	5	2120	A	N1-C6-N6	-5.74	115.16	118.60
36	5	2584	G	C5-C6-O6	-5.74	125.16	128.60
36	1	637	C	C6-N1-C2	5.74	122.59	120.30
36	1	1310	G	N1-C6-O6	-5.74	116.46	119.90
38	4	32	C	C2-N1-C1'	-5.74	112.49	118.80
1	6	1027	A	C2-N3-C4	-5.74	107.73	110.60
36	5	676	G	C8-N9-C4	-5.74	104.11	106.40
36	5	3142	A	C5-C6-N6	-5.74	119.11	123.70
36	5	809	G	C5-C6-O6	-5.73	125.16	128.60
36	5	2524	A	N9-C1'-C2'	5.73	121.45	114.00
40	l3	102	LEU	CA-CB-CG	5.73	128.49	115.30
36	1	96	G	C2-N3-C4	-5.73	109.03	111.90
36	5	970	A	C5-C6-N6	-5.73	119.11	123.70
36	5	1368	U	N3-C4-O4	5.73	123.41	119.40
37	7	40	C	N3-C2-O2	5.73	125.91	121.90
36	1	59	G	C6-C5-N7	-5.73	126.96	130.40
1	6	1560	U	C2-N1-C1'	5.73	124.58	117.70
36	5	2617	U	N3-C4-C5	-5.73	111.16	114.60
36	5	3004	C	N3-C4-N4	5.73	122.01	118.00
36	5	3140	G	C5-N7-C8	-5.73	101.43	104.30
63	n7	135	ARG	NE-CZ-NH2	5.73	123.17	120.30
36	5	981	U	C6-N1-C2	-5.73	117.56	121.00
36	1	2857	C	C6-N1-C2	-5.73	118.01	120.30
36	1	3268	A	N1-C6-N6	5.73	122.04	118.60
36	1	2376	G	C5-N7-C8	-5.73	101.44	104.30
36	5	1846	C	C5-C6-N1	-5.73	118.14	121.00
36	5	2957	G	C8-N9-C4	5.73	108.69	106.40
36	1	1397	C	N1-C2-O2	-5.72	115.47	118.90
36	5	835	G	O4'-C1'-N9	5.72	112.78	108.20
36	5	3101	G	N1-C2-N3	5.72	127.33	123.90
36	5	522	A	C5-C6-N6	-5.72	119.12	123.70
36	5	1336	U	O5'-P-OP2	-5.72	100.55	105.70
36	5	1507	G	N3-C4-N9	5.72	129.43	126.00
36	5	2531	C	N1-C2-O2	5.72	122.33	118.90
1	6	687	G	C4-N9-C1'	-5.72	119.06	126.50
36	5	96	G	N3-C4-C5	5.72	131.46	128.60
36	5	2358	A	C8-N9-C4	5.72	108.09	105.80
37	7	79	A	C4-C5-N7	5.72	113.56	110.70
36	1	515	C	O5'-P-OP2	-5.72	100.55	105.70
41	L4	198	ARG	NE-CZ-NH2	-5.72	117.44	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1239	C	C2-N1-C1'	5.72	125.09	118.80
76	q0	102	ARG	NE-CZ-NH1	-5.72	117.44	120.30
36	1	1116	G	C4-C5-C6	5.72	122.23	118.80
36	5	48	A	N1-C6-N6	-5.72	115.17	118.60
36	5	2383	C	C4-C5-C6	5.72	120.26	117.40
1	2	992	A	N3-C4-C5	5.72	130.80	126.80
1	2	1594	G	C5-C6-O6	-5.72	125.17	128.60
36	5	906	A	C6-N1-C2	-5.72	115.17	118.60
36	5	1146	C	N3-C2-O2	5.72	125.90	121.90
36	5	2869	U	N1-C2-N3	5.72	118.33	114.90
36	1	1516	C	N1-C2-O2	-5.71	115.47	118.90
36	1	2777	G	C8-N9-C4	-5.71	104.11	106.40
38	4	133	G	C8-N9-C4	5.71	108.69	106.40
1	6	1010	C	C6-N1-C2	-5.71	118.01	120.30
36	5	2309	A	C5-C6-N6	5.71	128.27	123.70
36	1	658	G	C8-N9-C1'	-5.71	119.57	127.00
36	1	807	A	C2-N3-C4	-5.71	107.74	110.60
36	1	895	A	C6-C5-N7	-5.71	128.30	132.30
36	1	2585	G	C2-N3-C4	5.71	114.76	111.90
36	1	2679	A	C2-N3-C4	-5.71	107.74	110.60
36	5	209	A	C5-C6-N6	-5.71	119.13	123.70
36	5	2288	G	C5-C6-O6	-5.71	125.17	128.60
36	1	1555	U	C2-N1-C1'	-5.71	110.85	117.70
36	1	3177	G	N1-C6-O6	5.71	123.33	119.90
36	5	1147	G	N3-C2-N2	-5.71	115.90	119.90
36	1	282	G	N3-C4-C5	-5.71	125.75	128.60
36	1	794	U	O5'-P-OP2	-5.71	100.56	105.70
36	1	2391	G	N1-C6-O6	-5.71	116.47	119.90
1	6	1736	G	N1-C2-N2	5.71	121.34	116.20
36	1	700	C	N3-C4-C5	-5.71	119.62	121.90
21	c9	57	ARG	NE-CZ-NH2	-5.71	117.45	120.30
36	5	1192	C	C2-N1-C1'	5.71	125.08	118.80
36	5	1617	G	N1-C6-O6	5.71	123.32	119.90
36	1	2194	G	C4-C5-N7	5.71	113.08	110.80
36	1	2403	G	O5'-P-OP1	5.71	117.55	110.70
36	1	27	C	O5'-P-OP1	-5.70	100.57	105.70
36	1	1192	C	C2-N3-C4	5.70	122.75	119.90
38	4	34	U	C5-C4-O4	-5.70	122.48	125.90
38	4	100	U	C6-N1-C1'	-5.70	113.21	121.20
36	5	913	A	N1-C6-N6	-5.70	115.18	118.60
36	5	989	A	C5-C6-N6	-5.70	119.14	123.70
36	5	2993	G	C5-C6-O6	-5.70	125.18	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	1016	C	C5-C6-N1	5.70	123.85	121.00
36	5	2366	C	N3-C4-N4	5.70	121.99	118.00
1	2	1659	A	N7-C8-N9	5.70	116.65	113.80
36	5	882	A	C6-N1-C2	-5.70	115.18	118.60
1	2	685	A	P-O3'-C3'	5.70	126.54	119.70
36	1	1176	C	C5-C4-N4	-5.70	116.21	120.20
36	1	1346	G	O5'-P-OP2	-5.70	100.57	105.70
36	1	1906	G	C6-C5-N7	-5.70	126.98	130.40
36	5	1444	G	C4-C5-N7	5.70	113.08	110.80
36	5	2325	G	C2-N3-C4	-5.70	109.05	111.90
36	5	3026	G	C5-C6-O6	-5.70	125.18	128.60
36	1	655	C	N1-C2-N3	5.70	123.19	119.20
36	1	2198	A	N9-C4-C5	5.70	108.08	105.80
36	1	2777	G	O5'-P-OP2	-5.70	100.57	105.70
36	5	287	G	C8-N9-C4	-5.70	104.12	106.40
36	1	1154	A	C8-N9-C4	-5.70	103.52	105.80
36	1	2294	U	N1-C2-N3	5.70	118.32	114.90
36	1	2572	C	N3-C2-O2	-5.70	117.91	121.90
36	1	2725	U	N3-C2-O2	-5.70	118.21	122.20
1	6	565	C	C5-C6-N1	-5.70	118.15	121.00
36	5	1368	U	C5-C4-O4	-5.70	122.48	125.90
36	5	2757	U	N1-C2-N3	5.70	118.32	114.90
36	5	2818	U	P-O3'-C3'	5.70	126.53	119.70
36	5	3140	G	C6-C5-N7	-5.70	126.98	130.40
36	1	716	A	O4'-C1'-N9	-5.69	103.64	108.20
36	5	421	G	C8-N9-C4	5.69	108.68	106.40
36	5	3285	C	N1-C2-O2	5.69	122.32	118.90
37	7	77	G	C6-C5-N7	-5.69	126.98	130.40
36	1	2413	A	C5-C6-N1	5.69	120.55	117.70
36	1	2550	U	N3-C2-O2	-5.69	118.22	122.20
36	5	323	A	C8-N9-C4	-5.69	103.52	105.80
36	5	1888	U	N1-C2-O2	-5.69	118.81	122.80
37	3	81	U	C5-C6-N1	-5.69	119.85	122.70
36	1	1269	U	N3-C2-O2	-5.69	118.22	122.20
36	5	97	U	N1-C2-N3	-5.69	111.49	114.90
36	5	659	G	C2-N3-C4	5.69	114.74	111.90
36	5	1443	G	C8-N9-C1'	-5.69	119.61	127.00
37	3	39	C	N1-C2-O2	5.69	122.31	118.90
68	O2	19	ARG	NE-CZ-NH1	-5.69	117.46	120.30
36	5	199	A	N1-C6-N6	-5.69	115.19	118.60
36	5	1379	G	N1-C2-N2	-5.69	111.08	116.20
36	1	1838	G	N9-C4-C5	-5.68	103.13	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	364	G	N3-C4-N9	5.68	129.41	126.00
1	6	1073	G	C4-N9-C1'	-5.68	119.11	126.50
1	2	1241	G	N7-C8-N9	5.68	115.94	113.10
36	1	1510	G	C4-C5-N7	5.68	113.07	110.80
36	1	2969	A	N1-C6-N6	5.68	122.01	118.60
1	2	61	A	C5-N7-C8	-5.68	101.06	103.90
36	1	1366	A	N1-C2-N3	-5.68	126.46	129.30
36	1	1443	G	C8-N9-C4	-5.68	104.13	106.40
36	5	971	G	N7-C8-N9	-5.68	110.26	113.10
36	5	2192	C	N3-C4-C5	-5.68	119.63	121.90
36	5	2239	G	N1-C6-O6	-5.68	116.49	119.90
36	5	1372	C	C5-C6-N1	-5.68	118.16	121.00
44	17	232	ARG	NE-CZ-NH1	-5.68	117.46	120.30
1	6	609	U	N3-C2-O2	-5.68	118.23	122.20
1	6	864	U	O4'-C1'-N1	5.68	112.74	108.20
36	5	640	U	C5-C4-O4	-5.68	122.49	125.90
36	1	2811	A	C8-N9-C4	-5.67	103.53	105.80
36	5	1863	G	N1-C6-O6	-5.67	116.50	119.90
36	5	2715	A	C8-N9-C4	-5.67	103.53	105.80
36	1	1097	G	P-O3'-C3'	5.67	126.51	119.70
36	5	1608	C	N1-C2-O2	5.67	122.30	118.90
36	1	857	G	C5-C6-N1	-5.67	108.66	111.50
36	1	2526	C	C6-N1-C2	-5.67	118.03	120.30
37	7	92	A	C8-N9-C4	5.67	108.07	105.80
38	8	14	C	N3-C4-C5	-5.67	119.63	121.90
1	2	1241	G	C5-C6-O6	-5.67	125.20	128.60
36	1	372	A	O5'-P-OP2	-5.67	100.60	105.70
36	5	264	G	N3-C4-N9	5.67	129.40	126.00
36	5	1496	C	C5-C6-N1	5.67	123.83	121.00
36	5	3137	C	N3-C4-N4	-5.67	114.03	118.00
36	1	1153	A	C6-C5-N7	-5.67	128.33	132.30
1	6	1539	G	O4'-C1'-N9	-5.67	103.67	108.20
36	5	892	U	N3-C4-O4	-5.67	115.43	119.40
36	1	1279	C	C6-N1-C2	-5.67	118.03	120.30
36	1	3188	G	C4-C5-N7	5.67	113.07	110.80
36	5	36	C	OP2-P-O3'	5.67	117.67	105.20
36	1	1376	C	C4-C5-C6	5.67	120.23	117.40
36	5	636	C	OP1-P-O3'	5.67	117.66	105.20
36	5	1924	U	C5-C6-N1	-5.67	119.87	122.70
36	5	2332	A	N1-C6-N6	5.67	122.00	118.60
36	5	3107	U	N1-C2-N3	5.67	118.30	114.90
1	6	1596	C	N1-C2-O2	5.66	122.30	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	1634	C	C6-N1-C1'	-5.66	114.00	120.80
36	1	800	G	N3-C4-C5	-5.66	125.77	128.60
36	5	1460	A	O5'-P-OP2	-5.66	100.60	105.70
36	5	3197	G	N3-C2-N2	-5.66	115.94	119.90
1	2	1389	C	C2-N1-C1'	5.66	125.03	118.80
36	1	53	G	O5'-P-OP2	-5.66	100.61	105.70
36	1	651	G	C8-N9-C1'	-5.66	119.64	127.00
36	5	1129	A	O5'-P-OP1	5.66	117.49	110.70
36	1	2901	G	N1-C6-O6	5.66	123.30	119.90
38	8	39	G	C6-C5-N7	-5.66	127.00	130.40
36	1	1083	G	N3-C4-N9	5.66	129.39	126.00
36	1	2726	C	N3-C2-O2	-5.66	117.94	121.90
36	1	3079	U	N1-C2-O2	-5.66	118.84	122.80
36	1	3208	G	C6-C5-N7	5.66	133.79	130.40
36	5	521	A	C2-N3-C4	-5.66	107.77	110.60
36	5	2144	A	O4'-C1'-N9	5.66	112.72	108.20
37	7	1	G	C6-C5-N7	-5.66	127.01	130.40
36	1	2635	A	O5'-P-OP2	-5.65	100.61	105.70
36	5	980	A	C2-N3-C4	5.65	113.43	110.60
36	5	1892	G	O5'-P-OP2	-5.65	100.61	105.70
36	5	2849	C	N3-C4-C5	-5.65	119.64	121.90
1	6	1274	C	C5-C6-N1	5.65	123.83	121.00
36	5	1222	G	C8-N9-C1'	-5.65	119.65	127.00
36	1	715	A	O4'-C1'-N9	5.65	112.72	108.20
1	6	687	G	N1-C2-N2	5.65	121.28	116.20
36	5	1789	G	C4-N9-C1'	-5.65	119.15	126.50
36	5	3081	C	N3-C4-N4	-5.65	114.04	118.00
36	1	281	G	N3-C4-N9	5.65	129.39	126.00
36	1	574	U	C6-N1-C2	5.65	124.39	121.00
36	1	650	C	OP2-P-O3'	5.65	117.62	105.20
38	4	125	U	C6-N1-C1'	-5.65	113.29	121.20
1	6	564	G	N3-C4-N9	-5.65	122.61	126.00
36	1	1000	C	C6-N1-C1'	-5.64	114.03	120.80
36	1	1911	A	C5-C6-N6	-5.64	119.18	123.70
36	1	1926	C	N3-C4-C5	5.64	124.16	121.90
36	1	3344	A	N1-C6-N6	5.64	121.99	118.60
40	L3	102	LEU	CA-CB-CG	5.64	128.28	115.30
36	5	1306	G	N1-C2-N3	5.64	127.29	123.90
36	5	1390	A	C8-N9-C4	-5.64	103.54	105.80
1	2	946	U	N1-C2-O2	5.64	126.75	122.80
38	4	4	C	C6-N1-C2	5.64	122.56	120.30
1	6	1600	A	N9-C1'-C2'	5.64	121.33	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	661	G	N3-C2-N2	5.64	123.85	119.90
36	5	2848	G	C4-C5-N7	5.64	113.06	110.80
36	1	1891	A	N9-C4-C5	-5.64	103.54	105.80
36	1	2850	G	C5-C6-O6	-5.64	125.22	128.60
36	1	2967	A	C8-N9-C4	5.64	108.06	105.80
36	5	1180	A	O4'-C1'-N9	-5.64	103.69	108.20
36	5	2961	G	C8-N9-C4	-5.64	104.14	106.40
1	6	1514	U	N3-C4-O4	-5.64	115.45	119.40
36	5	96	G	O5'-P-OP2	-5.64	100.62	105.70
36	5	2263	C	C5-C6-N1	5.64	123.82	121.00
36	5	2361	A	OP2-P-O3'	5.64	117.61	105.20
37	7	101	G	C5-C6-O6	-5.64	125.22	128.60
36	5	1014	U	C2-N1-C1'	5.64	124.47	117.70
36	1	2653	C	N3-C2-O2	-5.64	117.95	121.90
36	5	1519	G	C8-N9-C4	-5.64	104.14	106.40
36	1	60	A	C8-N9-C4	5.63	108.05	105.80
36	1	969	C	N1-C2-O2	-5.63	115.52	118.90
36	1	1541	G	C4-C5-N7	5.63	113.05	110.80
1	6	323	A	C8-N9-C4	-5.63	103.55	105.80
1	6	1640	C	C5-C4-N4	-5.63	116.26	120.20
36	5	886	C	N3-C2-O2	5.63	125.84	121.90
38	8	103	G	N9-C4-C5	-5.63	103.15	105.40
36	5	2820	A	C2-N3-C4	5.63	113.42	110.60
36	1	1430	U	N1-C2-N3	5.63	118.28	114.90
36	5	287	G	O5'-P-OP1	-5.63	100.63	105.70
36	5	306	A	N9-C4-C5	-5.63	103.55	105.80
36	5	881	C	C2-N1-C1'	5.63	125.00	118.80
36	1	2946	A	C8-N9-C4	5.63	108.05	105.80
1	6	1614	A	O4'-C1'-N9	5.63	112.70	108.20
36	1	2410	U	N3-C2-O2	5.63	126.14	122.20
36	1	2425	G	C5-C6-O6	-5.63	125.22	128.60
36	5	101	G	O4'-C1'-N9	5.63	112.70	108.20
36	5	330	G	O5'-P-OP1	-5.63	100.63	105.70
37	7	44	C	OP2-P-O3'	5.63	117.58	105.20
36	1	1053	A	C8-N9-C4	5.63	108.05	105.80
36	1	2375	G	C2-N3-C4	-5.63	109.09	111.90
36	5	1914	G	N1-C6-O6	-5.63	116.53	119.90
36	5	2774	C	C4-C5-C6	5.63	120.21	117.40
36	5	2927	C	C5-C6-N1	-5.63	118.19	121.00
36	5	2936	A	C2-N3-C4	5.63	113.41	110.60
36	5	1129	A	N1-C6-N6	5.62	121.97	118.60
36	1	2827	U	C2-N1-C1'	-5.62	110.95	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	4	43	A	N9-C4-C5	-5.62	103.55	105.80
1	6	425	A	OP2-P-O3'	5.62	117.57	105.20
1	2	1389	C	N1-C2-O2	5.62	122.27	118.90
36	1	39	A	C4-C5-N7	5.62	113.51	110.70
36	1	81	C	C6-N1-C2	5.62	122.55	120.30
36	1	2958	A	N1-C6-N6	5.62	121.97	118.60
1	6	1648	A	N1-C6-N6	5.62	121.97	118.60
36	5	83	U	OP1-P-OP2	5.62	128.03	119.60
36	5	3000	A	C2-N3-C4	-5.62	107.79	110.60
1	2	334	G	C2-N3-C4	-5.62	109.09	111.90
36	5	739	G	N1-C6-O6	-5.62	116.53	119.90
36	5	2832	C	C6-N1-C2	5.62	122.55	120.30
1	2	532	U	C6-N1-C2	-5.62	117.63	121.00
1	2	736	C	C2-N1-C1'	5.62	124.98	118.80
36	1	2624	G	C4-C5-N7	5.62	113.05	110.80
36	1	2773	C	O5'-P-OP2	-5.62	100.64	105.70
36	1	2725	U	N1-C2-O2	5.62	126.73	122.80
1	2	1596	C	N3-C2-O2	-5.62	117.97	121.90
36	1	1487	G	N9-C4-C5	5.62	107.65	105.40
36	5	3115	C	C6-N1-C1'	5.62	127.54	120.80
36	1	883	A	N1-C2-N3	5.61	132.11	129.30
36	1	1604	G	N3-C4-C5	-5.61	125.79	128.60
36	1	2197	C	N1-C2-N3	-5.61	115.27	119.20
1	6	646	C	C6-N1-C2	-5.61	118.06	120.30
36	5	57	A	N1-C6-N6	5.61	121.97	118.60
36	5	273	A	C8-N9-C4	5.61	108.05	105.80
36	5	2315	G	O5'-P-OP1	-5.61	100.65	105.70
36	5	2526	C	C2-N1-C1'	5.61	124.97	118.80
1	6	1039	A	O4'-C1'-N9	5.61	112.69	108.20
36	5	992	A	C2-N3-C4	-5.61	107.79	110.60
36	1	1156	C	C2-N3-C4	-5.61	117.09	119.90
1	6	425	A	C4-C5-C6	-5.61	114.19	117.00
1	6	1745	G	C5-C6-O6	-5.61	125.23	128.60
36	5	1047	A	C5-C6-N6	-5.61	119.21	123.70
36	5	2373	A	OP1-P-OP2	-5.61	111.19	119.60
36	5	3382	U	C2-N1-C1'	5.61	124.43	117.70
36	1	1127	G	C4-C5-N7	5.61	113.04	110.80
36	1	2572	C	C6-N1-C2	-5.61	118.06	120.30
37	7	49	G	O4'-C1'-N9	5.61	112.68	108.20
36	1	285	A	OP1-P-O3'	5.60	117.53	105.20
36	1	326	U	O5'-P-OP2	-5.60	100.66	105.70
36	1	1900	A	N1-C6-N6	-5.60	115.24	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1413	G	N1-C6-O6	5.60	123.26	119.90
36	1	40	A	C4-C5-C6	5.60	119.80	117.00
36	1	100	A	N1-C2-N3	5.60	132.10	129.30
36	5	394	G	C8-N9-C4	5.60	108.64	106.40
1	6	92	A	C8-N9-C4	5.60	108.04	105.80
1	6	1347	U	N1-C2-N3	5.60	118.26	114.90
36	5	588	G	N1-C6-O6	5.60	123.26	119.90
36	1	701	G	N3-C2-N2	-5.60	115.98	119.90
1	6	1473	U	N3-C2-O2	-5.60	118.28	122.20
36	5	683	U	N3-C4-C5	-5.60	111.24	114.60
36	5	835	G	N1-C6-O6	-5.60	116.54	119.90
36	5	1057	A	N9-C4-C5	-5.60	103.56	105.80
36	5	2152	A	C6-C5-N7	-5.60	128.38	132.30
36	1	2796	G	C5-N7-C8	-5.60	101.50	104.30
37	7	97	A	N1-C6-N6	5.60	121.96	118.60
1	2	428	A	C8-N9-C4	-5.59	103.56	105.80
36	1	1144	U	C5-C6-N1	-5.59	119.90	122.70
36	5	1599	G	C8-N9-C4	5.59	108.64	106.40
36	1	2352	A	N1-C6-N6	5.59	121.96	118.60
41	L4	206	LEU	CA-CB-CG	5.59	128.16	115.30
1	2	348	U	O5'-P-OP2	-5.59	100.67	105.70
1	2	368	U	C5-C4-O4	-5.59	122.55	125.90
36	1	2662	G	C6-C5-N7	-5.59	127.05	130.40
36	5	637	C	N1-C2-O2	-5.59	115.55	118.90
36	5	3218	A	C5-N7-C8	-5.59	101.11	103.90
36	5	3362	A	N7-C8-N9	5.59	116.60	113.80
1	2	1276	U	C5-C4-O4	-5.59	122.55	125.90
36	1	1155	C	N3-C4-C5	5.59	124.14	121.90
36	1	2827	U	N1-C2-N3	5.59	118.25	114.90
1	6	557	G	N1-C6-O6	-5.59	116.55	119.90
36	5	2897	A	C6-N1-C2	-5.59	115.25	118.60
36	1	961	C	N3-C4-N4	5.59	121.91	118.00
12	c0	97	PRO	N-CA-CB	5.59	110.00	103.30
36	5	593	C	OP2-P-O3'	5.59	117.49	105.20
36	5	2878	G	C5-C6-N1	5.59	114.29	111.50
36	5	3317	U	C6-N1-C2	-5.59	117.65	121.00
36	5	2394	G	N9-C4-C5	-5.58	103.17	105.40
1	2	1027	A	C8-N9-C4	-5.58	103.57	105.80
36	1	346	C	C6-N1-C2	5.58	122.53	120.30
36	1	1000	C	C5-C4-N4	-5.58	116.29	120.20
36	1	2406	C	C5-C4-N4	-5.58	116.29	120.20
36	1	2617	U	N3-C4-C5	-5.58	111.25	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2868	U	C2-N1-C1'	5.58	124.40	117.70
36	1	3208	G	N3-C4-C5	5.58	131.39	128.60
38	4	95	G	N3-C4-C5	5.58	131.39	128.60
36	5	281	G	C5-C6-O6	-5.58	125.25	128.60
36	5	339	C	N1-C2-O2	-5.58	115.55	118.90
36	5	2860	U	C2-N3-C4	-5.58	123.65	127.00
36	5	2914	G	N1-C6-O6	5.58	123.25	119.90
1	2	421	A	N9-C4-C5	-5.58	103.57	105.80
36	1	1389	G	C5-N7-C8	-5.58	101.51	104.30
36	1	2126	A	N9-C4-C5	-5.58	103.57	105.80
36	1	2722	U	N1-C2-O2	5.58	126.71	122.80
41	L4	195	ARG	NE-CZ-NH2	-5.58	117.51	120.30
1	6	1113	A	N1-C2-N3	5.58	132.09	129.30
1	6	1764	C	C6-N1-C2	5.58	122.53	120.30
36	1	1502	C	C5-C6-N1	-5.58	118.21	121.00
36	1	1662	G	C6-C5-N7	-5.58	127.05	130.40
1	2	794	U	P-O3'-C3'	5.58	126.39	119.70
36	5	353	G	C8-N9-C1'	5.58	134.25	127.00
36	5	2856	G	C6-C5-N7	-5.58	127.05	130.40
1	2	734	A	P-O3'-C3'	5.58	126.39	119.70
1	2	1324	G	C4-N9-C1'	-5.58	119.25	126.50
36	1	315	C	C6-N1-C2	-5.58	118.07	120.30
38	4	34	U	N3-C2-O2	5.58	126.10	122.20
36	1	364	G	N1-C2-N2	5.58	121.22	116.20
36	1	1414	G	N1-C6-O6	5.58	123.25	119.90
1	6	543	C	C6-N1-C2	-5.58	118.07	120.30
36	5	699	A	C2-N3-C4	-5.58	107.81	110.60
36	5	945	C	N1-C2-O2	5.58	122.25	118.90
36	1	730	C	C5-C4-N4	-5.57	116.30	120.20
36	1	2139	A	N9-C4-C5	5.57	108.03	105.80
36	1	2738	A	N1-C6-N6	-5.57	115.26	118.60
36	5	1481	A	P-O3'-C3'	5.57	126.39	119.70
36	5	1506	A	C8-N9-C4	-5.57	103.57	105.80
36	5	1888	U	C5-C4-O4	-5.57	122.56	125.90
36	5	2281	A	O4'-C1'-N9	5.57	112.66	108.20
36	5	3340	G	N1-C6-O6	-5.57	116.56	119.90
1	2	187	G	OP1-P-O3'	5.57	117.46	105.20
36	1	314	U	N1-C2-O2	5.57	126.70	122.80
36	1	2425	G	C4-C5-N7	5.57	113.03	110.80
36	5	1481	A	C4-C5-C6	5.57	119.78	117.00
36	5	2129	U	N1-C2-O2	5.57	126.70	122.80
36	5	3306	U	C4-C5-C6	-5.57	116.36	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2970	C	N3-C4-C5	5.57	124.13	121.90
37	7	74	C	N3-C2-O2	5.57	125.80	121.90
1	2	73	U	OP1-P-O3'	5.57	117.45	105.20
36	1	972	A	C8-N9-C4	5.57	108.03	105.80
36	1	1904	C	C6-N1-C2	-5.57	118.07	120.30
36	5	355	A	C8-N9-C4	-5.57	103.57	105.80
36	5	921	A	OP2-P-O3'	5.57	117.45	105.20
36	1	86	G	O4'-C1'-N9	5.57	112.65	108.20
36	1	315	C	C5-C6-N1	5.57	123.78	121.00
36	1	2779	A	N1-C6-N6	5.57	121.94	118.60
36	5	3230	G	N1-C6-O6	-5.57	116.56	119.90
37	7	88	G	N1-C2-N2	-5.57	111.19	116.20
36	1	1200	A	N1-C2-N3	5.56	132.08	129.30
36	5	888	A	N1-C6-N6	5.56	121.94	118.60
36	5	2818	U	N1-C2-N3	-5.56	111.56	114.90
36	5	2945	G	N1-C6-O6	5.56	123.24	119.90
1	2	864	U	N3-C4-O4	-5.56	115.51	119.40
1	2	1051	G	P-O3'-C3'	5.56	126.37	119.70
36	1	648	C	C5-C4-N4	-5.56	116.31	120.20
36	1	927	C	N3-C4-C5	5.56	124.12	121.90
36	1	3137	C	C2-N1-C1'	-5.56	112.68	118.80
36	5	651	G	N7-C8-N9	5.56	115.88	113.10
36	1	2325	G	C4-C5-N7	5.56	113.02	110.80
36	5	580	C	C5-C6-N1	5.56	123.78	121.00
1	2	412	A	N1-C6-N6	5.56	121.94	118.60
36	1	765	C	N1-C2-O2	5.56	122.24	118.90
36	1	2930	A	C6-C5-N7	-5.56	128.41	132.30
36	1	2982	A	N9-C4-C5	-5.56	103.58	105.80
1	6	571	G	N3-C4-C5	-5.56	125.82	128.60
36	5	2631	U	N3-C2-O2	-5.56	118.31	122.20
36	5	2814	G	C5-C6-O6	5.56	131.94	128.60
37	7	8	G	C8-N9-C4	-5.56	104.18	106.40
1	2	782	U	OP2-P-O3'	5.56	117.42	105.20
36	1	496	C	C6-N1-C2	-5.56	118.08	120.30
36	1	2257	C	C2-N1-C1'	5.56	124.91	118.80
1	6	755	A	C3'-C2'-C1'	5.56	105.95	101.50
36	5	1476	G	N3-C4-N9	-5.56	122.67	126.00
36	1	2651	G	C5-C6-O6	5.56	131.93	128.60
38	4	32	C	C6-N1-C2	5.56	122.52	120.30
36	5	625	G	N1-C6-O6	5.56	123.23	119.90
36	1	584	G	N9-C4-C5	5.55	107.62	105.40
36	1	1385	C	N1-C2-O2	-5.55	115.57	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1927	G	C5-C6-O6	5.55	131.93	128.60
1	6	858	G	C8-N9-C1'	-5.55	119.78	127.00
36	1	1153	A	C4-C5-C6	5.55	119.78	117.00
36	1	1326	A	N7-C8-N9	-5.55	111.02	113.80
36	5	2550	U	N3-C2-O2	-5.55	118.31	122.20
1	2	1761	U	N3-C2-O2	-5.55	118.31	122.20
36	5	361	A	C8-N9-C4	5.55	108.02	105.80
36	5	630	A	C8-N9-C4	5.55	108.02	105.80
36	5	1367	G	N3-C2-N2	-5.55	116.01	119.90
36	5	2255	A	C4-C5-C6	-5.55	114.22	117.00
36	5	2325	G	C5-C6-N1	-5.55	108.72	111.50
36	1	9	U	C2-N1-C1'	-5.55	111.04	117.70
36	5	650	C	N3-C2-O2	5.55	125.78	121.90
1	2	440	U	C5-C6-N1	-5.55	119.93	122.70
36	5	1657	C	N3-C2-O2	-5.55	118.02	121.90
79	q3	29	LEU	CA-CB-CG	-5.55	102.54	115.30
36	1	919	U	N3-C2-O2	-5.55	118.32	122.20
36	1	1145	G	C4-C5-N7	5.55	113.02	110.80
36	1	3143	C	N1-C2-O2	-5.55	115.57	118.90
1	6	1141	G	C5-C6-O6	-5.55	125.27	128.60
36	5	2155	G	C4-N9-C1'	-5.55	119.29	126.50
36	1	652	G	C6-C5-N7	-5.54	127.07	130.40
1	2	1433	G	N3-C4-C5	-5.54	125.83	128.60
36	5	1902	G	C4-C5-N7	5.54	113.02	110.80
36	5	2149	A	C8-N9-C4	5.54	108.02	105.80
1	2	61	A	N7-C8-N9	5.54	116.57	113.80
37	3	115	G	O5'-P-OP2	-5.54	100.71	105.70
36	5	1438	U	C4-C5-C6	5.54	123.03	119.70
36	5	1519	G	C4-C5-N7	5.54	113.02	110.80
36	5	2245	C	N3-C4-C5	-5.54	119.68	121.90
36	5	2756	C	C6-N1-C2	5.54	122.52	120.30
1	2	447	U	N3-C4-C5	-5.54	111.28	114.60
36	1	2174	G	N1-C6-O6	5.54	123.22	119.90
36	1	2891	U	C5-C4-O4	-5.54	122.58	125.90
36	5	2614	G	C5-C6-O6	5.54	131.92	128.60
36	1	914	A	C5-N7-C8	5.54	106.67	103.90
36	1	2710	C	N3-C2-O2	5.54	125.78	121.90
59	N3	48	ARG	NE-CZ-NH2	-5.54	117.53	120.30
1	2	34	G	N1-C6-O6	-5.53	116.58	119.90
1	2	385	A	OP1-P-O3'	5.53	117.38	105.20
1	2	968	U	C5-C6-N1	-5.53	119.93	122.70
36	5	61	A	C8-N9-C4	-5.53	103.59	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	926	A	N1-C2-N3	5.53	132.07	129.30
36	5	1449	A	C2-N3-C4	-5.53	107.83	110.60
36	5	2973	G	C5-C6-O6	5.53	131.92	128.60
1	2	388	G	N1-C6-O6	5.53	123.22	119.90
36	1	2410	U	C5-C6-N1	-5.53	119.94	122.70
1	6	1126	G	N1-C6-O6	-5.53	116.58	119.90
36	5	264	G	C6-C5-N7	-5.53	127.08	130.40
36	1	1609	C	N1-C2-O2	-5.53	115.58	118.90
36	1	1780	G	N1-C6-O6	5.53	123.22	119.90
52	M6	110	PRO	C-N-CD	-5.53	108.44	120.60
36	5	1390	A	N9-C4-C5	5.53	108.01	105.80
36	1	718	G	C5-C6-O6	-5.53	125.28	128.60
36	1	1297	C	C2-N1-C1'	-5.53	112.72	118.80
36	5	2145	A	C4-C5-C6	5.53	119.76	117.00
36	5	2698	G	N9-C4-C5	-5.53	103.19	105.40
36	1	2281	A	O5'-P-OP2	-5.52	100.73	105.70
36	5	1200	A	P-O3'-C3'	5.52	126.33	119.70
36	1	394	G	N9-C4-C5	5.52	107.61	105.40
1	6	65	A	N1-C6-N6	5.52	121.91	118.60
36	5	2892	A	C2-N3-C4	-5.52	107.84	110.60
36	5	2902	A	O5'-P-OP2	-5.52	100.73	105.70
36	5	406	G	C6-N1-C2	-5.52	121.79	125.10
37	3	94	C	O5'-P-OP1	-5.52	100.73	105.70
36	5	641	C	OP2-P-O3'	5.52	117.34	105.20
36	5	2199	G	C5-C6-N1	-5.52	108.74	111.50
12	c0	88	PRO	N-CA-CB	5.52	109.92	103.30
36	5	1212	A	N1-C6-N6	5.52	121.91	118.60
36	1	27	C	OP1-P-OP2	5.51	127.87	119.60
36	1	2416	U	C6-N1-C2	-5.51	117.69	121.00
36	1	2659	G	C8-N9-C4	5.51	108.61	106.40
36	5	42	C	N3-C4-C5	5.51	124.11	121.90
36	1	1514	G	OP1-P-OP2	5.51	127.87	119.60
36	1	2356	A	C4-C5-N7	5.51	113.45	110.70
36	5	589	A	N7-C8-N9	-5.51	111.05	113.80
1	2	1124	A	C2-N3-C4	-5.51	107.85	110.60
36	1	3093	C	C2-N1-C1'	-5.51	112.74	118.80
36	5	927	C	C6-N1-C2	-5.51	118.10	120.30
36	1	1153	A	C2-N3-C4	-5.51	107.85	110.60
38	4	43	A	C8-N9-C4	5.51	108.00	105.80
36	5	1126	G	N1-C6-O6	5.51	123.20	119.90
36	1	96	G	N1-C6-O6	5.51	123.20	119.90
1	6	1656	U	O5'-P-OP1	5.51	117.31	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	896	A	C8-N9-C4	-5.51	103.60	105.80
36	5	1850	A	N1-C6-N6	-5.51	115.30	118.60
1	2	783	G	C4-C5-N7	5.50	113.00	110.80
36	5	2625	C	N3-C4-N4	5.50	121.85	118.00
36	1	24	G	N1-C2-N2	-5.50	111.25	116.20
1	6	1661	U	O5'-P-OP2	-5.50	100.75	105.70
36	5	2612	U	C5-C6-N1	-5.50	119.95	122.70
1	6	1027	A	N3-C4-C5	5.50	130.65	126.80
36	5	395	A	C6-C5-N7	-5.50	128.45	132.30
36	5	3045	G	N3-C2-N2	-5.50	116.05	119.90
36	1	655	C	N1-C2-O2	-5.50	115.60	118.90
36	5	2621	G	C4-C5-N7	5.50	113.00	110.80
36	1	989	A	C8-N9-C4	5.50	108.00	105.80
36	5	39	A	C2-N3-C4	-5.50	107.85	110.60
36	5	681	U	C2-N1-C1'	5.50	124.30	117.70
36	5	2161	G	N3-C2-N2	-5.50	116.05	119.90
36	1	104	G	C4-C5-N7	5.50	113.00	110.80
36	1	2198	A	N1-C2-N3	5.50	132.05	129.30
36	5	594	U	O5'-P-OP1	-5.50	100.75	105.70
36	5	1171	G	N1-C6-O6	-5.50	116.60	119.90
36	5	2865	U	N1-C2-N3	-5.50	111.60	114.90
36	1	2101	C	P-O3'-C3'	5.50	126.29	119.70
36	5	2900	A	C5-C6-N6	5.50	128.10	123.70
36	1	2279	A	C8-N9-C4	5.49	108.00	105.80
36	5	2130	G	C5-C6-O6	5.49	131.90	128.60
36	5	2421	U	C4-C5-C6	5.49	123.00	119.70
36	5	1419	A	N1-C6-N6	-5.49	115.31	118.60
36	1	131	C	C5-C6-N1	5.49	123.75	121.00
36	1	2309	A	N1-C6-N6	5.49	121.89	118.60
1	6	687	G	N3-C4-C5	5.49	131.34	128.60
1	6	1141	G	N1-C6-O6	5.49	123.19	119.90
1	6	1440	C	C6-N1-C2	-5.49	118.10	120.30
36	5	340	C	C5-C6-N1	-5.49	118.25	121.00
36	5	591	G	N9-C4-C5	-5.49	103.20	105.40
36	5	792	G	C8-N9-C4	5.49	108.60	106.40
36	5	2965	U	C5-C4-O4	-5.49	122.61	125.90
1	2	1779	U	N3-C2-O2	5.49	126.04	122.20
36	1	1296	C	C6-N1-C2	-5.49	118.10	120.30
36	1	1397	C	C6-N1-C2	5.49	122.50	120.30
36	1	1591	G	C5-C6-O6	-5.49	125.31	128.60
36	5	519	A	N1-C6-N6	5.49	121.89	118.60
36	5	1496	C	C5-C4-N4	-5.49	116.36	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1432	C	N1-C2-O2	5.49	122.19	118.90
36	5	2623	G	N9-C4-C5	-5.49	103.20	105.40
36	1	1331	U	N3-C2-O2	5.49	126.04	122.20
36	1	2434	U	C5-C4-O4	5.49	129.19	125.90
36	1	3133	C	N3-C4-N4	5.49	121.84	118.00
36	1	3188	G	N9-C4-C5	-5.49	103.20	105.40
41	L4	139	GLY	N-CA-C	-5.49	99.38	113.10
36	5	2353	G	N3-C2-N2	-5.48	116.06	119.90
36	5	2727	A	O5'-P-OP1	-5.48	100.77	105.70
36	5	3137	C	C2-N1-C1'	-5.48	112.77	118.80
79	q3	50	GLY	N-CA-C	-5.48	99.39	113.10
1	2	428	A	N1-C6-N6	-5.48	115.31	118.60
36	1	1405	U	N3-C4-C5	5.48	117.89	114.60
36	1	2620	G	N9-C1'-C2'	-5.48	105.97	112.00
36	1	2912	G	C8-N9-C4	5.48	108.59	106.40
1	6	687	G	C8-N9-C1'	5.48	134.13	127.00
36	5	1792	C	C4-C5-C6	5.48	120.14	117.40
36	5	3028	G	N3-C2-N2	5.48	123.74	119.90
1	2	610	G	C4-N9-C1'	5.48	133.62	126.50
36	1	2278	C	N1-C2-O2	5.48	122.19	118.90
36	1	2772	C	C3'-C2'-C1'	-5.48	97.12	101.50
1	6	66	U	P-O3'-C3'	5.48	126.28	119.70
36	5	1456	A	C8-N9-C4	5.48	107.99	105.80
1	2	358	U	N3-C2-O2	-5.48	118.36	122.20
36	1	1179	A	C5-C6-N6	-5.48	119.32	123.70
36	1	2764	C	C6-N1-C2	-5.48	118.11	120.30
1	6	1779	U	N1-C2-O2	5.48	126.64	122.80
36	1	45	A	OP1-P-OP2	-5.48	111.38	119.60
36	1	1392	G	N3-C4-C5	-5.48	125.86	128.60
36	1	2139	A	C5-C6-N1	5.48	120.44	117.70
36	5	91	G	C6-C5-N7	-5.48	127.11	130.40
36	5	3374	U	C5-C6-N1	-5.48	119.96	122.70
38	8	125	U	C2-N1-C1'	5.48	124.27	117.70
36	1	2121	G	N1-C2-N2	-5.48	111.27	116.20
36	5	2927	C	N1-C2-O2	-5.48	115.61	118.90
36	1	803	C	OP2-P-O3'	5.47	117.25	105.20
36	1	2302	G	C5-C6-O6	5.47	131.88	128.60
36	1	2815	G	C5-C6-O6	-5.47	125.31	128.60
36	5	884	A	C5-C6-N6	-5.47	119.32	123.70
36	5	1716	U	P-O3'-C3'	5.47	126.27	119.70
36	5	2407	C	O5'-P-OP2	-5.47	100.77	105.70
36	5	3137	C	N3-C4-C5	5.47	124.09	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	3208	G	N3-C2-N2	-5.47	116.07	119.90
1	2	287	G	O4'-C1'-N9	5.47	112.58	108.20
36	1	439	C	C2-N1-C1'	5.47	124.82	118.80
36	1	2117	A	C6-N1-C2	-5.47	115.32	118.60
36	1	3362	A	C2-N3-C4	-5.47	107.86	110.60
47	M0	189	GLU	N-CA-C	5.47	125.78	111.00
1	6	1535	U	C2-N1-C1'	5.47	124.27	117.70
36	1	1306	G	N3-C4-N9	5.47	129.28	126.00
1	6	337	G	C4-N9-C1'	5.47	133.61	126.50
36	5	42	C	N1-C2-O2	5.47	122.18	118.90
36	1	901	G	C5-C6-N1	-5.47	108.77	111.50
36	1	2408	U	N3-C2-O2	-5.47	118.37	122.20
36	5	709	A	N9-C4-C5	-5.47	103.61	105.80
36	5	776	U	N3-C4-O4	-5.47	115.57	119.40
36	5	3245	A	C5-C6-N1	-5.47	114.97	117.70
1	2	499	U	P-O3'-C3'	5.47	126.26	119.70
36	1	1349	G	N3-C4-C5	-5.47	125.87	128.60
36	1	2637	A	O5'-P-OP1	-5.47	100.78	105.70
36	1	2796	G	C4-C5-N7	5.47	112.99	110.80
1	6	3	U	C6-N1-C2	5.47	124.28	121.00
36	5	1200	A	C5-C6-N6	-5.47	119.33	123.70
1	2	1432	U	C6-N1-C2	5.47	124.28	121.00
36	1	721	G	C5-N7-C8	-5.47	101.57	104.30
36	1	793	C	OP2-P-O3'	5.47	117.22	105.20
36	1	1101	G	C5-C6-O6	5.47	131.88	128.60
36	1	2983	C	N3-C4-N4	-5.47	114.17	118.00
36	1	3326	G	N7-C8-N9	-5.47	110.37	113.10
36	5	52	A	C6-N1-C2	5.47	121.88	118.60
1	2	694	U	N3-C2-O2	-5.46	118.37	122.20
36	1	640	U	N3-C4-O4	5.46	123.22	119.40
36	1	744	A	N7-C8-N9	-5.46	111.07	113.80
36	5	660	A	C5-C6-N6	5.46	128.07	123.70
36	5	2749	G	N1-C6-O6	-5.46	116.62	119.90
36	5	3339	A	C5-C6-N6	-5.46	119.33	123.70
36	5	2906	C	O5'-P-OP2	-5.46	100.78	105.70
36	1	1344	G	C8-N9-C4	5.46	108.58	106.40
1	6	1648	A	C5-C6-N6	-5.46	119.33	123.70
36	5	709	A	C8-N9-C4	5.46	107.98	105.80
36	5	1412	G	C8-N9-C4	-5.46	104.22	106.40
36	5	2974	U	N3-C2-O2	-5.46	118.38	122.20
36	1	25	U	N3-C4-C5	-5.46	111.32	114.60
36	1	3170	A	N1-C6-N6	5.46	121.88	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2231	C	C6-N1-C2	-5.46	118.12	120.30
1	2	1490	C	C6-N1-C2	-5.46	118.12	120.30
36	1	306	A	C8-N9-C4	5.46	107.98	105.80
36	1	1373	A	OP2-P-O3'	5.46	117.21	105.20
36	1	1606	U	C5-C6-N1	-5.46	119.97	122.70
36	1	2527	G	N3-C2-N2	-5.46	116.08	119.90
36	1	3180	A	N9-C4-C5	-5.46	103.62	105.80
1	6	578	U	C5-C6-N1	-5.46	119.97	122.70
1	6	910	C	C6-N1-C2	-5.46	118.12	120.30
36	5	182	U	C5-C6-N1	5.46	125.43	122.70
1	2	325	G	N3-C4-C5	5.46	131.33	128.60
1	2	1489	U	N3-C2-O2	-5.46	118.38	122.20
36	5	2273	G	C4-N9-C1'	-5.46	119.41	126.50
36	5	2689	A	C6-N1-C2	-5.46	115.33	118.60
36	1	659	G	N3-C2-N2	5.46	123.72	119.90
1	2	992	A	N3-C4-N9	-5.45	123.04	127.40
36	1	81	C	C5-C6-N1	-5.45	118.27	121.00
36	1	91	G	C4-C5-N7	5.45	112.98	110.80
1	6	541	A	P-O3'-C3'	-5.45	113.16	119.70
36	5	39	A	N1-C6-N6	5.45	121.87	118.60
36	5	1875	G	C6-C5-N7	5.45	133.67	130.40
36	5	3041	U	OP2-P-O3'	5.45	117.20	105.20
44	17	83	LEU	CA-CB-CG	5.45	127.84	115.30
1	6	1113	A	C2-N3-C4	-5.45	107.87	110.60
36	1	518	G	O4'-C1'-N9	5.45	112.56	108.20
36	1	1513	G	N3-C4-C5	-5.45	125.88	128.60
36	1	2688	U	C6-N1-C2	5.45	124.27	121.00
36	1	2869	U	O5'-P-OP2	5.45	117.24	110.70
36	5	2991	A	N1-C6-N6	-5.45	115.33	118.60
36	1	2912	G	C5-C6-N1	5.45	114.22	111.50
36	1	3179	U	N3-C4-C5	5.45	117.87	114.60
1	2	1324	G	N1-C2-N2	5.45	121.10	116.20
36	1	508	U	OP2-P-O3'	5.45	117.18	105.20
36	1	1904	C	N3-C4-N4	5.45	121.81	118.00
36	1	2880	U	C6-N1-C2	-5.45	117.73	121.00
36	1	3217	C	C6-N1-C1'	-5.45	114.27	120.80
36	1	3368	U	C2-N1-C1'	-5.45	111.17	117.70
36	5	1376	C	OP1-P-OP2	5.45	127.77	119.60
36	5	2132	C	C6-N1-C2	-5.45	118.12	120.30
36	5	1331	U	O5'-P-OP2	-5.44	100.80	105.70
1	6	1745	G	N9-C4-C5	-5.44	103.22	105.40
36	5	2862	U	OP2-P-O3'	5.44	117.17	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	14	339	LEU	CA-CB-CG	5.44	127.82	115.30
36	1	870	G	C5-C6-O6	5.44	131.86	128.60
36	1	1199	C	N3-C4-N4	-5.44	114.19	118.00
1	6	27	U	N3-C2-O2	-5.44	118.39	122.20
36	5	1139	G	C8-N9-C4	5.44	108.58	106.40
36	5	1449	A	C6-C5-N7	-5.44	128.49	132.30
62	n6	76	LEU	CA-CB-CG	5.44	127.81	115.30
1	2	1745	G	C6-N1-C2	-5.44	121.84	125.10
36	1	787	G	N1-C6-O6	-5.44	116.64	119.90
36	1	679	U	OP1-P-O3'	5.44	117.16	105.20
36	1	1306	G	N9-C4-C5	-5.44	103.22	105.40
1	6	1027	A	C5-N7-C8	-5.44	101.18	103.90
1	6	1560	U	O4'-C1'-N1	5.44	112.55	108.20
51	m5	187	ARG	NE-CZ-NH1	-5.44	117.58	120.30
1	2	1180	C	N1-C2-O2	5.44	122.16	118.90
36	1	281	G	C6-N1-C2	-5.44	121.84	125.10
36	1	672	A	C4-C5-N7	5.44	113.42	110.70
36	1	1379	G	N1-C2-N3	5.44	127.16	123.90
1	6	1651	A	C8-N9-C4	-5.44	103.62	105.80
36	5	3143	C	C5-C4-N4	-5.44	116.39	120.20
36	1	314	U	N3-C2-O2	-5.43	118.40	122.20
36	1	371	G	N1-C6-O6	5.43	123.16	119.90
36	1	851	C	C2-N1-C1'	5.43	124.78	118.80
36	1	2810	C	C6-N1-C2	5.43	122.47	120.30
1	6	782	U	C2-N1-C1'	5.43	124.22	117.70
36	5	712	G	O5'-P-OP2	-5.43	100.81	105.70
36	5	1141	C	C2-N3-C4	-5.43	117.18	119.90
36	5	2910	A	C8-N9-C4	-5.43	103.63	105.80
36	1	1395	G	N9-C4-C5	-5.43	103.23	105.40
36	1	1491	A	N1-C6-N6	5.43	121.86	118.60
36	1	2617	U	N3-C4-O4	-5.43	115.60	119.40
38	4	103	G	C5-C6-N1	5.43	114.22	111.50
1	6	89	G	N1-C6-O6	5.43	123.16	119.90
36	5	2155	G	N3-C4-C5	5.43	131.32	128.60
36	5	2204	C	N3-C4-N4	-5.43	114.20	118.00
1	6	1138	A	O5'-P-OP2	-5.43	100.81	105.70
36	5	2211	U	C5-C6-N1	-5.43	119.98	122.70
24	D2	93	LEU	CA-CB-CG	5.43	127.79	115.30
36	1	1213	G	C5-C6-O6	-5.43	125.34	128.60
1	6	542	A	P-O3'-C3'	5.43	126.22	119.70
36	5	220	G	O5'-P-OP2	-5.43	100.81	105.70
36	5	2764	C	N3-C4-C5	5.43	124.07	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	221	A	N1-C6-N6	-5.43	115.34	118.60
36	1	1793	C	O5'-P-OP1	-5.43	100.81	105.70
1	6	1119	G	N1-C6-O6	-5.43	116.64	119.90
1	6	1654	G	O5'-P-OP2	-5.43	100.81	105.70
38	8	109	A	C5-C6-N1	5.43	120.41	117.70
36	1	1331	U	O4'-C1'-N1	-5.43	103.86	108.20
36	1	1351	U	N1-C2-O2	5.43	126.60	122.80
36	1	1887	A	C8-N9-C4	5.43	107.97	105.80
1	6	1120	U	OP2-P-O3'	5.43	117.14	105.20
36	5	660	A	OP1-P-O3'	5.43	117.14	105.20
36	5	1461	A	O5'-P-OP2	-5.43	100.82	105.70
36	5	2993	G	C5-C6-N1	5.43	114.21	111.50
36	1	1395	G	OP2-P-O3'	5.42	117.14	105.20
36	5	2751	G	C8-N9-C4	-5.42	104.23	106.40
36	1	633	C	C4-C5-C6	5.42	120.11	117.40
36	1	1481	A	C6-C5-N7	-5.42	128.50	132.30
36	1	2175	U	N1-C2-N3	5.42	118.15	114.90
36	1	2795	U	O5'-P-OP1	-5.42	100.82	105.70
36	5	1413	G	C5-C6-O6	-5.42	125.35	128.60
37	7	92	A	N1-C6-N6	5.42	121.85	118.60
37	7	101	G	C4-C5-C6	5.42	122.05	118.80
1	2	321	C	O4'-C1'-N1	5.42	112.54	108.20
36	1	860	G	N1-C6-O6	5.42	123.15	119.90
36	1	2327	U	N3-C2-O2	5.42	126.00	122.20
36	1	3079	U	C6-N1-C1'	5.42	128.79	121.20
36	5	609	G	N3-C2-N2	-5.42	116.11	119.90
36	1	2634	U	C2-N3-C4	-5.42	123.75	127.00
36	5	589	A	C8-N9-C4	5.42	107.97	105.80
36	5	1098	A	N1-C6-N6	5.42	121.85	118.60
1	2	1274	C	N3-C4-N4	-5.42	114.21	118.00
1	2	1779	U	N1-C2-O2	-5.42	119.01	122.80
36	1	3137	C	N1-C2-O2	-5.42	115.65	118.90
36	1	3202	G	C8-N9-C4	5.42	108.57	106.40
36	5	2362	C	C4-C5-C6	-5.42	114.69	117.40
1	2	608	U	N1-C2-N3	5.42	118.15	114.90
36	1	1148	G	N9-C4-C5	-5.42	103.23	105.40
36	1	1352	A	P-O3'-C3'	5.42	126.20	119.70
1	6	383	G	C8-N9-C4	-5.42	104.23	106.40
36	5	639	G	N3-C2-N2	-5.42	116.11	119.90
36	1	2632	G	OP1-P-O3'	5.42	117.11	105.20
36	5	2334	U	C5-C4-O4	-5.42	122.65	125.90
36	5	2992	U	N3-C4-O4	5.42	123.19	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	3216	G	C5-C6-O6	-5.42	125.35	128.60
1	2	1652	C	C4-C5-C6	-5.41	114.69	117.40
36	1	2527	G	C8-N9-C1'	5.41	134.04	127.00
1	6	402	C	O5'-P-OP2	-5.41	100.83	105.70
36	5	665	A	N1-C6-N6	5.41	121.85	118.60
36	5	2413	A	N1-C6-N6	5.41	121.85	118.60
36	1	1115	G	N1-C6-O6	5.41	123.15	119.90
36	1	1365	G	N7-C8-N9	5.41	115.81	113.10
36	1	2175	U	C5-C4-O4	5.41	129.15	125.90
1	6	609	U	C2-N3-C4	-5.41	123.75	127.00
1	6	1724	U	N3-C4-O4	-5.41	115.61	119.40
36	5	1184	A	N9-C4-C5	5.41	107.97	105.80
1	2	75	U	O5'-P-OP2	5.41	117.19	110.70
1	2	720	G	P-O3'-C3'	5.41	126.19	119.70
36	1	2688	U	C5-C4-O4	-5.41	122.65	125.90
36	5	80	G	OP1-P-OP2	-5.41	111.49	119.60
36	5	3184	A	N9-C4-C5	-5.41	103.64	105.80
1	2	829	A	P-O3'-C3'	5.41	126.19	119.70
1	2	1568	C	P-O3'-C3'	5.41	126.19	119.70
36	1	1381	A	O5'-P-OP2	5.41	117.19	110.70
36	1	1815	U	P-O3'-C3'	5.41	126.19	119.70
36	1	2989	U	C5-C4-O4	-5.41	122.66	125.90
38	4	24	G	C5-C6-O6	-5.41	125.36	128.60
1	6	1141	G	O5'-P-OP1	-5.41	100.83	105.70
36	5	994	G	O5'-P-OP2	-5.41	100.83	105.70
36	5	2381	G	C5-N7-C8	-5.41	101.59	104.30
36	5	2871	G	C8-N9-C4	-5.41	104.24	106.40
36	5	3151	U	C6-N1-C2	5.41	124.25	121.00
36	1	59	G	C4-C5-N7	5.41	112.96	110.80
36	1	303	G	C4-C5-N7	-5.41	108.64	110.80
1	6	421	A	N1-C6-N6	5.41	121.84	118.60
1	6	1127	G	N1-C6-O6	5.41	123.14	119.90
36	5	1064	A	N1-C6-N6	5.41	121.84	118.60
36	5	2704	A	OP2-P-O3'	5.41	117.10	105.20
36	5	2917	G	O5'-P-OP2	-5.41	100.83	105.70
1	2	606	A	C8-N9-C4	5.41	107.96	105.80
36	1	700	C	N3-C4-N4	5.41	121.78	118.00
1	2	1456	C	N1-C2-O2	5.40	122.14	118.90
1	6	75	U	O4'-C1'-N1	5.40	112.52	108.20
36	5	1006	A	N1-C6-N6	-5.40	115.36	118.60
36	5	1142	G	O5'-P-OP2	-5.40	100.84	105.70
36	1	1924	U	C6-N1-C2	5.40	124.24	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1587	A	N1-C6-N6	5.40	121.84	118.60
1	2	1595	U	N3-C4-C5	-5.40	111.36	114.60
1	6	10	G	C4-C5-N7	-5.40	108.64	110.80
36	5	1703	U	N1-C2-O2	-5.40	119.02	122.80
36	1	2557	A	N1-C6-N6	5.40	121.84	118.60
36	1	2979	U	N3-C2-O2	-5.40	118.42	122.20
36	5	668	G	C5-C6-N1	5.40	114.20	111.50
36	5	892	U	C5-C4-O4	5.40	129.14	125.90
36	5	1141	C	C5-C4-N4	-5.40	116.42	120.20
36	5	1493	G	O5'-P-OP1	-5.40	100.84	105.70
36	5	1496	C	O5'-P-OP1	5.40	117.18	110.70
36	1	43	A	N3-C4-C5	5.40	130.58	126.80
1	6	1487	A	C8-N9-C4	5.40	107.96	105.80
36	5	1115	G	C8-N9-C1'	-5.40	119.98	127.00
36	5	2983	C	O5'-P-OP1	-5.40	100.84	105.70
1	2	704	C	C2-N1-C1'	5.39	124.73	118.80
36	1	880	G	N1-C6-O6	-5.39	116.66	119.90
36	1	1163	A	C2-N3-C4	-5.39	107.90	110.60
36	5	1869	C	N3-C4-C5	5.39	124.06	121.90
36	5	2398	A	N1-C6-N6	-5.39	115.36	118.60
36	1	283	G	O4'-C1'-N9	-5.39	103.89	108.20
36	1	1192	C	N3-C2-O2	-5.39	118.13	121.90
36	5	504	A	C5-C6-N6	-5.39	119.39	123.70
36	5	1012	G	C4-N9-C1'	-5.39	119.49	126.50
36	5	1885	U	N1-C2-O2	-5.39	119.03	122.80
36	1	1305	U	OP2-P-O3'	5.39	117.06	105.20
38	4	4	C	N3-C4-C5	5.39	124.06	121.90
36	5	2234	G	C5-C6-O6	-5.39	125.36	128.60
1	2	1777	G	C4-C5-N7	5.39	112.96	110.80
36	1	2126	A	N1-C6-N6	5.39	121.83	118.60
36	1	2203	U	N3-C4-C5	-5.39	111.37	114.60
36	1	2324	A	C5-N7-C8	-5.39	101.20	103.90
1	6	17	C	O5'-P-OP2	-5.39	100.85	105.70
1	6	905	A	N1-C6-N6	-5.39	115.37	118.60
36	5	41	G	C5-N7-C8	-5.39	101.61	104.30
36	5	390	G	C6-C5-N7	-5.39	127.17	130.40
36	5	961	C	C2-N1-C1'	5.39	124.73	118.80
1	6	361	C	C6-N1-C2	5.39	122.45	120.30
36	5	2889	C	C5-C6-N1	-5.39	118.31	121.00
36	1	675	C	N3-C4-N4	5.39	121.77	118.00
36	1	979	U	O4'-C1'-N1	5.39	112.51	108.20
36	1	1297	C	N1-C2-O2	-5.39	115.67	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1369	A	N1-C6-N6	5.39	121.83	118.60
36	1	706	A	N9-C4-C5	-5.38	103.65	105.80
36	1	1510	G	N1-C6-O6	5.38	123.13	119.90
36	1	2699	G	C5-C6-O6	-5.38	125.37	128.60
36	5	924	G	O4'-C1'-N9	-5.38	103.89	108.20
36	5	1292	C	N3-C4-C5	5.38	124.05	121.90
36	5	3208	G	N3-C4-C5	5.38	131.29	128.60
36	1	2986	U	N3-C2-O2	5.38	125.97	122.20
45	L8	189	LEU	CA-CB-CG	5.38	127.68	115.30
36	1	935	U	N1-C2-N3	5.38	118.13	114.90
1	6	1582	U	C5-C6-N1	-5.38	120.01	122.70
36	5	2362	C	N3-C4-C5	5.38	124.05	121.90
36	1	1879	A	O4'-C1'-N9	5.38	112.50	108.20
36	5	2753	G	N3-C2-N2	-5.38	116.13	119.90
36	1	1362	G	N7-C8-N9	-5.38	110.41	113.10
36	1	1556	C	P-O3'-C3'	5.38	126.16	119.70
36	5	343	U	C5-C4-O4	5.38	129.13	125.90
36	5	639	G	N1-C6-O6	5.38	123.13	119.90
36	5	2593	A	P-O3'-C3'	5.38	126.16	119.70
1	2	1651	A	C2-N3-C4	-5.38	107.91	110.60
36	1	9	U	C5-C6-N1	-5.38	120.01	122.70
36	1	1106	G	N1-C2-N2	5.38	121.04	116.20
36	1	2311	G	N1-C6-O6	5.38	123.13	119.90
1	6	815	G	N1-C6-O6	5.38	123.13	119.90
36	5	1330	A	C5-C6-N6	-5.38	119.40	123.70
36	5	2353	G	C6-C5-N7	-5.38	127.17	130.40
36	5	2858	U	N3-C2-O2	-5.38	118.44	122.20
36	5	3090	U	N3-C4-O4	-5.38	115.64	119.40
1	2	704	C	N3-C2-O2	-5.38	118.14	121.90
36	1	3178	A	C4-C5-C6	5.38	119.69	117.00
36	5	85	A	N7-C8-N9	-5.38	111.11	113.80
36	5	1077	U	C5-C6-N1	-5.38	120.01	122.70
36	1	368	G	C2-N3-C4	-5.37	109.21	111.90
36	1	755	A	C2-N3-C4	-5.37	107.91	110.60
38	4	22	U	C5-C6-N1	-5.37	120.01	122.70
36	5	220	G	N1-C2-N2	-5.37	111.36	116.20
1	2	1114	G	N3-C4-N9	5.37	129.22	126.00
36	1	428	A	N1-C6-N6	-5.37	115.38	118.60
36	1	2177	G	N3-C4-N9	5.37	129.22	126.00
36	5	644	G	C5-C6-O6	5.37	131.82	128.60
36	5	1127	G	C6-N1-C2	-5.37	121.88	125.10
36	5	3285	C	C2-N1-C1'	5.37	124.71	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	41	G	OP2-P-O3'	5.37	117.01	105.20
36	1	89	A	C6-N1-C2	-5.37	115.38	118.60
1	6	1595	U	O4'-C1'-N1	5.37	112.50	108.20
36	5	2325	G	N1-C6-O6	5.37	123.12	119.90
36	1	2370	G	N1-C6-O6	5.37	123.12	119.90
36	5	2801	A	C2-N3-C4	5.37	113.28	110.60
36	1	1510	G	N3-C4-C5	-5.37	125.92	128.60
36	5	1396	C	C6-N1-C2	5.37	122.45	120.30
36	5	3040	A	C8-N9-C4	5.37	107.95	105.80
1	2	1455	G	N3-C2-N2	-5.36	116.14	119.90
36	1	2306	C	C5-C4-N4	5.36	123.95	120.20
1	6	194	U	C5-C6-N1	5.36	125.38	122.70
36	5	859	G	C8-N9-C4	-5.36	104.25	106.40
36	5	2215	A	C2-N3-C4	-5.36	107.92	110.60
36	5	3278	C	C6-N1-C2	5.36	122.45	120.30
36	5	2856	G	C5-C6-O6	-5.36	125.38	128.60
36	1	1581	C	N3-C2-O2	-5.36	118.15	121.90
36	1	2662	G	C4-C5-N7	5.36	112.94	110.80
36	1	2725	U	C5-C4-O4	5.36	129.12	125.90
36	1	3362	A	C8-N9-C4	-5.36	103.66	105.80
1	6	1026	A	O5'-P-OP1	-5.36	100.88	105.70
36	5	1879	A	C5-N7-C8	-5.36	101.22	103.90
36	5	2146	C	C6-N1-C2	5.36	122.44	120.30
36	1	2695	A	C8-N9-C4	-5.36	103.66	105.80
36	1	2979	U	N1-C2-O2	5.36	126.55	122.80
36	1	2988	C	N1-C2-O2	-5.36	115.68	118.90
36	5	2643	A	N1-C6-N6	5.36	121.81	118.60
36	5	3132	C	N1-C2-O2	-5.36	115.69	118.90
36	1	2922	G	OP1-P-O3'	5.36	116.98	105.20
36	5	2818	U	C5'-C4'-O4'	-5.36	102.67	109.10
36	1	534	U	N3-C2-O2	-5.36	118.45	122.20
36	1	1307	G	OP1-P-O3'	5.36	116.98	105.20
36	1	2933	A	C5-N7-C8	-5.36	101.22	103.90
36	5	334	A	N7-C8-N9	-5.36	111.12	113.80
36	5	790	U	N3-C4-O4	5.36	123.15	119.40
36	5	2513	U	P-O3'-C3'	5.36	126.13	119.70
36	1	424	G	O5'-P-OP2	-5.35	100.88	105.70
36	5	2775	U	C6-N1-C2	5.35	124.21	121.00
36	1	2811	A	N1-C2-N3	5.35	131.98	129.30
36	5	2123	G	N1-C6-O6	-5.35	116.69	119.90
36	5	2318	U	N3-C4-O4	-5.35	115.65	119.40
36	1	1834	U	C4-C5-C6	5.35	122.91	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	N0	40	ARG	NE-CZ-NH2	5.35	122.98	120.30
36	5	209	A	N1-C6-N6	5.35	121.81	118.60
36	5	2169	G	C4-C5-N7	-5.35	108.66	110.80
36	1	811	U	N1-C2-O2	5.35	126.55	122.80
1	6	1653	C	N1-C2-N3	5.35	122.94	119.20
36	1	404	G	N3-C2-N2	-5.35	116.16	119.90
36	5	1435	A	C2-N3-C4	5.35	113.27	110.60
36	5	2369	G	N1-C6-O6	5.35	123.11	119.90
1	2	1291	G	N3-C4-C5	5.35	131.27	128.60
36	1	690	A	C8-N9-C4	5.35	107.94	105.80
36	1	1319	G	C5-C6-O6	5.35	131.81	128.60
36	1	922	U	C6-N1-C1'	-5.34	113.72	121.20
36	1	1822	C	C6-N1-C2	-5.34	118.16	120.30
36	1	1902	G	C5-N7-C8	-5.34	101.63	104.30
36	1	3101	G	C6-C5-N7	5.34	133.61	130.40
1	6	1614	A	C5-N7-C8	-5.34	101.23	103.90
36	5	2696	A	C4-C5-C6	-5.34	114.33	117.00
36	5	2945	G	C5-C6-O6	-5.34	125.39	128.60
37	7	68	C	N3-C4-C5	5.34	124.04	121.90
36	1	683	U	N3-C2-O2	5.34	125.94	122.20
1	6	543	C	N3-C4-N4	-5.34	114.26	118.00
36	5	1440	G	C8-N9-C4	5.34	108.54	106.40
36	5	2194	G	C2-N3-C4	-5.34	109.23	111.90
1	2	1122	G	C5-C6-O6	-5.34	125.39	128.60
36	1	2795	U	OP1-P-OP2	5.34	127.61	119.60
1	6	305	C	N1-C2-O2	-5.34	115.69	118.90
36	5	970	A	C6-N1-C2	-5.34	115.39	118.60
36	5	2403	G	C8-N9-C4	-5.34	104.26	106.40
36	5	3015	G	OP2-P-O3'	5.34	116.95	105.20
36	1	24	G	C8-N9-C1'	-5.34	120.06	127.00
36	1	2881	C	C4-C5-C6	5.34	120.07	117.40
36	5	637	C	C5-C6-N1	-5.34	118.33	121.00
36	5	717	C	N1-C2-O2	5.34	122.10	118.90
36	5	1191	U	N1-C2-O2	-5.34	119.06	122.80
36	5	1420	C	N3-C2-O2	5.34	125.64	121.90
36	5	3304	U	N3-C2-O2	5.34	125.94	122.20
1	2	74	U	P-O3'-C3'	5.34	126.11	119.70
36	1	1653	G	OP2-P-O3'	5.34	116.94	105.20
36	5	227	G	C8-N9-C1'	-5.34	120.06	127.00
36	5	385	A	N1-C6-N6	5.34	121.80	118.60
36	5	1162	U	OP1-P-OP2	5.34	127.61	119.60
38	8	34	U	N1-C2-N3	5.34	118.10	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	M1	112	LEU	CA-CB-CG	5.34	127.58	115.30
36	5	2791	G	N3-C2-N2	-5.34	116.16	119.90
36	1	2920	U	N1-C2-O2	-5.33	119.07	122.80
36	5	2246	G	O5'-P-OP1	-5.33	100.90	105.70
36	5	2371	G	N9-C4-C5	-5.33	103.27	105.40
1	2	17	C	N3-C4-C5	-5.33	119.77	121.90
1	2	1595	U	O4'-C1'-N1	5.33	112.47	108.20
36	1	919	U	O5'-P-OP1	5.33	117.10	110.70
36	5	788	C	N1-C2-O2	-5.33	115.70	118.90
36	5	2948	C	C6-N1-C2	5.33	122.43	120.30
36	1	1156	C	C2-N1-C1'	5.33	124.66	118.80
36	1	1192	C	C6-N1-C2	-5.33	118.17	120.30
36	5	889	U	C6-N1-C2	5.33	124.20	121.00
1	2	436	A	O5'-P-OP2	-5.33	100.90	105.70
36	5	1208	U	C5-C4-O4	5.33	129.10	125.90
36	5	1604	G	N9-C4-C5	-5.33	103.27	105.40
1	2	36	C	C6-N1-C2	5.33	122.43	120.30
1	2	734	A	OP1-P-O3'	5.33	116.92	105.20
1	2	1120	U	C5-C4-O4	5.33	129.10	125.90
1	2	1426	C	C6-N1-C2	5.33	122.43	120.30
36	1	48	A	C2-N3-C4	-5.33	107.94	110.60
52	M6	78	ARG	NE-CZ-NH1	5.33	122.96	120.30
36	5	961	C	O5'-P-OP2	5.33	117.09	110.70
36	1	3049	A	O5'-P-OP2	5.33	117.09	110.70
36	1	619	A	N9-C4-C5	-5.33	103.67	105.80
36	1	1367	G	N7-C8-N9	-5.33	110.44	113.10
36	5	315	C	N3-C4-C5	5.33	124.03	121.90
36	1	503	C	N3-C4-C5	5.32	124.03	121.90
36	1	714	G	C2-N3-C4	-5.32	109.24	111.90
36	1	1297	C	C2-N3-C4	-5.32	117.24	119.90
36	5	1321	G	C6-C5-N7	-5.32	127.21	130.40
36	5	1900	A	N1-C6-N6	5.32	121.79	118.60
36	5	2345	A	N1-C6-N6	5.32	121.79	118.60
1	2	556	A	C8-N9-C4	-5.32	103.67	105.80
36	1	2983	C	N1-C2-N3	5.32	122.92	119.20
1	6	1023	A	OP1-P-O3'	5.32	116.91	105.20
36	5	200	C	N3-C4-N4	5.32	121.72	118.00
36	5	802	C	N3-C4-C5	-5.32	119.77	121.90
36	5	2314	U	C5-C4-O4	-5.32	122.71	125.90
37	7	16	U	C2-N1-C1'	-5.32	111.32	117.70
36	1	652	G	O5'-P-OP2	-5.32	100.91	105.70
36	5	1341	U	C5-C4-O4	5.32	129.09	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1924	U	N3-C4-C5	5.32	117.79	114.60
1	2	13	C	C6-N1-C2	5.32	122.43	120.30
1	2	551	G	C8-N9-C4	-5.32	104.27	106.40
1	2	1041	G	C8-N9-C4	-5.32	104.27	106.40
36	1	925	A	N1-C2-N3	5.32	131.96	129.30
1	6	1164	G	C5-C6-N1	5.32	114.16	111.50
36	5	3159	C	N3-C2-O2	-5.32	118.18	121.90
36	1	1190	A	C8-N9-C4	-5.32	103.67	105.80
36	5	878	G	N3-C2-N2	5.32	123.62	119.90
36	1	277	G	C2-N3-C4	5.31	114.56	111.90
36	1	1863	G	C4-C5-N7	5.31	112.92	110.80
36	1	2527	G	N3-C4-C5	5.31	131.26	128.60
1	6	1597	A	C8-N9-C4	5.31	107.93	105.80
36	5	1389	G	C8-N9-C4	5.31	108.53	106.40
36	1	1505	C	O5'-P-OP2	-5.31	100.92	105.70
36	5	1047	A	N1-C6-N6	5.31	121.79	118.60
36	5	1191	U	N3-C2-O2	5.31	125.92	122.20
36	5	2381	G	C4-C5-N7	5.31	112.92	110.80
1	6	1736	G	N1-C6-O6	5.31	123.09	119.90
36	5	938	C	C6-N1-C2	5.31	122.42	120.30
36	5	1114	U	N3-C4-C5	-5.31	111.41	114.60
36	5	2164	A	C8-N9-C4	-5.31	103.67	105.80
36	5	3098	G	O5'-P-OP2	-5.31	100.92	105.70
36	1	1185	C	C6-N1-C2	5.31	122.42	120.30
1	6	976	G	C5-N7-C8	-5.31	101.64	104.30
1	6	1459	C	O5'-P-OP2	-5.31	100.92	105.70
36	5	1152	G	N1-C6-O6	5.31	123.09	119.90
36	5	1536	G	N3-C2-N2	-5.31	116.18	119.90
36	5	2117	A	C4-C5-N7	-5.31	108.05	110.70
1	2	1772	C	N1-C2-O2	-5.31	115.72	118.90
36	1	1396	C	O5'-P-OP1	5.31	117.07	110.70
36	5	215	G	C8-N9-C4	-5.31	104.28	106.40
36	5	3343	G	N3-C2-N2	5.31	123.62	119.90
36	1	921	A	O4'-C1'-N9	-5.30	103.96	108.20
36	5	3351	U	N3-C2-O2	-5.30	118.49	122.20
36	1	187	A	C8-N9-C4	-5.30	103.68	105.80
36	1	815	G	N3-C2-N2	-5.30	116.19	119.90
36	1	2800	G	C6-N1-C2	-5.30	121.92	125.10
1	6	794	U	C2-N1-C1'	5.30	124.06	117.70
36	5	2512	C	C2-N1-C1'	5.30	124.63	118.80
38	4	58	G	N1-C2-N2	-5.30	111.43	116.20
1	6	765	G	C8-N9-C4	5.30	108.52	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1305	U	C2-N1-C1'	5.30	124.06	117.70
37	7	87	G	N1-C6-O6	5.30	123.08	119.90
36	1	927	C	C2-N3-C4	-5.30	117.25	119.90
36	5	3278	C	C2-N1-C1'	-5.30	112.97	118.80
36	5	756	U	C5-C6-N1	-5.30	120.05	122.70
36	1	3093	C	C6-N1-C1'	5.30	127.16	120.80
36	5	111	C	O5'-P-OP2	-5.30	100.93	105.70
36	5	880	G	N7-C8-N9	-5.30	110.45	113.10
36	5	967	A	O5'-P-OP2	-5.30	100.93	105.70
36	5	1917	C	N3-C4-C5	-5.30	119.78	121.90
36	1	1377	G	N9-C4-C5	-5.29	103.28	105.40
36	1	3005	A	N1-C6-N6	-5.29	115.42	118.60
1	6	146	U	OP1-P-OP2	5.29	127.54	119.60
1	6	452	A	C4-C5-N7	5.29	113.35	110.70
36	5	2239	G	C5-C6-O6	5.29	131.78	128.60
1	2	380	U	C2-N1-C1'	5.29	124.05	117.70
36	1	945	C	C6-N1-C2	5.29	122.42	120.30
36	5	698	U	N3-C4-C5	-5.29	111.42	114.60
36	5	888	A	C5-C6-N6	-5.29	119.47	123.70
36	5	1910	A	OP2-P-O3'	5.29	116.85	105.20
36	5	2958	A	O5'-P-OP2	-5.29	100.94	105.70
36	1	339	C	C6-N1-C1'	5.29	127.15	120.80
36	1	2153	U	N3-C2-O2	-5.29	118.50	122.20
1	6	1129	U	C5-C4-O4	5.29	129.07	125.90
36	5	660	A	N9-C4-C5	5.29	107.92	105.80
36	5	701	G	C4-C5-N7	-5.29	108.68	110.80
36	5	2415	C	C5-C4-N4	-5.29	116.50	120.20
36	5	2881	C	C6-N1-C2	5.29	122.42	120.30
1	6	194	U	N3-C2-O2	-5.29	118.50	122.20
36	5	2113	A	O4'-C1'-N9	-5.29	103.97	108.20
36	5	3123	A	N9-C4-C5	-5.29	103.68	105.80
36	1	1119	C	C6-N1-C2	5.29	122.42	120.30
36	1	2836	C	C4-C5-C6	5.29	120.04	117.40
36	1	3319	U	P-O3'-C3'	5.29	126.05	119.70
36	5	424	G	N9-C4-C5	-5.29	103.28	105.40
36	5	1432	C	O5'-P-OP2	-5.29	100.94	105.70
36	5	2145	A	N1-C2-N3	5.29	131.94	129.30
36	5	2870	C	O4'-C1'-N1	5.29	112.43	108.20
36	1	706	A	O5'-P-OP1	-5.29	100.94	105.70
36	5	2291	A	C5-C6-N6	-5.29	119.47	123.70
1	2	433	C	O5'-P-OP1	-5.29	100.94	105.70
1	2	1458	G	C4-N9-C1'	5.29	133.37	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	43	A	N3-C4-N9	-5.29	123.17	127.40
36	1	1148	G	C5-C6-O6	-5.29	125.43	128.60
36	1	2406	C	N3-C4-N4	5.29	121.70	118.00
1	6	858	G	C6-C5-N7	-5.29	127.23	130.40
36	5	2414	G	C8-N9-C4	5.29	108.51	106.40
36	5	2683	U	N1-C2-O2	5.29	126.50	122.80
36	5	3111	U	C5-C4-O4	5.29	129.07	125.90
37	7	88	G	C5-C6-N1	5.29	114.14	111.50
1	2	189	C	N1-C2-O2	5.28	122.07	118.90
36	1	641	C	C2-N1-C1'	-5.28	112.99	118.80
36	1	1301	A	O5'-P-OP1	-5.28	100.94	105.70
36	5	170	G	C4-N9-C1'	5.28	133.37	126.50
36	5	820	A	N1-C2-N3	5.28	131.94	129.30
36	5	1308	A	O5'-P-OP1	-5.28	100.94	105.70
36	5	1481	A	C5-N7-C8	-5.28	101.26	103.90
36	1	1906	G	C4-C5-N7	5.28	112.91	110.80
36	1	2374	C	N1-C2-N3	5.28	122.90	119.20
1	6	385	A	C4-C5-N7	-5.28	108.06	110.70
36	5	2797	C	C4-C5-C6	5.28	120.04	117.40
36	1	1381	A	N1-C6-N6	5.28	121.77	118.60
36	1	1800	A	C2-N3-C4	5.28	113.24	110.60
36	1	2187	G	C8-N9-C4	-5.28	104.29	106.40
36	1	2245	C	N3-C2-O2	-5.28	118.20	121.90
36	1	2312	A	C5-C6-N6	-5.28	119.48	123.70
36	5	383	G	C8-N9-C4	5.28	108.51	106.40
1	2	1741	U	N3-C2-O2	-5.28	118.50	122.20
36	1	2860	U	N1-C2-N3	-5.28	111.73	114.90
36	1	3313	U	OP1-P-O3'	5.28	116.81	105.20
36	5	3185	U	C5-C6-N1	-5.28	120.06	122.70
1	2	1580	C	C6-N1-C2	5.28	122.41	120.30
36	1	2173	U	N1-C2-N3	5.28	118.07	114.90
1	2	1274	C	C5-C4-N4	5.28	123.89	120.20
36	1	639	G	N9-C1'-C2'	-5.28	106.20	112.00
36	5	1465	A	C2-N3-C4	-5.28	107.96	110.60
36	5	3182	G	C5-C6-N1	-5.28	108.86	111.50
36	1	277	G	N9-C4-C5	5.27	107.51	105.40
1	6	1082	C	C6-N1-C2	-5.27	118.19	120.30
36	5	2333	C	C6-N1-C2	5.27	122.41	120.30
1	6	1653	C	C4-C5-C6	5.27	120.04	117.40
36	5	1303	A	C8-N9-C4	5.27	107.91	105.80
37	7	94	C	O5'-P-OP2	5.27	117.03	110.70
1	2	606	A	N3-C4-C5	5.27	130.49	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1124	U	N3-C4-C5	5.27	117.76	114.60
36	1	1203	A	C5-C6-N6	-5.27	119.48	123.70
36	1	3228	C	C6-N1-C1'	-5.27	114.48	120.80
36	5	19	U	C6-N1-C2	-5.27	117.84	121.00
36	5	840	C	N3-C4-N4	5.27	121.69	118.00
36	5	1212	A	C5-N7-C8	-5.27	101.27	103.90
36	5	2295	A	C2-N3-C4	5.27	113.23	110.60
37	7	112	G	C8-N9-C4	-5.27	104.29	106.40
1	2	1780	G	N1-C6-O6	5.27	123.06	119.90
36	1	155	G	N3-C4-N9	5.27	129.16	126.00
36	1	2354	C	C5-C6-N1	-5.27	118.37	121.00
36	1	2876	C	C6-N1-C2	-5.27	118.19	120.30
36	5	647	A	N7-C8-N9	-5.27	111.17	113.80
36	1	2943	G	C5-N7-C8	-5.27	101.67	104.30
1	6	187	G	P-O3'-C3'	5.27	126.02	119.70
36	1	831	G	N1-C6-O6	5.26	123.06	119.90
36	1	1442	U	OP1-P-O3'	5.26	116.78	105.20
36	1	2179	C	N1-C2-O2	5.26	122.06	118.90
36	1	2871	G	C5-C6-O6	-5.26	125.44	128.60
36	1	2974	U	N3-C2-O2	-5.26	118.52	122.20
51	M5	164	LEU	CA-CB-CG	-5.26	103.19	115.30
36	1	187	A	N7-C8-N9	5.26	116.43	113.80
36	1	640	U	N1-C2-O2	-5.26	119.12	122.80
36	1	1107	C	C5-C4-N4	-5.26	116.52	120.20
36	5	709	A	C5-C6-N6	-5.26	119.49	123.70
36	5	1128	U	C2-N3-C4	-5.26	123.84	127.00
1	2	1370	U	P-O3'-C3'	5.26	126.01	119.70
36	1	716	A	C6-C5-N7	-5.26	128.62	132.30
36	1	900	G	C8-N9-C4	5.26	108.50	106.40
36	1	1317	A	N7-C8-N9	5.26	116.43	113.80
36	1	2361	A	N9-C4-C5	5.26	107.91	105.80
36	1	188	U	C4-C5-C6	5.26	122.86	119.70
36	1	2249	G	C3'-C2'-C1'	-5.26	97.29	101.50
1	6	1793	G	N1-C6-O6	-5.26	116.75	119.90
36	5	996	A	C8-N9-C4	5.26	107.90	105.80
36	5	3014	U	O5'-P-OP1	-5.26	100.97	105.70
36	5	911	C	N3-C2-O2	5.26	125.58	121.90
36	1	315	C	C2-N1-C1'	5.26	124.58	118.80
36	1	651	G	N3-C4-C5	-5.26	125.97	128.60
36	1	943	U	N1-C2-N3	5.26	118.05	114.90
1	6	1150	G	N1-C6-O6	5.26	123.05	119.90
36	5	1386	A	C5-C6-N1	-5.26	115.07	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2572	C	C6-N1-C1'	-5.26	114.49	120.80
1	2	15	U	C6-N1-C2	-5.25	117.85	121.00
1	2	1636	C	N1-C2-O2	-5.25	115.75	118.90
36	1	2249	G	N3-C4-C5	-5.25	125.97	128.60
36	5	1205	A	OP1-P-OP2	5.25	127.48	119.60
36	5	1413	G	C6-C5-N7	-5.25	127.25	130.40
1	2	736	C	C5-C6-N1	5.25	123.63	121.00
1	2	971	A	C4-C5-C6	5.25	119.63	117.00
36	1	683	U	C5-C4-O4	-5.25	122.75	125.90
36	1	1611	G	C5-C6-N1	-5.25	108.87	111.50
36	1	2427	U	C5-C6-N1	-5.25	120.07	122.70
36	5	911	C	C5-C6-N1	-5.25	118.37	121.00
36	5	2874	G	C5-C6-N1	-5.25	108.87	111.50
36	1	881	C	C2-N3-C4	5.25	122.53	119.90
36	1	893	C	N1-C2-O2	5.25	122.05	118.90
36	1	2201	G	C6-C5-N7	-5.25	127.25	130.40
36	1	2639	G	C6-C5-N7	-5.25	127.25	130.40
1	6	1588	G	N1-C6-O6	-5.25	116.75	119.90
36	5	1238	C	P-O3'-C3'	5.25	126.00	119.70
36	5	1367	G	OP2-P-O3'	5.25	116.75	105.20
36	5	2748	A	C2-N3-C4	-5.25	107.97	110.60
36	5	2866	U	C5-C6-N1	5.25	125.33	122.70
36	1	2953	U	N3-C2-O2	5.25	125.88	122.20
36	5	1770	G	C4-N9-C1'	5.25	133.32	126.50
1	2	404	G	C8-N9-C4	5.25	108.50	106.40
1	2	1642	G	N1-C6-O6	5.25	123.05	119.90
36	1	3062	G	N3-C2-N2	-5.25	116.23	119.90
36	5	337	G	N3-C4-C5	-5.25	125.98	128.60
36	5	2906	C	O5'-P-OP1	5.25	117.00	110.70
36	5	3151	U	N1-C2-N3	-5.25	111.75	114.90
36	1	2619	G	N1-C6-O6	-5.25	116.75	119.90
36	1	2891	U	C5-C6-N1	-5.25	120.08	122.70
1	6	1787	C	C6-N1-C2	-5.25	118.20	120.30
38	4	103	G	N3-C4-N9	5.25	129.15	126.00
1	2	167	U	C5-C6-N1	-5.24	120.08	122.70
1	2	499	U	C3'-C2'-C1'	5.24	105.70	101.50
36	1	948	C	C4-C5-C6	5.24	120.02	117.40
36	5	959	C	O4'-C1'-N1	5.24	112.40	108.20
36	5	2426	U	C5-C4-O4	5.24	129.05	125.90
36	5	3140	G	N9-C4-C5	-5.24	103.30	105.40
1	2	402	C	C6-N1-C2	5.24	122.40	120.30
15	C3	22	ALA	C-N-CA	5.24	144.02	122.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	267	G	C2-N3-C4	-5.24	109.28	111.90
36	1	361	A	N9-C4-C5	5.24	107.90	105.80
36	1	2828	G	N3-C2-N2	5.24	123.57	119.90
1	6	991	G	N1-C6-O6	5.24	123.05	119.90
36	1	188	U	N1-C2-N3	5.24	118.04	114.90
36	1	400	G	C4-C5-N7	5.24	112.90	110.80
36	1	706	A	C2-N3-C4	-5.24	107.98	110.60
36	1	3125	U	C2-N1-C1'	-5.24	111.41	117.70
1	6	347	G	C5-C6-O6	-5.24	125.46	128.60
36	5	2851	A	N1-C2-N3	5.24	131.92	129.30
36	1	722	G	C4-C5-N7	5.24	112.90	110.80
36	1	1217	A	C8-N9-C4	-5.24	103.70	105.80
36	1	1419	A	N1-C6-N6	5.24	121.74	118.60
36	1	2927	C	N1-C2-O2	-5.24	115.76	118.90
47	M0	36	LEU	CA-CB-CG	5.24	127.35	115.30
36	5	35	A	O5'-P-OP1	5.24	116.98	110.70
36	5	1554	U	OP1-P-O3'	5.24	116.72	105.20
36	5	2108	C	N1-C2-O2	-5.24	115.76	118.90
36	5	2186	U	O5'-P-OP2	-5.24	100.98	105.70
38	8	6	U	N3-C2-O2	5.24	125.87	122.20
1	2	455	C	C5-C4-N4	-5.24	116.53	120.20
36	5	3339	A	N1-C6-N6	5.24	121.74	118.60
36	1	346	C	C2-N1-C1'	-5.24	113.04	118.80
36	1	609	G	O5'-P-OP2	-5.24	100.99	105.70
36	1	1154	A	C4-C5-C6	5.24	119.62	117.00
36	1	1483	G	O4'-C1'-N9	5.24	112.39	108.20
36	1	2169	G	C8-N9-C4	-5.24	104.31	106.40
36	1	2606	G	C8-N9-C1'	-5.24	120.19	127.00
36	1	2660	G	N9-C4-C5	-5.24	103.31	105.40
36	5	100	A	N1-C6-N6	5.24	121.74	118.60
36	5	2815	G	C8-N9-C4	5.24	108.49	106.40
36	5	1152	G	N9-C4-C5	5.23	107.49	105.40
36	5	2318	U	N1-C2-O2	5.23	126.46	122.80
36	1	634	C	C6-N1-C2	5.23	122.39	120.30
36	1	793	C	C6-N1-C2	-5.23	118.21	120.30
36	1	948	C	N1-C2-O2	-5.23	115.76	118.90
36	1	2243	A	N1-C6-N6	-5.23	115.46	118.60
36	1	2922	G	C8-N9-C4	5.23	108.49	106.40
1	6	515	A	C8-N9-C4	-5.23	103.71	105.80
36	5	1394	A	O4'-C1'-N9	5.23	112.39	108.20
36	1	1929	G	N3-C4-N9	5.23	129.14	126.00
36	1	2235	C	N3-C4-C5	5.23	123.99	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2640	A	N1-C2-N3	5.23	131.91	129.30
36	5	2930	A	C4-N9-C1'	-5.23	116.89	126.30
36	1	1137	C	C5-C4-N4	-5.23	116.54	120.20
36	1	1405	U	C5-C6-N1	-5.23	120.09	122.70
36	1	2638	C	C5-C4-N4	5.23	123.86	120.20
38	4	103	G	N3-C4-C5	-5.23	125.99	128.60
1	6	1388	A	C8-N9-C4	-5.23	103.71	105.80
36	5	2222	A	O5'-P-OP2	-5.23	101.00	105.70
36	5	2648	G	C4-C5-C6	-5.23	115.66	118.80
1	2	13	C	N1-C2-O2	-5.23	115.77	118.90
36	1	3212	C	N3-C2-O2	5.23	125.56	121.90
36	5	960	U	N3-C4-O4	-5.23	115.74	119.40
36	5	2403	G	C6-C5-N7	-5.23	127.26	130.40
36	1	1114	U	N1-C2-O2	5.22	126.46	122.80
36	1	1135	A	C8-N9-C4	5.22	107.89	105.80
36	1	1149	G	C6-C5-N7	-5.22	127.27	130.40
36	5	61	A	N9-C4-C5	5.22	107.89	105.80
1	6	512	A	P-O3'-C3'	5.22	125.97	119.70
1	6	646	C	C5-C6-N1	5.22	123.61	121.00
1	2	1745	G	N3-C4-C5	-5.22	125.99	128.60
36	1	2714	G	C4-C5-N7	5.22	112.89	110.80
36	5	1854	C	N3-C4-C5	-5.22	119.81	121.90
36	1	81	C	C2-N3-C4	-5.22	117.29	119.90
36	1	1603	A	C8-N9-C4	5.22	107.89	105.80
36	1	2356	A	C5-N7-C8	-5.22	101.29	103.90
36	1	2818	U	C5'-C4'-O4'	-5.22	102.84	109.10
1	6	1058	U	P-O3'-C3'	5.22	125.96	119.70
1	6	1600	A	C5-N7-C8	-5.22	101.29	103.90
36	5	890	C	N3-C4-N4	5.22	121.65	118.00
36	5	2333	C	OP2-P-O3'	5.22	116.69	105.20
36	5	2959	C	OP2-P-O3'	5.22	116.68	105.20
36	1	2150	G	N1-C6-O6	5.22	123.03	119.90
36	1	2764	C	N3-C4-C5	-5.22	119.81	121.90
38	4	33	A	O4'-C1'-N9	-5.22	104.03	108.20
1	6	1150	G	C2-N3-C4	-5.22	109.29	111.90
36	5	3362	A	C8-N9-C4	-5.22	103.71	105.80
37	7	68	C	N1-C2-O2	5.22	122.03	118.90
1	2	1573	A	P-O3'-C3'	5.21	125.96	119.70
36	1	3183	A	O5'-P-OP1	-5.21	101.01	105.70
36	1	3369	G	C8-N9-C4	-5.21	104.31	106.40
1	6	1124	A	C5-N7-C8	-5.21	101.29	103.90
36	5	1064	A	O4'-C1'-N9	-5.21	104.03	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	7	87	G	C6-C5-N7	-5.21	127.27	130.40
36	1	184	U	C5-C4-O4	5.21	129.03	125.90
36	1	757	C	N1-C2-O2	-5.21	115.77	118.90
36	1	1307	G	O5'-P-OP2	-5.21	101.01	105.70
36	1	1590	G	N1-C6-O6	-5.21	116.77	119.90
36	1	2643	A	C8-N9-C4	5.21	107.89	105.80
1	6	765	G	C6-C5-N7	5.21	133.53	130.40
36	5	1370	G	N1-C2-N3	5.21	127.03	123.90
36	5	2632	G	OP1-P-O3'	5.21	116.67	105.20
36	5	3382	U	N1-C2-O2	5.21	126.45	122.80
1	2	934	C	C2-N1-C1'	5.21	124.53	118.80
36	1	2645	G	C8-N9-C4	5.21	108.48	106.40
36	5	2145	A	C8-N9-C4	-5.21	103.72	105.80
36	5	2996	U	C5-C4-O4	5.21	129.03	125.90
36	5	3111	U	N3-C4-O4	-5.21	115.75	119.40
36	1	654	C	C4-C5-C6	5.21	120.00	117.40
1	6	993	A	N1-C2-N3	-5.21	126.69	129.30
1	6	1044	U	C5-C4-O4	5.21	129.03	125.90
36	1	1182	A	C4-C5-C6	5.21	119.60	117.00
36	1	1595	U	C6-N1-C2	5.21	124.13	121.00
36	1	2283	G	C2-N3-C4	-5.21	109.30	111.90
36	1	2314	U	N3-C2-O2	5.21	125.85	122.20
36	1	2541	U	P-O3'-C3'	5.21	125.95	119.70
36	1	2969	A	C4-C5-C6	5.21	119.61	117.00
1	6	767	U	N3-C4-O4	-5.21	115.75	119.40
36	5	1146	C	C5-C4-N4	-5.21	116.55	120.20
1	6	901	G	C5-C6-O6	-5.21	125.48	128.60
1	6	1097	U	N3-C2-O2	-5.21	118.56	122.20
36	5	2422	C	N3-C4-N4	-5.21	114.36	118.00
36	1	1741	A	O5'-P-OP1	-5.21	101.02	105.70
38	4	121	U	C5-C4-O4	5.21	129.02	125.90
36	5	53	G	C8-N9-C4	5.21	108.48	106.40
1	6	122	U	C6-N1-C2	5.20	124.12	121.00
1	6	163	G	C8-N9-C4	-5.20	104.32	106.40
36	5	2612	U	N3-C2-O2	-5.20	118.56	122.20
36	1	1127	G	C5-C6-O6	-5.20	125.48	128.60
36	1	2606	G	C4-C5-N7	5.20	112.88	110.80
36	5	907	G	C5-C6-O6	-5.20	125.48	128.60
36	5	2245	C	N1-C2-O2	5.20	122.02	118.90
1	2	458	G	C5-C6-N1	-5.20	108.90	111.50
36	1	883	A	C5-C6-N1	5.20	120.30	117.70
36	1	2112	U	P-O3'-C3'	5.20	125.94	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2852	C	N3-C4-C5	5.20	123.98	121.90
39	L2	128	ARG	NE-CZ-NH1	-5.20	117.70	120.30
36	5	895	A	C8-N9-C4	5.20	107.88	105.80
1	2	621	A	O4'-C1'-N9	-5.20	104.04	108.20
36	1	1199	C	C5-C6-N1	-5.20	118.40	121.00
62	N6	126	LEU	CA-CB-CG	5.20	127.26	115.30
1	6	631	G	N1-C6-O6	5.20	123.02	119.90
1	6	1736	G	C8-N9-C4	-5.20	104.32	106.40
36	5	907	G	N3-C4-N9	5.20	129.12	126.00
36	5	1520	G	C6-C5-N7	-5.20	127.28	130.40
38	8	38	U	N3-C2-O2	-5.20	118.56	122.20
1	2	1200	G	N3-C2-N2	-5.20	116.26	119.90
36	1	2969	A	C6-C5-N7	-5.20	128.66	132.30
36	1	3184	A	N9-C4-C5	-5.20	103.72	105.80
36	1	3379	C	O5'-P-OP2	-5.20	101.02	105.70
36	5	214	G	N3-C4-N9	-5.20	122.88	126.00
36	5	283	G	C6-C5-N7	-5.20	127.28	130.40
36	5	3028	G	N1-C2-N2	-5.20	111.52	116.20
62	N6	57	LEU	CA-CB-CG	5.20	127.25	115.30
1	6	789	A	N1-C6-N6	-5.20	115.48	118.60
36	5	834	U	C6-N1-C2	5.20	124.12	121.00
36	5	2858	U	C5-C4-O4	5.20	129.02	125.90
1	2	1596	C	O5'-P-OP2	5.19	116.93	110.70
36	1	359	U	OP2-P-O3'	5.19	116.63	105.20
36	1	1055	A	C8-N9-C4	5.19	107.88	105.80
36	5	349	A	O5'-P-OP2	-5.19	101.03	105.70
36	5	2393	G	C5-C6-O6	-5.19	125.48	128.60
1	2	986	G	N3-C4-N9	5.19	129.12	126.00
36	1	1379	G	C2-N3-C4	-5.19	109.30	111.90
36	1	1799	A	N1-C6-N6	-5.19	115.48	118.60
57	N1	31	LEU	CA-CB-CG	-5.19	103.36	115.30
1	6	29	U	C4-C5-C6	5.19	122.81	119.70
36	5	2885	C	N3-C4-C5	5.19	123.98	121.90
37	7	1	G	C4-N9-C1'	5.19	133.25	126.50
37	7	85	G	OP2-P-O3'	5.19	116.62	105.20
38	8	70	G	C4-C5-N7	-5.19	108.72	110.80
41	14	190	GLY	N-CA-C	5.19	126.08	113.10
36	1	33	G	C2-N3-C4	-5.19	109.30	111.90
36	1	2973	G	C5-C6-O6	-5.19	125.48	128.60
36	1	3178	A	C6-C5-N7	-5.19	128.67	132.30
1	6	484	C	C5-C6-N1	5.19	123.60	121.00
36	1	364	G	N3-C2-N2	-5.19	116.27	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2169	G	C2-N3-C4	5.19	114.49	111.90
36	1	2381	G	C8-N9-C4	-5.19	104.32	106.40
36	1	3307	A	C4-C5-N7	5.19	113.29	110.70
36	5	1445	U	C5-C6-N1	-5.19	120.11	122.70
36	5	2147	A	C4-C5-C6	5.19	119.59	117.00
36	5	3238	G	N3-C4-C5	5.19	131.19	128.60
36	1	43	A	C5-C6-N1	-5.19	115.11	117.70
36	1	765	C	C2-N1-C1'	5.19	124.51	118.80
36	1	1367	G	N1-C2-N2	5.19	120.87	116.20
36	1	2658	G	C4-C5-N7	-5.19	108.72	110.80
38	4	113	U	C6-N1-C1'	5.19	128.46	121.20
1	6	365	G	N1-C2-N3	5.19	127.01	123.90
36	5	1151	U	N3-C4-O4	5.19	123.03	119.40
36	5	2706	G	C8-N9-C1'	-5.19	120.25	127.00
1	2	1182	U	N3-C2-O2	-5.19	118.57	122.20
36	1	1339	C	N1-C2-O2	-5.19	115.79	118.90
36	5	300	G	N3-C4-N9	-5.19	122.89	126.00
1	2	307	G	C8-N9-C1'	-5.18	120.26	127.00
36	1	39	A	N9-C4-C5	-5.18	103.73	105.80
36	1	776	U	N3-C2-O2	-5.18	118.57	122.20
36	1	1432	C	N3-C2-O2	-5.18	118.27	121.90
36	1	3015	G	N7-C8-N9	-5.18	110.51	113.10
36	1	3154	C	C6-N1-C2	-5.18	118.23	120.30
36	5	1502	C	N3-C2-O2	-5.18	118.27	121.90
1	2	1600	A	N1-C6-N6	5.18	121.71	118.60
36	1	92	G	N3-C2-N2	5.18	123.53	119.90
36	1	1121	U	C2-N3-C4	-5.18	123.89	127.00
36	1	2364	G	C4-C5-N7	5.18	112.87	110.80
1	6	1776	A	N1-C6-N6	5.18	121.71	118.60
36	5	229	G	N3-C2-N2	-5.18	116.27	119.90
36	1	1497	C	N3-C4-C5	-5.18	119.83	121.90
1	6	436	A	N1-C6-N6	5.18	121.71	118.60
36	5	1881	A	C5-N7-C8	-5.18	101.31	103.90
36	1	420	G	O4'-C1'-N9	5.18	112.34	108.20
43	L6	26	ARG	NE-CZ-NH1	-5.18	117.71	120.30
1	6	10	G	C5-C6-O6	5.18	131.71	128.60
36	5	152	U	N1-C2-O2	5.18	126.42	122.80
36	5	1490	A	N1-C6-N6	-5.18	115.49	118.60
36	1	869	G	N1-C2-N3	5.18	127.01	123.90
36	1	1306	G	C8-N9-C1'	-5.18	120.27	127.00
36	5	58	G	O5'-P-OP2	-5.18	101.04	105.70
36	1	721	G	C6-C5-N7	-5.18	127.29	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2871	G	C5-N7-C8	-5.18	101.71	104.30
36	1	3214	U	N1-C2-O2	5.18	126.42	122.80
1	6	1117	U	C6-N1-C2	-5.18	117.89	121.00
1	6	1697	G	N3-C4-N9	5.18	129.10	126.00
36	5	1378	U	C5-C6-N1	-5.18	120.11	122.70
36	5	2399	A	C8-N9-C4	5.17	107.87	105.80
1	2	1572	G	N9-C4-C5	-5.17	103.33	105.40
36	1	332	C	C5-C6-N1	-5.17	118.41	121.00
36	1	943	U	C6-N1-C2	-5.17	117.90	121.00
36	1	2183	A	C2-N3-C4	-5.17	108.01	110.60
36	1	3268	A	C6-C5-N7	-5.17	128.68	132.30
1	6	1340	U	C5-C4-O4	5.17	129.00	125.90
36	5	420	G	C4-C5-N7	5.17	112.87	110.80
36	1	1399	A	O4'-C1'-N9	-5.17	104.06	108.20
36	1	2662	G	N9-C4-C5	-5.17	103.33	105.40
36	1	2815	G	C2-N3-C4	-5.17	109.31	111.90
36	1	2871	G	O5'-P-OP2	-5.17	101.05	105.70
36	5	395	A	C5-C6-N6	-5.17	119.56	123.70
36	5	2598	G	C8-N9-C4	5.17	108.47	106.40
36	5	3216	G	N1-C6-O6	5.17	123.00	119.90
38	8	47	C	C4-C5-C6	5.17	119.98	117.40
38	4	4	C	C5-C6-N1	-5.17	118.42	121.00
1	6	990	C	OP1-P-O3'	5.17	116.57	105.20
1	6	1307	U	C2-N1-C1'	-5.17	111.50	117.70
35	SM	134	ASP	CB-CG-OD2	5.17	122.95	118.30
1	2	13	C	C5-C6-N1	-5.17	118.42	121.00
36	1	56	G	C4-N9-C1'	-5.17	119.78	126.50
36	1	1809	A	C2-N3-C4	-5.17	108.02	110.60
38	4	34	U	N3-C4-O4	5.17	123.02	119.40
36	5	649	A	C8-N9-C4	5.17	107.87	105.80
1	2	1448	G	O5'-P-OP1	-5.17	101.05	105.70
36	1	625	G	O5'-P-OP2	-5.17	101.05	105.70
36	1	905	U	O5'-P-OP2	-5.17	101.05	105.70
36	5	1690	C	C6-N1-C2	-5.17	118.23	120.30
36	5	1844	C	C6-N1-C2	-5.17	118.23	120.30
1	2	1431	C	C6-N1-C2	5.16	122.36	120.30
36	1	870	G	N1-C6-O6	-5.16	116.80	119.90
36	1	1190	A	C4-N9-C1'	5.16	135.59	126.30
36	1	1368	U	C6-N1-C1'	-5.16	113.97	121.20
36	1	2301	U	O5'-P-OP2	-5.16	101.05	105.70
36	1	2918	G	N1-C6-O6	5.16	123.00	119.90
36	1	3025	C	C5-C6-N1	-5.16	118.42	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	1274	C	N3-C4-C5	-5.16	119.83	121.90
36	5	3078	U	N1-C2-N3	5.16	118.00	114.90
36	5	30	G	N3-C4-C5	-5.16	126.02	128.60
36	5	880	G	C4-N9-C1'	-5.16	119.79	126.50
1	2	624	G	N1-C6-O6	-5.16	116.80	119.90
36	1	646	A	C4-C5-C6	5.16	119.58	117.00
36	1	1124	U	N1-C2-O2	5.16	126.41	122.80
36	1	1192	C	C6-N1-C1'	-5.16	114.61	120.80
36	5	644	G	N9-C4-C5	5.16	107.46	105.40
36	5	1780	G	N1-C6-O6	-5.16	116.80	119.90
1	2	966	A	N1-C2-N3	5.16	131.88	129.30
36	1	2622	C	C6-N1-C2	-5.16	118.24	120.30
1	6	1781	A	N1-C2-N3	5.16	131.88	129.30
36	5	2207	A	O4'-C1'-N9	5.16	112.33	108.20
36	5	2248	C	N1-C2-O2	-5.16	115.81	118.90
1	2	1491	U	N3-C2-O2	-5.16	118.59	122.20
36	5	2893	C	N1-C2-O2	-5.16	115.81	118.90
1	2	103	A	P-O3'-C3'	5.16	125.89	119.70
36	1	817	A	N3-C4-N9	5.16	131.53	127.40
36	1	1456	A	OP1-P-O3'	5.16	116.54	105.20
36	1	2828	G	C4-N9-C1'	5.16	133.20	126.50
36	5	227	G	C4-N9-C1'	5.16	133.20	126.50
36	5	1065	A	C8-N9-C4	5.16	107.86	105.80
36	5	2775	U	C2-N1-C1'	-5.16	111.51	117.70
36	1	856	G	C6-C5-N7	-5.15	127.31	130.40
1	6	571	G	N7-C8-N9	5.15	115.68	113.10
36	5	1826	C	C6-N1-C2	5.15	122.36	120.30
36	1	1728	G	N3-C4-N9	5.15	129.09	126.00
1	6	105	A	C8-N9-C4	5.15	107.86	105.80
1	6	1560	U	N3-C2-O2	-5.15	118.59	122.20
36	5	1115	G	C4-N9-C1'	5.15	133.20	126.50
36	5	1125	U	N3-C4-O4	-5.15	115.79	119.40
36	5	2827	U	OP1-P-O3'	5.15	116.54	105.20
1	2	542	A	C4-N9-C1'	5.15	135.57	126.30
36	1	2201	G	C4-C5-N7	5.15	112.86	110.80
36	1	2280	A	C4-C5-N7	5.15	113.28	110.70
49	M3	165	SER	N-CA-C	5.15	124.91	111.00
1	6	406	U	C5-C6-N1	-5.15	120.12	122.70
36	5	643	U	N1-C2-O2	5.15	126.41	122.80
36	5	2619	G	C5-C6-O6	-5.15	125.51	128.60
36	5	2879	C	C5-C6-N1	-5.15	118.42	121.00
36	5	2914	G	C6-C5-N7	-5.15	127.31	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2280	A	C5-C6-N6	-5.15	119.58	123.70
36	1	2959	C	N3-C2-O2	5.15	125.50	121.90
36	5	2882	U	O5'-P-OP2	-5.15	101.07	105.70
36	1	676	G	OP2-P-O3'	5.15	116.53	105.20
36	1	2868	U	OP2-P-O3'	5.15	116.52	105.20
1	6	1489	U	C2-N1-C1'	5.15	123.88	117.70
36	5	892	U	C2-N1-C1'	-5.15	111.52	117.70
36	5	984	G	N3-C4-C5	-5.15	126.03	128.60
36	5	1292	C	C5-C6-N1	-5.15	118.43	121.00
36	5	1309	U	O5'-P-OP1	-5.15	101.07	105.70
36	5	2613	U	N3-C2-O2	5.15	125.80	122.20
36	5	2898	G	C5-C6-O6	5.15	131.69	128.60
1	2	802	G	N3-C4-C5	-5.15	126.03	128.60
36	1	3215	A	C8-N9-C4	5.15	107.86	105.80
36	5	941	G	C5-C6-N1	5.15	114.07	111.50
36	5	1389	G	N9-C4-C5	-5.15	103.34	105.40
36	5	1832	C	C6-N1-C2	5.15	122.36	120.30
36	1	1508	C	C5-C4-N4	5.14	123.80	120.20
36	1	2191	U	C5-C4-O4	5.14	128.99	125.90
38	4	6	U	C4-C5-C6	-5.14	116.61	119.70
1	6	308	C	C6-N1-C1'	5.14	126.97	120.80
36	5	706	A	C2-N3-C4	-5.14	108.03	110.60
36	5	2278	C	N3-C4-C5	5.14	123.96	121.90
36	5	2828	G	N3-C4-N9	5.14	129.09	126.00
36	1	2939	G	C4-C5-N7	-5.14	108.74	110.80
36	5	726	G	C6-C5-N7	-5.14	127.31	130.40
36	5	1064	A	C4-C5-N7	5.14	113.27	110.70
36	5	2819	A	C8-N9-C4	5.14	107.86	105.80
36	5	3184	A	N3-C4-C5	5.14	130.40	126.80
37	7	58	C	O5'-P-OP2	-5.14	101.07	105.70
37	7	74	C	N1-C2-O2	-5.14	115.81	118.90
36	1	644	G	C2-N3-C4	-5.14	109.33	111.90
36	1	1128	U	N3-C2-O2	-5.14	118.60	122.20
36	1	2309	A	C8-N9-C4	5.14	107.86	105.80
36	5	1509	A	N1-C6-N6	5.14	121.69	118.60
36	5	3261	C	N1-C2-O2	-5.14	115.81	118.90
18	C6	40	GLU	C-N-CA	5.14	143.59	122.00
36	1	18	G	N9-C4-C5	-5.14	103.34	105.40
36	5	403	C	N1-C2-O2	-5.14	115.82	118.90
36	5	860	G	OP1-P-O3'	5.14	116.51	105.20
36	5	2651	G	C8-N9-C4	5.14	108.46	106.40
37	7	64	A	C8-N9-C4	5.14	107.86	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1843	C	N1-C2-O2	-5.14	115.82	118.90
36	1	2856	G	N3-C4-N9	-5.14	122.92	126.00
36	1	3088	G	N1-C6-O6	-5.14	116.82	119.90
36	5	993	G	O5'-P-OP2	-5.14	101.08	105.70
1	2	1004	U	N3-C2-O2	-5.14	118.60	122.20
36	1	654	C	N3-C4-C5	-5.14	119.84	121.90
36	1	701	G	OP2-P-O3'	5.14	116.50	105.20
36	1	1131	G	C4-C5-N7	5.14	112.85	110.80
36	1	2425	G	N9-C4-C5	-5.14	103.34	105.40
38	4	53	A	C6-N1-C2	-5.14	115.52	118.60
1	6	1102	G	N3-C4-N9	-5.14	122.92	126.00
36	5	974	G	N1-C6-O6	-5.14	116.82	119.90
36	1	91	G	C6-C5-N7	-5.13	127.32	130.40
36	1	1604	G	N1-C2-N2	-5.13	111.58	116.20
36	1	1823	A	C4-C5-C6	5.13	119.57	117.00
1	6	315	A	C2-N3-C4	5.13	113.17	110.60
1	6	631	G	N3-C4-N9	5.13	129.08	126.00
36	5	1339	C	N1-C2-O2	-5.13	115.82	118.90
36	5	2999	U	C5-C6-N1	-5.13	120.13	122.70
1	2	783	G	N9-C4-C5	-5.13	103.35	105.40
36	1	582	G	N3-C4-C5	5.13	131.17	128.60
1	6	38	C	C6-N1-C2	5.13	122.35	120.30
36	5	1506	A	C5-C6-N6	5.13	127.81	123.70
36	5	1882	G	C5-C6-N1	5.13	114.07	111.50
1	2	404	G	N3-C4-C5	5.13	131.17	128.60
36	1	2287	C	N3-C2-O2	-5.13	118.31	121.90
36	1	2426	U	OP2-P-O3'	5.13	116.49	105.20
1	6	475	A	N1-C6-N6	5.13	121.68	118.60
1	6	925	G	C8-N9-C4	5.13	108.45	106.40
36	5	1330	A	N1-C6-N6	5.13	121.68	118.60
36	5	2959	C	N3-C4-C5	-5.13	119.85	121.90
37	7	93	C	O5'-P-OP1	5.13	116.86	110.70
36	1	2772	C	N1-C1'-C2'	5.13	120.67	114.00
36	5	616	G	N1-C6-O6	-5.13	116.82	119.90
36	5	677	A	C5-C6-N6	-5.13	119.60	123.70
36	5	810	A	C2-N3-C4	5.13	113.17	110.60
36	5	2308	C	N1-C2-O2	-5.13	115.82	118.90
1	2	1399	C	C5-C6-N1	5.13	123.56	121.00
36	1	1501	U	C6-N1-C2	5.13	124.08	121.00
36	1	2679	A	O4'-C1'-N9	5.13	112.30	108.20
36	1	3242	G	C5-C6-O6	-5.13	125.52	128.60
1	6	631	G	C4-C5-N7	5.13	112.85	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	842	G	N3-C4-N9	5.13	129.08	126.00
36	5	2382	G	OP1-P-OP2	-5.13	111.91	119.60
1	2	1744	A	O5'-P-OP1	-5.13	101.09	105.70
36	1	801	A	C2-N3-C4	5.13	113.16	110.60
36	1	2216	G	C5-C6-O6	5.13	131.68	128.60
36	1	2988	C	C5-C6-N1	-5.13	118.44	121.00
1	6	1120	U	N3-C2-O2	-5.13	118.61	122.20
36	5	834	U	C2-N1-C1'	-5.13	111.55	117.70
36	5	834	U	N3-C4-O4	-5.13	115.81	119.40
36	5	1507	G	C6-C5-N7	-5.13	127.32	130.40
1	6	718	U	C2-N1-C1'	5.12	123.85	117.70
36	5	92	G	C5-C6-N1	5.12	114.06	111.50
1	2	403	G	C4-N9-C1'	5.12	133.16	126.50
1	2	1255	G	N1-C6-O6	-5.12	116.83	119.90
36	1	788	C	C6-N1-C2	5.12	122.35	120.30
37	3	92	A	C2-N3-C4	-5.12	108.04	110.60
1	6	1535	U	C6-N1-C1'	-5.12	114.03	121.20
36	5	914	A	N1-C2-N3	5.12	131.86	129.30
1	2	532	U	C5-C6-N1	5.12	125.26	122.70
36	1	3041	U	N3-C2-O2	5.12	125.78	122.20
36	1	3088	G	C4-C5-N7	-5.12	108.75	110.80
1	6	1131	A	C5-C6-N6	-5.12	119.60	123.70
36	5	1043	C	OP2-P-O3'	5.12	116.47	105.20
36	1	1377	G	C4-C5-N7	5.12	112.85	110.80
36	1	2388	U	C5-C4-O4	-5.12	122.83	125.90
36	5	3008	A	C5-C6-N1	-5.12	115.14	117.70
36	1	2593	A	P-O3'-C3'	5.12	125.84	119.70
36	5	1085	A	C2-N3-C4	-5.12	108.04	110.60
36	1	282	G	C2'-C3'-O3'	5.12	121.89	113.70
36	1	1595	U	C2-N1-C1'	-5.12	111.56	117.70
36	1	2370	G	OP2-P-O3'	5.12	116.46	105.20
36	5	2364	G	N9-C4-C5	5.12	107.45	105.40
1	2	1559	A	O4'-C1'-N9	5.12	112.29	108.20
1	6	399	A	C8-N9-C4	5.12	107.85	105.80
1	6	1751	C	C6-N1-C2	5.12	122.35	120.30
36	5	800	G	N9-C4-C5	-5.12	103.35	105.40
36	5	933	A	N1-C2-N3	5.12	131.86	129.30
36	1	1487	G	C4-C5-N7	-5.11	108.75	110.80
36	1	1534	A	C4-C5-N7	5.11	113.26	110.70
38	4	111	A	C8-N9-C4	5.11	107.85	105.80
14	c2	58	LEU	CA-CB-CG	5.11	127.06	115.30
36	5	971	G	N3-C2-N2	-5.11	116.32	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2295	A	C5-C6-N1	5.11	120.26	117.70
36	5	2541	U	C2-N1-C1'	5.11	123.84	117.70
36	5	2993	G	C8-N9-C4	5.11	108.44	106.40
36	1	726	G	C5-N7-C8	-5.11	101.74	104.30
36	1	2935	U	O5'-P-OP2	-5.11	101.10	105.70
36	1	2964	G	OP1-P-O3'	5.11	116.45	105.20
36	1	3054	U	C5-C4-O4	5.11	128.97	125.90
36	5	800	G	C6-C5-N7	-5.11	127.33	130.40
36	5	2916	U	N3-C4-O4	5.11	122.98	119.40
36	1	221	A	O4'-C1'-N9	5.11	112.29	108.20
36	1	2282	U	O5'-P-OP1	5.11	116.83	110.70
36	1	2704	A	C2-N3-C4	-5.11	108.05	110.60
36	1	2930	A	N9-C4-C5	-5.11	103.76	105.80
36	1	2943	G	C6-C5-N7	-5.11	127.33	130.40
1	6	13	C	C4-C5-C6	5.11	119.95	117.40
36	5	38	U	C5-C6-N1	-5.11	120.14	122.70
36	5	800	G	C8-N9-C1'	-5.11	120.36	127.00
36	5	2980	U	N3-C2-O2	-5.11	118.62	122.20
36	5	3020	U	N3-C2-O2	5.11	125.78	122.20
36	1	940	G	N1-C6-O6	-5.11	116.83	119.90
36	5	306	A	N1-C6-N6	5.11	121.67	118.60
36	1	72	C	C2-N1-C1'	-5.11	113.18	118.80
36	1	2396	G	N7-C8-N9	-5.11	110.55	113.10
53	M7	3	ARG	NE-CZ-NH2	-5.11	117.75	120.30
36	5	798	G	N3-C4-N9	-5.11	122.94	126.00
36	5	1548	C	C6-N1-C1'	5.11	126.93	120.80
36	5	2320	A	C2-N3-C4	-5.11	108.05	110.60
47	m0	57	LEU	CA-CB-CG	5.11	127.05	115.30
36	1	2335	G	C8-N9-C4	5.11	108.44	106.40
36	1	2813	A	O5'-P-OP1	5.11	116.83	110.70
36	5	2141	U	OP2-P-O3'	5.11	116.43	105.20
36	5	2211	U	N1-C2-N3	5.11	117.96	114.90
36	5	2325	G	N1-C2-N3	5.11	126.96	123.90
36	5	2818	U	C5-C6-N1	5.11	125.25	122.70
36	5	2993	G	N9-C4-C5	-5.11	103.36	105.40
1	2	601	A	C5-C6-N6	-5.10	119.62	123.70
36	1	901	G	N3-C2-N2	-5.10	116.33	119.90
36	1	1834	U	N3-C4-C5	-5.10	111.54	114.60
1	6	664	U	C2-N1-C1'	5.10	123.82	117.70
36	5	1476	G	C5-C6-O6	5.10	131.66	128.60
36	5	3197	G	C8-N9-C1'	5.10	133.63	127.00
37	7	50	U	N1-C2-O2	-5.10	119.23	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	639	G	C5-C6-O6	-5.10	125.54	128.60
36	1	801	A	O4'-C1'-N9	-5.10	104.12	108.20
36	1	1061	A	C8-N9-C4	5.10	107.84	105.80
36	5	421	G	N3-C2-N2	5.10	123.47	119.90
36	5	635	G	C2-N3-C4	-5.10	109.35	111.90
36	5	971	G	C5-N7-C8	5.10	106.85	104.30
36	5	2961	G	C5-C6-N1	-5.10	108.95	111.50
36	5	3004	C	N1-C2-O2	-5.10	115.84	118.90
36	1	2352	A	C5-C6-N6	-5.10	119.62	123.70
36	5	546	C	C3'-C2'-C1'	5.10	105.58	101.50
36	5	2725	U	C4-C5-C6	-5.10	116.64	119.70
36	5	2914	G	C5-C6-O6	-5.10	125.54	128.60
38	8	45	C	C6-N1-C2	-5.10	118.26	120.30
36	1	353	G	C5-C6-O6	-5.10	125.54	128.60
36	1	2434	U	N3-C2-O2	-5.10	118.63	122.20
1	6	1782	A	C8-N9-C4	-5.10	103.76	105.80
36	5	1163	A	C5-C6-N6	5.10	127.78	123.70
36	5	2992	U	C2-N1-C1'	5.10	123.82	117.70
36	1	2615	G	C4-C5-N7	5.10	112.84	110.80
1	6	63	G	C5-C6-N1	5.10	114.05	111.50
1	6	965	U	N1-C2-O2	5.10	126.37	122.80
37	7	11	A	C6-C5-N7	-5.10	128.73	132.30
36	1	843	A	C2-N3-C4	-5.09	108.05	110.60
36	1	2148	U	C5-C4-O4	-5.09	122.84	125.90
36	1	2796	G	N7-C8-N9	5.09	115.65	113.10
36	5	1521	G	N1-C6-O6	-5.09	116.84	119.90
36	5	1595	U	C2-N1-C1'	-5.09	111.58	117.70
36	5	2199	G	C4-C5-C6	5.09	121.86	118.80
36	5	2202	C	N3-C4-N4	5.09	121.57	118.00
36	5	2406	C	N1-C2-O2	-5.09	115.84	118.90
36	5	2917	G	C5-C6-O6	-5.09	125.54	128.60
36	5	3008	A	N3-C4-N9	-5.09	123.33	127.40
1	2	545	A	OP1-P-O3'	5.09	116.41	105.20
36	5	2891	U	C5-C4-O4	-5.09	122.84	125.90
1	2	1258	U	C2-N1-C1'	5.09	123.81	117.70
1	2	1273	G	O4'-C1'-N9	5.09	112.27	108.20
6	S4	193	GLY	N-CA-C	5.09	125.83	113.10
36	1	97	U	C5-C6-N1	-5.09	120.16	122.70
36	1	1391	C	C2-N1-C1'	5.09	124.40	118.80
36	1	3208	G	N1-C2-N2	5.09	120.78	116.20
36	5	38	U	C5-C4-O4	-5.09	122.84	125.90
36	5	750	G	C5-C6-O6	-5.09	125.55	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1324	U	O5'-P-OP2	-5.09	101.12	105.70
36	5	2524	A	N7-C8-N9	5.09	116.34	113.80
36	5	3307	A	C5-C6-N6	-5.09	119.63	123.70
36	1	511	G	OP2-P-O3'	5.09	116.40	105.20
36	5	6	A	C8-N9-C4	5.09	107.84	105.80
36	5	427	C	C5-C6-N1	-5.09	118.45	121.00
36	5	816	A	C5-C6-N6	5.09	127.77	123.70
36	5	1887	A	N7-C8-N9	-5.09	111.25	113.80
36	5	2972	G	C5-C6-O6	5.09	131.65	128.60
36	5	3136	G	N1-C2-N3	5.09	126.95	123.90
36	1	2726	C	C5-C4-N4	5.09	123.76	120.20
37	3	86	U	O4'-C1'-N1	-5.09	104.13	108.20
36	5	2608	G	C5-C6-O6	5.09	131.65	128.60
36	1	1310	G	C5-C6-O6	5.09	131.65	128.60
37	3	82	G	N1-C2-N2	-5.09	111.62	116.20
1	6	1774	G	N1-C6-O6	-5.09	116.85	119.90
36	5	1456	A	N1-C6-N6	5.09	121.65	118.60
36	5	2213	A	OP2-P-O3'	5.09	116.39	105.20
36	5	3093	C	C5-C6-N1	-5.09	118.46	121.00
1	2	460	A	N1-C6-N6	-5.08	115.55	118.60
36	1	663	C	N1-C2-O2	-5.08	115.85	118.90
36	1	2249	G	N9-C1'-C2'	-5.08	106.41	112.00
36	5	105	C	C6-N1-C2	5.08	122.33	120.30
36	5	588	G	C6-C5-N7	-5.08	127.35	130.40
36	5	3304	U	N3-C4-O4	5.08	122.96	119.40
36	1	335	G	O5'-P-OP1	-5.08	101.12	105.70
36	1	715	A	OP1-P-O3'	5.08	116.39	105.20
36	1	1003	A	C6-C5-N7	-5.08	128.74	132.30
36	1	1199	C	C6-N1-C2	5.08	122.33	120.30
36	1	1397	C	N3-C4-C5	5.08	123.93	121.90
36	1	2639	G	C5-C6-O6	-5.08	125.55	128.60
36	5	942	U	N3-C4-C5	-5.08	111.55	114.60
36	5	1117	G	N3-C2-N2	-5.08	116.34	119.90
36	5	1512	U	OP2-P-O3'	5.08	116.38	105.20
36	5	2850	G	C5-C6-N1	5.08	114.04	111.50
1	6	75	U	P-O3'-C3'	5.08	125.80	119.70
1	6	337	G	C4-C5-N7	5.08	112.83	110.80
36	5	304	G	C8-N9-C4	-5.08	104.37	106.40
36	5	955	U	C5-C4-O4	5.08	128.95	125.90
36	5	1372	C	C6-N1-C2	5.08	122.33	120.30
36	5	1450	G	N1-C2-N2	5.08	120.77	116.20
36	5	2725	U	C2-N1-C1'	-5.08	111.60	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1366	A	C4-C5-N7	5.08	113.24	110.70
1	6	571	G	N9-C4-C5	5.08	107.43	105.40
36	5	1133	A	C5-C6-N1	5.08	120.24	117.70
36	1	368	G	C4-C5-N7	5.08	112.83	110.80
36	1	2201	G	N1-C6-O6	5.08	122.95	119.90
36	1	2810	C	N3-C2-O2	5.08	125.45	121.90
36	1	2833	A	N7-C8-N9	-5.08	111.26	113.80
1	6	89	G	C5-C6-O6	-5.08	125.55	128.60
36	5	559	A	C8-N9-C4	-5.08	103.77	105.80
36	5	1134	G	O5'-P-OP2	-5.08	101.13	105.70
37	7	112	G	C5-C6-O6	5.08	131.65	128.60
36	5	2301	U	N1-C2-O2	-5.08	119.25	122.80
36	5	2772	C	OP2-P-O3'	5.08	116.37	105.20
36	1	1458	U	C5-C6-N1	-5.08	120.16	122.70
36	1	2633	U	C4-C5-C6	5.08	122.75	119.70
36	1	2868	U	C6-N1-C1'	-5.08	114.09	121.20
1	6	1150	G	C4-C5-N7	5.08	112.83	110.80
36	1	320	G	C8-N9-C4	5.07	108.43	106.40
36	1	2706	G	N9-C4-C5	-5.07	103.37	105.40
1	6	438	A	C8-N9-C4	5.07	107.83	105.80
1	6	1522	U	O4'-C1'-N1	5.07	112.26	108.20
36	5	1888	U	C4-C5-C6	5.07	122.74	119.70
1	2	1244	A	P-O3'-C3'	5.07	125.79	119.70
36	1	695	C	C5-C6-N1	-5.07	118.46	121.00
36	1	2298	U	C5-C4-O4	5.07	128.94	125.90
36	5	964	G	C4-N9-C1'	5.07	133.09	126.50
36	5	1372	C	C2-N3-C4	-5.07	117.36	119.90
36	5	2346	C	N3-C4-N4	5.07	121.55	118.00
36	1	233	C	C6-N1-C2	5.07	122.33	120.30
36	1	3103	A	C2-N3-C4	-5.07	108.06	110.60
36	5	649	A	N9-C4-C5	-5.07	103.77	105.80
36	1	2215	A	C2-N3-C4	-5.07	108.07	110.60
36	1	2364	G	C6-N1-C2	-5.07	122.06	125.10
36	5	1314	C	N1-C2-O2	5.07	121.94	118.90
36	5	2836	C	C2-N1-C1'	5.07	124.38	118.80
1	2	90	C	C6-N1-C2	-5.07	118.27	120.30
1	2	1572	G	C6-C5-N7	-5.07	127.36	130.40
36	1	865	U	OP2-P-O3'	5.07	116.35	105.20
36	1	2642	A	N3-C4-C5	5.07	130.35	126.80
36	1	2901	G	C5-C6-O6	-5.07	125.56	128.60
36	1	3361	G	N3-C2-N2	5.07	123.45	119.90
1	6	67	A	C6-C5-N7	-5.07	128.75	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	592	A	C4-C5-N7	5.07	113.23	110.70
36	5	617	G	C4-C5-N7	5.07	112.83	110.80
36	5	1197	A	C5-C6-N6	-5.07	119.65	123.70
36	5	1770	G	C8-N9-C1'	-5.07	120.41	127.00
36	5	2293	C	C5-C4-N4	-5.07	116.65	120.20
36	5	3184	A	C4-C5-C6	-5.07	114.47	117.00
36	1	81	C	N1-C2-O2	-5.07	115.86	118.90
36	1	1115	G	C4-C5-N7	5.07	112.83	110.80
36	1	2572	C	C5-C6-N1	5.07	123.53	121.00
71	O5	24	LEU	CB-CG-CD2	-5.07	102.39	111.00
36	1	642	U	OP1-P-OP2	-5.06	112.00	119.60
36	1	2142	A	N1-C2-N3	5.06	131.83	129.30
1	6	407	A	N1-C6-N6	5.06	121.64	118.60
1	6	610	G	N9-C4-C5	-5.06	103.37	105.40
36	5	543	C	C6-N1-C2	-5.06	118.27	120.30
36	5	2371	G	N7-C8-N9	-5.06	110.57	113.10
36	5	2649	A	OP2-P-O3'	5.06	116.34	105.20
36	5	2650	U	N1-C2-N3	5.06	117.94	114.90
36	1	1433	A	C2-N3-C4	5.06	113.13	110.60
36	1	1481	A	N1-C6-N6	5.06	121.64	118.60
1	6	338	C	C6-N1-C2	-5.06	118.28	120.30
1	6	755	A	P-O3'-C3'	5.06	125.78	119.70
36	5	303	G	N1-C6-O6	-5.06	116.86	119.90
36	5	1200	A	C6-C5-N7	-5.06	128.76	132.30
36	5	1879	A	N9-C4-C5	-5.06	103.78	105.80
36	5	2402	A	OP1-P-O3'	5.06	116.34	105.20
36	5	2687	G	N3-C4-N9	5.06	129.04	126.00
36	5	2695	A	C5-C6-N1	5.06	120.23	117.70
36	1	959	C	N3-C2-O2	5.06	125.44	121.90
1	6	1480	G	C4-N9-C1'	5.06	133.08	126.50
38	8	142	C	N3-C4-C5	5.06	123.92	121.90
36	1	2620	G	N1-C6-O6	5.06	122.94	119.90
36	1	2662	G	C2-N3-C4	-5.06	109.37	111.90
36	1	3208	G	N3-C2-N2	-5.06	116.36	119.90
1	6	1773	C	C4-C5-C6	5.06	119.93	117.40
36	5	2246	G	O5'-P-OP2	5.06	116.77	110.70
36	5	3014	U	C5-C4-O4	-5.06	122.86	125.90
37	7	77	G	N3-C4-N9	5.06	129.03	126.00
1	2	1482	C	C6-N1-C2	5.06	122.32	120.30
36	1	1447	G	N1-C6-O6	-5.06	116.86	119.90
36	1	2282	U	OP2-P-O3'	5.06	116.33	105.20
36	1	2394	G	N1-C6-O6	-5.06	116.87	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	2410	U	C6-N1-C2	5.06	124.03	121.00
38	4	19	C	C4-C5-C6	5.06	119.93	117.40
1	6	678	A	P-O3'-C3'	5.06	125.77	119.70
36	5	1449	A	C5-C6-N6	-5.06	119.66	123.70
36	5	1848	G	C5-C6-O6	-5.06	125.56	128.60
36	5	2335	G	C8-N9-C4	5.06	108.42	106.40
1	2	975	C	N3-C4-C5	-5.06	119.88	121.90
1	2	1452	U	N3-C2-O2	-5.06	118.66	122.20
36	1	649	A	N1-C6-N6	-5.06	115.57	118.60
38	4	17	A	O5'-P-OP2	5.06	116.77	110.70
36	5	2154	U	N3-C2-O2	-5.06	118.66	122.20
36	5	3043	C	N3-C4-C5	5.06	123.92	121.90
38	8	103	G	N3-C2-N2	5.06	123.44	119.90
1	2	1749	A	C8-N9-C4	5.05	107.82	105.80
1	6	1423	U	C5-C6-N1	-5.05	120.17	122.70
36	5	653	A	N9-C4-C5	-5.05	103.78	105.80
36	5	1658	G	N1-C6-O6	-5.05	116.87	119.90
36	5	2381	G	N1-C6-O6	5.05	122.93	119.90
36	5	2398	A	N7-C8-N9	-5.05	111.27	113.80
36	5	2832	C	C4-C5-C6	5.05	119.93	117.40
37	7	81	U	OP2-P-O3'	5.05	116.32	105.20
36	5	859	G	C5-N7-C8	-5.05	101.77	104.30
36	5	1098	A	C5-C6-N6	-5.05	119.66	123.70
36	5	1165	A	O5'-P-OP2	-5.05	101.15	105.70
36	5	2729	U	C5-C4-O4	5.05	128.93	125.90
36	5	2797	C	C2-N3-C4	-5.05	117.37	119.90
36	1	651	G	OP2-P-O3'	5.05	116.31	105.20
36	1	1094	U	OP1-P-O3'	5.05	116.31	105.20
36	1	1741	A	C2-N3-C4	-5.05	108.07	110.60
1	6	1722	A	C8-N9-C4	5.05	107.82	105.80
36	1	1112	A	C5-C6-N6	-5.05	119.66	123.70
36	1	1364	C	C4-C5-C6	-5.05	114.88	117.40
1	6	317	C	C2-N3-C4	-5.05	117.38	119.90
36	5	815	G	C5-C6-O6	-5.05	125.57	128.60
36	5	2112	U	P-O3'-C3'	5.05	125.76	119.70
36	5	3065	G	O5'-P-OP1	-5.05	101.16	105.70
1	2	388	G	C5-C6-O6	-5.05	125.57	128.60
1	6	1696	G	C3'-C2'-C1'	5.05	105.54	101.50
36	5	2140	U	N1-C2-N3	5.05	117.93	114.90
36	1	39	A	N1-C6-N6	5.05	121.63	118.60
36	1	104	G	C6-C5-N7	-5.05	127.37	130.40
36	1	2371	G	N1-C2-N2	-5.05	111.66	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1080	A	C8-N9-C4	5.05	107.82	105.80
36	5	2190	U	N1-C2-O2	-5.05	119.27	122.80
1	6	687	G	C6-C5-N7	5.04	133.43	130.40
1	2	1241	G	C5-N7-C8	-5.04	101.78	104.30
36	1	3133	C	C5-C4-N4	-5.04	116.67	120.20
36	5	580	C	N3-C2-O2	-5.04	118.37	121.90
36	5	2316	G	C4-C5-N7	-5.04	108.78	110.80
36	1	217	U	C4-C5-C6	5.04	122.72	119.70
36	1	778	U	C5-C4-O4	5.04	128.93	125.90
36	1	817	A	N3-C4-C5	-5.04	123.27	126.80
36	1	1317	A	C4-C5-C6	5.04	119.52	117.00
36	1	2619	G	OP1-P-OP2	5.04	127.16	119.60
36	1	2830	G	N3-C2-N2	-5.04	116.37	119.90
36	1	2966	G	N3-C4-N9	5.04	129.02	126.00
36	5	53	G	O5'-P-OP2	-5.04	101.16	105.70
36	5	1846	C	C2-N3-C4	-5.04	117.38	119.90
36	5	3093	C	N3-C2-O2	5.04	125.43	121.90
1	6	1100	G	N3-C4-C5	-5.04	126.08	128.60
1	2	610	G	C8-N9-C1'	-5.04	120.45	127.00
36	1	233	C	N3-C4-C5	5.04	123.92	121.90
36	1	2859	U	OP2-P-O3'	5.04	116.28	105.20
36	5	428	A	C8-N9-C4	5.04	107.81	105.80
1	2	13	C	N3-C4-C5	5.04	123.92	121.90
64	N8	4	ARG	NE-CZ-NH1	-5.04	117.78	120.30
36	5	2191	U	N3-C2-O2	-5.04	118.67	122.20
1	2	403	G	C8-N9-C1'	-5.04	120.45	127.00
1	6	163	G	C4-N9-C1'	-5.04	119.95	126.50
1	6	565	C	C2-N3-C4	-5.04	117.38	119.90
36	5	395	A	N3-C4-N9	5.04	131.43	127.40
1	2	316	A	C5-C6-N1	5.03	120.22	117.70
36	1	365	A	N1-C6-N6	5.03	121.62	118.60
36	1	2513	U	P-O3'-C3'	5.03	125.74	119.70
38	4	111	A	N9-C4-C5	-5.03	103.79	105.80
36	5	55	G	OP1-P-O3'	5.03	116.27	105.20
36	5	334	A	C8-N9-C4	5.03	107.81	105.80
36	5	864	G	N1-C6-O6	5.03	122.92	119.90
36	5	1451	C	C2-N3-C4	-5.03	117.38	119.90
36	1	3127	A	OP1-P-O3'	5.03	116.27	105.20
36	5	583	G	C5-C6-O6	5.03	131.62	128.60
36	5	642	U	O5'-P-OP2	-5.03	101.17	105.70
36	5	2526	C	C6-N1-C1'	-5.03	114.76	120.80
36	1	821	U	C5-C6-N1	-5.03	120.18	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	932	U	C5-C4-O4	-5.03	122.88	125.90
36	1	2422	C	N3-C4-N4	-5.03	114.48	118.00
47	M0	146	ASP	CB-CG-OD1	-5.03	113.77	118.30
1	6	308	C	N3-C4-N4	-5.03	114.48	118.00
36	5	992	A	C5-C6-N1	-5.03	115.19	117.70
36	5	2134	G	C5-C6-O6	5.03	131.62	128.60
36	5	2967	A	C2-N3-C4	-5.03	108.08	110.60
36	5	3343	G	N3-C4-N9	5.03	129.02	126.00
38	4	6	U	N1-C2-N3	-5.03	111.88	114.90
25	d3	33	LEU	CA-CB-CG	-5.03	103.73	115.30
1	2	1743	U	N1-C2-O2	-5.03	119.28	122.80
36	1	658	G	C4-N9-C1'	5.03	133.04	126.50
36	1	979	U	P-O3'-C3'	5.03	125.73	119.70
36	1	1032	C	N1-C2-O2	5.03	121.92	118.90
36	1	1161	G	C5-C6-O6	-5.03	125.58	128.60
36	1	1923	C	C6-N1-C2	5.03	122.31	120.30
36	1	2434	U	N3-C4-O4	-5.03	115.88	119.40
1	6	552	G	N9-C4-C5	-5.03	103.39	105.40
36	5	1344	G	C8-N9-C4	5.03	108.41	106.40
1	2	868	G	N1-C6-O6	5.03	122.92	119.90
36	1	619	A	C8-N9-C4	5.03	107.81	105.80
1	6	151	G	N9-C4-C5	5.03	107.41	105.40
36	5	859	G	N7-C8-N9	5.03	115.61	113.10
36	5	1047	A	C5-N7-C8	-5.03	101.39	103.90
36	5	2939	G	OP2-P-O3'	5.03	116.25	105.20
36	1	268	A	C8-N9-C4	5.02	107.81	105.80
36	5	35	A	O5'-P-OP2	-5.02	101.18	105.70
1	6	402	C	O4'-C1'-N1	5.02	112.22	108.20
1	6	755	A	O4'-C1'-N9	5.02	112.22	108.20
36	5	1443	G	C5-C6-O6	5.02	131.61	128.60
36	5	3009	G	N3-C2-N2	-5.02	116.38	119.90
36	1	832	G	C8-N9-C4	5.02	108.41	106.40
1	6	1603	U	OP2-P-O3'	5.02	116.25	105.20
1	6	1748	G	N9-C4-C5	-5.02	103.39	105.40
36	5	2204	C	P-O3'-C3'	5.02	125.73	119.70
36	1	2385	G	C8-N9-C4	5.02	108.41	106.40
1	6	948	G	N1-C6-O6	-5.02	116.89	119.90
36	5	500	C	C6-N1-C2	5.02	122.31	120.30
36	5	645	A	C8-N9-C4	-5.02	103.79	105.80
48	m1	112	LEU	CA-CB-CG	5.02	126.84	115.30
36	1	2798	C	N3-C4-C5	-5.02	119.89	121.90
38	4	147	U	C5-C4-O4	-5.02	122.89	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	518	A	C5-C6-N6	5.02	127.71	123.70
7	s5	42	LEU	CA-CB-CG	5.02	126.84	115.30
36	5	1363	A	O5'-P-OP2	-5.02	101.18	105.70
36	5	2988	C	C5-C6-N1	-5.02	118.49	121.00
36	1	2764	C	C2-N3-C4	5.02	122.41	119.90
1	2	389	G	C8-N9-C4	-5.01	104.39	106.40
36	1	1136	A	C6-N1-C2	-5.01	115.59	118.60
36	1	3180	A	O5'-P-OP1	-5.01	101.19	105.70
36	5	1208	U	N1-C2-N3	5.01	117.91	114.90
36	5	2914	G	N9-C4-C5	-5.01	103.39	105.40
36	5	3086	A	C6-C5-N7	-5.01	128.79	132.30
40	l3	4	ARG	CG-CD-NE	5.01	122.33	111.80
1	2	321	C	C2-N1-C1'	5.01	124.31	118.80
1	2	1595	U	C4-C5-C6	5.01	122.71	119.70
36	5	92	G	N3-C2-N2	5.01	123.41	119.90
36	5	411	U	C2-N1-C1'	-5.01	111.69	117.70
36	5	1209	G	C5-N7-C8	-5.01	101.79	104.30
1	2	453	U	N1-C2-O2	5.01	126.31	122.80
1	2	1622	G	C8-N9-C4	5.01	108.40	106.40
36	1	1099	A	C5-C6-N6	-5.01	119.69	123.70
36	1	2714	G	C8-N9-C1'	5.01	133.51	127.00
36	1	3137	C	C6-N1-C1'	5.01	126.81	120.80
36	5	971	G	N1-C6-O6	5.01	122.91	119.90
36	5	1008	U	C5-C6-N1	-5.01	120.19	122.70
36	5	1014	U	C6-N1-C1'	-5.01	114.18	121.20
36	5	1088	U	C5-C6-N1	5.01	125.20	122.70
36	5	2199	G	C5-C6-O6	-5.01	125.59	128.60
36	5	2257	C	P-O3'-C3'	5.01	125.71	119.70
36	5	2900	A	N9-C4-C5	5.01	107.81	105.80
36	5	3107	U	C2-N3-C4	-5.01	123.99	127.00
36	1	797	U	OP2-P-O3'	5.01	116.22	105.20
36	1	1081	U	C2-N1-C1'	5.01	123.71	117.70
36	1	1547	G	C5-N7-C8	5.01	106.81	104.30
36	1	3265	C	C4-C5-C6	-5.01	114.89	117.40
38	4	34	U	N1-C2-O2	-5.01	119.29	122.80
38	4	99	C	N3-C4-N4	-5.01	114.49	118.00
36	5	1129	A	O5'-P-OP2	-5.01	101.19	105.70
36	5	2903	A	C8-N9-C4	5.01	107.80	105.80
38	8	17	A	C6-C5-N7	-5.01	128.79	132.30
1	2	1745	G	N9-C4-C5	-5.01	103.40	105.40
36	1	3093	C	N1-C2-N3	5.01	122.71	119.20
36	5	798	G	N3-C4-C5	5.01	131.10	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	929	A	O5'-P-OP2	-5.01	101.19	105.70
36	5	949	C	C5-C6-N1	-5.01	118.50	121.00
1	2	107	C	N3-C4-C5	5.01	123.90	121.90
36	1	53	G	C8-N9-C1'	-5.01	120.49	127.00
36	1	807	A	N1-C2-N3	5.01	131.80	129.30
1	6	453	U	C6-N1-C1'	-5.01	114.19	121.20
36	5	1166	G	C4-C5-N7	5.01	112.80	110.80
36	5	2874	G	C8-N9-C4	-5.01	104.40	106.40
1	2	1117	U	N3-C4-O4	5.00	122.90	119.40
36	1	2395	G	C6-C5-N7	-5.00	127.40	130.40
1	6	1698	G	P-O3'-C3'	5.00	125.71	119.70
36	5	398	A	OP1-P-OP2	5.00	127.11	119.60
36	5	2152	A	C6-N1-C2	-5.00	115.60	118.60
36	5	2611	U	C5-C6-N1	-5.00	120.20	122.70
36	5	3184	A	C6-N1-C2	5.00	121.60	118.60
1	2	543	C	P-O3'-C3'	5.00	125.70	119.70
36	1	112	U	O4'-C1'-N1	5.00	112.20	108.20
36	1	405	U	C5-C4-O4	-5.00	122.90	125.90
36	1	574	U	C2-N1-C1'	-5.00	111.70	117.70
36	1	1487	G	C5-C6-O6	5.00	131.60	128.60
36	1	1505	C	O5'-P-OP1	5.00	116.70	110.70
36	1	2173	U	C6-N1-C2	-5.00	118.00	121.00
36	1	2661	G	C4-C5-N7	5.00	112.80	110.80
36	5	671	U	C5-C6-N1	-5.00	120.20	122.70
36	5	3080	G	N9-C4-C5	-5.00	103.40	105.40
36	1	645	A	C5-C6-N1	5.00	120.20	117.70
36	1	797	U	N3-C4-O4	5.00	122.90	119.40
38	4	4	C	C2-N3-C4	-5.00	117.40	119.90
1	6	1535	U	O4'-C1'-N1	5.00	112.20	108.20
36	5	592	A	N3-C4-C5	5.00	130.30	126.80
36	5	1888	U	C2-N3-C4	-5.00	124.00	127.00
36	5	2777	G	C5'-C4'-C3'	-5.00	108.00	116.00
37	7	10	C	C6-N1-C1'	-5.00	114.80	120.80

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
81	p0	212	HIS	CA

All (35) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
16	C4	124	ASP	Peptide
19	C7	22	PRO	Peptide
19	C7	85	VAL	Peptide
27	D5	94	LYS	Peptide
28	D6	97	PRO	Peptide
33	E1	105	TYR	Peptide
41	L4	129	THR	Peptide
43	L6	89	THR	Peptide
45	L8	30	THR	Peptide
49	M3	164	GLU	Peptide
52	M6	110	PRO	Peptide
57	N1	16	GLN	Peptide
65	N9	20	GLY	Peptide
9	S7	131	PHE	Peptide
17	c5	52	LYS	Peptide
18	c6	41	PRO	Peptide
19	c7	87	GLU	Peptide
22	d0	70	THR	Peptide
39	l2	237	LEU	Peptide
40	l3	234	GLY	Peptide
42	l5	270	LYS	Peptide
43	l6	51	ARG	Peptide
44	l7	226	GLY	Peptide
52	m6	110	PRO	Peptide
54	m8	14	GLY	Peptide
54	m8	169	GLY	Peptide
56	n0	133	ALA	Peptide
56	n0	170	THR	Peptide
64	n8	26	ARG	Peptide
64	n8	66	ALA	Peptide
65	n9	19	ASN	Peptide
72	o6	63	ASN	Peptide
7	s5	44	ASN	Peptide
7	s5	99	MET	Peptide
9	s7	130	VAL	Peptide

## 5.2 Too-close contacts ⓘ

Due to software issues we are unable to calculate clashes - this section is therefore empty.

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	S0	204/251 (81%)	150 (74%)	31 (15%)	23 (11%)	0	2
2	s0	204/251 (81%)	156 (76%)	28 (14%)	20 (10%)	0	3
3	S1	212/254 (84%)	148 (70%)	40 (19%)	24 (11%)	0	2
3	s1	214/254 (84%)	171 (80%)	31 (14%)	12 (6%)	2	14
4	S2	215/253 (85%)	180 (84%)	24 (11%)	11 (5%)	2	15
4	s2	215/253 (85%)	177 (82%)	28 (13%)	10 (5%)	2	17
5	S3	221/239 (92%)	183 (83%)	27 (12%)	11 (5%)	2	16
5	s3	221/239 (92%)	170 (77%)	35 (16%)	16 (7%)	1	7
6	S4	258/260 (99%)	205 (80%)	43 (17%)	10 (4%)	3	22
6	s4	258/260 (99%)	209 (81%)	28 (11%)	21 (8%)	1	5
7	S5	204/224 (91%)	156 (76%)	30 (15%)	18 (9%)	1	4
7	s5	204/224 (91%)	158 (78%)	27 (13%)	19 (9%)	0	3
8	S6	224/236 (95%)	192 (86%)	21 (9%)	11 (5%)	2	17
8	s6	216/236 (92%)	186 (86%)	18 (8%)	12 (6%)	2	14
9	S7	182/189 (96%)	132 (72%)	29 (16%)	21 (12%)	0	2
9	s7	184/189 (97%)	148 (80%)	24 (13%)	12 (6%)	1	10
10	S8	184/200 (92%)	153 (83%)	19 (10%)	12 (6%)	1	10
10	s8	184/200 (92%)	163 (89%)	16 (9%)	5 (3%)	5	30
11	S9	183/196 (93%)	147 (80%)	25 (14%)	11 (6%)	1	12
11	s9	183/196 (93%)	149 (81%)	24 (13%)	10 (6%)	2	14
12	C0	94/105 (90%)	72 (77%)	12 (13%)	10 (11%)	0	2
12	c0	92/105 (88%)	67 (73%)	11 (12%)	14 (15%)	0	1
13	C1	153/155 (99%)	119 (78%)	22 (14%)	12 (8%)	1	6
13	c1	144/155 (93%)	118 (82%)	17 (12%)	9 (6%)	1	10
14	C2	122/142 (86%)	68 (56%)	29 (24%)	25 (20%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	c2	122/142 (86%)	64 (52%)	36 (30%)	22 (18%)	0	0
15	C3	148/150 (99%)	122 (82%)	17 (12%)	9 (6%)	1	12
15	c3	148/150 (99%)	111 (75%)	28 (19%)	9 (6%)	1	12
16	C4	125/136 (92%)	88 (70%)	25 (20%)	12 (10%)	0	3
16	c4	126/136 (93%)	97 (77%)	19 (15%)	10 (8%)	1	6
17	C5	122/141 (86%)	86 (70%)	24 (20%)	12 (10%)	0	3
17	c5	133/141 (94%)	90 (68%)	27 (20%)	16 (12%)	0	2
18	C6	139/142 (98%)	119 (86%)	11 (8%)	9 (6%)	1	10
18	c6	140/142 (99%)	113 (81%)	17 (12%)	10 (7%)	1	8
19	C7	116/136 (85%)	90 (78%)	15 (13%)	11 (10%)	0	3
19	c7	113/136 (83%)	85 (75%)	17 (15%)	11 (10%)	0	3
20	C8	143/145 (99%)	112 (78%)	19 (13%)	12 (8%)	1	5
20	c8	143/145 (99%)	112 (78%)	23 (16%)	8 (6%)	2	14
21	C9	141/143 (99%)	122 (86%)	11 (8%)	8 (6%)	1	14
21	c9	141/143 (99%)	118 (84%)	18 (13%)	5 (4%)	3	24
22	D0	105/120 (88%)	81 (77%)	17 (16%)	7 (7%)	1	9
22	d0	108/120 (90%)	85 (79%)	12 (11%)	11 (10%)	0	3
23	D1	85/87 (98%)	59 (69%)	15 (18%)	11 (13%)	0	1
23	d1	85/87 (98%)	69 (81%)	11 (13%)	5 (6%)	1	12
24	D2	127/129 (98%)	108 (85%)	16 (13%)	3 (2%)	6	34
24	d2	127/129 (98%)	109 (86%)	17 (13%)	1 (1%)	19	58
25	D3	142/144 (99%)	109 (77%)	18 (13%)	15 (11%)	0	2
25	d3	142/144 (99%)	123 (87%)	15 (11%)	4 (3%)	5	29
26	D4	132/134 (98%)	107 (81%)	17 (13%)	8 (6%)	1	12
26	d4	132/134 (98%)	102 (77%)	17 (13%)	13 (10%)	0	3
27	D5	68/107 (64%)	45 (66%)	14 (21%)	9 (13%)	0	1
27	d5	67/107 (63%)	53 (79%)	10 (15%)	4 (6%)	1	12
28	D6	95/97 (98%)	59 (62%)	16 (17%)	20 (21%)	0	0
28	d6	95/97 (98%)	74 (78%)	13 (14%)	8 (8%)	1	5
29	D7	79/81 (98%)	63 (80%)	12 (15%)	4 (5%)	2	15
29	d7	79/81 (98%)	61 (77%)	13 (16%)	5 (6%)	1	10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	D8	61/66 (92%)	50 (82%)	9 (15%)	2 (3%)	4	25
30	d8	61/66 (92%)	40 (66%)	15 (25%)	6 (10%)	0	3
31	D9	51/55 (93%)	41 (80%)	7 (14%)	3 (6%)	1	12
31	d9	51/55 (93%)	43 (84%)	4 (8%)	4 (8%)	1	6
32	E0	58/60 (97%)	46 (79%)	9 (16%)	3 (5%)	2	15
33	E1	69/76 (91%)	38 (55%)	13 (19%)	18 (26%)	0	0
33	e1	74/76 (97%)	35 (47%)	19 (26%)	20 (27%)	0	0
34	SR	316/318 (99%)	277 (88%)	28 (9%)	11 (4%)	3	24
34	sR	316/318 (99%)	274 (87%)	31 (10%)	11 (4%)	3	24
35	SM	155/273 (57%)	106 (68%)	30 (19%)	19 (12%)	0	2
35	sM	98/273 (36%)	63 (64%)	18 (18%)	17 (17%)	0	0
39	L2	250/253 (99%)	220 (88%)	20 (8%)	10 (4%)	3	21
39	l2	250/253 (99%)	207 (83%)	31 (12%)	12 (5%)	2	17
40	L3	384/386 (100%)	326 (85%)	42 (11%)	16 (4%)	3	20
40	l3	384/386 (100%)	344 (90%)	31 (8%)	9 (2%)	6	34
41	L4	359/361 (99%)	286 (80%)	46 (13%)	27 (8%)	1	7
41	l4	359/361 (99%)	297 (83%)	36 (10%)	26 (7%)	1	7
42	L5	294/296 (99%)	245 (83%)	27 (9%)	22 (8%)	1	7
42	l5	292/296 (99%)	243 (83%)	39 (13%)	10 (3%)	3	24
43	L6	152/175 (87%)	133 (88%)	15 (10%)	4 (3%)	5	31
43	l6	153/175 (87%)	131 (86%)	17 (11%)	5 (3%)	4	25
44	L7	220/243 (90%)	189 (86%)	24 (11%)	7 (3%)	4	26
44	l7	221/243 (91%)	194 (88%)	18 (8%)	9 (4%)	3	21
45	L8	231/255 (91%)	181 (78%)	35 (15%)	15 (6%)	1	10
45	l8	229/255 (90%)	166 (72%)	45 (20%)	18 (8%)	1	6
46	L9	189/191 (99%)	156 (82%)	25 (13%)	8 (4%)	3	20
46	l9	189/191 (99%)	163 (86%)	19 (10%)	7 (4%)	3	22
47	M0	207/220 (94%)	166 (80%)	33 (16%)	8 (4%)	3	22
47	m0	209/220 (95%)	163 (78%)	32 (15%)	14 (7%)	1	9
48	M1	167/173 (96%)	127 (76%)	19 (11%)	21 (13%)	0	1
48	m1	167/173 (96%)	138 (83%)	20 (12%)	9 (5%)	2	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	M3	191/198 (96%)	155 (81%)	23 (12%)	13 (7%)	1	9
49	m3	192/198 (97%)	151 (79%)	22 (12%)	19 (10%)	0	3
50	M4	134/137 (98%)	115 (86%)	12 (9%)	7 (5%)	2	15
50	m4	135/137 (98%)	119 (88%)	13 (10%)	3 (2%)	6	35
51	M5	201/203 (99%)	181 (90%)	12 (6%)	8 (4%)	3	21
51	m5	201/203 (99%)	175 (87%)	21 (10%)	5 (2%)	5	32
52	M6	195/198 (98%)	181 (93%)	11 (6%)	3 (2%)	10	44
52	m6	195/198 (98%)	171 (88%)	17 (9%)	7 (4%)	3	23
53	M7	181/183 (99%)	151 (83%)	21 (12%)	9 (5%)	2	16
53	m7	153/183 (84%)	137 (90%)	14 (9%)	2 (1%)	12	47
54	M8	183/185 (99%)	156 (85%)	21 (12%)	6 (3%)	4	25
54	m8	183/185 (99%)	155 (85%)	23 (13%)	5 (3%)	5	30
55	M9	186/188 (99%)	163 (88%)	21 (11%)	2 (1%)	14	51
55	m9	186/188 (99%)	158 (85%)	26 (14%)	2 (1%)	14	51
56	N0	170/172 (99%)	157 (92%)	8 (5%)	5 (3%)	4	28
56	n0	170/172 (99%)	158 (93%)	11 (6%)	1 (1%)	25	64
57	N1	157/159 (99%)	136 (87%)	16 (10%)	5 (3%)	4	26
57	n1	157/159 (99%)	134 (85%)	18 (12%)	5 (3%)	4	26
58	N2	98/120 (82%)	72 (74%)	22 (22%)	4 (4%)	3	21
58	n2	96/120 (80%)	79 (82%)	12 (12%)	5 (5%)	2	15
59	N3	134/136 (98%)	122 (91%)	9 (7%)	3 (2%)	6	35
59	n3	134/136 (98%)	122 (91%)	10 (8%)	2 (2%)	10	44
60	N4	96/155 (62%)	70 (73%)	21 (22%)	5 (5%)	2	15
60	n4	133/155 (86%)	109 (82%)	14 (10%)	10 (8%)	1	7
61	N5	119/141 (84%)	107 (90%)	12 (10%)	0	100	100
61	n5	118/141 (84%)	97 (82%)	9 (8%)	12 (10%)	0	3
62	N6	124/126 (98%)	110 (89%)	11 (9%)	3 (2%)	6	34
62	n6	124/126 (98%)	102 (82%)	17 (14%)	5 (4%)	3	21
63	N7	133/135 (98%)	113 (85%)	12 (9%)	8 (6%)	1	12
63	n7	133/135 (98%)	111 (84%)	11 (8%)	11 (8%)	1	5
64	N8	146/148 (99%)	117 (80%)	19 (13%)	10 (7%)	1	9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
64	n8	146/148 (99%)	113 (77%)	23 (16%)	10 (7%)	1	9
65	N9	56/58 (97%)	49 (88%)	6 (11%)	1 (2%)	8	41
65	n9	56/58 (97%)	43 (77%)	8 (14%)	5 (9%)	1	4
66	O0	95/104 (91%)	88 (93%)	6 (6%)	1 (1%)	14	51
66	o0	98/104 (94%)	85 (87%)	8 (8%)	5 (5%)	2	15
67	O1	107/112 (96%)	88 (82%)	11 (10%)	8 (8%)	1	7
67	o1	107/112 (96%)	89 (83%)	12 (11%)	6 (6%)	2	14
68	O2	125/129 (97%)	111 (89%)	12 (10%)	2 (2%)	9	43
68	o2	125/129 (97%)	105 (84%)	16 (13%)	4 (3%)	4	26
69	O3	104/106 (98%)	94 (90%)	7 (7%)	3 (3%)	4	28
69	o3	104/106 (98%)	93 (89%)	7 (7%)	4 (4%)	3	22
70	O4	110/120 (92%)	96 (87%)	13 (12%)	1 (1%)	17	56
70	o4	110/120 (92%)	92 (84%)	14 (13%)	4 (4%)	3	23
71	O5	117/119 (98%)	104 (89%)	9 (8%)	4 (3%)	3	24
71	o5	117/119 (98%)	102 (87%)	12 (10%)	3 (3%)	5	31
72	O6	97/99 (98%)	73 (75%)	17 (18%)	7 (7%)	1	7
72	o6	97/99 (98%)	80 (82%)	11 (11%)	6 (6%)	1	11
73	O7	85/87 (98%)	73 (86%)	12 (14%)	0	100	100
73	o7	85/87 (98%)	71 (84%)	12 (14%)	2 (2%)	6	34
74	O8	75/77 (97%)	63 (84%)	11 (15%)	1 (1%)	12	47
74	o8	75/77 (97%)	59 (79%)	11 (15%)	5 (7%)	1	9
75	O9	48/50 (96%)	38 (79%)	9 (19%)	1 (2%)	7	37
75	o9	48/50 (96%)	43 (90%)	3 (6%)	2 (4%)	3	20
76	Q0	50/52 (96%)	42 (84%)	5 (10%)	3 (6%)	1	12
76	q0	50/52 (96%)	47 (94%)	1 (2%)	2 (4%)	3	21
77	Q1	23/25 (92%)	21 (91%)	2 (9%)	0	100	100
77	q1	23/25 (92%)	17 (74%)	6 (26%)	0	100	100
78	Q2	103/105 (98%)	79 (77%)	15 (15%)	9 (9%)	1	4
78	q2	103/105 (98%)	90 (87%)	10 (10%)	3 (3%)	4	28
79	Q3	89/91 (98%)	77 (86%)	11 (12%)	1 (1%)	14	51
79	q3	89/91 (98%)	80 (90%)	8 (9%)	1 (1%)	14	51

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
80	e0	60/62 (97%)	44 (73%)	12 (20%)	4 (7%)	1	9
81	p0	139/311 (45%)	120 (86%)	16 (12%)	3 (2%)	6	35
All	All	22333/24143 (92%)	18254 (82%)	2761 (12%)	1318 (6%)	1	12

All (1318) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	S0	4	PRO
2	S0	39	ASN
2	S0	66	ALA
2	S0	95	ALA
2	S0	139	VAL
2	S0	158	VAL
2	S0	185	ARG
2	S0	190	ASP
2	S0	191	ARG
3	S1	49	ASN
3	S1	58	SER
3	S1	63	GLY
3	S1	148	ASN
3	S1	177	GLN
3	S1	179	SER
3	S1	206	PRO
4	S2	135	SER
4	S2	148	LEU
5	S3	62	ASN
5	S3	93	ASP
5	S3	211	PRO
5	S3	220	PRO
6	S4	242	LYS
7	S5	35	GLN
7	S5	39	GLU
7	S5	63	GLN
7	S5	101	GLY
8	S6	154	ARG
8	S6	173	PRO
8	S6	174	LYS
9	S7	29	ASN
9	S7	31	SER
9	S7	32	PRO
9	S7	64	VAL

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Mol	Chain	Res	Type
9	S7	67	LEU
9	S7	111	LYS
9	S7	112	ARG
9	S7	131	PHE
9	S7	133	THR
9	S7	134	GLU
9	S7	155	ASP
10	S8	149	SER
11	S9	134	ILE
12	C0	54	TYR
12	C0	60	SER
12	C0	64	TYR
12	C0	81	ASN
12	C0	87	VAL
12	C0	88	PRO
13	C1	7	VAL
13	C1	30	ARG
13	C1	147	ALA
14	C2	89	ILE
14	C2	90	LYS
14	C2	91	VAL
14	C2	93	ASP
14	C2	126	TRP
15	C3	27	LYS
15	C3	28	LEU
15	C3	138	ASN
16	C4	39	ILE
16	C4	50	ALA
16	C4	92	LYS
16	C4	124	ASP
16	C4	125	SER
16	C4	126	THR
17	C5	54	ALA
17	C5	125	PRO
17	C5	126	VAL
18	C6	40	GLU
18	C6	41	PRO
18	C6	114	ARG
19	C7	85	VAL
19	C7	86	PRO
19	C7	88	VAL
19	C7	124	VAL

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Mol	Chain	Res	Type
20	C8	14	ILE
20	C8	60	GLU
20	C8	82	PRO
20	C8	91	ASP
20	C8	92	ILE
21	C9	31	PRO
21	C9	53	TRP
22	D0	17	GLN
23	D1	7	GLN
24	D2	83	ILE
25	D3	3	LYS
25	D3	131	SER
25	D3	138	GLU
26	D4	36	SER
27	D5	39	ALA
27	D5	43	ASP
27	D5	71	ILE
27	D5	97	LYS
28	D6	18	VAL
28	D6	45	VAL
28	D6	65	PRO
28	D6	82	ARG
28	D6	84	VAL
28	D6	85	ARG
28	D6	86	VAL
29	D7	38	PRO
29	D7	62	ILE
31	D9	8	PHE
32	E0	47	VAL
33	E1	84	VAL
33	E1	102	VAL
33	E1	103	LEU
33	E1	106	TYR
33	E1	111	GLU
33	E1	138	ARG
34	SR	51	ASP
34	SR	161	LYS
34	SR	318	ALA
35	SM	52	PRO
35	SM	82	THR
35	SM	87	THR
35	SM	140	ASP

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Mol	Chain	Res	Type
35	SM	166	VAL
35	SM	167	PRO
39	L2	13	GLY
40	L3	3	HIS
40	L3	140	ASP
40	L3	155	ALA
40	L3	212	ASN
40	L3	347	SER
41	L4	24	ALA
41	L4	90	PHE
41	L4	220	ARG
41	L4	268	ALA
41	L4	338	LYS
42	L5	7	ALA
42	L5	85	ARG
42	L5	233	ALA
42	L5	234	ASP
42	L5	253	PHE
42	L5	258	LYS
43	L6	98	VAL
44	L7	24	GLU
44	L7	26	VAL
45	L8	25	PRO
45	L8	31	PRO
45	L8	36	ILE
45	L8	76	ALA
46	L9	50	ASN
47	M0	113	GLN
47	M0	189	GLU
47	M0	194	GLY
48	M1	8	PRO
48	M1	65	ILE
48	M1	74	PRO
48	M1	94	ARG
48	M1	115	LYS
48	M1	140	ARG
48	M1	165	GLN
49	M3	13	HIS
49	M3	47	ALA
49	M3	51	LEU
49	M3	76	THR
49	M3	129	ASN

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Mol	Chain	Res	Type
49	M3	131	LYS
49	M3	166	ALA
49	M3	193	ALA
50	M4	8	LYS
50	M4	9	ALA
50	M4	136	ALA
51	M5	74	PRO
52	M6	16	VAL
52	M6	110	PRO
52	M6	111	PRO
53	M7	157	VAL
54	M8	41	ASP
54	M8	99	THR
54	M8	147	ARG
55	M9	53	LYS
56	N0	167	ARG
60	N4	46	PRO
60	N4	64	THR
60	N4	81	PRO
62	N6	84	LYS
62	N6	126	LEU
63	N7	17	ARG
63	N7	30	ASP
63	N7	129	TRP
64	N8	76	ASP
67	O1	5	LYS
67	O1	83	GLU
67	O1	84	ASP
68	O2	123	LYS
71	O5	119	LYS
72	O6	33	ALA
76	Q0	78	ILE
78	Q2	17	CYS
78	Q2	100	LYS
2	s0	4	PRO
2	s0	23	HIS
2	s0	29	VAL
2	s0	92	HIS
2	s0	95	ALA
2	s0	158	VAL
2	s0	164	ASN
2	s0	189	VAL

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Mol	Chain	Res	Type
2	s0	192	THR
2	s0	194	PRO
2	s0	206	ASP
3	s1	81	PHE
3	s1	147	ALA
3	s1	154	SER
3	s1	206	PRO
3	s1	223	PHE
4	s2	92	ALA
4	s2	106	ASP
5	s3	115	ILE
5	s3	179	GLN
5	s3	211	PRO
5	s3	217	ILE
5	s3	220	PRO
6	s4	12	LEU
6	s4	24	SER
6	s4	104	ASP
6	s4	119	ALA
6	s4	163	ASP
6	s4	195	ILE
6	s4	196	VAL
7	s5	28	PRO
7	s5	39	GLU
7	s5	43	PHE
7	s5	98	MET
7	s5	184	PHE
7	s5	204	GLY
7	s5	209	TYR
8	s6	25	ARG
8	s6	70	PRO
8	s6	122	GLU
8	s6	153	VAL
8	s6	154	ARG
8	s6	173	PRO
8	s6	174	LYS
9	s7	11	GLN
9	s7	64	VAL
9	s7	67	LEU
9	s7	131	PHE
10	s8	62	THR
10	s8	100	ALA

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Mol	Chain	Res	Type
10	s8	101	ILE
11	s9	121	SER
12	c0	31	LYS
12	c0	83	PRO
12	c0	88	PRO
12	c0	94	GLU
12	c0	97	PRO
13	c1	114	ALA
13	c1	129	ARG
13	c1	133	LYS
14	c2	82	PRO
14	c2	89	ILE
14	c2	93	ASP
14	c2	131	ASP
15	c3	19	SER
15	c3	66	ILE
15	c3	108	ASP
16	c4	91	THR
16	c4	132	ARG
17	c5	11	VAL
17	c5	51	SER
17	c5	52	LYS
17	c5	68	PRO
17	c5	125	PRO
17	c5	126	VAL
17	c5	132	GLY
18	c6	40	GLU
18	c6	42	GLU
18	c6	116	LEU
19	c7	67	ARG
19	c7	88	VAL
19	c7	99	VAL
20	c8	91	ASP
20	c8	135	GLY
21	c9	33	TYR
21	c9	34	VAL
22	d0	15	GLN
22	d0	49	ASN
22	d0	96	PRO
22	d0	97	VAL
22	d0	112	VAL
22	d0	118	VAL

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Mol	Chain	Res	Type
26	d4	30	PRO
26	d4	32	ARG
26	d4	33	ALA
26	d4	35	VAL
26	d4	121	THR
26	d4	123	LYS
27	d5	85	LYS
27	d5	104	ALA
28	d6	8	ASN
28	d6	47	ALA
28	d6	63	ALA
29	d7	60	SER
30	d8	57	MET
31	d9	6	VAL
31	d9	11	PRO
80	e0	60	PRO
33	e1	83	LYS
33	e1	87	THR
33	e1	92	LYS
33	e1	98	VAL
33	e1	103	LEU
33	e1	106	TYR
34	sR	4	ASN
34	sR	161	LYS
34	sR	163	ASP
34	sR	165	ASP
34	sR	318	ALA
35	sM	50	ASN
35	sM	120	GLU
35	sM	167	PRO
39	l2	96	LEU
39	l2	144	ASN
40	l3	142	ALA
40	l3	187	SER
40	l3	235	THR
40	l3	347	SER
41	l4	15	ALA
41	l4	90	PHE
41	l4	142	VAL
41	l4	145	ILE
41	l4	233	LEU
41	l4	301	PRO

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Mol	Chain	Res	Type
41	l4	302	ALA
41	l4	329	PRO
41	l4	330	TYR
41	l4	339	LEU
41	l4	353	ALA
42	l5	260	PHE
43	l6	98	VAL
44	l7	178	ILE
44	l7	193	PRO
44	l7	229	PHE
45	l8	25	PRO
45	l8	122	LYS
45	l8	133	LYS
46	l9	139	ASN
46	l9	144	ILE
47	m0	3	ARG
48	m1	8	PRO
48	m1	9	MET
48	m1	10	ARG
48	m1	94	ARG
48	m1	108	GLU
48	m1	111	ASP
49	m3	44	ALA
49	m3	45	LYS
49	m3	47	ALA
49	m3	50	PRO
49	m3	121	SER
49	m3	134	GLU
49	m3	141	ALA
50	m4	135	LEU
51	m5	81	TYR
51	m5	183	THR
51	m5	187	ARG
52	m6	12	LYS
52	m6	16	VAL
52	m6	110	PRO
54	m8	99	THR
54	m8	112	ALA
54	m8	113	LYS
56	n0	2	ALA
57	n1	135	PRO
58	n2	50	LEU

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Mol	Chain	Res	Type
60	n4	26	SER
60	n4	63	ILE
60	n4	71	ARG
60	n4	76	VAL
61	n5	38	LEU
61	n5	40	LEU
61	n5	44	PRO
61	n5	45	LYS
62	n6	83	ASP
62	n6	84	LYS
62	n6	125	LYS
63	n7	5	LEU
63	n7	7	ALA
63	n7	29	HIS
63	n7	125	GLY
63	n7	129	TRP
64	n8	28	HIS
64	n8	76	ASP
65	n9	23	LYS
65	n9	39	PHE
66	o0	100	ILE
67	o1	5	LYS
67	o1	7	VAL
67	o1	45	GLY
68	o2	4	LEU
68	o2	5	PRO
69	o3	90	PRO
70	o4	79	SER
72	o6	33	ALA
72	o6	64	SER
72	o6	98	ARG
74	o8	18	ALA
81	p0	93	LEU
2	S0	5	ALA
2	S0	49	ASN
2	S0	68	PRO
2	S0	94	GLY
2	S0	195	TRP
3	S1	26	ARG
3	S1	60	ALA
3	S1	62	LYS
3	S1	81	PHE

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Mol	Chain	Res	Type
3	S1	82	ARG
3	S1	93	GLY
3	S1	130	SER
3	S1	132	ASP
3	S1	158	SER
3	S1	221	PRO
4	S2	91	ARG
4	S2	236	PRO
5	S3	65	ARG
5	S3	216	PRO
6	S4	12	LEU
6	S4	237	SER
7	S5	58	LEU
7	S5	148	ARG
7	S5	150	GLY
7	S5	153	GLY
8	S6	25	ARG
8	S6	138	ALA
9	S7	5	GLN
9	S7	73	VAL
9	S7	125	ILE
9	S7	159	VAL
10	S8	40	ALA
10	S8	52	ASN
10	S8	120	THR
10	S8	186	GLY
11	S9	98	ALA
11	S9	117	GLY
11	S9	163	PRO
11	S9	164	PHE
12	C0	25	LYS
12	C0	89	ALA
12	C0	93	GLN
12	C0	94	GLU
13	C1	154	ALA
14	C2	21	GLU
14	C2	55	GLY
14	C2	66	VAL
14	C2	119	SER
14	C2	127	GLY
14	C2	131	ASP
15	C3	22	ALA

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Mol	Chain	Res	Type
15	C3	68	GLY
16	C4	42	VAL
16	C4	51	ASP
17	C5	11	VAL
17	C5	80	MET
18	C6	32	ASN
18	C6	138	PHE
19	C7	23	LYS
19	C7	113	LEU
20	C8	25	ASN
20	C8	61	LEU
20	C8	80	LYS
20	C8	83	ALA
20	C8	142	GLY
22	D0	118	VAL
23	D1	4	ASP
23	D1	12	TYR
23	D1	15	ARG
23	D1	44	ARG
25	D3	70	LYS
25	D3	114	LYS
26	D4	4	ALA
26	D4	5	VAL
26	D4	51	GLU
28	D6	32	LYS
28	D6	47	ALA
28	D6	63	ALA
29	D7	63	LEU
30	D8	36	THR
31	D9	6	VAL
33	E1	98	VAL
33	E1	127	GLY
34	SR	238	ASP
35	SM	47	ALA
35	SM	86	ASN
35	SM	89	ARG
35	SM	97	THR
35	SM	111	GLY
35	SM	153	ASP
35	SM	173	GLU
39	L2	144	ASN
39	L2	234	LYS

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Mol	Chain	Res	Type
39	L2	246	LEU
39	L2	250	GLN
39	L2	251	LYS
40	L3	4	ARG
40	L3	5	LYS
40	L3	138	ALA
40	L3	139	GLN
40	L3	351	LEU
40	L3	386	ASP
41	L4	25	VAL
41	L4	146	PRO
41	L4	190	GLY
41	L4	232	SER
41	L4	292	SER
41	L4	311	HIS
42	L5	202	GLY
42	L5	228	ALA
42	L5	260	PHE
45	L8	37	GLY
45	L8	119	GLY
45	L8	136	LEU
45	L8	156	ASP
45	L8	254	ASP
46	L9	59	ASN
46	L9	169	ASN
46	L9	190	ASP
47	M0	117	GLY
48	M1	11	ASP
48	M1	95	ASN
48	M1	114	ILE
48	M1	152	HIS
48	M1	167	TYR
49	M3	141	ALA
50	M4	36	VAL
50	M4	135	LEU
51	M5	40	ALA
51	M5	144	ARG
51	M5	184	LYS
53	M7	51	VAL
57	N1	16	GLN
57	N1	124	VAL
58	N2	11	ILE

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Mol	Chain	Res	Type
58	N2	60	GLY
63	N7	35	SER
63	N7	102	GLU
64	N8	66	ALA
64	N8	78	LEU
64	N8	93	SER
64	N8	96	LYS
67	O1	6	ASP
69	O3	14	LEU
70	O4	77	GLY
72	O6	34	SER
74	O8	33	LYS
78	Q2	33	ALA
2	s0	8	ASP
2	s0	30	GLN
2	s0	44	GLY
2	s0	185	ARG
2	s0	186	GLY
3	s1	26	ARG
3	s1	82	ARG
3	s1	93	GLY
3	s1	106	THR
3	s1	179	SER
4	s2	163	GLY
4	s2	218	ILE
5	s3	61	GLU
5	s3	76	ARG
5	s3	216	PRO
5	s3	219	ALA
6	s4	95	THR
6	s4	135	GLY
6	s4	164	LEU
7	s5	35	GLN
7	s5	36	ALA
7	s5	55	ASP
7	s5	59	VAL
7	s5	60	ASP
9	s7	74	GLN
9	s7	111	LYS
11	s9	117	GLY
12	c0	4	PRO
12	c0	23	ALA

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Mol	Chain	Res	Type
12	c0	92	ILE
13	c1	7	VAL
14	c2	22	VAL
14	c2	66	VAL
14	c2	87	PRO
14	c2	101	ALA
14	c2	115	VAL
14	c2	119	SER
14	c2	127	GLY
15	c3	139	TRP
15	c3	140	LYS
16	c4	35	GLY
16	c4	50	ALA
16	c4	51	ASP
17	c5	127	ARG
18	c6	113	ASP
18	c6	115	THR
19	c7	62	GLN
19	c7	98	GLY
19	c7	104	ASN
20	c8	55	HIS
20	c8	92	ILE
21	c9	29	GLU
22	d0	17	GLN
23	d1	43	GLY
26	d4	49	LYS
26	d4	54	ALA
28	d6	13	LYS
28	d6	56	ALA
30	d8	61	ARG
31	d9	7	TRP
80	e0	51	ASN
33	e1	79	LYS
33	e1	84	VAL
33	e1	100	LEU
33	e1	102	VAL
33	e1	136	LYS
34	sR	97	GLY
34	sR	160	GLU
34	sR	237	GLN
35	sM	47	ALA
35	sM	64	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	sM	67	GLY
35	sM	122	GLU
39	l2	212	GLY
40	l3	140	ASP
41	l4	146	PRO
41	l4	190	GLY
41	l4	311	HIS
41	l4	361	HIS
42	l5	168	ASP
42	l5	294	ALA
44	l7	56	GLU
45	l8	34	PHE
45	l8	39	ALA
45	l8	81	THR
45	l8	202	GLU
45	l8	203	VAL
45	l8	239	GLY
45	l8	240	ASN
46	l9	2	LYS
47	m0	82	ARG
47	m0	145	LYS
47	m0	194	GLY
48	m1	114	ILE
48	m1	167	TYR
49	m3	51	LEU
49	m3	62	THR
49	m3	93	ILE
49	m3	101	ARG
49	m3	129	ASN
49	m3	135	ALA
49	m3	152	THR
49	m3	177	LYS
49	m3	178	LYS
50	m4	17	VAL
50	m4	136	ALA
51	m5	184	LYS
52	m6	183	ALA
58	n2	44	GLU
58	n2	91	ASP
60	n4	133	THR
61	n5	24	LEU
61	n5	55	ASN

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Mol	Chain	Res	Type
61	n5	101	GLU
61	n5	102	LEU
61	n5	108	LEU
63	n7	16	GLY
63	n7	17	ARG
65	n9	21	ILE
67	o1	83	GLU
67	o1	84	ASP
68	o2	124	GLY
71	o5	82	ALA
72	o6	9	ILE
72	o6	20	MET
72	o6	34	SER
73	o7	12	HIS
74	o8	60	GLY
74	o8	61	LYS
75	o9	3	ALA
78	q2	17	CYS
78	q2	33	ALA
2	S0	103	THR
2	S0	163	ASN
2	S0	164	ASN
3	S1	54	LEU
3	S1	154	SER
3	S1	209	ASN
4	S2	39	THR
4	S2	107	SER
4	S2	150	GLN
5	S3	195	SER
5	S3	196	ARG
6	S4	26	CYS
6	S4	104	ASP
6	S4	164	LEU
6	S4	200	ARG
7	S5	26	ALA
7	S5	54	LYS
7	S5	64	VAL
7	S5	204	GLY
8	S6	70	PRO
9	S7	98	ILE
9	S7	116	ARG
9	S7	132	PRO

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Mol	Chain	Res	Type
9	S7	156	SER
9	S7	186	PRO
10	S8	9	HIS
10	S8	59	ARG
10	S8	154	SER
11	S9	16	LYS
11	S9	118	LEU
13	C1	29	LYS
13	C1	55	ASP
14	C2	25	GLU
14	C2	42	ALA
14	C2	87	PRO
14	C2	101	ALA
14	C2	107	ASP
15	C3	3	ARG
15	C3	19	SER
16	C4	40	ALA
17	C5	51	SER
17	C5	52	LYS
17	C5	69	GLU
18	C6	42	GLU
19	C7	72	LYS
20	C8	79	TYR
20	C8	144	ARG
21	C9	39	THR
21	C9	50	ALA
23	D1	2	GLU
23	D1	10	GLU
23	D1	49	GLU
24	D2	30	SER
24	D2	95	PRO
25	D3	112	LYS
25	D3	144	ARG
26	D4	34	ASN
27	D5	56	THR
27	D5	74	SER
27	D5	88	ILE
28	D6	3	LYS
28	D6	46	GLU
28	D6	62	TYR
29	D7	51	GLN
32	E0	53	LYS

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Mol	Chain	Res	Type
33	E1	83	LYS
33	E1	85	TYR
33	E1	128	ALA
33	E1	145	HIS
34	SR	98	GLU
35	SM	88	ARG
39	L2	104	LEU
39	L2	130	SER
40	L3	385	LYS
41	L4	65	TRP
41	L4	124	SER
41	L4	193	LYS
41	L4	361	HIS
42	L5	137	ASP
42	L5	178	ASN
42	L5	215	ASP
42	L5	259	LYS
42	L5	276	LYS
44	L7	105	LEU
45	L8	75	ILE
45	L8	80	TYR
47	M0	16	PRO
47	M0	218	ALA
48	M1	39	GLN
48	M1	64	LYS
48	M1	145	LYS
49	M3	5	LYS
51	M5	75	VAL
51	M5	81	TYR
53	M7	66	SER
53	M7	160	ALA
53	M7	163	LYS
53	M7	164	LYS
54	M8	176	ARG
55	M9	161	ALA
56	N0	24	LEU
57	N1	159	PHE
58	N2	107	PHE
59	N3	82	ALA
60	N4	97	LYS
64	N8	47	LYS
64	N8	48	TYR

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Mol	Chain	Res	Type
67	O1	60	TRP
71	O5	60	GLU
71	O5	97	ALA
72	O6	3	VAL
72	O6	32	ALA
72	O6	98	ARG
78	Q2	15	LYS
78	Q2	78	LYS
78	Q2	94	GLY
2	s0	10	THR
2	s0	203	PHE
3	s1	177	GLN
3	s1	209	ASN
4	s2	235	LEU
5	s3	90	ARG
5	s3	93	ASP
6	s4	57	ASN
6	s4	168	LYS
8	s6	68	LEU
9	s7	106	SER
10	s8	52	ASN
11	s9	110	GLN
11	s9	167	ALA
12	c0	82	LEU
13	c1	55	ASP
14	c2	45	LEU
14	c2	54	ARG
14	c2	58	LEU
14	c2	106	ILE
15	c3	22	ALA
17	c5	17	TYR
17	c5	130	ARG
18	c6	39	VAL
18	c6	120	ASP
18	c6	142	TYR
19	c7	3	ARG
20	c8	61	LEU
20	c8	90	ASN
21	c9	28	LEU
22	d0	13	GLU
23	d1	4	ASP
23	d1	42	GLU

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Mol	Chain	Res	Type
23	d1	44	ARG
25	d3	128	SER
26	d4	51	GLU
26	d4	58	PHE
27	d5	38	HIS
29	d7	3	LEU
29	d7	38	PRO
30	d8	32	PHE
30	d8	33	LEU
30	d8	65	ARG
31	d9	16	LYS
33	e1	81	LYS
33	e1	112	GLY
33	e1	124	PRO
33	e1	128	ALA
33	e1	131	PHE
33	e1	146	SER
34	sR	186	PHE
34	sR	279	ALA
35	sM	42	ALA
35	sM	63	ASP
35	sM	65	THR
35	sM	84	LYS
39	l2	24	GLN
39	l2	32	LEU
39	l2	127	ALA
39	l2	249	SER
41	l4	14	GLU
41	l4	61	SER
41	l4	132	ALA
41	l4	196	ASN
41	l4	338	LYS
42	l5	270	LYS
43	l6	133	GLU
44	l7	158	LYS
44	l7	191	VAL
44	l7	228	SER
44	l7	234	GLU
45	l8	69	LEU
45	l8	222	PHE
47	m0	25	ALA
47	m0	157	TYR

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Mol	Chain	Res	Type
47	m0	207	GLU
47	m0	219	ALA
47	m0	220	GLN
49	m3	76	THR
52	m6	184	THR
53	m7	3	ARG
55	m9	28	GLU
57	n1	38	ASP
57	n1	127	GLN
59	n3	27	ASP
59	n3	42	SER
60	n4	25	ASP
60	n4	83	THR
60	n4	132	GLY
61	n5	25	LYS
61	n5	39	LYS
63	n7	130	PHE
64	n8	47	LYS
64	n8	120	ASN
65	n9	5	LYS
65	n9	24	PRO
66	o0	103	THR
69	o3	39	GLN
70	o4	47	CYS
81	p0	47	GLY
2	S0	187	ALA
2	S0	194	PRO
3	S1	35	PRO
4	S2	95	ARG
5	S3	217	ILE
6	S4	195	ILE
6	S4	233	LYS
7	S5	31	GLU
7	S5	43	PHE
7	S5	127	GLN
8	S6	20	ASP
8	S6	123	GLY
10	S8	10	LYS
10	S8	152	ILE
11	S9	99	LEU
11	S9	147	MET
13	C1	145	ALA

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Mol	Chain	Res	Type
14	C2	22	VAL
14	C2	39	ASP
14	C2	53	THR
14	C2	106	ILE
14	C2	112	ALA
15	C3	137	PRO
16	C4	123	SER
17	C5	22	LEU
17	C5	101	ALA
17	C5	130	ARG
19	C7	84	TYR
19	C7	87	GLU
19	C7	101	ASN
21	C9	28	LEU
21	C9	116	ILE
22	D0	117	VAL
25	D3	41	SER
25	D3	46	SER
25	D3	96	VAL
25	D3	109	ARG
27	D5	54	VAL
28	D6	61	GLU
28	D6	64	LEU
28	D6	88	SER
28	D6	97	PRO
31	D9	20	GLN
33	E1	87	THR
33	E1	118	ARG
33	E1	137	ASP
33	E1	146	SER
35	SM	53	ARG
39	L2	201	GLY
40	L3	187	SER
41	L4	4	PRO
41	L4	5	GLN
41	L4	140	HIS
41	L4	304	GLN
42	L5	6	ASP
42	L5	221	GLU
42	L5	252	ALA
43	L6	5	LYS
43	L6	108	LYS

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Mol	Chain	Res	Type
44	L7	163	LEU
45	L8	39	ALA
46	L9	110	LYS
48	M1	24	GLY
48	M1	108	GLU
48	M1	111	ASP
48	M1	117	ASP
48	M1	151	SER
49	M3	50	PRO
49	M3	136	GLU
51	M5	145	ASP
53	M7	37	ASN
56	N0	125	LYS
56	N0	130	GLU
57	N1	18	ASP
58	N2	91	ASP
59	N3	6	ALA
63	N7	36	HIS
64	N8	91	LEU
71	O5	75	TYR
76	Q0	97	ARG
78	Q2	8	ARG
2	s0	103	THR
4	s2	150	GLN
4	s2	238	SER
5	s3	43	PRO
5	s3	44	THR
6	s4	30	ARG
6	s4	31	PRO
7	s5	29	ILE
7	s5	126	ASP
8	s6	152	ASP
8	s6	164	LYS
8	s6	165	GLY
9	s7	155	ASP
9	s7	165	LYS
9	s7	185	ILE
11	s9	147	MET
12	c0	24	LYS
12	c0	35	ILE
13	c1	53	TYR
14	c2	108	ARG

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Mol	Chain	Res	Type
15	c3	29	SER
15	c3	117	LEU
16	c4	12	GLN
16	c4	131	GLY
17	c5	14	THR
17	c5	46	ALA
17	c5	48	GLY
17	c5	50	THR
22	d0	119	ALA
25	d3	70	LYS
25	d3	131	SER
26	d4	52	LYS
26	d4	117	LYS
28	d6	59	TYR
29	d7	59	CYS
30	d8	16	LEU
80	e0	47	VAL
33	e1	85	TYR
35	sM	43	ASP
35	sM	48	ARG
35	sM	55	SER
35	sM	171	LYS
39	l2	56	ALA
39	l2	115	ASN
39	l2	142	ASP
40	l3	129	ALA
40	l3	155	ALA
40	l3	262	TRP
41	l4	63	GLU
41	l4	120	TYR
42	l5	12	TYR
42	l5	237	GLU
42	l5	258	LYS
42	l5	279	LYS
43	l6	10	TYR
45	l8	112	GLU
45	l8	118	GLU
46	l9	189	GLU
47	m0	101	LYS
47	m0	179	PRO
49	m3	13	HIS
52	m6	13	GLY

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Mol	Chain	Res	Type
54	m8	41	ASP
54	m8	84	VAL
57	n1	144	GLU
58	n2	45	GLY
60	n4	72	SER
62	n6	112	ASP
62	n6	126	LEU
63	n7	18	TYR
63	n7	134	LEU
64	n8	129	PHE
66	o0	46	ALA
66	o0	104	LEU
69	o3	40	ASP
70	o4	82	ALA
73	o7	85	LYS
74	o8	35	GLY
76	q0	78	ILE
79	q3	51	ALA
2	S0	77	SER
3	S1	213	ARG
4	S2	248	SER
5	S3	44	THR
6	S4	11	ARG
7	S5	51	VAL
7	S5	65	ARG
8	S6	122	GLU
10	S8	22	ARG
10	S8	105	ASP
13	C1	4	GLU
13	C1	6	THR
14	C2	68	GLU
14	C2	83	GLU
14	C2	113	ARG
15	C3	10	GLY
17	C5	29	SER
18	C6	113	ASP
21	C9	29	GLU
21	C9	69	LYS
22	D0	21	LYS
23	D1	26	ALA
23	D1	81	ASN
25	D3	5	LYS

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Mol	Chain	Res	Type
25	D3	92	CYS
25	D3	128	SER
27	D5	37	GLN
28	D6	36	ILE
28	D6	75	VAL
33	E1	86	THR
33	E1	94	LYS
34	SR	15	GLY
34	SR	105	GLY
34	SR	163	ASP
39	L2	127	ALA
40	L3	317	ILE
40	L3	348	ARG
41	L4	15	ALA
41	L4	130	ALA
41	L4	131	VAL
41	L4	182	LEU
41	L4	270	SER
42	L5	57	ASN
42	L5	115	LEU
43	L6	97	ASN
44	L7	25	GLN
45	L8	150	LEU
45	L8	157	VAL
46	L9	2	LYS
46	L9	109	ALA
47	M0	25	ALA
51	M5	94	TYR
53	M7	161	ALA
54	M8	162	ALA
56	N0	2	ALA
59	N3	54	LEU
62	N6	38	GLU
63	N7	103	GLN
63	N7	128	GLN
64	N8	79	TRP
64	N8	97	GLU
67	O1	97	LEU
72	O6	21	THR
75	O9	3	ALA
76	Q0	79	GLU
78	Q2	30	ALA

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Mol	Chain	Res	Type
78	Q2	77	CYS
79	Q3	51	ALA
5	s3	212	LYS
5	s3	221	SER
6	s4	90	ILE
6	s4	94	ALA
6	s4	118	GLU
6	s4	245	LYS
7	s5	129	PRO
7	s5	142	PRO
7	s5	148	ARG
9	s7	133	THR
10	s8	78	ILE
11	s9	91	LYS
12	c0	95	ARG
14	c2	81	ASP
15	c3	118	ILE
16	c4	48	VAL
16	c4	125	SER
17	c5	6	ASN
17	c5	131	ALA
19	c7	120	SER
20	c8	60	GLU
21	c9	142	GLU
22	d0	51	VAL
22	d0	52	LYS
23	d1	77	GLY
25	d3	101	GLU
26	d4	50	ALA
27	d5	87	GLY
28	d6	35	ALA
80	e0	54	ARG
33	e1	127	GLY
33	e1	137	ASP
35	sM	66	ALA
39	l2	80	GLU
39	l2	133	TYR
40	l3	365	PHE
41	l4	23	PRO
41	l4	305	ALA
41	l4	328	ASN
41	l4	342	LYS

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Mol	Chain	Res	Type
45	l8	121	SER
45	l8	223	ALA
45	l8	237	ILE
46	l9	110	LYS
47	m0	174	THR
47	m0	176	LEU
48	m1	95	ASN
49	m3	60	ALA
51	m5	68	ARG
52	m6	111	PRO
55	m9	133	LYS
58	n2	27	VAL
60	n4	64	THR
61	n5	47	ALA
63	n7	103	GLN
64	n8	24	LYS
64	n8	110	GLY
66	o0	101	LEU
67	o1	82	GLU
69	o3	59	VAL
70	o4	59	PRO
71	o5	40	SER
71	o5	119	LYS
74	o8	37	PRO
81	p0	33	VAL
2	S0	202	TYR
4	S2	36	VAL
4	S2	106	ASP
8	S6	153	VAL
9	S7	110	GLN
11	S9	136	VAL
13	C1	51	GLY
13	C1	146	ALA
18	C6	33	GLY
19	C7	24	LEU
26	D4	47	VAL
26	D4	60	PHE
28	D6	10	ARG
35	SM	12	VAL
35	SM	102	THR
41	L4	14	GLU
42	L5	295	GLY

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Mol	Chain	Res	Type
44	L7	178	ILE
46	L9	187	ILE
49	M3	130	GLY
50	M4	6	ILE
54	M8	43	PRO
67	O1	7	VAL
68	O2	13	HIS
69	O3	94	PHE
2	s0	157	ASP
4	s2	93	GLY
5	s3	113	LEU
6	s4	242	LYS
7	s5	127	GLN
11	s9	162	SER
11	s9	169	PRO
12	c0	26	ASP
13	c1	144	ALA
14	c2	103	LEU
14	c2	118	ALA
16	c4	124	ASP
18	c6	4	VAL
19	c7	105	GLN
20	c8	14	ILE
29	d7	62	ILE
34	sR	96	THR
46	l9	167	VAL
76	q0	80	PRO
78	q2	78	LYS
3	S1	210	ILE
7	S5	33	VAL
13	C1	76	VAL
14	C2	75	VAL
22	D0	55	PRO
22	D0	106	ILE
23	D1	82	VAL
26	D4	95	GLY
34	SR	6	VAL
34	SR	194	GLY
41	L4	328	ASN
57	N1	126	VAL
72	O6	52	PRO
12	c0	3	MET

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Mol	Chain	Res	Type
13	c1	130	PRO
18	c6	5	PRO
24	d2	6	VAL
42	l5	125	VAL
43	l6	36	PRO
44	l7	217	PRO
46	l9	4	ILE
68	o2	6	HIS
75	o9	24	PRO
16	C4	48	VAL
16	C4	96	PRO
40	L3	141	GLY
42	L5	125	VAL
53	M7	84	PRO
65	N9	21	ILE
69	O3	59	VAL
6	s4	260	GLY
7	s5	151	GLY
11	s9	168	ARG
14	c2	91	VAL
64	n8	70	LYS
2	S0	126	PRO
2	S0	189	VAL
3	S1	21	VAL
25	D3	143	PRO
35	SM	172	VAL
42	L5	84	PRO
45	L8	30	THR
50	M4	39	ILE
60	N4	82	ILE
4	s2	85	PRO
4	s2	234	PRO
11	s9	134	ILE
14	c2	40	GLY
14	c2	63	VAL
19	c7	117	LEU
35	sM	51	ARG
57	n1	126	VAL
64	n8	148	ILE
5	S3	81	PRO
8	S6	69	LEU
11	S9	162	SER

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Mol	Chain	Res	Type
18	C6	39	VAL
22	D0	19	ILE
30	D8	20	GLY
32	E0	60	PRO
34	SR	94	VAL
41	L4	230	VAL
47	M0	91	VAL
48	M1	148	VAL
66	O0	96	GLY
67	O1	59	ILE
6	s4	243	GLY
8	s6	69	LEU
9	s7	112	ARG
13	c1	113	PRO
19	c7	50	ILE
28	d6	20	PRO
42	l5	156	GLY
43	l6	171	PRO
45	l8	163	VAL
47	m0	204	GLY
64	n8	56	VAL
35	SM	17	VAL
44	L7	91	GLY
53	m7	84	PRO

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	S0	164/209 (78%)	133 (81%)	31 (19%)	1	8
2	s0	165/209 (79%)	132 (80%)	33 (20%)	1	6
3	S1	191/223 (86%)	146 (76%)	45 (24%)	1	3
3	s1	192/223 (86%)	146 (76%)	46 (24%)	0	3
4	S2	176/204 (86%)	138 (78%)	38 (22%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	s2	176/204 (86%)	126 (72%)	50 (28%)	0	1
5	S3	182/194 (94%)	146 (80%)	36 (20%)	1	7
5	s3	182/194 (94%)	144 (79%)	38 (21%)	1	6
6	S4	221/221 (100%)	175 (79%)	46 (21%)	1	6
6	s4	221/221 (100%)	189 (86%)	32 (14%)	3	15
7	S5	173/190 (91%)	142 (82%)	31 (18%)	2	9
7	s5	173/190 (91%)	139 (80%)	34 (20%)	1	7
8	S6	188/201 (94%)	154 (82%)	34 (18%)	1	8
8	s6	187/201 (93%)	149 (80%)	38 (20%)	1	6
9	S7	165/169 (98%)	134 (81%)	31 (19%)	1	8
9	s7	165/169 (98%)	135 (82%)	30 (18%)	1	8
10	S8	150/161 (93%)	126 (84%)	24 (16%)	2	11
10	s8	150/161 (93%)	122 (81%)	28 (19%)	1	8
11	S9	158/165 (96%)	127 (80%)	31 (20%)	1	7
11	s9	158/165 (96%)	124 (78%)	34 (22%)	1	5
12	C0	77/98 (79%)	63 (82%)	14 (18%)	1	8
12	c0	73/98 (74%)	61 (84%)	12 (16%)	2	11
13	C1	129/136 (95%)	109 (84%)	20 (16%)	2	12
13	c1	129/136 (95%)	101 (78%)	28 (22%)	1	5
14	C2	88/118 (75%)	63 (72%)	25 (28%)	0	1
14	c2	88/118 (75%)	60 (68%)	28 (32%)	0	0
15	C3	127/127 (100%)	99 (78%)	28 (22%)	1	5
15	c3	127/127 (100%)	101 (80%)	26 (20%)	1	6
16	C4	81/104 (78%)	62 (76%)	19 (24%)	1	3
16	c4	97/104 (93%)	73 (75%)	24 (25%)	0	2
17	C5	101/117 (86%)	80 (79%)	21 (21%)	1	6
17	c5	103/117 (88%)	79 (77%)	24 (23%)	1	3
18	C6	117/118 (99%)	90 (77%)	27 (23%)	1	3
18	c6	118/118 (100%)	99 (84%)	19 (16%)	2	11
19	C7	94/124 (76%)	75 (80%)	19 (20%)	1	6
19	c7	92/124 (74%)	73 (79%)	19 (21%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
20	C8	128/128 (100%)	96 (75%)	32 (25%)	0	2
20	c8	128/128 (100%)	102 (80%)	26 (20%)	1	6
21	C9	115/115 (100%)	92 (80%)	23 (20%)	1	6
21	c9	115/115 (100%)	97 (84%)	18 (16%)	2	12
22	D0	100/113 (88%)	77 (77%)	23 (23%)	1	3
22	d0	103/113 (91%)	80 (78%)	23 (22%)	1	4
23	D1	74/74 (100%)	58 (78%)	16 (22%)	1	5
23	d1	74/74 (100%)	61 (82%)	13 (18%)	2	9
24	D2	110/110 (100%)	88 (80%)	22 (20%)	1	6
24	d2	110/110 (100%)	96 (87%)	14 (13%)	4	20
25	D3	119/119 (100%)	97 (82%)	22 (18%)	1	8
25	d3	119/119 (100%)	98 (82%)	21 (18%)	2	9
26	D4	112/112 (100%)	93 (83%)	19 (17%)	2	10
26	d4	112/112 (100%)	90 (80%)	22 (20%)	1	7
27	D5	61/88 (69%)	47 (77%)	14 (23%)	1	3
27	d5	61/88 (69%)	52 (85%)	9 (15%)	3	14
28	D6	83/83 (100%)	63 (76%)	20 (24%)	0	3
28	d6	83/83 (100%)	70 (84%)	13 (16%)	2	12
29	D7	70/70 (100%)	64 (91%)	6 (9%)	10	38
29	d7	70/70 (100%)	55 (79%)	15 (21%)	1	5
30	D8	56/59 (95%)	42 (75%)	14 (25%)	0	2
30	d8	56/59 (95%)	39 (70%)	17 (30%)	0	0
31	D9	47/48 (98%)	34 (72%)	13 (28%)	0	1
31	d9	47/48 (98%)	35 (74%)	12 (26%)	0	2
32	E0	51/51 (100%)	43 (84%)	8 (16%)	2	12
33	E1	62/66 (94%)	47 (76%)	15 (24%)	0	2
33	e1	66/66 (100%)	52 (79%)	14 (21%)	1	5
34	SR	260/261 (100%)	228 (88%)	32 (12%)	4	21
34	sR	260/261 (100%)	227 (87%)	33 (13%)	4	20
35	SM	97/228 (42%)	77 (79%)	20 (21%)	1	6
35	sM	54/228 (24%)	45 (83%)	9 (17%)	2	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	L2	193/195 (99%)	161 (83%)	32 (17%)	2	10
39	l2	192/195 (98%)	152 (79%)	40 (21%)	1	6
40	L3	321/322 (100%)	249 (78%)	72 (22%)	1	4
40	l3	318/322 (99%)	256 (80%)	62 (20%)	1	7
41	L4	288/288 (100%)	231 (80%)	57 (20%)	1	7
41	l4	288/288 (100%)	231 (80%)	57 (20%)	1	7
42	L5	244/244 (100%)	197 (81%)	47 (19%)	1	8
42	l5	243/244 (100%)	195 (80%)	48 (20%)	1	7
43	L6	134/152 (88%)	111 (83%)	23 (17%)	2	10
43	l6	135/152 (89%)	113 (84%)	22 (16%)	2	11
44	L7	186/204 (91%)	160 (86%)	26 (14%)	3	16
44	l7	187/204 (92%)	155 (83%)	32 (17%)	2	10
45	L8	187/207 (90%)	156 (83%)	31 (17%)	2	10
45	l8	177/207 (86%)	146 (82%)	31 (18%)	2	9
46	L9	171/171 (100%)	131 (77%)	40 (23%)	1	3
46	l9	171/171 (100%)	131 (77%)	40 (23%)	1	3
47	M0	177/186 (95%)	140 (79%)	37 (21%)	1	6
47	m0	179/186 (96%)	141 (79%)	38 (21%)	1	5
48	M1	147/150 (98%)	120 (82%)	27 (18%)	1	8
48	m1	147/150 (98%)	115 (78%)	32 (22%)	1	5
49	M3	154/158 (98%)	125 (81%)	29 (19%)	1	8
49	m3	154/158 (98%)	125 (81%)	29 (19%)	1	8
50	M4	107/108 (99%)	89 (83%)	18 (17%)	2	10
50	m4	108/108 (100%)	89 (82%)	19 (18%)	2	9
51	M5	175/175 (100%)	145 (83%)	30 (17%)	2	10
51	m5	175/175 (100%)	150 (86%)	25 (14%)	3	15
52	M6	160/161 (99%)	140 (88%)	20 (12%)	4	21
52	m6	160/161 (99%)	126 (79%)	34 (21%)	1	5
53	M7	140/145 (97%)	109 (78%)	31 (22%)	1	4
53	m7	125/145 (86%)	94 (75%)	31 (25%)	0	2
54	M8	150/150 (100%)	125 (83%)	25 (17%)	2	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
54	m8	150/150 (100%)	123 (82%)	27 (18%)	1	9
55	M9	153/153 (100%)	132 (86%)	21 (14%)	3	17
55	m9	153/153 (100%)	119 (78%)	34 (22%)	1	4
56	N0	156/156 (100%)	124 (80%)	32 (20%)	1	6
56	n0	156/156 (100%)	130 (83%)	26 (17%)	2	10
57	N1	136/136 (100%)	110 (81%)	26 (19%)	1	8
57	n1	136/136 (100%)	109 (80%)	27 (20%)	1	6
58	N2	87/106 (82%)	69 (79%)	18 (21%)	1	6
58	n2	85/106 (80%)	66 (78%)	19 (22%)	1	4
59	N3	104/104 (100%)	85 (82%)	19 (18%)	1	8
59	n3	104/104 (100%)	93 (89%)	11 (11%)	6	27
60	N4	57/129 (44%)	51 (90%)	6 (10%)	7	28
60	n4	100/129 (78%)	85 (85%)	15 (15%)	3	14
61	N5	104/117 (89%)	82 (79%)	22 (21%)	1	5
61	n5	104/117 (89%)	87 (84%)	17 (16%)	2	11
62	N6	109/109 (100%)	87 (80%)	22 (20%)	1	6
62	n6	109/109 (100%)	81 (74%)	28 (26%)	0	2
63	N7	115/115 (100%)	93 (81%)	22 (19%)	1	8
63	n7	115/115 (100%)	94 (82%)	21 (18%)	1	8
64	N8	118/118 (100%)	95 (80%)	23 (20%)	1	7
64	n8	118/118 (100%)	99 (84%)	19 (16%)	2	11
65	N9	46/46 (100%)	37 (80%)	9 (20%)	1	7
65	n9	46/46 (100%)	38 (83%)	8 (17%)	2	10
66	O0	81/87 (93%)	64 (79%)	17 (21%)	1	6
66	o0	84/87 (97%)	69 (82%)	15 (18%)	2	9
67	O1	92/96 (96%)	74 (80%)	18 (20%)	1	7
67	o1	94/96 (98%)	77 (82%)	17 (18%)	1	8
68	O2	109/110 (99%)	85 (78%)	24 (22%)	1	5
68	o2	109/110 (99%)	87 (80%)	22 (20%)	1	6
69	O3	90/90 (100%)	79 (88%)	11 (12%)	5	22
69	o3	90/90 (100%)	73 (81%)	17 (19%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
70	O4	95/102 (93%)	76 (80%)	19 (20%)	1	6
70	o4	95/102 (93%)	74 (78%)	21 (22%)	1	4
71	O5	104/104 (100%)	82 (79%)	22 (21%)	1	5
71	o5	103/104 (99%)	78 (76%)	25 (24%)	0	2
72	O6	81/81 (100%)	61 (75%)	20 (25%)	0	2
72	o6	80/81 (99%)	55 (69%)	25 (31%)	0	0
73	O7	70/70 (100%)	57 (81%)	13 (19%)	1	8
73	o7	70/70 (100%)	60 (86%)	10 (14%)	3	15
74	O8	68/68 (100%)	51 (75%)	17 (25%)	0	2
74	o8	67/68 (98%)	56 (84%)	11 (16%)	2	11
75	O9	45/45 (100%)	38 (84%)	7 (16%)	2	12
75	o9	45/45 (100%)	37 (82%)	8 (18%)	2	9
76	Q0	47/47 (100%)	35 (74%)	12 (26%)	0	2
76	q0	47/47 (100%)	36 (77%)	11 (23%)	1	3
77	Q1	23/23 (100%)	16 (70%)	7 (30%)	0	0
77	q1	23/23 (100%)	16 (70%)	7 (30%)	0	0
78	Q2	90/90 (100%)	72 (80%)	18 (20%)	1	6
78	q2	90/90 (100%)	70 (78%)	20 (22%)	1	4
79	Q3	71/71 (100%)	59 (83%)	12 (17%)	2	10
79	q3	71/71 (100%)	55 (78%)	16 (22%)	1	4
80	e0	53/53 (100%)	39 (74%)	14 (26%)	0	2
81	p0	105/253 (42%)	85 (81%)	20 (19%)	1	8
All	All	18727/20241 (92%)	15073 (80%)	3654 (20%)	1	7

All (3654) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	S0	10	THR
2	S0	24	LEU
2	S0	32	HIS
2	S0	37	VAL
2	S0	43	ASP
2	S0	47	VAL
2	S0	49	ASN

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Mol	Chain	Res	Type
2	S0	50	VAL
2	S0	56	LYS
2	S0	57	LEU
2	S0	59	LEU
2	S0	62	ARG
2	S0	68	PRO
2	S0	80	THR
2	S0	84	ARG
2	S0	87	LEU
2	S0	88	LYS
2	S0	96	THR
2	S0	101	ARG
2	S0	103	THR
2	S0	110	TYR
2	S0	111	ILE
2	S0	119	ARG
2	S0	154	GLU
2	S0	157	ASP
2	S0	170	ILE
2	S0	172	LEU
2	S0	177	LEU
2	S0	185	ARG
2	S0	196	SER
2	S0	200	ASP
3	S1	21	VAL
3	S1	22	ASP
3	S1	25	THR
3	S1	29	TRP
3	S1	30	PHE
3	S1	38	PHE
3	S1	46	THR
3	S1	51	SER
3	S1	55	LYS
3	S1	61	LEU
3	S1	70	LEU
3	S1	73	LEU
3	S1	77	GLU
3	S1	78	ASP
3	S1	81	PHE
3	S1	89	ASP
3	S1	91	VAL
3	S1	95	ASN

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Mol	Chain	Res	Type
3	S1	96	LEU
3	S1	97	LEU
3	S1	105	PHE
3	S1	108	ASP
3	S1	110	LEU
3	S1	111	ARG
3	S1	112	SER
3	S1	117	TRP
3	S1	119	THR
3	S1	126	THR
3	S1	131	ASP
3	S1	148	ASN
3	S1	169	SER
3	S1	170	GLU
3	S1	177	GLN
3	S1	180	THR
3	S1	181	LEU
3	S1	193	ILE
3	S1	198	GLU
3	S1	202	LYS
3	S1	214	LYS
3	S1	215	VAL
3	S1	218	LEU
3	S1	219	LYS
3	S1	220	GLN
3	S1	222	LYS
3	S1	223	PHE
4	S2	41	LEU
4	S2	50	ILE
4	S2	53	ILE
4	S2	58	LEU
4	S2	60	SER
4	S2	69	ILE
4	S2	73	LEU
4	S2	77	GLN
4	S2	87	GLN
4	S2	90	THR
4	S2	91	ARG
4	S2	95	ARG
4	S2	96	THR
4	S2	97	ARG
4	S2	111	VAL

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Mol	Chain	Res	Type
4	S2	113	LEU
4	S2	116	LYS
4	S2	117	THR
4	S2	119	LYS
4	S2	134	LEU
4	S2	139	ILE
4	S2	140	ARG
4	S2	141	ARG
4	S2	148	LEU
4	S2	153	SER
4	S2	159	THR
4	S2	166	THR
4	S2	174	ARG
4	S2	207	LEU
4	S2	208	GLU
4	S2	221	THR
4	S2	222	TYR
4	S2	225	LEU
4	S2	226	THR
4	S2	229	LEU
4	S2	235	LEU
4	S2	237	VAL
4	S2	245	ASP
5	S3	4	LEU
5	S3	7	LYS
5	S3	9	ARG
5	S3	14	ASP
5	S3	21	LEU
5	S3	23	GLU
5	S3	37	VAL
5	S3	41	VAL
5	S3	65	ARG
5	S3	66	ILE
5	S3	76	ARG
5	S3	84	ILE
5	S3	89	GLU
5	S3	92	GLN
5	S3	94	ARG
5	S3	103	GLU
5	S3	104	SER
5	S3	117	ARG
5	S3	127	MET

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Mol	Chain	Res	Type
5	S3	143	ARG
5	S3	146	ARG
5	S3	151	LYS
5	S3	158	ILE
5	S3	172	THR
5	S3	175	VAL
5	S3	176	LEU
5	S3	178	ARG
5	S3	181	VAL
5	S3	182	LEU
5	S3	189	MET
5	S3	190	ARG
5	S3	200	LYS
5	S3	207	THR
5	S3	209	ILE
5	S3	218	LEU
5	S3	222	VAL
6	S4	6	LYS
6	S4	7	LYS
6	S4	9	LEU
6	S4	12	LEU
6	S4	26	CYS
6	S4	38	LEU
6	S4	45	ILE
6	S4	48	LEU
6	S4	65	LEU
6	S4	67	GLN
6	S4	68	ARG
6	S4	77	ARG
6	S4	78	THR
6	S4	105	VAL
6	S4	115	THR
6	S4	117	GLU
6	S4	120	SER
6	S4	123	LEU
6	S4	128	LYS
6	S4	131	LEU
6	S4	142	HIS
6	S4	151	ASP
6	S4	155	LYS
6	S4	158	ASP
6	S4	160	VAL

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Mol	Chain	Res	Type
6	S4	164	LEU
6	S4	168	LYS
6	S4	180	LEU
6	S4	181	VAL
6	S4	182	TYR
6	S4	187	ARG
6	S4	192	ILE
6	S4	197	HIS
6	S4	211	LYS
6	S4	215	ASP
6	S4	221	ARG
6	S4	222	LEU
6	S4	226	PHE
6	S4	227	VAL
6	S4	231	GLN
6	S4	236	ILE
6	S4	240	LYS
6	S4	242	LYS
6	S4	246	LEU
6	S4	258	GLN
6	S4	259	GLN
7	S5	25	LEU
7	S5	32	GLU
7	S5	34	GLN
7	S5	38	THR
7	S5	41	LYS
7	S5	43	PHE
7	S5	45	LYS
7	S5	53	VAL
7	S5	63	GLN
7	S5	76	ARG
7	S5	79	ASN
7	S5	86	GLN
7	S5	89	ILE
7	S5	90	ILE
7	S5	93	LEU
7	S5	94	THR
7	S5	119	ASP
7	S5	123	VAL
7	S5	126	ASP
7	S5	131	GLN
7	S5	139	ASN

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Mol	Chain	Res	Type
7	S5	147	THR
7	S5	156	ARG
7	S5	157	ARG
7	S5	158	GLN
7	S5	163	SER
7	S5	166	ARG
7	S5	194	LEU
7	S5	203	LYS
7	S5	216	GLU
7	S5	225	ARG
8	S6	5	ILE
8	S6	6	SER
8	S6	7	TYR
8	S6	13	GLN
8	S6	21	GLU
8	S6	25	ARG
8	S6	30	LYS
8	S6	45	PHE
8	S6	51	LYS
8	S6	58	LYS
8	S6	67	VAL
8	S6	76	LEU
8	S6	78	THR
8	S6	79	LYS
8	S6	82	SER
8	S6	89	ASP
8	S6	98	ARG
8	S6	126	ASP
8	S6	127	THR
8	S6	128	THR
8	S6	129	VAL
8	S6	133	LEU
8	S6	143	LYS
8	S6	150	GLU
8	S6	151	ASP
8	S6	154	ARG
8	S6	155	ASP
8	S6	169	TYR
8	S6	175	ILE
8	S6	177	ARG
8	S6	193	LEU
8	S6	216	LEU

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Mol	Chain	Res	Type
8	S6	217	SER
8	S6	223	LYS
9	S7	37	GLU
9	S7	38	LEU
9	S7	46	ILE
9	S7	50	ASP
9	S7	51	VAL
9	S7	55	LYS
9	S7	67	LEU
9	S7	70	PHE
9	S7	71	HIS
9	S7	75	THR
9	S7	77	LEU
9	S7	79	ARG
9	S7	85	PHE
9	S7	87	ASP
9	S7	97	ARG
9	S7	99	LEU
9	S7	104	ARG
9	S7	105	THR
9	S7	110	GLN
9	S7	114	ARG
9	S7	116	ARG
9	S7	126	LEU
9	S7	129	LEU
9	S7	130	VAL
9	S7	134	GLU
9	S7	143	LEU
9	S7	144	VAL
9	S7	147	ASN
9	S7	167	GLU
9	S7	185	ILE
9	S7	186	PRO
10	S8	4	SER
10	S8	8	ARG
10	S8	21	PHE
10	S8	22	ARG
10	S8	29	LEU
10	S8	36	THR
10	S8	46	VAL
10	S8	56	ARG
10	S8	66	SER

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Mol	Chain	Res	Type
10	S8	74	LYS
10	S8	86	SER
10	S8	98	LYS
10	S8	135	LYS
10	S8	138	ASN
10	S8	140	GLU
10	S8	151	LYS
10	S8	152	ILE
10	S8	155	SER
10	S8	158	SER
10	S8	164	ARG
10	S8	184	LEU
10	S8	187	GLU
10	S8	196	LEU
10	S8	199	LYS
11	S9	3	ARG
11	S9	7	THR
11	S9	14	THR
11	S9	21	SER
11	S9	28	LEU
11	S9	40	LYS
11	S9	50	SER
11	S9	60	LEU
11	S9	78	ARG
11	S9	79	ARG
11	S9	82	ARG
11	S9	89	ASP
11	S9	92	LYS
11	S9	93	LEU
11	S9	94	ASP
11	S9	99	LEU
11	S9	105	LEU
11	S9	109	LEU
11	S9	110	GLN
11	S9	118	LEU
11	S9	121	SER
11	S9	130	THR
11	S9	134	ILE
11	S9	138	LYS
11	S9	145	SER
11	S9	149	ARG
11	S9	157	ASP

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Mol	Chain	Res	Type
11	S9	161	THR
11	S9	171	ARG
11	S9	172	VAL
11	S9	182	GLU
12	C0	5	LYS
12	C0	8	ARG
12	C0	27	PHE
12	C0	29	GLN
12	C0	32	HIS
12	C0	46	LEU
12	C0	55	VAL
12	C0	56	LYS
12	C0	67	THR
12	C0	71	GLU
12	C0	76	LEU
12	C0	78	GLU
12	C0	81	ASN
12	C0	82	LEU
13	C1	4	GLU
13	C1	8	GLN
13	C1	21	ASN
13	C1	37	ASN
13	C1	40	LEU
13	C1	44	THR
13	C1	56	LYS
13	C1	63	LEU
13	C1	67	ARG
13	C1	69	LYS
13	C1	72	THR
13	C1	74	THR
13	C1	79	LYS
13	C1	80	MET
13	C1	83	THR
13	C1	99	ARG
13	C1	109	VAL
13	C1	118	GLN
13	C1	131	ILE
13	C1	136	ARG
14	C2	28	LEU
14	C2	33	ARG
14	C2	36	LEU
14	C2	37	VAL

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Mol	Chain	Res	Type
14	C2	38	HIS
14	C2	43	ARG
14	C2	45	LEU
14	C2	46	ARG
14	C2	50	LYS
14	C2	58	LEU
14	C2	61	VAL
14	C2	66	VAL
14	C2	71	ILE
14	C2	83	GLU
14	C2	85	LYS
14	C2	86	VAL
14	C2	89	ILE
14	C2	103	LEU
14	C2	119	SER
14	C2	121	VAL
14	C2	126	TRP
14	C2	129	GLU
14	C2	132	GLU
14	C2	139	HIS
14	C2	140	PHE
15	C3	3	ARG
15	C3	4	MET
15	C3	9	LYS
15	C3	16	ILE
15	C3	27	LYS
15	C3	39	LYS
15	C3	56	ASP
15	C3	58	HIS
15	C3	62	GLN
15	C3	64	ARG
15	C3	66	ILE
15	C3	67	THR
15	C3	72	MET
15	C3	75	LEU
15	C3	76	LYS
15	C3	88	LEU
15	C3	99	ARG
15	C3	102	LEU
15	C3	110	ASP
15	C3	114	ARG
15	C3	115	LEU

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Mol	Chain	Res	Type
15	C3	125	LEU
15	C3	127	ARG
15	C3	140	LYS
15	C3	143	SER
15	C3	145	THR
15	C3	150	VAL
15	C3	151	ASN
16	C4	13	VAL
16	C4	16	VAL
16	C4	20	TYR
16	C4	24	ASN
16	C4	26	THR
16	C4	29	HIS
16	C4	31	THR
16	C4	39	ILE
16	C4	42	VAL
16	C4	52	ARG
16	C4	89	THR
16	C4	92	LYS
16	C4	93	THR
16	C4	102	LEU
16	C4	118	VAL
16	C4	125	SER
16	C4	127	ARG
16	C4	136	ARG
16	C4	137	LEU
17	C5	22	LEU
17	C5	26	LEU
17	C5	31	GLU
17	C5	34	VAL
17	C5	35	LYS
17	C5	36	LEU
17	C5	40	ARG
17	C5	44	ARG
17	C5	52	LYS
17	C5	60	LEU
17	C5	69	GLU
17	C5	84	ILE
17	C5	86	VAL
17	C5	89	MET
17	C5	100	LYS
17	C5	110	GLU

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Mol	Chain	Res	Type
17	C5	116	LEU
17	C5	121	ILE
17	C5	124	THR
17	C5	125	PRO
17	C5	128	HIS
18	C6	4	VAL
18	C6	8	GLN
18	C6	12	LYS
18	C6	19	VAL
18	C6	26	LYS
18	C6	29	ILE
18	C6	31	VAL
18	C6	36	ILE
18	C6	43	ILE
18	C6	44	LEU
18	C6	52	LEU
18	C6	54	LEU
18	C6	66	ARG
18	C6	68	ARG
18	C6	69	VAL
18	C6	94	GLN
18	C6	98	ASP
18	C6	106	LYS
18	C6	116	LEU
18	C6	123	ARG
18	C6	127	LYS
18	C6	128	LYS
18	C6	137	ARG
18	C6	138	PHE
18	C6	140	LYS
18	C6	141	SER
18	C6	143	ARG
19	C7	3	ARG
19	C7	5	ARG
19	C7	25	THR
19	C7	30	THR
19	C7	34	LEU
19	C7	38	ILE
19	C7	40	THR
19	C7	49	LYS
19	C7	54	THR
19	C7	69	ILE

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Mol	Chain	Res	Type
19	C7	71	PHE
19	C7	72	LYS
19	C7	78	ARG
19	C7	83	GLN
19	C7	84	TYR
19	C7	88	VAL
19	C7	105	GLN
19	C7	113	LEU
19	C7	115	LEU
20	C8	3	LEU
20	C8	5	VAL
20	C8	8	GLN
20	C8	11	PHE
20	C8	12	GLN
20	C8	13	HIS
20	C8	14	ILE
20	C8	17	LEU
20	C8	18	LEU
20	C8	20	THR
20	C8	25	ASN
20	C8	26	ILE
20	C8	28	ILE
20	C8	34	THR
20	C8	40	ARG
20	C8	54	LEU
20	C8	60	GLU
20	C8	61	LEU
20	C8	71	GLN
20	C8	77	THR
20	C8	80	LYS
20	C8	86	LEU
20	C8	92	ILE
20	C8	93	THR
20	C8	97	ASP
20	C8	113	LEU
20	C8	116	LEU
20	C8	132	ARG
20	C8	136	GLN
20	C8	138	THR
20	C8	141	THR
20	C8	143	ARG
21	C9	4	VAL

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Mol	Chain	Res	Type
21	C9	6	VAL
21	C9	13	ASP
21	C9	18	TYR
21	C9	22	LEU
21	C9	28	LEU
21	C9	30	VAL
21	C9	33	TYR
21	C9	35	ASP
21	C9	37	VAL
21	C9	41	SER
21	C9	57	ARG
21	C9	63	ARG
21	C9	67	MET
21	C9	84	LYS
21	C9	86	ARG
21	C9	88	VAL
21	C9	94	ILE
21	C9	116	ILE
21	C9	130	ARG
21	C9	131	ASP
21	C9	133	ASP
21	C9	144	GLU
22	D0	15	GLN
22	D0	17	GLN
22	D0	18	GLN
22	D0	19	ILE
22	D0	22	ILE
22	D0	23	ARG
22	D0	25	THR
22	D0	27	THR
22	D0	30	LYS
22	D0	34	LEU
22	D0	41	ILE
22	D0	42	VAL
22	D0	47	GLN
22	D0	48	HIS
22	D0	51	VAL
22	D0	57	ARG
22	D0	66	SER
22	D0	74	GLU
22	D0	81	THR
22	D0	89	ARG

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Mol	Chain	Res	Type
22	D0	99	ILE
22	D0	103	ILE
22	D0	121	ASN
23	D1	3	ASN
23	D1	7	GLN
23	D1	9	VAL
23	D1	11	LEU
23	D1	32	VAL
23	D1	33	GLN
23	D1	41	GLU
23	D1	52	THR
23	D1	60	ARG
23	D1	61	SER
23	D1	69	LEU
23	D1	76	ASP
23	D1	80	LYS
23	D1	84	SER
23	D1	86	SER
23	D1	87	ARG
24	D2	4	SER
24	D2	7	LEU
24	D2	12	ASN
24	D2	22	LYS
24	D2	23	ARG
24	D2	24	GLN
24	D2	25	VAL
24	D2	27	ILE
24	D2	28	ARG
24	D2	49	GLU
24	D2	53	ILE
24	D2	56	HIS
24	D2	65	LEU
24	D2	81	VAL
24	D2	93	LEU
24	D2	97	ARG
24	D2	98	GLN
24	D2	103	ILE
24	D2	104	LEU
24	D2	105	THR
24	D2	121	VAL
24	D2	129	VAL
25	D3	7	ARG

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Mol	Chain	Res	Type
25	D3	16	ARG
25	D3	18	HIS
25	D3	19	ARG
25	D3	28	ASN
25	D3	31	LYS
25	D3	33	LEU
25	D3	47	SER
25	D3	69	ARG
25	D3	73	ARG
25	D3	78	LYS
25	D3	82	LYS
25	D3	84	THR
25	D3	103	LEU
25	D3	107	PHE
25	D3	109	ARG
25	D3	110	LYS
25	D3	114	LYS
25	D3	117	ILE
25	D3	132	LEU
25	D3	140	LYS
25	D3	144	ARG
26	D4	2	SER
26	D4	14	SER
26	D4	17	LEU
26	D4	21	LYS
26	D4	29	HIS
26	D4	32	ARG
26	D4	34	ASN
26	D4	40	LEU
26	D4	46	GLU
26	D4	47	VAL
26	D4	57	VAL
26	D4	61	ARG
26	D4	84	LYS
26	D4	96	LEU
26	D4	99	LYS
26	D4	102	LYS
26	D4	124	ARG
26	D4	128	LYS
26	D4	129	VAL
27	D5	38	HIS
27	D5	40	VAL

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Mol	Chain	Res	Type
27	D5	42	LEU
27	D5	49	ARG
27	D5	58	ARG
27	D5	59	TYR
27	D5	63	SER
27	D5	69	LEU
27	D5	71	ILE
27	D5	75	LEU
27	D5	85	LYS
27	D5	92	ILE
27	D5	95	HIS
27	D5	100	ILE
28	D6	15	ARG
28	D6	18	VAL
28	D6	34	LYS
28	D6	36	ILE
28	D6	38	ARG
28	D6	41	ILE
28	D6	44	ILE
28	D6	45	VAL
28	D6	58	VAL
28	D6	61	GLU
28	D6	66	LYS
28	D6	68	TYR
28	D6	69	ASN
28	D6	70	LYS
28	D6	76	SER
28	D6	82	ARG
28	D6	83	ILE
28	D6	85	ARG
28	D6	86	VAL
28	D6	88	SER
29	D7	3	LEU
29	D7	4	VAL
29	D7	20	LYS
29	D7	33	LEU
29	D7	34	ASP
29	D7	61	THR
30	D8	13	ILE
30	D8	15	VAL
30	D8	19	THR
30	D8	32	PHE

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Mol	Chain	Res	Type
30	D8	33	LEU
30	D8	34	GLU
30	D8	35	ASP
30	D8	36	THR
30	D8	39	THR
30	D8	49	ARG
30	D8	54	LEU
30	D8	57	MET
30	D8	58	GLU
30	D8	64	ARG
31	D9	5	ASN
31	D9	6	VAL
31	D9	9	SER
31	D9	19	ARG
31	D9	22	ARG
31	D9	23	VAL
31	D9	25	SER
31	D9	30	LEU
31	D9	32	ARG
31	D9	36	LEU
31	D9	39	CYS
31	D9	40	ARG
31	D9	49	ASP
32	E0	20	LYS
32	E0	21	VAL
32	E0	22	GLU
32	E0	25	GLU
32	E0	28	LYS
32	E0	39	LEU
32	E0	42	ARG
32	E0	47	VAL
33	E1	86	THR
33	E1	89	LYS
33	E1	91	ILE
33	E1	93	HIS
33	E1	96	LYS
33	E1	97	LYS
33	E1	100	LEU
33	E1	108	VAL
33	E1	120	GLU
33	E1	126	CYS
33	E1	130	VAL

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Mol	Chain	Res	Type
33	E1	139	LEU
33	E1	147	VAL
33	E1	150	VAL
33	E1	151	ASN
34	SR	3	SER
34	SR	6	VAL
34	SR	10	ARG
34	SR	17	ASN
34	SR	29	GLN
34	SR	44	SER
34	SR	52	GLN
34	SR	59	ARG
34	SR	66	HIS
34	SR	76	ASP
34	SR	82	SER
34	SR	102	ARG
34	SR	117	LYS
34	SR	118	LYS
34	SR	136	ILE
34	SR	141	LEU
34	SR	144	LEU
34	SR	145	LEU
34	SR	149	ASP
34	SR	153	GLN
34	SR	163	ASP
34	SR	165	ASP
34	SR	191	ASP
34	SR	232	TYR
34	SR	238	ASP
34	SR	256	THR
34	SR	266	ASP
34	SR	268	GLN
34	SR	277	GLU
34	SR	300	THR
34	SR	316	MET
34	SR	317	THR
35	SM	24	GLU
35	SM	34	LYS
35	SM	46	LYS
35	SM	48	ARG
35	SM	51	ARG
35	SM	55	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	SM	61	ILE
35	SM	62	ARG
35	SM	64	LYS
35	SM	68	ARG
35	SM	74	LYS
35	SM	75	ASP
35	SM	77	THR
35	SM	84	LYS
35	SM	89	ARG
35	SM	91	THR
35	SM	100	THR
35	SM	102	THR
35	SM	116	GLU
35	SM	130	GLU
39	L2	10	LYS
39	L2	32	LEU
39	L2	44	ILE
39	L2	48	ILE
39	L2	49	VAL
39	L2	62	VAL
39	L2	70	ARG
39	L2	73	GLU
39	L2	74	GLU
39	L2	96	LEU
39	L2	98	VAL
39	L2	101	VAL
39	L2	104	LEU
39	L2	112	ILE
39	L2	116	VAL
39	L2	118	GLU
39	L2	126	LEU
39	L2	134	VAL
39	L2	142	ASP
39	L2	143	GLU
39	L2	158	ILE
39	L2	160	SER
39	L2	179	LEU
39	L2	181	LYS
39	L2	202	VAL
39	L2	204	MET
39	L2	225	ILE
39	L2	227	ARG

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Mol	Chain	Res	Type
39	L2	230	VAL
39	L2	231	SER
39	L2	238	ILE
39	L2	247	ARG
40	L3	2	SER
40	L3	7	GLU
40	L3	17	LEU
40	L3	19	ARG
40	L3	24	SER
40	L3	25	ILE
40	L3	37	ARG
40	L3	45	SER
40	L3	47	LEU
40	L3	55	THR
40	L3	56	ILE
40	L3	66	LYS
40	L3	73	VAL
40	L3	79	VAL
40	L3	81	THR
40	L3	84	VAL
40	L3	85	VAL
40	L3	90	VAL
40	L3	93	VAL
40	L3	100	ARG
40	L3	102	LEU
40	L3	103	THR
40	L3	104	THR
40	L3	110	LEU
40	L3	114	VAL
40	L3	126	LYS
40	L3	136	LYS
40	L3	139	GLN
40	L3	146	ARG
40	L3	148	LEU
40	L3	150	ARG
40	L3	156	SER
40	L3	157	VAL
40	L3	160	VAL
40	L3	162	VAL
40	L3	167	ARG
40	L3	169	THR
40	L3	178	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	L3	188	ILE
40	L3	189	SER
40	L3	196	ARG
40	L3	202	THR
40	L3	205	VAL
40	L3	207	SER
40	L3	208	VAL
40	L3	212	ASN
40	L3	226	PHE
40	L3	232	ARG
40	L3	235	THR
40	L3	238	LEU
40	L3	241	LYS
40	L3	244	ARG
40	L3	252	ILE
40	L3	261	MET
40	L3	266	ARG
40	L3	284	ARG
40	L3	287	LYS
40	L3	289	ASP
40	L3	296	THR
40	L3	300	ARG
40	L3	305	ILE
40	L3	308	MET
40	L3	319	ASN
40	L3	320	ASP
40	L3	324	VAL
40	L3	328	ILE
40	L3	332	ARG
40	L3	338	LEU
40	L3	343	TYR
40	L3	347	SER
40	L3	372	THR
40	L3	382	THR
41	L4	21	PRO
41	L4	25	VAL
41	L4	37	THR
41	L4	40	THR
41	L4	41	SER
41	L4	60	THR
41	L4	69	ARG
41	L4	71	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	L4	73	ARG
41	L4	74	ILE
41	L4	92	ASN
41	L4	93	MET
41	L4	99	MET
41	L4	112	LYS
41	L4	120	TYR
41	L4	124	SER
41	L4	138	ARG
41	L4	148	ILE
41	L4	150	LEU
41	L4	156	LEU
41	L4	161	LYS
41	L4	170	LYS
41	L4	172	VAL
41	L4	185	LYS
41	L4	186	LYS
41	L4	187	LEU
41	L4	193	LYS
41	L4	194	TYR
41	L4	200	THR
41	L4	202	ARG
41	L4	203	ARG
41	L4	206	LEU
41	L4	215	ILE
41	L4	217	LYS
41	L4	220	ARG
41	L4	222	VAL
41	L4	230	VAL
41	L4	246	ARG
41	L4	256	THR
41	L4	259	ASP
41	L4	267	VAL
41	L4	270	SER
41	L4	275	THR
41	L4	287	THR
41	L4	292	SER
41	L4	293	SER
41	L4	306	THR
41	L4	307	GLN
41	L4	308	LYS
41	L4	313	LEU

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Mol	Chain	Res	Type
41	L4	323	VAL
41	L4	327	LEU
41	L4	332	LYS
41	L4	333	VAL
41	L4	339	LEU
41	L4	346	LYS
41	L4	347	THR
42	L5	5	LYS
42	L5	10	SER
42	L5	22	ARG
42	L5	23	ARG
42	L5	35	ARG
42	L5	41	LYS
42	L5	64	ILE
42	L5	66	SER
42	L5	67	SER
42	L5	70	THR
42	L5	92	LEU
42	L5	93	THR
42	L5	105	ILE
42	L5	110	LEU
42	L5	111	GLN
42	L5	112	LYS
42	L5	115	LEU
42	L5	117	GLU
42	L5	118	THR
42	L5	123	GLU
42	L5	124	GLU
42	L5	128	GLU
42	L5	131	LEU
42	L5	132	THR
42	L5	137	ASP
42	L5	140	ARG
42	L5	144	VAL
42	L5	146	LEU
42	L5	151	GLN
42	L5	155	THR
42	L5	163	LEU
42	L5	177	GLU
42	L5	185	PHE
42	L5	187	THR
42	L5	189	GLU

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Mol	Chain	Res	Type
42	L5	206	GLN
42	L5	218	ARG
42	L5	222	LEU
42	L5	227	LEU
42	L5	232	ASP
42	L5	238	ASP
42	L5	242	SER
42	L5	257	GLU
42	L5	259	LYS
42	L5	263	GLU
42	L5	273	ARG
42	L5	293	LEU
43	L6	2	SER
43	L6	5	LYS
43	L6	15	VAL
43	L6	21	THR
43	L6	41	ILE
43	L6	50	LYS
43	L6	52	VAL
43	L6	62	THR
43	L6	64	LEU
43	L6	65	ILE
43	L6	66	SER
43	L6	76	LEU
43	L6	78	ARG
43	L6	79	VAL
43	L6	88	SER
43	L6	89	THR
43	L6	92	SER
43	L6	98	VAL
43	L6	129	GLU
43	L6	134	ARG
43	L6	152	THR
43	L6	155	LEU
43	L6	173	MET
44	L7	24	GLU
44	L7	25	GLN
44	L7	26	VAL
44	L7	39	GLU
44	L7	40	LYS
44	L7	60	ARG
44	L7	80	GLN

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Mol	Chain	Res	Type
44	L7	82	LYS
44	L7	92	ILE
44	L7	93	ASN
44	L7	98	LYS
44	L7	100	ARG
44	L7	109	THR
44	L7	124	LEU
44	L7	128	LYS
44	L7	133	TYR
44	L7	151	ARG
44	L7	162	PRO
44	L7	175	LYS
44	L7	178	ILE
44	L7	179	LEU
44	L7	184	LEU
44	L7	207	LEU
44	L7	229	PHE
44	L7	234	GLU
44	L7	239	LEU
45	L8	26	LEU
45	L8	27	THR
45	L8	38	GLN
45	L8	41	GLN
45	L8	63	LYS
45	L8	65	LEU
45	L8	74	THR
45	L8	79	GLN
45	L8	81	THR
45	L8	84	ARG
45	L8	92	LYS
45	L8	101	THR
45	L8	118	GLU
45	L8	124	ASP
45	L8	132	VAL
45	L8	136	LEU
45	L8	150	LEU
45	L8	156	ASP
45	L8	169	LEU
45	L8	181	LYS
45	L8	183	LYS
45	L8	185	ARG
45	L8	189	LEU

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Mol	Chain	Res	Type
45	L8	203	VAL
45	L8	218	ILE
45	L8	230	LYS
45	L8	238	LEU
45	L8	241	LYS
45	L8	246	MET
45	L8	248	LYS
45	L8	251	LYS
46	L9	5	GLN
46	L9	9	GLN
46	L9	14	GLU
46	L9	18	VAL
46	L9	19	SER
46	L9	20	ILE
46	L9	24	ILE
46	L9	33	THR
46	L9	41	ILE
46	L9	42	ASP
46	L9	48	VAL
46	L9	52	LEU
46	L9	55	VAL
46	L9	62	ARG
46	L9	65	VAL
46	L9	68	LEU
46	L9	69	ARG
46	L9	70	THR
46	L9	73	SER
46	L9	82	VAL
46	L9	91	ARG
46	L9	92	TYR
46	L9	118	LEU
46	L9	120	ASP
46	L9	121	LYS
46	L9	135	GLU
46	L9	137	SER
46	L9	138	THR
46	L9	139	ASN
46	L9	151	VAL
46	L9	157	ASN
46	L9	161	LEU
46	L9	162	GLN
46	L9	163	GLN

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Mol	Chain	Res	Type
46	L9	164	ILE
46	L9	172	ILE
46	L9	173	ARG
46	L9	189	GLU
46	L9	190	ASP
46	L9	191	LEU
47	M0	3	ARG
47	M0	7	ARG
47	M0	20	SER
47	M0	21	ARG
47	M0	24	ARG
47	M0	26	VAL
47	M0	30	LYS
47	M0	32	ARG
47	M0	33	ILE
47	M0	36	LEU
47	M0	39	LYS
47	M0	42	THR
47	M0	48	LEU
47	M0	52	LEU
47	M0	63	GLU
47	M0	74	LYS
47	M0	87	LEU
47	M0	116	ARG
47	M0	128	ARG
47	M0	130	ASP
47	M0	133	GLN
47	M0	139	ARG
47	M0	143	SER
47	M0	156	ARG
47	M0	163	GLN
47	M0	165	ILE
47	M0	167	LEU
47	M0	168	SER
47	M0	169	LYS
47	M0	174	THR
47	M0	177	ASP
47	M0	184	LYS
47	M0	197	VAL
47	M0	200	LEU
47	M0	203	LYS
47	M0	205	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
47	M0	207	GLU
48	M1	6	GLN
48	M1	9	MET
48	M1	10	ARG
48	M1	11	ASP
48	M1	12	LEU
48	M1	13	LYS
48	M1	23	VAL
48	M1	26	SER
48	M1	44	THR
48	M1	46	VAL
48	M1	65	ILE
48	M1	80	LEU
48	M1	82	ARG
48	M1	94	ARG
48	M1	106	ILE
48	M1	107	ASP
48	M1	111	ASP
48	M1	120	ILE
48	M1	130	VAL
48	M1	137	ARG
48	M1	140	ARG
48	M1	142	LYS
48	M1	147	THR
48	M1	155	THR
48	M1	166	LYS
48	M1	168	ASP
48	M1	171	VAL
49	M3	23	LYS
49	M3	24	VAL
49	M3	32	LYS
49	M3	41	THR
49	M3	53	LEU
49	M3	54	LEU
49	M3	55	ARG
49	M3	58	VAL
49	M3	59	ARG
49	M3	67	ARG
49	M3	70	ARG
49	M3	85	LEU
49	M3	91	ARG
49	M3	107	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
49	M3	108	ILE
49	M3	114	GLN
49	M3	115	ARG
49	M3	124	ILE
49	M3	131	LYS
49	M3	139	LEU
49	M3	154	VAL
49	M3	157	ARG
49	M3	164	GLU
49	M3	168	ARG
49	M3	170	LEU
49	M3	171	ARG
49	M3	176	GLU
49	M3	182	ILE
49	M3	190	LYS
50	M4	8	LYS
50	M4	10	SER
50	M4	13	ARG
50	M4	27	GLN
50	M4	38	ILE
50	M4	53	VAL
50	M4	58	ILE
50	M4	62	GLN
50	M4	63	VAL
50	M4	64	VAL
50	M4	66	THR
50	M4	74	ARG
50	M4	90	VAL
50	M4	91	CYS
50	M4	93	LYS
50	M4	102	LYS
50	M4	125	LYS
50	M4	135	LEU
51	M5	10	LEU
51	M5	18	VAL
51	M5	19	LEU
51	M5	22	LEU
51	M5	38	ARG
51	M5	41	ARG
51	M5	49	ARG
51	M5	50	ARG
51	M5	56	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
51	M5	80	THR
51	M5	83	LYS
51	M5	85	THR
51	M5	96	ARG
51	M5	97	SER
51	M5	98	LEU
51	M5	109	ARG
51	M5	113	LEU
51	M5	117	ASN
51	M5	125	SER
51	M5	133	ILE
51	M5	144	ARG
51	M5	151	ILE
51	M5	159	ARG
51	M5	167	THR
51	M5	170	LYS
51	M5	171	SER
51	M5	183	THR
51	M5	190	THR
51	M5	198	SER
51	M5	204	LYS
52	M6	34	VAL
52	M6	36	VAL
52	M6	41	LEU
52	M6	67	THR
52	M6	78	ARG
52	M6	84	LEU
52	M6	85	ARG
52	M6	88	VAL
52	M6	94	ARG
52	M6	106	GLU
52	M6	110	PRO
52	M6	116	LYS
52	M6	117	ARG
52	M6	122	GLN
52	M6	128	ARG
52	M6	143	THR
52	M6	155	LYS
52	M6	175	THR
52	M6	180	SER
52	M6	184	THR
53	M7	9	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	M7	10	ASN
53	M7	14	SER
53	M7	20	SER
53	M7	23	ARG
53	M7	24	VAL
53	M7	29	THR
53	M7	32	THR
53	M7	36	ILE
53	M7	42	THR
53	M7	52	LEU
53	M7	53	ASP
53	M7	69	ARG
53	M7	91	VAL
53	M7	111	LYS
53	M7	112	LEU
53	M7	114	VAL
53	M7	119	VAL
53	M7	126	ARG
53	M7	127	ARG
53	M7	128	ARG
53	M7	141	SER
53	M7	142	SER
53	M7	144	SER
53	M7	153	LYS
53	M7	157	VAL
53	M7	168	LEU
53	M7	173	ARG
53	M7	180	LYS
53	M7	181	ARG
53	M7	182	ILE
54	M8	3	ILE
54	M8	6	THR
54	M8	11	LYS
54	M8	21	SER
54	M8	26	LEU
54	M8	32	LEU
54	M8	34	THR
54	M8	39	ARG
54	M8	41	ASP
54	M8	63	SER
54	M8	64	VAL
54	M8	69	ARG

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Mol	Chain	Res	Type
54	M8	86	THR
54	M8	95	GLU
54	M8	100	THR
54	M8	111	ARG
54	M8	113	LYS
54	M8	125	ASP
54	M8	135	GLN
54	M8	138	LEU
54	M8	146	SER
54	M8	147	ARG
54	M8	168	THR
54	M8	174	ARG
54	M8	180	ARG
55	M9	25	ASP
55	M9	29	THR
55	M9	41	ILE
55	M9	51	VAL
55	M9	52	LYS
55	M9	55	VAL
55	M9	71	ARG
55	M9	99	LEU
55	M9	100	ARG
55	M9	103	ARG
55	M9	104	ARG
55	M9	106	LEU
55	M9	116	ASP
55	M9	127	SER
55	M9	134	HIS
55	M9	138	LEU
55	M9	144	GLN
55	M9	164	LEU
55	M9	175	GLN
55	M9	180	LYS
55	M9	182	ASP
56	N0	1	MET
56	N0	8	GLN
56	N0	34	GLU
56	N0	40	ARG
56	N0	45	LEU
56	N0	57	GLU
56	N0	59	VAL
56	N0	62	ASN

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Mol	Chain	Res	Type
56	N0	71	LYS
56	N0	79	VAL
56	N0	80	ARG
56	N0	87	THR
56	N0	97	VAL
56	N0	103	VAL
56	N0	105	THR
56	N0	106	LEU
56	N0	115	ARG
56	N0	117	ARG
56	N0	125	LYS
56	N0	130	GLU
56	N0	131	LYS
56	N0	132	THR
56	N0	137	ARG
56	N0	138	GLN
56	N0	142	GLN
56	N0	145	THR
56	N0	155	ARG
56	N0	156	VAL
56	N0	158	LYS
56	N0	160	THR
56	N0	162	THR
56	N0	167	ARG
57	N1	12	ARG
57	N1	26	HIS
57	N1	27	LEU
57	N1	31	LEU
57	N1	55	LYS
57	N1	68	THR
57	N1	75	ILE
57	N1	78	LYS
57	N1	79	MET
57	N1	80	VAL
57	N1	83	ARG
57	N1	92	ARG
57	N1	96	ILE
57	N1	97	LYS
57	N1	104	GLU
57	N1	106	LEU
57	N1	124	VAL
57	N1	127	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	N1	128	LEU
57	N1	139	ARG
57	N1	143	THR
57	N1	144	GLU
57	N1	149	GLN
57	N1	154	VAL
57	N1	158	THR
57	N1	160	ILE
58	N2	10	LYS
58	N2	21	SER
58	N2	29	ASP
58	N2	38	ILE
58	N2	39	ASP
58	N2	43	VAL
58	N2	52	ASN
58	N2	54	VAL
58	N2	66	VAL
58	N2	80	THR
58	N2	81	LYS
58	N2	82	LYS
58	N2	88	GLN
58	N2	93	ILE
58	N2	95	PHE
58	N2	96	VAL
58	N2	100	THR
58	N2	104	ARG
59	N3	4	ASN
59	N3	9	THR
59	N3	12	ARG
59	N3	13	ILE
59	N3	45	ARG
59	N3	48	ARG
59	N3	64	LYS
59	N3	69	LEU
59	N3	72	LYS
59	N3	73	VAL
59	N3	74	MET
59	N3	83	LYS
59	N3	84	SER
59	N3	88	ARG
59	N3	98	ASN
59	N3	102	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	N3	112	SER
59	N3	115	THR
59	N3	120	LYS
60	N4	5	ILE
60	N4	19	THR
60	N4	34	SER
60	N4	39	LEU
60	N4	47	ARG
60	N4	52	THR
61	N5	27	ARG
61	N5	38	LEU
61	N5	39	LYS
61	N5	40	LEU
61	N5	45	LYS
61	N5	56	ARG
61	N5	63	ILE
61	N5	71	THR
61	N5	74	LYS
61	N5	81	ILE
61	N5	86	VAL
61	N5	92	LYS
61	N5	108	LEU
61	N5	115	ARG
61	N5	125	ARG
61	N5	127	THR
61	N5	133	LEU
61	N5	134	ASP
61	N5	135	ILE
61	N5	137	ASN
61	N5	139	ILE
61	N5	142	ILE
62	N6	5	SER
62	N6	10	SER
62	N6	13	ARG
62	N6	17	LYS
62	N6	26	GLN
62	N6	28	ARG
62	N6	36	SER
62	N6	37	LYS
62	N6	38	GLU
62	N6	42	GLN
62	N6	45	ILE

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Mol	Chain	Res	Type
62	N6	56	VAL
62	N6	57	LEU
62	N6	72	SER
62	N6	74	TYR
62	N6	84	LYS
62	N6	94	SER
62	N6	95	VAL
62	N6	97	ILE
62	N6	99	LEU
62	N6	105	VAL
62	N6	115	ARG
63	N7	14	VAL
63	N7	17	ARG
63	N7	24	VAL
63	N7	42	LEU
63	N7	46	ILE
63	N7	54	THR
63	N7	57	HIS
63	N7	64	LYS
63	N7	72	ILE
63	N7	73	LYS
63	N7	81	LEU
63	N7	87	LEU
63	N7	90	GLU
63	N7	99	GLU
63	N7	103	GLN
63	N7	105	SER
63	N7	106	GLN
63	N7	107	ARG
63	N7	109	GLU
63	N7	123	GLN
63	N7	127	ASN
63	N7	135	ARG
64	N8	4	ARG
64	N8	8	THR
64	N8	10	LYS
64	N8	14	HIS
64	N8	15	VAL
64	N8	16	SER
64	N8	26	ARG
64	N8	34	MET
64	N8	42	ARG

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Mol	Chain	Res	Type
64	N8	46	ASP
64	N8	60	TYR
64	N8	63	LYS
64	N8	65	GLN
64	N8	70	LYS
64	N8	78	LEU
64	N8	88	ASP
64	N8	91	LEU
64	N8	92	LYS
64	N8	115	LYS
64	N8	120	ASN
64	N8	130	VAL
64	N8	133	LEU
64	N8	139	ARG
65	N9	13	THR
65	N9	18	ARG
65	N9	22	LYS
65	N9	25	LYS
65	N9	40	ARG
65	N9	47	LEU
65	N9	50	THR
65	N9	54	LEU
65	N9	59	LYS
66	O0	14	LEU
66	O0	16	LEU
66	O0	34	LEU
66	O0	36	GLN
66	O0	40	LYS
66	O0	41	LEU
66	O0	44	ILE
66	O0	54	SER
66	O0	61	MET
66	O0	66	LYS
66	O0	76	GLU
66	O0	79	THR
66	O0	83	LYS
66	O0	87	VAL
66	O0	99	ASP
66	O0	101	LEU
66	O0	104	LEU
67	O1	13	THR
67	O1	16	LEU

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Mol	Chain	Res	Type
67	O1	26	LYS
67	O1	28	ARG
67	O1	31	ARG
67	O1	64	VAL
67	O1	68	GLU
67	O1	73	LEU
67	O1	79	ARG
67	O1	82	GLU
67	O1	83	GLU
67	O1	84	ASP
67	O1	86	LYS
67	O1	87	ASN
67	O1	94	GLU
67	O1	96	VAL
67	O1	106	THR
67	O1	107	VAL
68	O2	4	LEU
68	O2	19	ARG
68	O2	27	ARG
68	O2	33	ARG
68	O2	35	GLN
68	O2	40	SER
68	O2	41	VAL
68	O2	44	ARG
68	O2	51	SER
68	O2	52	GLN
68	O2	54	LYS
68	O2	62	LYS
68	O2	67	SER
68	O2	73	THR
68	O2	75	LEU
68	O2	81	ASP
68	O2	82	LEU
68	O2	86	THR
68	O2	91	THR
68	O2	103	LYS
68	O2	109	LEU
68	O2	125	ARG
68	O2	126	LEU
68	O2	128	LEU
69	O3	15	SER
69	O3	28	SER

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Mol	Chain	Res	Type
69	O3	31	LYS
69	O3	48	ARG
69	O3	49	ILE
69	O3	59	VAL
69	O3	70	LYS
69	O3	81	VAL
69	O3	93	THR
69	O3	98	VAL
69	O3	106	ASN
70	O4	5	VAL
70	O4	7	PHE
70	O4	8	ARG
70	O4	20	ILE
70	O4	21	LYS
70	O4	24	LYS
70	O4	31	ARG
70	O4	49	SER
70	O4	51	LEU
70	O4	57	LEU
70	O4	58	ARG
70	O4	65	VAL
70	O4	66	SER
70	O4	71	THR
70	O4	81	CYS
70	O4	86	LYS
70	O4	87	GLU
70	O4	102	LYS
70	O4	104	VAL
71	O5	15	GLU
71	O5	20	GLN
71	O5	21	LEU
71	O5	27	GLU
71	O5	40	SER
71	O5	43	LYS
71	O5	44	ILE
71	O5	47	VAL
71	O5	48	ARG
71	O5	50	SER
71	O5	62	GLN
71	O5	69	LEU
71	O5	71	LYS
71	O5	73	LYS

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Mol	Chain	Res	Type
71	O5	84	LYS
71	O5	85	THR
71	O5	89	ARG
71	O5	90	ARG
71	O5	101	THR
71	O5	103	LYS
71	O5	107	LYS
71	O5	119	LYS
72	O6	11	LEU
72	O6	21	THR
72	O6	26	ILE
72	O6	34	SER
72	O6	36	ARG
72	O6	43	LEU
72	O6	45	ARG
72	O6	52	PRO
72	O6	57	LEU
72	O6	58	ILE
72	O6	60	LEU
72	O6	62	ARG
72	O6	64	SER
72	O6	68	ARG
72	O6	70	ARG
72	O6	71	LYS
72	O6	76	ARG
72	O6	79	SER
72	O6	81	THR
72	O6	99	ARG
73	O7	17	THR
73	O7	24	ARG
73	O7	25	ARG
73	O7	26	SER
73	O7	33	THR
73	O7	58	THR
73	O7	59	THR
73	O7	64	MET
73	O7	65	ARG
73	O7	67	LEU
73	O7	75	LYS
73	O7	80	THR
73	O7	82	SER
74	O8	3	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
74	O8	5	ILE
74	O8	17	ARG
74	O8	24	THR
74	O8	29	LYS
74	O8	31	LEU
74	O8	32	ASN
74	O8	39	ARG
74	O8	41	THR
74	O8	45	VAL
74	O8	46	ARG
74	O8	53	THR
74	O8	55	VAL
74	O8	64	LYS
74	O8	65	LEU
74	O8	67	GLN
74	O8	77	ARG
75	O9	4	GLN
75	O9	21	ARG
75	O9	23	LEU
75	O9	25	GLN
75	O9	29	LEU
75	O9	34	THR
75	O9	45	ARG
76	Q0	77	ILE
76	Q0	78	ILE
76	Q0	83	LYS
76	Q0	85	LEU
76	Q0	88	LYS
76	Q0	92	ASP
76	Q0	94	SER
76	Q0	108	THR
76	Q0	112	LYS
76	Q0	113	ARG
76	Q0	114	LYS
76	Q0	127	LEU
77	Q1	4	LYS
77	Q1	6	ARG
77	Q1	9	ARG
77	Q1	11	ARG
77	Q1	16	LYS
77	Q1	19	LYS
77	Q1	25	LYS

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Mol	Chain	Res	Type
78	Q2	9	LYS
78	Q2	16	THR
78	Q2	26	THR
78	Q2	35	LEU
78	Q2	45	ARG
78	Q2	47	GLN
78	Q2	70	LEU
78	Q2	71	ARG
78	Q2	76	LYS
78	Q2	80	ARG
78	Q2	83	LEU
78	Q2	84	THR
78	Q2	85	LEU
78	Q2	87	ARG
78	Q2	88	CYS
78	Q2	100	LYS
78	Q2	104	LEU
78	Q2	105	GLN
79	Q3	11	THR
79	Q3	16	VAL
79	Q3	21	SER
79	Q3	25	GLN
79	Q3	45	LYS
79	Q3	49	ARG
79	Q3	59	CYS
79	Q3	60	CYS
79	Q3	73	THR
79	Q3	78	THR
79	Q3	84	ARG
79	Q3	91	GLU
2	s0	6	THR
2	s0	9	LEU
2	s0	12	GLU
2	s0	22	THR
2	s0	29	VAL
2	s0	30	GLN
2	s0	41	ARG
2	s0	43	ASP
2	s0	45	VAL
2	s0	50	VAL
2	s0	59	LEU
2	s0	62	ARG

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Mol	Chain	Res	Type
2	s0	87	LEU
2	s0	88	LYS
2	s0	93	THR
2	s0	96	THR
2	s0	101	ARG
2	s0	106	SER
2	s0	110	TYR
2	s0	111	ILE
2	s0	119	ARG
2	s0	122	ILE
2	s0	144	ILE
2	s0	153	SER
2	s0	158	VAL
2	s0	162	CYS
2	s0	170	ILE
2	s0	172	LEU
2	s0	180	GLU
2	s0	184	LEU
2	s0	185	ARG
2	s0	188	LEU
2	s0	189	VAL
3	s1	21	VAL
3	s1	25	THR
3	s1	37	THR
3	s1	47	LEU
3	s1	48	VAL
3	s1	49	ASN
3	s1	51	SER
3	s1	55	LYS
3	s1	56	SER
3	s1	61	LEU
3	s1	62	LYS
3	s1	68	VAL
3	s1	70	LEU
3	s1	73	LEU
3	s1	74	GLN
3	s1	81	PHE
3	s1	82	ARG
3	s1	83	LYS
3	s1	96	LEU
3	s1	105	PHE
3	s1	110	LEU

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Mol	Chain	Res	Type
3	s1	116	LYS
3	s1	120	LEU
3	s1	126	THR
3	s1	129	THR
3	s1	130	SER
3	s1	131	ASP
3	s1	137	ILE
3	s1	159	SER
3	s1	169	SER
3	s1	170	GLU
3	s1	175	GLU
3	s1	177	GLN
3	s1	180	THR
3	s1	181	LEU
3	s1	184	LEU
3	s1	185	THR
3	s1	188	LEU
3	s1	193	ILE
3	s1	195	LYS
3	s1	202	LYS
3	s1	203	ASP
3	s1	222	LYS
3	s1	223	PHE
3	s1	228	LEU
3	s1	231	LEU
4	s2	41	LEU
4	s2	53	ILE
4	s2	54	GLU
4	s2	58	LEU
4	s2	60	SER
4	s2	61	LEU
4	s2	69	ILE
4	s2	70	ASP
4	s2	72	LEU
4	s2	73	LEU
4	s2	80	VAL
4	s2	81	MET
4	s2	83	ILE
4	s2	87	GLN
4	s2	89	GLN
4	s2	90	THR
4	s2	91	ARG

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Mol	Chain	Res	Type
4	s2	95	ARG
4	s2	96	THR
4	s2	97	ARG
4	s2	102	VAL
4	s2	111	VAL
4	s2	117	THR
4	s2	130	ILE
4	s2	134	LEU
4	s2	139	ILE
4	s2	141	ARG
4	s2	146	THR
4	s2	148	LEU
4	s2	150	GLN
4	s2	153	SER
4	s2	157	LYS
4	s2	159	THR
4	s2	164	SER
4	s2	166	THR
4	s2	170	ILE
4	s2	185	LYS
4	s2	194	GLU
4	s2	206	THR
4	s2	207	LEU
4	s2	222	TYR
4	s2	224	PHE
4	s2	225	LEU
4	s2	226	THR
4	s2	229	LEU
4	s2	233	GLN
4	s2	237	VAL
4	s2	238	SER
4	s2	244	SER
4	s2	250	GLN
5	s3	4	LEU
5	s3	9	ARG
5	s3	21	LEU
5	s3	32	GLU
5	s3	34	TYR
5	s3	37	VAL
5	s3	39	VAL
5	s3	41	VAL
5	s3	44	THR

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Mol	Chain	Res	Type
5	s3	55	THR
5	s3	61	GLU
5	s3	69	LEU
5	s3	83	THR
5	s3	84	ILE
5	s3	90	ARG
5	s3	94	ARG
5	s3	111	ASN
5	s3	115	ILE
5	s3	116	ARG
5	s3	125	TYR
5	s3	127	MET
5	s3	128	GLU
5	s3	132	LYS
5	s3	135	GLU
5	s3	142	LEU
5	s3	148	LYS
5	s3	154	ASP
5	s3	162	GLN
5	s3	168	ILE
5	s3	169	ASP
5	s3	178	ARG
5	s3	185	LYS
5	s3	187	LYS
5	s3	189	MET
5	s3	208	ILE
5	s3	212	LYS
5	s3	213	GLU
5	s3	224	ASP
6	s4	6	LYS
6	s4	7	LYS
6	s4	12	LEU
6	s4	23	LEU
6	s4	26	CYS
6	s4	38	LEU
6	s4	40	GLU
6	s4	42	LEU
6	s4	49	ARG
6	s4	51	ARG
6	s4	67	GLN
6	s4	75	LYS
6	s4	104	ASP

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Mol	Chain	Res	Type
6	s4	116	ASP
6	s4	126	VAL
6	s4	130	GLN
6	s4	131	LEU
6	s4	146	THR
6	s4	148	ARG
6	s4	159	THR
6	s4	164	LEU
6	s4	176	ASP
6	s4	180	LEU
6	s4	182	TYR
6	s4	215	ASP
6	s4	221	ARG
6	s4	222	LEU
6	s4	227	VAL
6	s4	236	ILE
6	s4	245	LYS
6	s4	247	SER
6	s4	254	ARG
7	s5	23	VAL
7	s5	25	LEU
7	s5	27	THR
7	s5	31	GLU
7	s5	38	THR
7	s5	40	ILE
7	s5	41	LYS
7	s5	45	LYS
7	s5	58	LEU
7	s5	59	VAL
7	s5	63	GLN
7	s5	64	VAL
7	s5	66	GLN
7	s5	68	ILE
7	s5	81	ARG
7	s5	89	ILE
7	s5	93	LEU
7	s5	99	MET
7	s5	102	ARG
7	s5	122	ASN
7	s5	124	LEU
7	s5	125	THR
7	s5	127	GLN

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Mol	Chain	Res	Type
7	s5	148	ARG
7	s5	157	ARG
7	s5	163	SER
7	s5	166	ARG
7	s5	170	GLN
7	s5	172	ILE
7	s5	194	LEU
7	s5	203	LYS
7	s5	213	LYS
7	s5	216	GLU
7	s5	219	ARG
8	s6	6	SER
8	s6	10	ASN
8	s6	12	SER
8	s6	15	THR
8	s6	21	GLU
8	s6	25	ARG
8	s6	34	GLN
8	s6	56	ASN
8	s6	67	VAL
8	s6	71	THR
8	s6	76	LEU
8	s6	78	THR
8	s6	89	ASP
8	s6	93	LYS
8	s6	97	VAL
8	s6	108	VAL
8	s6	109	LEU
8	s6	111	LEU
8	s6	120	GLU
8	s6	121	LEU
8	s6	126	ASP
8	s6	127	THR
8	s6	128	THR
8	s6	129	VAL
8	s6	133	LEU
8	s6	143	LYS
8	s6	150	GLU
8	s6	151	ASP
8	s6	153	VAL
8	s6	154	ARG
8	s6	155	ASP

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Mol	Chain	Res	Type
8	s6	156	PHE
8	s6	170	THR
8	s6	177	ARG
8	s6	182	GLN
8	s6	193	LEU
8	s6	212	LEU
8	s6	215	ARG
9	s7	11	GLN
9	s7	24	PHE
9	s7	28	GLU
9	s7	33	GLU
9	s7	39	ARG
9	s7	41	LEU
9	s7	44	LYS
9	s7	49	ILE
9	s7	67	LEU
9	s7	74	GLN
9	s7	75	THR
9	s7	77	LEU
9	s7	79	ARG
9	s7	80	GLU
9	s7	86	GLN
9	s7	97	ARG
9	s7	105	THR
9	s7	110	GLN
9	s7	114	ARG
9	s7	115	SER
9	s7	116	ARG
9	s7	117	THR
9	s7	123	ASP
9	s7	124	LYS
9	s7	126	LEU
9	s7	144	VAL
9	s7	150	GLN
9	s7	160	GLN
9	s7	166	LEU
9	s7	185	ILE
10	s8	7	SER
10	s8	18	ARG
10	s8	20	GLN
10	s8	25	ARG
10	s8	26	LYS

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Mol	Chain	Res	Type
10	s8	29	LEU
10	s8	36	THR
10	s8	46	VAL
10	s8	58	LEU
10	s8	59	ARG
10	s8	62	THR
10	s8	73	SER
10	s8	74	LYS
10	s8	76	THR
10	s8	77	ARG
10	s8	78	ILE
10	s8	89	GLU
10	s8	93	THR
10	s8	111	GLN
10	s8	121	LEU
10	s8	138	ASN
10	s8	151	LYS
10	s8	152	ILE
10	s8	155	SER
10	s8	161	SER
10	s8	171	SER
10	s8	183	ILE
10	s8	184	LEU
11	s9	3	ARG
11	s9	6	ARG
11	s9	7	THR
11	s9	9	SER
11	s9	21	SER
11	s9	22	SER
11	s9	28	LEU
11	s9	33	GLU
11	s9	39	LYS
11	s9	45	ILE
11	s9	49	LEU
11	s9	63	ASP
11	s9	78	ARG
11	s9	83	VAL
11	s9	90	LYS
11	s9	93	LEU
11	s9	96	VAL
11	s9	101	VAL
11	s9	109	LEU

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Mol	Chain	Res	Type
11	s9	110	GLN
11	s9	115	LYS
11	s9	121	SER
11	s9	126	ARG
11	s9	127	VAL
11	s9	130	THR
11	s9	134	ILE
11	s9	142	ASN
11	s9	145	SER
11	s9	149	ARG
11	s9	150	LEU
11	s9	151	ASP
11	s9	161	THR
11	s9	172	VAL
11	s9	180	LYS
12	c0	2	LEU
12	c0	5	LYS
12	c0	15	LEU
12	c0	20	VAL
12	c0	27	PHE
12	c0	28	ASN
12	c0	36	ASP
12	c0	47	GLN
12	c0	50	THR
12	c0	55	VAL
12	c0	57	THR
12	c0	71	GLU
13	c1	3	THR
13	c1	5	LEU
13	c1	10	GLU
13	c1	21	ASN
13	c1	22	ASN
13	c1	30	ARG
13	c1	32	LYS
13	c1	33	ARG
13	c1	40	LEU
13	c1	44	THR
13	c1	52	SER
13	c1	60	PHE
13	c1	63	LEU
13	c1	67	ARG
13	c1	69	LYS

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Mol	Chain	Res	Type
13	c1	74	THR
13	c1	76	VAL
13	c1	77	SER
13	c1	80	MET
13	c1	82	ARG
13	c1	83	THR
13	c1	87	ARG
13	c1	117	VAL
13	c1	122	ILE
13	c1	129	ARG
13	c1	131	ILE
13	c1	133	LYS
13	c1	140	VAL
14	c2	28	LEU
14	c2	30	VAL
14	c2	36	LEU
14	c2	39	ASP
14	c2	43	ARG
14	c2	52	LEU
14	c2	58	LEU
14	c2	59	LEU
14	c2	61	VAL
14	c2	62	LEU
14	c2	66	VAL
14	c2	71	ILE
14	c2	74	LEU
14	c2	83	GLU
14	c2	85	LYS
14	c2	89	ILE
14	c2	97	LEU
14	c2	103	LEU
14	c2	116	VAL
14	c2	119	SER
14	c2	121	VAL
14	c2	125	ASN
14	c2	129	GLU
14	c2	132	GLU
14	c2	136	ILE
14	c2	138	GLU
14	c2	139	HIS
14	c2	140	PHE
15	c3	4	MET

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Mol	Chain	Res	Type
15	c3	6	SER
15	c3	12	SER
15	c3	14	SER
15	c3	20	ARG
15	c3	21	ASN
15	c3	28	LEU
15	c3	39	LYS
15	c3	46	THR
15	c3	53	LEU
15	c3	60	VAL
15	c3	66	ILE
15	c3	70	LYS
15	c3	76	LYS
15	c3	80	LEU
15	c3	84	ILE
15	c3	87	ASP
15	c3	97	SER
15	c3	99	ARG
15	c3	102	LEU
15	c3	104	ARG
15	c3	115	LEU
15	c3	125	LEU
15	c3	127	ARG
15	c3	138	ASN
15	c3	143	SER
16	c4	13	VAL
16	c4	18	ARG
16	c4	24	ASN
16	c4	26	THR
16	c4	31	THR
16	c4	32	ASP
16	c4	33	LEU
16	c4	52	ARG
16	c4	79	VAL
16	c4	81	VAL
16	c4	84	ARG
16	c4	92	LYS
16	c4	93	THR
16	c4	102	LEU
16	c4	107	ARG
16	c4	110	LEU
16	c4	114	ARG

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Mol	Chain	Res	Type
16	c4	118	VAL
16	c4	119	THR
16	c4	123	SER
16	c4	125	SER
16	c4	129	LYS
16	c4	136	ARG
16	c4	137	LEU
17	c5	12	PHE
17	c5	21	ASP
17	c5	24	LYS
17	c5	27	GLU
17	c5	29	SER
17	c5	36	LEU
17	c5	43	ARG
17	c5	44	ARG
17	c5	49	MET
17	c5	52	LYS
17	c5	69	GLU
17	c5	71	GLU
17	c5	83	MET
17	c5	84	ILE
17	c5	92	SER
17	c5	97	TYR
17	c5	100	LYS
17	c5	107	ILE
17	c5	110	GLU
17	c5	112	LEU
17	c5	121	ILE
17	c5	125	PRO
17	c5	127	ARG
17	c5	128	HIS
18	c6	6	SER
18	c6	23	LYS
18	c6	28	LEU
18	c6	37	THR
18	c6	43	ILE
18	c6	47	LYS
18	c6	53	LEU
18	c6	57	LEU
18	c6	63	ILE
18	c6	68	ARG
18	c6	69	VAL

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Mol	Chain	Res	Type
18	c6	83	GLN
18	c6	94	GLN
18	c6	98	ASP
18	c6	110	THR
18	c6	114	ARG
18	c6	128	LYS
18	c6	136	SER
18	c6	137	ARG
19	c7	3	ARG
19	c7	6	THR
19	c7	25	THR
19	c7	29	GLN
19	c7	34	LEU
19	c7	46	LEU
19	c7	47	ARG
19	c7	49	LYS
19	c7	56	HIS
19	c7	62	GLN
19	c7	69	ILE
19	c7	85	VAL
19	c7	88	VAL
19	c7	89	SER
19	c7	104	ASN
19	c7	108	ASP
19	c7	110	VAL
19	c7	112	SER
19	c7	113	LEU
20	c8	3	LEU
20	c8	4	VAL
20	c8	5	VAL
20	c8	6	GLN
20	c8	13	HIS
20	c8	15	LEU
20	c8	25	ASN
20	c8	26	ILE
20	c8	28	ILE
20	c8	33	THR
20	c8	34	THR
20	c8	36	LYS
20	c8	38	VAL
20	c8	40	ARG
20	c8	61	LEU

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Mol	Chain	Res	Type
20	c8	63	GLN
20	c8	68	ARG
20	c8	85	PHE
20	c8	86	LEU
20	c8	94	ASP
20	c8	116	LEU
20	c8	120	ARG
20	c8	131	LEU
20	c8	133	VAL
20	c8	138	THR
20	c8	144	ARG
21	c9	6	VAL
21	c9	25	GLN
21	c9	28	LEU
21	c9	34	VAL
21	c9	39	THR
21	c9	57	ARG
21	c9	68	ARG
21	c9	86	ARG
21	c9	91	TYR
21	c9	116	ILE
21	c9	123	ARG
21	c9	131	ASP
21	c9	132	LEU
21	c9	139	THR
21	c9	140	LEU
21	c9	141	GLU
21	c9	142	GLU
21	c9	143	ASP
22	d0	22	ILE
22	d0	23	ARG
22	d0	27	THR
22	d0	30	LYS
22	d0	31	VAL
22	d0	34	LEU
22	d0	44	ASN
22	d0	47	GLN
22	d0	57	ARG
22	d0	61	LYS
22	d0	63	LEU
22	d0	67	THR
22	d0	70	THR

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Mol	Chain	Res	Type
22	d0	72	ASN
22	d0	74	GLU
22	d0	76	SER
22	d0	81	THR
22	d0	99	ILE
22	d0	102	ARG
22	d0	103	ILE
22	d0	105	GLN
22	d0	108	ILE
22	d0	113	ASP
23	d1	2	GLU
23	d1	5	LYS
23	d1	8	LEU
23	d1	10	GLU
23	d1	11	LEU
23	d1	12	TYR
23	d1	32	VAL
23	d1	38	LYS
23	d1	41	GLU
23	d1	50	TYR
23	d1	52	THR
23	d1	68	SER
23	d1	78	LEU
24	d2	6	VAL
24	d2	7	LEU
24	d2	15	ASN
24	d2	20	THR
24	d2	23	ARG
24	d2	25	VAL
24	d2	26	LEU
24	d2	43	LYS
24	d2	47	ILE
24	d2	65	LEU
24	d2	93	LEU
24	d2	98	GLN
24	d2	103	ILE
24	d2	129	VAL
25	d3	9	LEU
25	d3	14	LYS
25	d3	17	VAL
25	d3	19	ARG
25	d3	28	ASN

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Mol	Chain	Res	Type
25	d3	33	LEU
25	d3	52	ILE
25	d3	55	GLU
25	d3	73	ARG
25	d3	83	VAL
25	d3	84	THR
25	d3	96	VAL
25	d3	97	ASP
25	d3	100	ASP
25	d3	103	LEU
25	d3	107	PHE
25	d3	109	ARG
25	d3	114	LYS
25	d3	117	ILE
25	d3	125	VAL
25	d3	133	LEU
26	d4	10	ARG
26	d4	21	LYS
26	d4	26	ASP
26	d4	29	HIS
26	d4	34	ASN
26	d4	36	SER
26	d4	38	ASP
26	d4	43	LYS
26	d4	44	LEU
26	d4	47	VAL
26	d4	49	LYS
26	d4	51	GLU
26	d4	53	ASP
26	d4	62	THR
26	d4	77	ASN
26	d4	81	GLU
26	d4	102	LYS
26	d4	104	SER
26	d4	125	LEU
26	d4	128	LYS
26	d4	132	ARG
26	d4	133	ASN
27	d5	41	ILE
27	d5	51	LEU
27	d5	53	GLU
27	d5	57	TYR

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Mol	Chain	Res	Type
27	d5	60	VAL
27	d5	68	ARG
27	d5	81	ARG
27	d5	86	GLU
27	d5	88	ILE
28	d6	10	ARG
28	d6	24	VAL
28	d6	28	LYS
28	d6	34	LYS
28	d6	39	MET
28	d6	44	ILE
28	d6	45	VAL
28	d6	46	GLU
28	d6	51	ARG
28	d6	53	LEU
28	d6	67	THR
28	d6	82	ARG
28	d6	90	GLU
29	d7	3	LEU
29	d7	4	VAL
29	d7	17	ARG
29	d7	21	LEU
29	d7	26	GLN
29	d7	34	ASP
29	d7	37	CYS
29	d7	41	LEU
29	d7	43	ILE
29	d7	44	THR
29	d7	46	VAL
29	d7	61	THR
29	d7	62	ILE
29	d7	77	THR
29	d7	81	ARG
30	d8	5	THR
30	d8	14	LYS
30	d8	16	LEU
30	d8	21	SER
30	d8	22	ARG
30	d8	28	VAL
30	d8	30	VAL
30	d8	32	PHE
30	d8	33	LEU

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Mol	Chain	Res	Type
30	d8	36	THR
30	d8	40	ILE
30	d8	52	ASP
30	d8	54	LEU
30	d8	58	GLU
30	d8	64	ARG
30	d8	65	ARG
30	d8	66	LEU
31	d9	8	PHE
31	d9	10	HIS
31	d9	18	SER
31	d9	22	ARG
31	d9	24	CYS
31	d9	28	THR
31	d9	30	LEU
31	d9	31	ILE
31	d9	32	ARG
31	d9	36	LEU
31	d9	49	ASP
31	d9	54	LYS
80	e0	13	LYS
80	e0	21	VAL
80	e0	22	GLU
80	e0	23	LYS
80	e0	26	LYS
80	e0	28	LYS
80	e0	29	LYS
80	e0	38	LEU
80	e0	42	ARG
80	e0	44	PHE
80	e0	45	VAL
80	e0	46	ASN
80	e0	54	ARG
80	e0	56	MET
33	e1	78	LYS
33	e1	80	ARG
33	e1	90	LYS
33	e1	96	LYS
33	e1	97	LYS
33	e1	100	LEU
33	e1	102	VAL
33	e1	106	TYR

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Mol	Chain	Res	Type
33	e1	107	LYS
33	e1	113	LYS
33	e1	120	GLU
33	e1	121	CYS
33	e1	135	HIS
33	e1	140	TYR
34	sR	21	THR
34	sR	25	THR
34	sR	29	GLN
34	sR	32	LEU
34	sR	37	SER
34	sR	42	LEU
34	sR	58	VAL
34	sR	59	ARG
34	sR	64	HIS
34	sR	65	SER
34	sR	70	ASP
34	sR	76	ASP
34	sR	93	ASP
34	sR	96	THR
34	sR	100	TYR
34	sR	102	ARG
34	sR	123	ILE
34	sR	130	THR
34	sR	145	LEU
34	sR	149	ASP
34	sR	159	ASN
34	sR	176	LYS
34	sR	184	ASN
34	sR	199	ILE
34	sR	202	LEU
34	sR	228	LYS
34	sR	232	TYR
34	sR	266	ASP
34	sR	275	ARG
34	sR	297	ASP
34	sR	310	ILE
34	sR	312	VAL
34	sR	319	ASN
35	sM	23	LYS
35	sM	43	ASP
35	sM	48	ARG

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Mol	Chain	Res	Type
35	sM	53	ARG
35	sM	55	SER
35	sM	61	ILE
35	sM	68	ARG
35	sM	75	ASP
35	sM	77	THR
39	l2	15	ILE
39	l2	19	HIS
39	l2	32	LEU
39	l2	44	ILE
39	l2	45	VAL
39	l2	48	ILE
39	l2	49	VAL
39	l2	62	VAL
39	l2	64	ARG
39	l2	70	ARG
39	l2	74	GLU
39	l2	80	GLU
39	l2	82	VAL
39	l2	96	LEU
39	l2	98	VAL
39	l2	101	VAL
39	l2	112	ILE
39	l2	113	VAL
39	l2	116	VAL
39	l2	134	VAL
39	l2	137	ILE
39	l2	142	ASP
39	l2	147	ARG
39	l2	155	LYS
39	l2	157	VAL
39	l2	165	VAL
39	l2	179	LEU
39	l2	193	ARG
39	l2	202	VAL
39	l2	204	MET
39	l2	205	ASN
39	l2	207	VAL
39	l2	230	VAL
39	l2	233	GLN
39	l2	238	ILE
39	l2	243	THR

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Mol	Chain	Res	Type
39	12	246	LEU
39	12	249	SER
39	12	250	GLN
39	12	251	LYS
40	13	3	HIS
40	13	4	ARG
40	13	10	ARG
40	13	17	LEU
40	13	19	ARG
40	13	20	LYS
40	13	25	ILE
40	13	37	ARG
40	13	39	LYS
40	13	44	THR
40	13	47	LEU
40	13	50	LYS
40	13	55	THR
40	13	69	LYS
40	13	73	VAL
40	13	77	THR
40	13	79	VAL
40	13	81	THR
40	13	102	LEU
40	13	103	THR
40	13	111	SER
40	13	114	VAL
40	13	120	LYS
40	13	125	SER
40	13	139	GLN
40	13	146	ARG
40	13	148	LEU
40	13	157	VAL
40	13	160	VAL
40	13	161	LEU
40	13	167	ARG
40	13	169	THR
40	13	183	LEU
40	13	184	ASN
40	13	192	VAL
40	13	196	ARG
40	13	202	THR
40	13	205	VAL

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Mol	Chain	Res	Type
40	l3	208	VAL
40	l3	214	MET
40	l3	221	THR
40	l3	232	ARG
40	l3	235	THR
40	l3	238	LEU
40	l3	248	LYS
40	l3	249	VAL
40	l3	252	ILE
40	l3	264	VAL
40	l3	266	ARG
40	l3	274	SER
40	l3	287	LYS
40	l3	311	PHE
40	l3	328	ILE
40	l3	332	ARG
40	l3	340	LYS
40	l3	347	SER
40	l3	359	ILE
40	l3	361	THR
40	l3	363	SER
40	l3	367	LYS
40	l3	369	ARG
40	l3	380	MET
41	l4	3	ARG
41	l4	12	THR
41	l4	20	LEU
41	l4	37	THR
41	l4	52	VAL
41	l4	73	ARG
41	l4	90	PHE
41	l4	93	MET
41	l4	99	MET
41	l4	103	THR
41	l4	120	TYR
41	l4	133	SER
41	l4	136	LEU
41	l4	138	ARG
41	l4	144	LYS
41	l4	148	ILE
41	l4	150	LEU
41	l4	154	THR

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Mol	Chain	Res	Type
41	14	156	LEU
41	14	158	SER
41	14	170	LYS
41	14	172	VAL
41	14	179	LEU
41	14	182	LEU
41	14	183	LYS
41	14	186	LYS
41	14	187	LEU
41	14	191	LYS
41	14	203	ARG
41	14	206	LEU
41	14	220	ARG
41	14	222	VAL
41	14	230	VAL
41	14	246	ARG
41	14	249	ILE
41	14	256	THR
41	14	258	LEU
41	14	259	ASP
41	14	265	GLU
41	14	275	THR
41	14	283	THR
41	14	291	ASN
41	14	295	ILE
41	14	300	ARG
41	14	301	PRO
41	14	304	GLN
41	14	306	THR
41	14	319	LYS
41	14	323	VAL
41	14	327	LEU
41	14	333	VAL
41	14	338	LYS
41	14	342	LYS
41	14	347	THR
41	14	356	THR
41	14	359	LEU
41	14	362	ASP
42	15	4	GLN
42	15	5	LYS
42	15	35	ARG

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Mol	Chain	Res	Type
42	15	41	LYS
42	15	46	THR
42	15	51	LEU
42	15	66	SER
42	15	70	THR
42	15	74	VAL
42	15	109	THR
42	15	110	LEU
42	15	112	LYS
42	15	113	LEU
42	15	118	THR
42	15	132	THR
42	15	133	GLU
42	15	135	VAL
42	15	140	ARG
42	15	144	VAL
42	15	146	LEU
42	15	148	ILE
42	15	151	GLN
42	15	152	ARG
42	15	154	THR
42	15	155	THR
42	15	158	ARG
42	15	164	LYS
42	15	185	PHE
42	15	189	GLU
42	15	194	LEU
42	15	203	HIS
42	15	211	LEU
42	15	220	SER
42	15	227	LEU
42	15	230	ASP
42	15	232	ASP
42	15	236	LEU
42	15	258	LYS
42	15	259	LYS
42	15	262	LYS
42	15	263	GLU
42	15	268	GLU
42	15	273	ARG
42	15	274	GLN
42	15	279	LYS

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Mol	Chain	Res	Type
42	15	281	GLU
42	15	289	LYS
42	15	293	LEU
43	16	8	LYS
43	16	14	ASP
43	16	15	VAL
43	16	20	LYS
43	16	21	THR
43	16	46	ARG
43	16	50	LYS
43	16	64	LEU
43	16	65	ILE
43	16	76	LEU
43	16	78	ARG
43	16	79	VAL
43	16	82	ARG
43	16	88	SER
43	16	89	THR
43	16	98	VAL
43	16	109	GLU
43	16	131	LYS
43	16	152	THR
43	16	155	LEU
43	16	162	SER
43	16	170	LYS
44	17	22	THR
44	17	26	VAL
44	17	30	ARG
44	17	40	LYS
44	17	41	ARG
44	17	45	LEU
44	17	54	GLU
44	17	60	ARG
44	17	82	LYS
44	17	83	LEU
44	17	88	ARG
44	17	93	ASN
44	17	98	LYS
44	17	101	LYS
44	17	113	SER
44	17	124	LEU
44	17	130	ILE

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Mol	Chain	Res	Type
44	17	145	ARG
44	17	150	LYS
44	17	156	ILE
44	17	158	LYS
44	17	159	GLN
44	17	175	LYS
44	17	179	LEU
44	17	181	ILE
44	17	184	LEU
44	17	189	ILE
44	17	193	PRO
44	17	196	LYS
44	17	208	SER
44	17	229	PHE
44	17	239	LEU
45	18	26	LEU
45	18	41	GLN
45	18	50	VAL
45	18	71	VAL
45	18	74	THR
45	18	79	GLN
45	18	81	THR
45	18	89	GLU
45	18	95	ASN
45	18	98	ARG
45	18	101	THR
45	18	109	LEU
45	18	111	LYS
45	18	136	LEU
45	18	146	LYS
45	18	160	ILE
45	18	163	VAL
45	18	164	VAL
45	18	169	LEU
45	18	172	LYS
45	18	185	ARG
45	18	200	LEU
45	18	206	GLU
45	18	214	LEU
45	18	217	THR
45	18	219	ASP
45	18	222	PHE

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Mol	Chain	Res	Type
45	18	230	LYS
45	18	241	LYS
45	18	245	LYS
45	18	248	LYS
46	19	5	GLN
46	19	6	THR
46	19	16	VAL
46	19	17	THR
46	19	18	VAL
46	19	31	ARG
46	19	33	THR
46	19	34	LEU
46	19	39	LYS
46	19	44	THR
46	19	48	VAL
46	19	52	LEU
46	19	55	VAL
46	19	62	ARG
46	19	68	LEU
46	19	69	ARG
46	19	70	THR
46	19	80	THR
46	19	82	VAL
46	19	92	TYR
46	19	103	ILE
46	19	105	GLU
46	19	106	LYS
46	19	107	ASP
46	19	122	LYS
46	19	129	ARG
46	19	132	VAL
46	19	133	THR
46	19	143	GLU
46	19	144	ILE
46	19	149	ASN
46	19	150	SER
46	19	151	VAL
46	19	157	ASN
46	19	161	LEU
46	19	162	GLN
46	19	166	ARG
46	19	177	ASP

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Mol	Chain	Res	Type
46	l9	188	THR
46	l9	191	LEU
47	m0	4	ARG
47	m0	24	ARG
47	m0	26	VAL
47	m0	28	ASP
47	m0	29	SER
47	m0	31	ILE
47	m0	36	LEU
47	m0	42	THR
47	m0	45	GLU
47	m0	52	LEU
47	m0	53	VAL
47	m0	58	GLU
47	m0	63	GLU
47	m0	71	CYS
47	m0	74	LYS
47	m0	87	LEU
47	m0	90	ARG
47	m0	99	ILE
47	m0	121	LYS
47	m0	143	SER
47	m0	144	ASN
47	m0	148	VAL
47	m0	154	ARG
47	m0	163	GLN
47	m0	166	ILE
47	m0	169	LYS
47	m0	176	LEU
47	m0	177	ASP
47	m0	183	LYS
47	m0	197	VAL
47	m0	200	LEU
47	m0	205	SER
47	m0	206	LEU
47	m0	208	ASN
47	m0	210	ILE
47	m0	211	ARG
47	m0	212	GLU
47	m0	217	PHE
48	m1	10	ARG
48	m1	11	ASP

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Mol	Chain	Res	Type
48	m1	12	LEU
48	m1	13	LYS
48	m1	16	LYS
48	m1	19	LEU
48	m1	31	THR
48	m1	44	THR
48	m1	46	VAL
48	m1	54	VAL
48	m1	56	THR
48	m1	80	LEU
48	m1	92	ARG
48	m1	95	ASN
48	m1	101	ASN
48	m1	106	ILE
48	m1	107	ASP
48	m1	108	GLU
48	m1	112	LEU
48	m1	119	SER
48	m1	129	VAL
48	m1	130	VAL
48	m1	132	ASN
48	m1	137	ARG
48	m1	140	ARG
48	m1	145	LYS
48	m1	147	THR
48	m1	154	THR
48	m1	155	THR
48	m1	158	ASP
48	m1	159	THR
48	m1	171	VAL
49	m3	19	GLN
49	m3	53	LEU
49	m3	54	LEU
49	m3	58	VAL
49	m3	59	ARG
49	m3	62	THR
49	m3	63	VAL
49	m3	67	ARG
49	m3	69	VAL
49	m3	76	THR
49	m3	85	LEU
49	m3	100	ARG

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Mol	Chain	Res	Type
49	m3	107	GLU
49	m3	114	GLN
49	m3	116	LEU
49	m3	118	GLU
49	m3	120	GLN
49	m3	123	ILE
49	m3	124	ILE
49	m3	131	LYS
49	m3	138	VAL
49	m3	149	GLN
49	m3	152	THR
49	m3	165	SER
49	m3	168	ARG
49	m3	171	ARG
49	m3	176	GLU
49	m3	184	GLU
49	m3	194	GLU
50	m4	3	THR
50	m4	4	ASP
50	m4	15	VAL
50	m4	16	GLU
50	m4	20	VAL
50	m4	27	GLN
50	m4	35	ILE
50	m4	53	VAL
50	m4	64	VAL
50	m4	66	THR
50	m4	80	THR
50	m4	106	ARG
50	m4	107	GLU
50	m4	108	ARG
50	m4	109	ARG
50	m4	123	LEU
50	m4	124	ARG
50	m4	130	THR
50	m4	135	LEU
51	m5	5	LYS
51	m5	10	LEU
51	m5	18	VAL
51	m5	22	LEU
51	m5	24	ARG
51	m5	68	ARG

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Mol	Chain	Res	Type
51	m5	71	ARG
51	m5	76	PRO
51	m5	80	THR
51	m5	85	THR
51	m5	92	LEU
51	m5	93	LYS
51	m5	96	ARG
51	m5	105	ARG
51	m5	109	ARG
51	m5	138	GLN
51	m5	153	ASP
51	m5	155	VAL
51	m5	171	SER
51	m5	176	LYS
51	m5	178	HIS
51	m5	190	THR
51	m5	194	GLN
51	m5	198	SER
51	m5	204	LYS
52	m6	9	ILE
52	m6	12	LYS
52	m6	22	VAL
52	m6	34	VAL
52	m6	41	LEU
52	m6	58	LEU
52	m6	60	LYS
52	m6	66	LYS
52	m6	67	THR
52	m6	78	ARG
52	m6	84	LEU
52	m6	100	GLU
52	m6	106	GLU
52	m6	108	ILE
52	m6	110	PRO
52	m6	115	LYS
52	m6	116	LYS
52	m6	117	ARG
52	m6	122	GLN
52	m6	124	LEU
52	m6	126	VAL
52	m6	128	ARG
52	m6	130	LYS

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Mol	Chain	Res	Type
52	m6	134	LYS
52	m6	142	SER
52	m6	148	LYS
52	m6	152	VAL
52	m6	170	LYS
52	m6	175	THR
52	m6	178	VAL
52	m6	182	ASN
52	m6	184	THR
52	m6	187	GLU
52	m6	197	LEU
53	m7	3	ARG
53	m7	7	THR
53	m7	9	THR
53	m7	13	LYS
53	m7	16	SER
53	m7	18	ARG
53	m7	20	SER
53	m7	22	LEU
53	m7	24	VAL
53	m7	29	THR
53	m7	31	GLU
53	m7	32	THR
53	m7	49	GLU
53	m7	52	LEU
53	m7	53	ASP
53	m7	56	ARG
53	m7	78	VAL
53	m7	79	THR
53	m7	80	LYS
53	m7	86	LYS
53	m7	89	LYS
53	m7	97	ASN
53	m7	107	LEU
53	m7	119	VAL
53	m7	120	ASN
53	m7	126	ARG
53	m7	127	ARG
53	m7	136	ILE
53	m7	142	SER
53	m7	150	VAL
53	m7	153	LYS

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Mol	Chain	Res	Type
54	m8	7	SER
54	m8	8	LYS
54	m8	12	ARG
54	m8	17	THR
54	m8	22	ASP
54	m8	26	LEU
54	m8	32	LEU
54	m8	34	THR
54	m8	41	ASP
54	m8	49	LEU
54	m8	63	SER
54	m8	64	VAL
54	m8	66	ARG
54	m8	69	ARG
54	m8	80	THR
54	m8	81	VAL
54	m8	93	ILE
54	m8	113	LYS
54	m8	127	LEU
54	m8	135	GLN
54	m8	138	LEU
54	m8	161	LYS
54	m8	165	ILE
54	m8	170	ARG
54	m8	178	ARG
54	m8	180	ARG
54	m8	185	LYS
55	m9	7	GLN
55	m9	10	LEU
55	m9	13	SER
55	m9	20	ARG
55	m9	30	SER
55	m9	31	GLU
55	m9	36	ASN
55	m9	41	ILE
55	m9	43	LYS
55	m9	49	THR
55	m9	52	LYS
55	m9	56	THR
55	m9	57	VAL
55	m9	63	THR
55	m9	70	LYS

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Mol	Chain	Res	Type
55	m9	71	ARG
55	m9	74	ARG
55	m9	88	ARG
55	m9	91	SER
55	m9	99	LEU
55	m9	101	VAL
55	m9	104	ARG
55	m9	114	LYS
55	m9	126	GLU
55	m9	133	LYS
55	m9	138	LEU
55	m9	143	ILE
55	m9	148	ASP
55	m9	152	GLU
55	m9	153	LYS
55	m9	158	GLU
55	m9	164	LEU
55	m9	167	ARG
55	m9	173	ARG
56	n0	13	ARG
56	n0	21	GLU
56	n0	32	SER
56	n0	45	LEU
56	n0	60	SER
56	n0	62	ASN
56	n0	70	THR
56	n0	71	LYS
56	n0	80	ARG
56	n0	87	THR
56	n0	92	LYS
56	n0	97	VAL
56	n0	100	VAL
56	n0	104	GLU
56	n0	117	ARG
56	n0	130	GLU
56	n0	136	LYS
56	n0	137	ARG
56	n0	148	LEU
56	n0	155	ARG
56	n0	157	GLN
56	n0	160	THR
56	n0	162	THR

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Mol	Chain	Res	Type
56	n0	167	ARG
56	n0	171	PHE
56	n0	172	TYR
57	n1	9	SER
57	n1	17	ARG
57	n1	18	ASP
57	n1	25	VAL
57	n1	26	HIS
57	n1	27	LEU
57	n1	35	LYS
57	n1	60	LYS
57	n1	68	THR
57	n1	71	SER
57	n1	78	LYS
57	n1	80	VAL
57	n1	83	ARG
57	n1	96	ILE
57	n1	102	ARG
57	n1	126	VAL
57	n1	127	GLN
57	n1	128	LEU
57	n1	135	PRO
57	n1	139	ARG
57	n1	141	VAL
57	n1	143	THR
57	n1	149	GLN
57	n1	150	THR
57	n1	154	VAL
57	n1	157	GLU
57	n1	160	ILE
58	n2	14	THR
58	n2	16	THR
58	n2	19	VAL
58	n2	21	SER
58	n2	27	VAL
58	n2	39	ASP
58	n2	47	VAL
58	n2	50	LEU
58	n2	54	VAL
58	n2	55	THR
58	n2	58	GLU
58	n2	62	VAL

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Mol	Chain	Res	Type
58	n2	63	VAL
58	n2	66	VAL
58	n2	68	THR
58	n2	74	LYS
58	n2	90	ARG
58	n2	98	THR
58	n2	100	THR
59	n3	13	ILE
59	n3	40	LYS
59	n3	45	ARG
59	n3	69	LEU
59	n3	73	VAL
59	n3	74	MET
59	n3	75	PRO
59	n3	86	ARG
59	n3	88	ARG
59	n3	120	LYS
59	n3	125	LEU
60	n4	1	MET
60	n4	19	THR
60	n4	25	ASP
60	n4	34	SER
60	n4	39	LEU
60	n4	54	LEU
60	n4	57	LYS
60	n4	60	LYS
60	n4	63	ILE
60	n4	82	ILE
60	n4	89	LEU
60	n4	96	LEU
60	n4	126	GLU
60	n4	127	LYS
60	n4	130	SER
61	n5	24	LEU
61	n5	27	ARG
61	n5	34	LEU
61	n5	37	THR
61	n5	38	LEU
61	n5	40	LEU
61	n5	56	ARG
61	n5	63	ILE
61	n5	70	GLU

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Mol	Chain	Res	Type
61	n5	71	THR
61	n5	73	MET
61	n5	86	VAL
61	n5	115	ARG
61	n5	125	ARG
61	n5	133	LEU
61	n5	135	ILE
61	n5	142	ILE
62	n6	3	LYS
62	n6	8	VAL
62	n6	10	SER
62	n6	11	ASP
62	n6	12	ARG
62	n6	13	ARG
62	n6	32	SER
62	n6	37	LYS
62	n6	40	ARG
62	n6	45	ILE
62	n6	50	ILE
62	n6	56	VAL
62	n6	57	LEU
62	n6	62	SER
62	n6	66	GLN
62	n6	71	SER
62	n6	74	TYR
62	n6	76	LEU
62	n6	80	VAL
62	n6	82	VAL
62	n6	83	ASP
62	n6	86	THR
62	n6	94	SER
62	n6	105	VAL
62	n6	108	LYS
62	n6	112	ASP
62	n6	115	ARG
62	n6	120	GLN
63	n7	3	LYS
63	n7	15	ARG
63	n7	17	ARG
63	n7	24	VAL
63	n7	34	LYS
63	n7	36	HIS

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Mol	Chain	Res	Type
63	n7	46	ILE
63	n7	57	HIS
63	n7	65	ARG
63	n7	72	ILE
63	n7	81	LEU
63	n7	83	THR
63	n7	95	VAL
63	n7	100	THR
63	n7	102	GLU
63	n7	105	SER
63	n7	121	ARG
63	n7	126	LYS
63	n7	127	ASN
63	n7	134	LEU
63	n7	135	ARG
64	n8	3	SER
64	n8	6	THR
64	n8	8	THR
64	n8	10	LYS
64	n8	15	VAL
64	n8	26	ARG
64	n8	42	ARG
64	n8	46	ASP
64	n8	47	LYS
64	n8	60	TYR
64	n8	73	LEU
64	n8	76	ASP
64	n8	78	LEU
64	n8	88	ASP
64	n8	91	LEU
64	n8	98	THR
64	n8	130	VAL
64	n8	132	LYS
64	n8	133	LEU
65	n9	6	ASN
65	n9	13	THR
65	n9	26	THR
65	n9	31	SER
65	n9	38	LYS
65	n9	54	LEU
65	n9	58	LYS
65	n9	59	LYS

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Mol	Chain	Res	Type
66	o0	14	LEU
66	o0	18	ILE
66	o0	19	LYS
66	o0	40	LYS
66	o0	41	LEU
66	o0	55	GLU
66	o0	61	MET
66	o0	68	TYR
66	o0	71	GLN
66	o0	74	ASN
66	o0	76	GLU
66	o0	86	ARG
66	o0	87	VAL
66	o0	99	ASP
66	o0	103	THR
67	o1	6	ASP
67	o1	13	THR
67	o1	16	LEU
67	o1	24	SER
67	o1	26	LYS
67	o1	31	ARG
67	o1	34	LYS
67	o1	44	MET
67	o1	55	LEU
67	o1	64	VAL
67	o1	71	LEU
67	o1	76	SER
67	o1	96	VAL
67	o1	102	LYS
67	o1	106	THR
67	o1	107	VAL
67	o1	110	GLU
68	o2	6	HIS
68	o2	16	LYS
68	o2	24	ARG
68	o2	27	ARG
68	o2	33	ARG
68	o2	34	LYS
68	o2	50	ILE
68	o2	51	SER
68	o2	52	GLN
68	o2	54	LYS

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Mol	Chain	Res	Type
68	o2	61	LYS
68	o2	71	HIS
68	o2	73	THR
68	o2	75	LEU
68	o2	82	LEU
68	o2	84	THR
68	o2	86	THR
68	o2	89	THR
68	o2	109	LEU
68	o2	123	LYS
68	o2	125	ARG
68	o2	126	LEU
69	o3	4	SER
69	o3	21	ARG
69	o3	31	LYS
69	o3	33	GLU
69	o3	49	ILE
69	o3	56	SER
69	o3	57	LYS
69	o3	58	GLU
69	o3	59	VAL
69	o3	60	ARG
69	o3	70	LYS
69	o3	81	VAL
69	o3	84	THR
69	o3	86	ARG
69	o3	93	THR
69	o3	97	SER
69	o3	98	VAL
70	o4	5	VAL
70	o4	9	ARG
70	o4	16	ARG
70	o4	21	LYS
70	o4	22	VAL
70	o4	25	THR
70	o4	30	LEU
70	o4	31	ARG
70	o4	35	VAL
70	o4	47	CYS
70	o4	49	SER
70	o4	51	LEU
70	o4	58	ARG

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Mol	Chain	Res	Type
70	o4	59	PRO
70	o4	65	VAL
70	o4	66	SER
70	o4	71	THR
70	o4	79	SER
70	o4	85	VAL
70	o4	86	LYS
70	o4	98	GLN
71	o5	4	VAL
71	o5	11	THR
71	o5	20	GLN
71	o5	21	LEU
71	o5	27	GLU
71	o5	31	LEU
71	o5	36	LEU
71	o5	45	LYS
71	o5	46	THR
71	o5	47	VAL
71	o5	48	ARG
71	o5	53	CYS
71	o5	63	ARG
71	o5	68	GLN
71	o5	69	LEU
71	o5	73	LYS
71	o5	80	LEU
71	o5	85	THR
71	o5	86	ARG
71	o5	89	ARG
71	o5	90	ARG
71	o5	100	VAL
71	o5	107	LYS
71	o5	115	LYS
71	o5	119	LYS
72	o6	3	VAL
72	o6	7	ILE
72	o6	9	ILE
72	o6	12	ASN
72	o6	17	VAL
72	o6	26	ILE
72	o6	29	LYS
72	o6	34	SER
72	o6	35	ASN

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Mol	Chain	Res	Type
72	o6	36	ARG
72	o6	38	LYS
72	o6	43	LEU
72	o6	45	ARG
72	o6	56	ARG
72	o6	57	LEU
72	o6	58	ILE
72	o6	59	ASP
72	o6	60	LEU
72	o6	61	ILE
72	o6	70	ARG
72	o6	76	ARG
72	o6	79	SER
72	o6	81	THR
72	o6	94	ILE
72	o6	98	ARG
73	o7	17	THR
73	o7	19	CYS
73	o7	33	THR
73	o7	36	SER
73	o7	54	LYS
73	o7	55	ARG
73	o7	65	ARG
73	o7	67	LEU
73	o7	74	PHE
73	o7	80	THR
74	o8	8	ILE
74	o8	12	LEU
74	o8	17	ARG
74	o8	22	THR
74	o8	24	THR
74	o8	41	THR
74	o8	50	SER
74	o8	53	THR
74	o8	61	LYS
74	o8	64	LYS
74	o8	65	LEU
75	o9	4	GLN
75	o9	5	LYS
75	o9	9	ILE
75	o9	11	GLN
75	o9	15	LYS

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Mol	Chain	Res	Type
75	o9	21	ARG
75	o9	45	ARG
75	o9	48	LYS
76	q0	79	GLU
76	q0	80	PRO
76	q0	85	LEU
76	q0	87	SER
76	q0	88	LYS
76	q0	106	ARG
76	q0	108	THR
76	q0	112	LYS
76	q0	113	ARG
76	q0	114	LYS
76	q0	127	LEU
77	q1	2	ARG
77	q1	6	ARG
77	q1	9	ARG
77	q1	13	LEU
77	q1	21	ARG
77	q1	23	ARG
77	q1	24	SER
78	q2	2	VAL
78	q2	7	THR
78	q2	8	ARG
78	q2	20	HIS
78	q2	22	GLN
78	q2	26	THR
78	q2	38	GLN
78	q2	45	ARG
78	q2	47	GLN
78	q2	71	ARG
78	q2	78	LYS
78	q2	83	LEU
78	q2	84	THR
78	q2	85	LEU
78	q2	89	LYS
78	q2	93	LEU
78	q2	98	LYS
78	q2	104	LEU
78	q2	105	GLN
78	q2	106	PHE
79	q3	3	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	q3	8	VAL
79	q3	16	VAL
79	q3	22	LEU
79	q3	24	ARG
79	q3	33	GLN
79	q3	42	CYS
79	q3	48	LYS
79	q3	49	ARG
79	q3	54	ILE
79	q3	56	THR
79	q3	57	CYS
79	q3	58	SER
79	q3	70	THR
79	q3	73	THR
79	q3	81	SER
81	p0	4	ILE
81	p0	5	ARG
81	p0	15	LEU
81	p0	25	LEU
81	p0	30	VAL
81	p0	39	HIS
81	p0	42	ARG
81	p0	55	LYS
81	p0	63	ILE
81	p0	67	LEU
81	p0	70	LEU
81	p0	76	LEU
81	p0	80	VAL
81	p0	81	LYS
81	p0	91	GLU
81	p0	93	LEU
81	p0	96	ILE
81	p0	97	LYS
81	p0	104	ARG
81	p0	185	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (58) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	S0	163	ASN
2	S0	164	ASN
3	S1	118	GLN

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Mol	Chain	Res	Type
3	S1	177	GLN
3	S1	208	GLN
6	S4	50	ASN
6	S4	231	GLN
6	S4	259	GLN
7	S5	131	GLN
11	S9	110	GLN
12	C0	12	HIS
13	C1	118	GLN
18	C6	83	GLN
21	C9	70	GLN
21	C9	138	GLN
25	D3	75	GLN
27	D5	95	HIS
39	L2	47	GLN
39	L2	83	HIS
41	L4	311	HIS
42	L5	40	HIS
42	L5	81	HIS
46	L9	50	ASN
46	L9	162	GLN
51	M5	194	GLN
53	M7	45	GLN
55	M9	130	ASN
57	N1	49	GLN
62	N6	100	HIS
65	N9	45	HIS
75	O9	4	GLN
2	s0	46	HIS
5	s3	74	GLN
6	s4	209	HIS
6	s4	224	ASN
8	s6	22	HIS
8	s6	119	GLN
9	s7	71	HIS
11	s9	110	GLN
11	s9	124	HIS
21	c9	64	HIS
22	d0	16	GLN
24	d2	56	HIS
26	d4	22	GLN
30	d8	27	GLN

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Mol	Chain	Res	Type
34	sR	29	GLN
39	l2	38	HIS
40	l3	211	GLN
41	l4	279	HIS
41	l4	307	GLN
48	m1	132	ASN
51	m5	15	GLN
51	m5	178	HIS
52	m6	90	HIS
57	n1	16	GLN
59	n3	33	ASN
59	n3	132	ASN
63	n7	127	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	2	1747/1800 (97%)	495 (28%)	62 (3%)
1	6	1793/1800 (99%)	481 (26%)	53 (2%)
36	1	3145/3396 (92%)	712 (22%)	87 (2%)
36	5	3145/3396 (92%)	700 (22%)	82 (2%)
37	3	120/121 (99%)	21 (17%)	2 (1%)
37	7	120/121 (99%)	22 (18%)	2 (1%)
38	4	157/158 (99%)	40 (25%)	5 (3%)
38	8	157/158 (99%)	40 (25%)	2 (1%)
All	All	10384/10950 (94%)	2511 (24%)	295 (2%)

All (2511) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	2	2	A
1	2	4	C
1	2	25	C
1	2	26	A
1	2	27	U
1	2	34	G
1	2	40	A
1	2	41	A
1	2	45	U
1	2	46	A
1	2	47	A

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Mol	Chain	Res	Type
1	2	57	G
1	2	60	U
1	2	63	G
1	2	66	U
1	2	67	A
1	2	68	A
1	2	69	G
1	2	72	A
1	2	73	U
1	2	74	U
1	2	75	U
1	2	76	A
1	2	77	U
1	2	104	A
1	2	114	C
1	2	127	G
1	2	129	U
1	2	130	C
1	2	131	C
1	2	132	U
1	2	133	U
1	2	134	U
1	2	135	A
1	2	136	C
1	2	137	U
1	2	140	A
1	2	141	U
1	2	144	U
1	2	145	A
1	2	146	U
1	2	153	G
1	2	158	U
1	2	159	U
1	2	167	U
1	2	169	A
1	2	174	U
1	2	178	U
1	2	179	A
1	2	185	U
1	2	186	C
1	2	188	A
1	2	190	C

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Mol	Chain	Res	Type
1	2	191	C
1	2	192	U
1	2	193	U
1	2	194	U
1	2	195	G
1	2	196	G
1	2	197	A
1	2	198	A
1	2	200	A
1	2	215	A
1	2	218	A
1	2	219	A
1	2	220	A
1	2	226	A
1	2	227	U
1	2	228	G
1	2	229	U
1	2	231	U
1	2	233	C
1	2	234	G
1	2	235	G
1	2	236	A
1	2	238	U
1	2	239	C
1	2	240	U
1	2	241	U
1	2	242	U
1	2	250	C
1	2	260	U
1	2	261	U
1	2	265	A
1	2	271	A
1	2	272	U
1	2	274	G
1	2	275	C
1	2	276	C
1	2	277	U
1	2	278	U
1	2	279	G
1	2	280	U
1	2	281	G
1	2	284	G

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Mol	Chain	Res	Type
1	2	288	A
1	2	290	G
1	2	299	A
1	2	308	C
1	2	309	C
1	2	313	U
1	2	314	C
1	2	316	A
1	2	319	U
1	2	321	C
1	2	322	G
1	2	332	U
1	2	337	G
1	2	338	C
1	2	352	A
1	2	359	A
1	2	360	A
1	2	361	C
1	2	363	G
1	2	387	A
1	2	390	G
1	2	393	C
1	2	399	A
1	2	400	A
1	2	402	C
1	2	404	G
1	2	416	A
1	2	418	G
1	2	419	G
1	2	423	G
1	2	424	C
1	2	425	A
1	2	426	G
1	2	428	A
1	2	434	G
1	2	439	U
1	2	444	C
1	2	446	A
1	2	448	C
1	2	468	A
1	2	470	A
1	2	477	A

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Mol	Chain	Res	Type
1	2	484	C
1	2	485	A
1	2	486	G
1	2	488	G
1	2	493	U
1	2	494	U
1	2	495	C
1	2	496	G
1	2	497	G
1	2	498	G
1	2	499	U
1	2	500	C
1	2	501	U
1	2	502	U
1	2	503	G
1	2	504	U
1	2	505	A
1	2	506	A
1	2	507	U
1	2	510	G
1	2	511	A
1	2	513	U
1	2	514	G
1	2	515	A
1	2	516	G
1	2	519	C
1	2	525	A
1	2	527	A
1	2	532	U
1	2	536	C
1	2	538	A
1	2	539	G
1	2	540	G
1	2	541	A
1	2	542	A
1	2	543	C
1	2	544	A
1	2	546	U
1	2	548	G
1	2	555	A
1	2	556	A
1	2	557	G

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Mol	Chain	Res	Type
1	2	558	U
1	2	559	C
1	2	565	C
1	2	571	G
1	2	579	A
1	2	580	A
1	2	585	A
1	2	594	A
1	2	595	G
1	2	597	G
1	2	609	U
1	2	610	G
1	2	619	A
1	2	620	A
1	2	621	A
1	2	622	A
1	2	623	A
1	2	624	G
1	2	639	U
1	2	640	U
1	2	650	U
1	2	653	C
1	2	655	G
1	2	656	G
1	2	657	U
1	2	658	C
1	2	677	G
1	2	679	U
1	2	680	U
1	2	682	C
1	2	684	A
1	2	685	A
1	2	686	C
1	2	692	C
1	2	694	U
1	2	695	U
1	2	696	C
1	2	697	C
1	2	700	C
1	2	702	G
1	2	703	G
1	2	704	C

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Mol	Chain	Res	Type
1	2	705	U
1	2	706	A
1	2	707	A
1	2	708	C
1	2	709	C
1	2	710	U
1	2	712	G
1	2	713	A
1	2	714	G
1	2	717	C
1	2	718	U
1	2	719	U
1	2	720	G
1	2	721	U
1	2	722	G
1	2	723	G
1	2	725	U
1	2	727	U
1	2	728	U
1	2	730	G
1	2	731	C
1	2	732	G
1	2	733	A
1	2	734	A
1	2	735	C
1	2	736	C
1	2	737	A
1	2	738	G
1	2	742	U
1	2	743	U
1	2	745	U
1	2	754	A
1	2	755	A
1	2	756	A
1	2	759	U
1	2	765	G
1	2	766	U
1	2	771	A
1	2	774	A
1	2	775	G
1	2	778	G
1	2	779	U

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Mol	Chain	Res	Type
1	2	781	U
1	2	782	U
1	2	783	G
1	2	784	C
1	2	787	G
1	2	789	A
1	2	793	A
1	2	794	U
1	2	795	U
1	2	812	A
1	2	815	G
1	2	816	G
1	2	818	C
1	2	819	G
1	2	820	U
1	2	821	U
1	2	822	U
1	2	823	G
1	2	824	G
1	2	829	A
1	2	830	U
1	2	831	U
1	2	833	U
1	2	837	G
1	2	840	U
1	2	846	G
1	2	852	C
1	2	854	U
1	2	856	A
1	2	860	U
1	2	862	A
1	2	863	A
1	2	864	U
1	2	881	A
1	2	886	U
1	2	898	A
1	2	912	U
1	2	913	G
1	2	914	G
1	2	916	U
1	2	921	U
1	2	933	A

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Mol	Chain	Res	Type
1	2	935	U
1	2	942	G
1	2	944	A
1	2	951	A
1	2	960	U
1	2	966	A
1	2	975	C
1	2	984	G
1	2	988	A
1	2	992	A
1	2	993	A
1	2	995	A
1	2	997	G
1	2	1003	A
1	2	1004	U
1	2	1005	A
1	2	1026	A
1	2	1028	C
1	2	1039	A
1	2	1040	G
1	2	1052	U
1	2	1053	G
1	2	1058	U
1	2	1059	U
1	2	1060	U
1	2	1061	A
1	2	1064	G
1	2	1074	G
1	2	1076	A
1	2	1080	U
1	2	1082	C
1	2	1083	G
1	2	1086	A
1	2	1091	A
1	2	1092	A
1	2	1096	C
1	2	1097	U
1	2	1100	G
1	2	1109	G
1	2	1119	G
1	2	1138	A
1	2	1146	G

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Mol	Chain	Res	Type
1	2	1150	G
1	2	1151	A
1	2	1155	G
1	2	1157	A
1	2	1158	C
1	2	1160	A
1	2	1167	G
1	2	1169	G
1	2	1185	U
1	2	1191	U
1	2	1194	A
1	2	1196	A
1	2	1197	C
1	2	1199	G
1	2	1200	G
1	2	1202	A
1	2	1207	C
1	2	1209	C
1	2	1212	G
1	2	1217	A
1	2	1218	G
1	2	1227	A
1	2	1228	G
1	2	1229	G
1	2	1243	G
1	2	1244	A
1	2	1245	G
1	2	1251	U
1	2	1255	G
1	2	1257	U
1	2	1258	U
1	2	1259	U
1	2	1263	G
1	2	1276	U
1	2	1286	U
1	2	1287	A
1	2	1288	G
1	2	1300	A
1	2	1301	U
1	2	1314	U
1	2	1315	U
1	2	1320	U

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Mol	Chain	Res	Type
1	2	1321	A
1	2	1329	A
1	2	1338	C
1	2	1339	C
1	2	1340	U
1	2	1341	A
1	2	1344	A
1	2	1345	A
1	2	1346	A
1	2	1349	G
1	2	1354	G
1	2	1355	C
1	2	1362	U
1	2	1363	U
1	2	1364	G
1	2	1370	U
1	2	1371	A
1	2	1372	U
1	2	1383	G
1	2	1388	A
1	2	1390	U
1	2	1398	U
1	2	1399	C
1	2	1407	U
1	2	1412	G
1	2	1413	U
1	2	1414	U
1	2	1415	U
1	2	1425	A
1	2	1427	A
1	2	1428	G
1	2	1431	C
1	2	1433	G
1	2	1435	G
1	2	1445	G
1	2	1446	A
1	2	1448	G
1	2	1457	C
1	2	1458	G
1	2	1459	C
1	2	1461	C
1	2	1471	A

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Mol	Chain	Res	Type
1	2	1473	U
1	2	1474	G
1	2	1475	A
1	2	1482	C
1	2	1486	G
1	2	1489	U
1	2	1490	C
1	2	1491	U
1	2	1492	A
1	2	1493	A
1	2	1499	G
1	2	1503	A
1	2	1506	G
1	2	1514	U
1	2	1516	A
1	2	1517	U
1	2	1523	G
1	2	1524	A
1	2	1526	A
1	2	1530	C
1	2	1535	U
1	2	1536	G
1	2	1537	C
1	2	1538	U
1	2	1542	G
1	2	1550	A
1	2	1557	U
1	2	1559	A
1	2	1569	A
1	2	1572	G
1	2	1574	G
1	2	1584	G
1	2	1590	G
1	2	1601	G
1	2	1614	A
1	2	1616	G
1	2	1618	C
1	2	1625	C
1	2	1631	A
1	2	1652	C
1	2	1657	U
1	2	1658	G

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Mol	Chain	Res	Type
1	2	1666	U
1	2	1680	G
1	2	1682	U
1	2	1683	C
1	2	1684	U
1	2	1731	A
1	2	1750	A
1	2	1760	G
1	2	1762	A
1	2	1766	A
1	2	1769	U
1	2	1770	U
1	2	1772	C
1	2	1780	G
1	2	1782	A
1	2	1783	C
1	2	1792	G
1	2	1793	G
1	2	1794	A
1	2	1795	U
1	2	1796	C
1	2	1798	U
36	1	13	A
36	1	14	U
36	1	15	C
36	1	26	A
36	1	40	A
36	1	49	A
36	1	57	A
36	1	59	G
36	1	60	A
36	1	65	A
36	1	66	A
36	1	73	C
36	1	76	G
36	1	87	U
36	1	92	G
36	1	93	C
36	1	94	G
36	1	99	A
36	1	109	A
36	1	110	G

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Mol	Chain	Res	Type
36	1	111	C
36	1	113	C
36	1	117	U
36	1	121	A
36	1	122	A
36	1	133	U
36	1	135	C
36	1	136	G
36	1	156	G
36	1	157	A
36	1	161	G
36	1	166	C
36	1	169	U
36	1	170	G
36	1	173	G
36	1	182	U
36	1	187	A
36	1	190	U
36	1	191	U
36	1	192	C
36	1	210	U
36	1	211	A
36	1	218	G
36	1	219	A
36	1	232	G
36	1	236	G
36	1	238	A
36	1	240	U
36	1	241	G
36	1	243	G
36	1	245	U
36	1	246	U
36	1	247	C
36	1	249	U
36	1	250	U
36	1	251	G
36	1	252	U
36	1	269	G
36	1	270	U
36	1	282	G
36	1	283	G
36	1	286	U

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Mol	Chain	Res	Type
36	1	289	A
36	1	295	A
36	1	298	U
36	1	305	U
36	1	311	C
36	1	315	C
36	1	323	A
36	1	329	U
36	1	339	C
36	1	349	A
36	1	350	C
36	1	370	U
36	1	375	A
36	1	376	G
36	1	390	G
36	1	395	A
36	1	398	A
36	1	399	A
36	1	401	U
36	1	402	A
36	1	403	C
36	1	404	G
36	1	420	G
36	1	421	G
36	1	422	A
36	1	439	C
36	1	440	A
36	1	495	G
36	1	497	C
36	1	498	A
36	1	507	U
36	1	520	U
36	1	521	A
36	1	531	G
36	1	535	G
36	1	543	C
36	1	544	C
36	1	546	C
36	1	547	G
36	1	548	G
36	1	551	A
36	1	552	G

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Mol	Chain	Res	Type
36	1	553	U
36	1	555	U
36	1	557	A
36	1	559	A
36	1	568	G
36	1	578	A
36	1	579	G
36	1	589	A
36	1	592	A
36	1	599	C
36	1	604	G
36	1	609	G
36	1	611	A
36	1	619	A
36	1	620	U
36	1	621	A
36	1	636	C
36	1	637	C
36	1	643	U
36	1	648	C
36	1	649	A
36	1	651	G
36	1	658	G
36	1	660	A
36	1	662	U
36	1	667	C
36	1	677	A
36	1	681	U
36	1	691	A
36	1	692	A
36	1	705	A
36	1	708	G
36	1	712	G
36	1	715	A
36	1	716	A
36	1	718	G
36	1	725	G
36	1	726	G
36	1	733	G
36	1	758	C
36	1	764	U
36	1	766	U

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Mol	Chain	Res	Type
36	1	767	U
36	1	768	C
36	1	776	U
36	1	777	U
36	1	780	A
36	1	781	G
36	1	785	G
36	1	803	C
36	1	806	A
36	1	817	A
36	1	830	A
36	1	842	G
36	1	849	C
36	1	861	C
36	1	864	G
36	1	869	G
36	1	874	U
36	1	879	U
36	1	896	A
36	1	897	U
36	1	907	G
36	1	908	G
36	1	914	A
36	1	916	G
36	1	917	A
36	1	921	A
36	1	923	C
36	1	924	G
36	1	929	A
36	1	937	G
36	1	938	C
36	1	943	U
36	1	944	C
36	1	953	G
36	1	959	C
36	1	960	U
36	1	961	C
36	1	962	A
36	1	974	G
36	1	979	U
36	1	980	A
36	1	981	U

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Mol	Chain	Res	Type
36	1	982	C
36	1	993	G
36	1	994	G
36	1	1001	G
36	1	1002	A
36	1	1006	A
36	1	1010	G
36	1	1017	C
36	1	1018	G
36	1	1020	G
36	1	1021	G
36	1	1024	G
36	1	1025	A
36	1	1029	G
36	1	1035	G
36	1	1037	C
36	1	1041	U
36	1	1047	A
36	1	1049	C
36	1	1052	U
36	1	1064	A
36	1	1065	A
36	1	1068	C
36	1	1069	C
36	1	1072	G
36	1	1081	U
36	1	1082	U
36	1	1083	G
36	1	1087	G
36	1	1093	A
36	1	1094	U
36	1	1095	U
36	1	1096	U
36	1	1097	G
36	1	1098	A
36	1	1103	A
36	1	1104	G
36	1	1113	G
36	1	1117	G
36	1	1128	U
36	1	1129	A
36	1	1131	G

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Mol	Chain	Res	Type
36	1	1153	A
36	1	1159	A
36	1	1160	C
36	1	1168	U
36	1	1180	A
36	1	1181	U
36	1	1182	A
36	1	1190	A
36	1	1191	U
36	1	1192	C
36	1	1201	C
36	1	1202	A
36	1	1209	G
36	1	1212	A
36	1	1213	G
36	1	1216	C
36	1	1217	A
36	1	1221	A
36	1	1222	G
36	1	1225	A
36	1	1227	C
36	1	1232	C
36	1	1233	G
36	1	1235	U
36	1	1236	G
36	1	1237	G
36	1	1238	C
36	1	1241	U
36	1	1242	G
36	1	1243	G
36	1	1245	A
36	1	1246	G
36	1	1248	C
36	1	1249	G
36	1	1251	A
36	1	1258	U
36	1	1262	G
36	1	1263	A
36	1	1264	G
36	1	1265	U
36	1	1266	G
36	1	1267	U

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Mol	Chain	Res	Type
36	1	1269	U
36	1	1270	A
36	1	1271	A
36	1	1272	C
36	1	1274	A
36	1	1278	A
36	1	1279	C
36	1	1281	G
36	1	1285	G
36	1	1287	A
36	1	1307	G
36	1	1308	A
36	1	1309	U
36	1	1313	G
36	1	1325	U
36	1	1330	A
36	1	1331	U
36	1	1345	G
36	1	1348	U
36	1	1349	G
36	1	1351	U
36	1	1352	A
36	1	1353	U
36	1	1354	G
36	1	1355	A
36	1	1356	U
36	1	1357	G
36	1	1386	A
36	1	1399	A
36	1	1400	G
36	1	1418	A
36	1	1419	A
36	1	1431	G
36	1	1433	A
36	1	1434	G
36	1	1437	C
36	1	1443	G
36	1	1446	A
36	1	1450	G
36	1	1467	A
36	1	1481	A
36	1	1482	A

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Mol	Chain	Res	Type
36	1	1485	G
36	1	1487	G
36	1	1490	A
36	1	1508	C
36	1	1527	C
36	1	1529	A
36	1	1531	C
36	1	1536	G
36	1	1555	U
36	1	1556	C
36	1	1557	A
36	1	1560	G
36	1	1561	G
36	1	1562	C
36	1	1563	C
36	1	1564	U
36	1	1566	A
36	1	1567	U
36	1	1568	U
36	1	1569	U
36	1	1570	U
36	1	1572	U
36	1	1576	G
36	1	1580	A
36	1	1581	C
36	1	1582	C
36	1	1583	A
36	1	1587	A
36	1	1589	A
36	1	1593	A
36	1	1607	U
36	1	1613	A
36	1	1617	G
36	1	1620	U
36	1	1621	A
36	1	1629	U
36	1	1639	C
36	1	1641	U
36	1	1642	A
36	1	1643	A
36	1	1645	U
36	1	1657	C

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Mol	Chain	Res	Type
36	1	1673	G
36	1	1683	A
36	1	1716	U
36	1	1717	U
36	1	1724	U
36	1	1725	C
36	1	1741	A
36	1	1742	U
36	1	1750	A
36	1	1751	G
36	1	1752	A
36	1	1760	A
36	1	1761	C
36	1	1762	C
36	1	1764	U
36	1	1765	U
36	1	1766	G
36	1	1767	C
36	1	1769	G
36	1	1770	G
36	1	1775	G
36	1	1779	C
36	1	1780	G
36	1	1788	C
36	1	1797	A
36	1	1809	A
36	1	1810	A
36	1	1813	A
36	1	1814	A
36	1	1816	A
36	1	1817	G
36	1	1819	U
36	1	1820	U
36	1	1821	U
36	1	1835	A
36	1	1839	A
36	1	1840	U
36	1	1841	A
36	1	1842	A
36	1	1845	G
36	1	1846	C
36	1	1849	C

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Mol	Chain	Res	Type
36	1	1850	A
36	1	1851	G
36	1	1855	U
36	1	1857	C
36	1	1858	A
36	1	1871	U
36	1	1879	A
36	1	1880	U
36	1	1886	A
36	1	1893	A
36	1	1895	A
36	1	1896	A
36	1	1906	G
36	1	1927	G
36	1	1931	U
36	1	1935	G
36	1	1951	C
36	1	1952	G
36	1	1953	G
36	1	1954	G
36	1	2101	C
36	1	2102	U
36	1	2111	G
36	1	2112	U
36	1	2113	A
36	1	2121	G
36	1	2122	G
36	1	2130	G
36	1	2131	A
36	1	2134	G
36	1	2140	U
36	1	2144	A
36	1	2158	A
36	1	2165	G
36	1	2169	G
36	1	2170	U
36	1	2177	G
36	1	2194	G
36	1	2205	U
36	1	2206	G
36	1	2208	A
36	1	2209	U

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Mol	Chain	Res	Type
36	1	2210	G
36	1	2223	A
36	1	2225	U
36	1	2239	G
36	1	2243	A
36	1	2244	A
36	1	2245	C
36	1	2249	G
36	1	2250	G
36	1	2255	A
36	1	2256	A
36	1	2272	G
36	1	2273	G
36	1	2281	A
36	1	2282	U
36	1	2288	G
36	1	2298	U
36	1	2303	A
36	1	2307	G
36	1	2310	U
36	1	2313	A
36	1	2314	U
36	1	2315	G
36	1	2319	U
36	1	2334	U
36	1	2336	U
36	1	2362	C
36	1	2365	C
36	1	2372	A
36	1	2373	A
36	1	2374	C
36	1	2375	G
36	1	2378	C
36	1	2379	U
36	1	2385	G
36	1	2392	C
36	1	2393	G
36	1	2394	G
36	1	2397	A
36	1	2401	A
36	1	2402	A
36	1	2403	G

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Mol	Chain	Res	Type
36	1	2404	A
36	1	2411	U
36	1	2418	G
36	1	2419	A
36	1	2435	G
36	1	2437	G
36	1	2444	C
36	1	2445	A
36	1	2502	A
36	1	2503	G
36	1	2504	U
36	1	2511	A
36	1	2514	U
36	1	2515	A
36	1	2522	G
36	1	2523	A
36	1	2526	C
36	1	2532	U
36	1	2533	G
36	1	2537	U
36	1	2538	U
36	1	2539	C
36	1	2540	A
36	1	2541	U
36	1	2542	U
36	1	2543	U
36	1	2547	A
36	1	2548	C
36	1	2549	G
36	1	2552	C
36	1	2554	A
36	1	2555	G
36	1	2561	A
36	1	2568	C
36	1	2569	A
36	1	2570	U
36	1	2571	U
36	1	2572	C
36	1	2573	G
36	1	2576	G
36	1	2581	U
36	1	2585	G

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Mol	Chain	Res	Type
36	1	2586	G
36	1	2588	U
36	1	2593	A
36	1	2594	C
36	1	2606	G
36	1	2607	G
36	1	2614	G
36	1	2618	G
36	1	2621	G
36	1	2626	A
36	1	2637	A
36	1	2638	C
36	1	2639	G
36	1	2652	U
36	1	2656	A
36	1	2657	A
36	1	2671	A
36	1	2672	G
36	1	2674	A
36	1	2677	G
36	1	2689	A
36	1	2691	A
36	1	2693	C
36	1	2694	A
36	1	2696	A
36	1	2705	A
36	1	2714	G
36	1	2728	G
36	1	2729	U
36	1	2734	A
36	1	2737	C
36	1	2746	A
36	1	2748	A
36	1	2751	G
36	1	2752	U
36	1	2753	G
36	1	2762	A
36	1	2772	C
36	1	2773	C
36	1	2777	G
36	1	2778	G
36	1	2779	A

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Mol	Chain	Res	Type
36	1	2780	A
36	1	2788	C
36	1	2796	G
36	1	2799	A
36	1	2800	G
36	1	2801	A
36	1	2802	A
36	1	2803	A
36	1	2810	C
36	1	2814	G
36	1	2817	A
36	1	2818	U
36	1	2822	U
36	1	2829	U
36	1	2836	C
36	1	2842	U
36	1	2843	U
36	1	2845	A
36	1	2860	U
36	1	2871	G
36	1	2872	A
36	1	2875	U
36	1	2876	C
36	1	2887	A
36	1	2889	C
36	1	2899	C
36	1	2912	G
36	1	2923	U
36	1	2925	C
36	1	2927	C
36	1	2935	U
36	1	2936	A
36	1	2942	C
36	1	2945	G
36	1	2947	G
36	1	2954	U
36	1	2955	U
36	1	2971	A
36	1	2974	U
36	1	2978	U
36	1	2979	U
36	1	2983	C

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Mol	Chain	Res	Type
36	1	2990	G
36	1	2992	U
36	1	2996	U
36	1	2997	G
36	1	3012	A
36	1	3055	U
36	1	3056	U
36	1	3057	U
36	1	3058	U
36	1	3059	G
36	1	3078	U
36	1	3079	U
36	1	3080	G
36	1	3086	A
36	1	3087	A
36	1	3090	U
36	1	3091	A
36	1	3092	C
36	1	3094	A
36	1	3119	U
36	1	3122	A
36	1	3130	A
36	1	3131	U
36	1	3139	A
36	1	3142	A
36	1	3143	C
36	1	3151	U
36	1	3153	U
36	1	3154	C
36	1	3155	U
36	1	3156	U
36	1	3157	U
36	1	3164	C
36	1	3165	A
36	1	3168	A
36	1	3169	U
36	1	3170	A
36	1	3171	U
36	1	3173	G
36	1	3174	A
36	1	3176	G
36	1	3179	U

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Mol	Chain	Res	Type
36	1	3181	C
36	1	3187	A
36	1	3196	U
36	1	3199	G
36	1	3207	U
36	1	3210	A
36	1	3217	C
36	1	3218	A
36	1	3219	G
36	1	3220	G
36	1	3221	C
36	1	3223	A
36	1	3228	C
36	1	3229	G
36	1	3235	C
36	1	3245	A
36	1	3246	G
36	1	3247	G
36	1	3253	G
36	1	3259	U
36	1	3261	C
36	1	3268	A
36	1	3269	U
36	1	3270	U
36	1	3272	C
36	1	3276	G
36	1	3277	U
36	1	3281	U
36	1	3286	G
36	1	3287	U
36	1	3289	G
36	1	3294	A
36	1	3295	A
36	1	3304	U
36	1	3309	G
36	1	3313	U
36	1	3316	A
36	1	3317	U
36	1	3318	G
36	1	3319	U
36	1	3320	A
36	1	3335	A

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Mol	Chain	Res	Type
36	1	3341	U
36	1	3342	A
36	1	3345	G
36	1	3347	A
36	1	3351	U
36	1	3352	U
36	1	3353	G
36	1	3354	U
36	1	3355	U
36	1	3356	G
36	1	3360	C
36	1	3369	G
36	1	3375	A
36	1	3376	A
36	1	3378	C
36	1	3382	U
36	1	3383	G
36	1	3384	U
36	1	3389	U
36	1	3390	G
37	3	7	G
37	3	13	A
37	3	14	U
37	3	17	A
37	3	21	G
37	3	22	A
37	3	26	C
37	3	41	G
37	3	42	A
37	3	45	A
37	3	53	U
37	3	54	U
37	3	63	A
37	3	65	G
37	3	74	C
37	3	76	A
37	3	78	U
37	3	95	A
37	3	101	G
37	3	102	A
37	3	112	G
38	4	2	A

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Mol	Chain	Res	Type
38	4	9	A
38	4	26	U
38	4	34	U
38	4	35	C
38	4	43	A
38	4	48	A
38	4	50	C
38	4	52	A
38	4	53	A
38	4	58	G
38	4	59	A
38	4	62	C
38	4	63	G
38	4	75	G
38	4	79	A
38	4	80	A
38	4	81	U
38	4	82	U
38	4	83	C
38	4	84	C
38	4	85	G
38	4	86	U
38	4	87	G
38	4	90	U
38	4	95	G
38	4	97	A
38	4	104	A
38	4	105	A
38	4	106	C
38	4	111	A
38	4	113	U
38	4	125	U
38	4	126	A
38	4	128	U
38	4	138	A
38	4	142	C
38	4	148	G
38	4	152	G
38	4	158	U
1	6	2	A
1	6	4	C
1	6	17	C

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Mol	Chain	Res	Type
1	6	25	C
1	6	26	A
1	6	27	U
1	6	34	G
1	6	46	A
1	6	47	A
1	6	57	G
1	6	61	A
1	6	66	U
1	6	67	A
1	6	68	A
1	6	69	G
1	6	73	U
1	6	75	U
1	6	76	A
1	6	77	U
1	6	78	A
1	6	100	A
1	6	103	A
1	6	104	A
1	6	114	C
1	6	127	G
1	6	132	U
1	6	137	U
1	6	138	A
1	6	140	A
1	6	141	U
1	6	144	U
1	6	145	A
1	6	153	G
1	6	158	U
1	6	159	U
1	6	165	G
1	6	166	C
1	6	178	U
1	6	185	U
1	6	188	A
1	6	190	C
1	6	191	C
1	6	192	U
1	6	193	U
1	6	195	G

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Mol	Chain	Res	Type
1	6	196	G
1	6	198	A
1	6	199	G
1	6	200	A
1	6	215	A
1	6	216	U
1	6	217	A
1	6	218	A
1	6	219	A
1	6	220	A
1	6	222	A
1	6	226	A
1	6	227	U
1	6	228	G
1	6	229	U
1	6	230	C
1	6	232	U
1	6	233	C
1	6	234	G
1	6	235	G
1	6	240	U
1	6	241	U
1	6	249	U
1	6	250	C
1	6	260	U
1	6	261	U
1	6	265	A
1	6	266	A
1	6	271	A
1	6	272	U
1	6	273	G
1	6	277	U
1	6	278	U
1	6	280	U
1	6	285	G
1	6	292	U
1	6	298	C
1	6	299	A
1	6	304	U
1	6	309	C
1	6	314	C
1	6	316	A

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Mol	Chain	Res	Type
1	6	319	U
1	6	320	U
1	6	321	C
1	6	322	G
1	6	333	A
1	6	337	G
1	6	338	C
1	6	341	A
1	6	346	G
1	6	352	A
1	6	359	A
1	6	360	A
1	6	361	C
1	6	369	A
1	6	390	G
1	6	400	A
1	6	401	A
1	6	402	C
1	6	404	G
1	6	416	A
1	6	418	G
1	6	419	G
1	6	421	A
1	6	424	C
1	6	425	A
1	6	426	G
1	6	428	A
1	6	434	G
1	6	439	U
1	6	444	C
1	6	448	C
1	6	452	A
1	6	454	U
1	6	468	A
1	6	475	A
1	6	477	A
1	6	484	C
1	6	485	A
1	6	486	G
1	6	487	G
1	6	488	G
1	6	489	C

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Mol	Chain	Res	Type
1	6	490	C
1	6	492	A
1	6	493	U
1	6	494	U
1	6	496	G
1	6	497	G
1	6	500	C
1	6	501	U
1	6	504	U
1	6	505	A
1	6	506	A
1	6	508	U
1	6	510	G
1	6	511	A
1	6	512	A
1	6	513	U
1	6	514	G
1	6	516	G
1	6	519	C
1	6	527	A
1	6	536	C
1	6	538	A
1	6	539	G
1	6	540	G
1	6	541	A
1	6	542	A
1	6	543	C
1	6	544	A
1	6	548	G
1	6	555	A
1	6	556	A
1	6	557	G
1	6	558	U
1	6	559	C
1	6	565	C
1	6	570	A
1	6	574	G
1	6	578	U
1	6	579	A
1	6	580	A
1	6	582	U
1	6	594	A

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Mol	Chain	Res	Type
1	6	595	G
1	6	597	G
1	6	609	U
1	6	610	G
1	6	619	A
1	6	620	A
1	6	622	A
1	6	623	A
1	6	624	G
1	6	634	G
1	6	637	C
1	6	639	U
1	6	648	G
1	6	650	U
1	6	651	G
1	6	652	G
1	6	653	C
1	6	654	C
1	6	658	C
1	6	661	A
1	6	662	U
1	6	665	U
1	6	667	U
1	6	668	C
1	6	670	U
1	6	676	G
1	6	678	A
1	6	679	U
1	6	680	U
1	6	681	U
1	6	682	C
1	6	683	C
1	6	684	A
1	6	685	A
1	6	691	C
1	6	695	U
1	6	696	C
1	6	697	C
1	6	698	U
1	6	709	C
1	6	710	U
1	6	711	U

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Mol	Chain	Res	Type
1	6	714	G
1	6	718	U
1	6	719	U
1	6	720	G
1	6	721	U
1	6	722	G
1	6	723	G
1	6	730	G
1	6	742	U
1	6	745	U
1	6	751	G
1	6	753	A
1	6	754	A
1	6	755	A
1	6	756	A
1	6	765	G
1	6	774	A
1	6	775	G
1	6	780	A
1	6	781	U
1	6	782	U
1	6	783	G
1	6	787	G
1	6	789	A
1	6	792	U
1	6	793	A
1	6	794	U
1	6	795	U
1	6	803	A
1	6	806	A
1	6	811	A
1	6	812	A
1	6	815	G
1	6	816	G
1	6	821	U
1	6	822	U
1	6	823	G
1	6	825	U
1	6	826	U
1	6	828	U
1	6	829	A
1	6	830	U

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Mol	Chain	Res	Type
1	6	831	U
1	6	832	U
1	6	834	G
1	6	835	U
1	6	856	A
1	6	861	U
1	6	862	A
1	6	863	A
1	6	873	U
1	6	898	A
1	6	906	A
1	6	913	G
1	6	914	G
1	6	916	U
1	6	933	A
1	6	935	U
1	6	942	G
1	6	944	A
1	6	951	A
1	6	959	U
1	6	960	U
1	6	966	A
1	6	969	C
1	6	970	A
1	6	971	A
1	6	976	G
1	6	985	G
1	6	992	A
1	6	993	A
1	6	997	G
1	6	1003	A
1	6	1004	U
1	6	1005	A
1	6	1020	A
1	6	1021	C
1	6	1026	A
1	6	1028	C
1	6	1029	U
1	6	1036	A
1	6	1039	A
1	6	1040	G
1	6	1052	U

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Mol	Chain	Res	Type
1	6	1053	G
1	6	1057	U
1	6	1058	U
1	6	1059	U
1	6	1060	U
1	6	1063	U
1	6	1072	C
1	6	1073	G
1	6	1074	G
1	6	1082	C
1	6	1083	G
1	6	1092	A
1	6	1096	C
1	6	1097	U
1	6	1098	U
1	6	1100	G
1	6	1109	G
1	6	1137	A
1	6	1138	A
1	6	1146	G
1	6	1151	A
1	6	1154	G
1	6	1155	G
1	6	1158	C
1	6	1159	C
1	6	1160	A
1	6	1167	G
1	6	1185	U
1	6	1194	A
1	6	1196	A
1	6	1199	G
1	6	1200	G
1	6	1202	A
1	6	1208	A
1	6	1213	G
1	6	1214	U
1	6	1217	A
1	6	1218	G
1	6	1219	A
1	6	1226	A
1	6	1228	G
1	6	1229	G

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Mol	Chain	Res	Type
1	6	1230	A
1	6	1231	U
1	6	1236	A
1	6	1239	U
1	6	1240	U
1	6	1241	G
1	6	1242	A
1	6	1243	G
1	6	1244	A
1	6	1245	G
1	6	1246	C
1	6	1248	C
1	6	1250	U
1	6	1255	G
1	6	1256	A
1	6	1257	U
1	6	1258	U
1	6	1259	U
1	6	1262	U
1	6	1275	A
1	6	1285	U
1	6	1286	U
1	6	1291	G
1	6	1307	U
1	6	1314	U
1	6	1315	U
1	6	1316	G
1	6	1321	A
1	6	1338	C
1	6	1343	U
1	6	1344	A
1	6	1345	A
1	6	1354	G
1	6	1355	C
1	6	1361	U
1	6	1362	U
1	6	1363	U
1	6	1364	G
1	6	1370	U
1	6	1371	A
1	6	1372	U
1	6	1383	G

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Mol	Chain	Res	Type
1	6	1388	A
1	6	1390	U
1	6	1397	U
1	6	1398	U
1	6	1399	C
1	6	1400	A
1	6	1402	G
1	6	1412	G
1	6	1413	U
1	6	1415	U
1	6	1422	A
1	6	1427	A
1	6	1428	G
1	6	1429	G
1	6	1431	C
1	6	1432	U
1	6	1433	G
1	6	1435	G
1	6	1445	G
1	6	1446	A
1	6	1448	G
1	6	1451	C
1	6	1458	G
1	6	1459	C
1	6	1460	A
1	6	1461	C
1	6	1471	A
1	6	1481	C
1	6	1482	C
1	6	1489	U
1	6	1490	C
1	6	1491	U
1	6	1492	A
1	6	1493	A
1	6	1496	U
1	6	1506	G
1	6	1514	U
1	6	1515	A
1	6	1516	A
1	6	1517	U
1	6	1521	G
1	6	1523	G

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Mol	Chain	Res	Type
1	6	1524	A
1	6	1535	U
1	6	1536	G
1	6	1537	C
1	6	1538	U
1	6	1540	G
1	6	1554	U
1	6	1557	U
1	6	1559	A
1	6	1569	A
1	6	1573	A
1	6	1574	G
1	6	1577	A
1	6	1584	G
1	6	1590	G
1	6	1596	C
1	6	1601	G
1	6	1616	G
1	6	1621	U
1	6	1622	G
1	6	1637	C
1	6	1638	G
1	6	1656	U
1	6	1657	U
1	6	1658	G
1	6	1696	G
1	6	1697	G
1	6	1698	G
1	6	1699	G
1	6	1700	C
1	6	1701	A
1	6	1702	A
1	6	1710	U
1	6	1712	A
1	6	1715	G
1	6	1716	C
1	6	1717	G
1	6	1731	A
1	6	1736	G
1	6	1742	U
1	6	1754	A
1	6	1755	A

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Mol	Chain	Res	Type
1	6	1760	G
1	6	1762	A
1	6	1766	A
1	6	1767	G
1	6	1769	U
1	6	1770	U
1	6	1780	G
1	6	1782	A
1	6	1789	G
1	6	1792	G
1	6	1793	G
1	6	1794	A
1	6	1795	U
1	6	1796	C
1	6	1799	U
1	6	1800	A
36	5	21	G
36	5	26	A
36	5	40	A
36	5	43	A
36	5	44	U
36	5	49	A
36	5	57	A
36	5	60	A
36	5	62	A
36	5	65	A
36	5	66	A
36	5	76	G
36	5	84	U
36	5	93	C
36	5	94	G
36	5	96	G
36	5	99	A
36	5	109	A
36	5	110	G
36	5	111	C
36	5	113	C
36	5	116	A
36	5	120	G
36	5	121	A
36	5	122	A
36	5	133	U

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Mol	Chain	Res	Type
36	5	134	U
36	5	135	C
36	5	136	G
36	5	142	C
36	5	156	G
36	5	157	A
36	5	161	G
36	5	165	A
36	5	166	C
36	5	170	G
36	5	171	G
36	5	172	G
36	5	174	C
36	5	178	U
36	5	180	C
36	5	182	U
36	5	187	A
36	5	190	U
36	5	191	U
36	5	200	C
36	5	206	G
36	5	210	U
36	5	211	A
36	5	213	A
36	5	218	G
36	5	219	A
36	5	221	A
36	5	231	G
36	5	234	G
36	5	236	G
36	5	237	G
36	5	239	G
36	5	240	U
36	5	242	C
36	5	244	G
36	5	246	U
36	5	248	U
36	5	249	U
36	5	250	U
36	5	251	G
36	5	252	U
36	5	253	A

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Mol	Chain	Res	Type
36	5	254	A
36	5	265	A
36	5	267	G
36	5	269	G
36	5	274	G
36	5	284	A
36	5	286	U
36	5	295	A
36	5	305	U
36	5	311	C
36	5	315	C
36	5	323	A
36	5	329	U
36	5	339	C
36	5	349	A
36	5	350	C
36	5	370	U
36	5	376	G
36	5	395	A
36	5	398	A
36	5	399	A
36	5	401	U
36	5	402	A
36	5	403	C
36	5	417	A
36	5	421	G
36	5	422	A
36	5	436	A
36	5	437	G
36	5	439	C
36	5	441	U
36	5	442	G
36	5	492	U
36	5	495	G
36	5	512	U
36	5	521	A
36	5	523	A
36	5	542	G
36	5	546	C
36	5	547	G
36	5	548	G
36	5	552	G

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Mol	Chain	Res	Type
36	5	553	U
36	5	555	U
36	5	557	A
36	5	558	U
36	5	559	A
36	5	578	A
36	5	579	G
36	5	592	A
36	5	594	U
36	5	604	G
36	5	609	G
36	5	610	G
36	5	611	A
36	5	619	A
36	5	620	U
36	5	621	A
36	5	636	C
36	5	642	U
36	5	649	A
36	5	660	A
36	5	677	A
36	5	681	U
36	5	692	A
36	5	705	A
36	5	708	G
36	5	712	G
36	5	715	A
36	5	716	A
36	5	725	G
36	5	727	G
36	5	735	A
36	5	736	A
36	5	758	C
36	5	766	U
36	5	767	U
36	5	774	G
36	5	776	U
36	5	777	U
36	5	780	A
36	5	781	G
36	5	785	G
36	5	786	A

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Mol	Chain	Res	Type
36	5	806	A
36	5	817	A
36	5	830	A
36	5	836	A
36	5	855	U
36	5	857	G
36	5	861	C
36	5	869	G
36	5	874	U
36	5	876	A
36	5	877	C
36	5	879	U
36	5	890	C
36	5	895	A
36	5	896	A
36	5	907	G
36	5	908	G
36	5	910	G
36	5	913	A
36	5	914	A
36	5	916	G
36	5	917	A
36	5	921	A
36	5	923	C
36	5	924	G
36	5	937	G
36	5	944	C
36	5	959	C
36	5	960	U
36	5	963	G
36	5	964	G
36	5	979	U
36	5	980	A
36	5	981	U
36	5	993	G
36	5	994	G
36	5	1000	C
36	5	1001	G
36	5	1002	A
36	5	1005	G
36	5	1006	A
36	5	1010	G

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Mol	Chain	Res	Type
36	5	1015	U
36	5	1017	C
36	5	1018	G
36	5	1019	G
36	5	1020	G
36	5	1021	G
36	5	1024	G
36	5	1025	A
36	5	1026	A
36	5	1027	A
36	5	1028	U
36	5	1029	G
36	5	1034	U
36	5	1035	G
36	5	1041	U
36	5	1047	A
36	5	1049	C
36	5	1057	A
36	5	1064	A
36	5	1065	A
36	5	1072	G
36	5	1081	U
36	5	1082	U
36	5	1088	U
36	5	1093	A
36	5	1094	U
36	5	1095	U
36	5	1096	U
36	5	1097	G
36	5	1098	A
36	5	1103	A
36	5	1104	G
36	5	1117	G
36	5	1131	G
36	5	1152	G
36	5	1153	A
36	5	1154	A
36	5	1159	A
36	5	1161	G
36	5	1178	G
36	5	1180	A
36	5	1181	U

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Mol	Chain	Res	Type
36	5	1182	A
36	5	1190	A
36	5	1191	U
36	5	1192	C
36	5	1193	A
36	5	1196	C
36	5	1201	C
36	5	1209	G
36	5	1221	A
36	5	1222	G
36	5	1223	A
36	5	1224	C
36	5	1232	C
36	5	1236	G
36	5	1237	G
36	5	1239	C
36	5	1241	U
36	5	1242	G
36	5	1243	G
36	5	1245	A
36	5	1246	G
36	5	1252	A
36	5	1254	C
36	5	1258	U
36	5	1259	A
36	5	1262	G
36	5	1263	A
36	5	1264	G
36	5	1265	U
36	5	1266	G
36	5	1285	G
36	5	1308	A
36	5	1309	U
36	5	1313	G
36	5	1329	U
36	5	1330	A
36	5	1331	U
36	5	1332	A
36	5	1348	U
36	5	1349	G
36	5	1351	U
36	5	1352	A

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Mol	Chain	Res	Type
36	5	1353	U
36	5	1356	U
36	5	1357	G
36	5	1363	A
36	5	1368	U
36	5	1385	C
36	5	1386	A
36	5	1398	U
36	5	1399	A
36	5	1400	G
36	5	1418	A
36	5	1419	A
36	5	1428	A
36	5	1431	G
36	5	1433	A
36	5	1434	G
36	5	1437	C
36	5	1438	U
36	5	1443	G
36	5	1446	A
36	5	1450	G
36	5	1451	C
36	5	1455	U
36	5	1460	A
36	5	1480	G
36	5	1481	A
36	5	1482	A
36	5	1490	A
36	5	1492	G
36	5	1503	A
36	5	1508	C
36	5	1527	C
36	5	1528	G
36	5	1533	U
36	5	1536	G
36	5	1541	G
36	5	1542	G
36	5	1554	U
36	5	1555	U
36	5	1556	C
36	5	1557	A
36	5	1560	G

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Mol	Chain	Res	Type
36	5	1561	G
36	5	1562	C
36	5	1563	C
36	5	1565	G
36	5	1566	A
36	5	1567	U
36	5	1569	U
36	5	1570	U
36	5	1571	A
36	5	1572	U
36	5	1574	C
36	5	1575	A
36	5	1576	G
36	5	1577	G
36	5	1578	C
36	5	1579	C
36	5	1580	A
36	5	1581	C
36	5	1582	C
36	5	1583	A
36	5	1589	A
36	5	1607	U
36	5	1618	G
36	5	1620	U
36	5	1629	U
36	5	1632	A
36	5	1639	C
36	5	1641	U
36	5	1643	A
36	5	1644	C
36	5	1645	U
36	5	1646	G
36	5	1655	G
36	5	1657	C
36	5	1658	G
36	5	1683	A
36	5	1687	U
36	5	1716	U
36	5	1717	U
36	5	1724	U
36	5	1725	C
36	5	1736	G

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Mol	Chain	Res	Type
36	5	1750	A
36	5	1751	G
36	5	1762	C
36	5	1764	U
36	5	1765	U
36	5	1766	G
36	5	1767	C
36	5	1770	G
36	5	1780	G
36	5	1793	C
36	5	1795	U
36	5	1797	A
36	5	1810	A
36	5	1813	A
36	5	1814	A
36	5	1815	U
36	5	1816	A
36	5	1817	G
36	5	1818	U
36	5	1820	U
36	5	1821	U
36	5	1839	A
36	5	1841	A
36	5	1842	A
36	5	1846	C
36	5	1847	A
36	5	1849	C
36	5	1850	A
36	5	1864	A
36	5	1878	G
36	5	1879	A
36	5	1880	U
36	5	1893	A
36	5	1901	A
36	5	1904	C
36	5	1906	G
36	5	1952	G
36	5	1953	G
36	5	2100	A
36	5	2101	C
36	5	2102	U
36	5	2111	G

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Mol	Chain	Res	Type
36	5	2112	U
36	5	2113	A
36	5	2121	G
36	5	2122	G
36	5	2131	A
36	5	2139	A
36	5	2140	U
36	5	2146	C
36	5	2155	G
36	5	2158	A
36	5	2168	A
36	5	2169	G
36	5	2171	G
36	5	2179	C
36	5	2184	U
36	5	2187	G
36	5	2188	A
36	5	2192	C
36	5	2198	A
36	5	2205	U
36	5	2210	G
36	5	2223	A
36	5	2225	U
36	5	2228	A
36	5	2244	A
36	5	2250	G
36	5	2252	A
36	5	2253	G
36	5	2255	A
36	5	2256	A
36	5	2257	C
36	5	2258	U
36	5	2273	G
36	5	2278	C
36	5	2279	A
36	5	2281	A
36	5	2288	G
36	5	2303	A
36	5	2306	C
36	5	2307	G
36	5	2310	U
36	5	2313	A

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Mol	Chain	Res	Type
36	5	2315	G
36	5	2324	A
36	5	2334	U
36	5	2335	G
36	5	2336	U
36	5	2367	A
36	5	2373	A
36	5	2374	C
36	5	2375	G
36	5	2385	G
36	5	2392	C
36	5	2393	G
36	5	2397	A
36	5	2403	G
36	5	2404	A
36	5	2411	U
36	5	2418	G
36	5	2435	G
36	5	2437	G
36	5	2439	A
36	5	2440	G
36	5	2441	A
36	5	2443	A
36	5	2504	U
36	5	2505	U
36	5	2506	U
36	5	2507	C
36	5	2508	U
36	5	2511	A
36	5	2512	C
36	5	2514	U
36	5	2515	A
36	5	2518	C
36	5	2519	A
36	5	2522	G
36	5	2523	A
36	5	2526	C
36	5	2530	G
36	5	2531	C
36	5	2532	U
36	5	2537	U
36	5	2538	U

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Mol	Chain	Res	Type
36	5	2539	C
36	5	2540	A
36	5	2543	U
36	5	2549	G
36	5	2552	C
36	5	2555	G
36	5	2566	C
36	5	2567	C
36	5	2568	C
36	5	2569	A
36	5	2570	U
36	5	2571	U
36	5	2572	C
36	5	2573	G
36	5	2574	G
36	5	2584	G
36	5	2585	G
36	5	2589	G
36	5	2593	A
36	5	2594	C
36	5	2606	G
36	5	2607	G
36	5	2609	A
36	5	2610	G
36	5	2614	G
36	5	2618	G
36	5	2625	C
36	5	2639	G
36	5	2652	U
36	5	2656	A
36	5	2674	A
36	5	2675	C
36	5	2676	A
36	5	2677	G
36	5	2681	U
36	5	2683	U
36	5	2689	A
36	5	2690	G
36	5	2691	A
36	5	2693	C
36	5	2694	A
36	5	2696	A

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Mol	Chain	Res	Type
36	5	2705	A
36	5	2706	G
36	5	2707	C
36	5	2714	G
36	5	2716	U
36	5	2727	A
36	5	2728	G
36	5	2729	U
36	5	2742	C
36	5	2752	U
36	5	2753	G
36	5	2755	C
36	5	2771	U
36	5	2772	C
36	5	2773	C
36	5	2778	G
36	5	2783	U
36	5	2796	G
36	5	2800	G
36	5	2801	A
36	5	2802	A
36	5	2810	C
36	5	2814	G
36	5	2817	A
36	5	2818	U
36	5	2821	C
36	5	2829	U
36	5	2839	G
36	5	2840	C
36	5	2842	U
36	5	2843	U
36	5	2845	A
36	5	2847	A
36	5	2853	A
36	5	2860	U
36	5	2867	C
36	5	2871	G
36	5	2872	A
36	5	2873	U
36	5	2875	U
36	5	2877	G
36	5	2887	A

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Mol	Chain	Res	Type
36	5	2889	C
36	5	2899	C
36	5	2912	G
36	5	2920	U
36	5	2921	U
36	5	2922	G
36	5	2923	U
36	5	2924	U
36	5	2935	U
36	5	2936	A
36	5	2939	G
36	5	2942	C
36	5	2944	U
36	5	2947	G
36	5	2957	G
36	5	2967	A
36	5	2971	A
36	5	2972	G
36	5	2979	U
36	5	2980	U
36	5	2983	C
36	5	2990	G
36	5	2992	U
36	5	2993	G
36	5	2996	U
36	5	2997	G
36	5	3012	A
36	5	3013	U
36	5	3028	G
36	5	3049	A
36	5	3056	U
36	5	3057	U
36	5	3059	G
36	5	3078	U
36	5	3079	U
36	5	3086	A
36	5	3092	C
36	5	3104	U
36	5	3122	A
36	5	3127	A
36	5	3130	A
36	5	3131	U

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Mol	Chain	Res	Type
36	5	3142	A
36	5	3143	C
36	5	3153	U
36	5	3155	U
36	5	3156	U
36	5	3157	U
36	5	3158	G
36	5	3159	C
36	5	3164	C
36	5	3165	A
36	5	3166	C
36	5	3168	A
36	5	3171	U
36	5	3172	A
36	5	3173	G
36	5	3174	A
36	5	3176	G
36	5	3179	U
36	5	3181	C
36	5	3184	A
36	5	3187	A
36	5	3195	U
36	5	3196	U
36	5	3197	G
36	5	3198	U
36	5	3207	U
36	5	3208	G
36	5	3217	C
36	5	3218	A
36	5	3219	G
36	5	3223	A
36	5	3228	C
36	5	3229	G
36	5	3238	G
36	5	3239	G
36	5	3242	G
36	5	3243	A
36	5	3244	A
36	5	3245	A
36	5	3246	G
36	5	3247	G
36	5	3253	G

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Mol	Chain	Res	Type
36	5	3259	U
36	5	3270	U
36	5	3275	U
36	5	3276	G
36	5	3277	U
36	5	3279	A
36	5	3280	U
36	5	3282	U
36	5	3285	C
36	5	3286	G
36	5	3289	G
36	5	3290	G
36	5	3292	A
36	5	3294	A
36	5	3304	U
36	5	3309	G
36	5	3313	U
36	5	3316	A
36	5	3317	U
36	5	3318	G
36	5	3319	U
36	5	3320	A
36	5	3330	A
36	5	3333	G
36	5	3341	U
36	5	3342	A
36	5	3345	G
36	5	3348	G
36	5	3350	C
36	5	3351	U
36	5	3352	U
36	5	3354	U
36	5	3355	U
36	5	3356	G
36	5	3358	U
36	5	3369	G
36	5	3378	C
36	5	3382	U
36	5	3383	G
36	5	3389	U
36	5	3390	G
36	5	3391	A

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Mol	Chain	Res	Type
36	5	3393	U
36	5	3396	U
37	7	7	G
37	7	19	C
37	7	22	A
37	7	27	A
37	7	45	A
37	7	49	G
37	7	52	G
37	7	54	U
37	7	58	C
37	7	60	G
37	7	62	U
37	7	65	G
37	7	73	C
37	7	74	C
37	7	76	A
37	7	78	U
37	7	93	C
37	7	101	G
37	7	102	A
37	7	103	A
37	7	104	A
37	7	112	G
38	8	14	C
38	8	21	C
38	8	34	U
38	8	35	C
38	8	43	A
38	8	48	A
38	8	51	G
38	8	53	A
38	8	57	C
38	8	59	A
38	8	60	U
38	8	62	C
38	8	63	G
38	8	69	U
38	8	79	A
38	8	80	A
38	8	81	U
38	8	82	U

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Mol	Chain	Res	Type
38	8	84	C
38	8	85	G
38	8	86	U
38	8	87	G
38	8	90	U
38	8	95	G
38	8	97	A
38	8	104	A
38	8	105	A
38	8	106	C
38	8	111	A
38	8	113	U
38	8	122	U
38	8	123	G
38	8	125	U
38	8	126	A
38	8	127	U
38	8	138	A
38	8	152	G
38	8	156	U
38	8	157	U
38	8	158	U

All (295) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	2	25	C
1	2	45	U
1	2	68	A
1	2	73	U
1	2	74	U
1	2	103	A
1	2	114	C
1	2	126	A
1	2	130	C
1	2	131	C
1	2	132	U
1	2	133	U
1	2	139	C
1	2	144	U
1	2	158	U
1	2	187	G

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Mol	Chain	Res	Type
1	2	217	A
1	2	218	A
1	2	239	C
1	2	240	U
1	2	278	U
1	2	280	U
1	2	321	C
1	2	417	A
1	2	497	G
1	2	499	U
1	2	501	U
1	2	503	G
1	2	512	A
1	2	555	A
1	2	558	U
1	2	685	A
1	2	704	C
1	2	720	G
1	2	721	U
1	2	734	A
1	2	755	A
1	2	781	U
1	2	782	U
1	2	794	U
1	2	811	A
1	2	829	A
1	2	913	G
1	2	1051	G
1	2	1058	U
1	2	1081	A
1	2	1157	A
1	2	1196	A
1	2	1226	A
1	2	1244	A
1	2	1250	U
1	2	1339	C
1	2	1344	A
1	2	1370	U
1	2	1481	C
1	2	1489	U
1	2	1490	C
1	2	1568	C

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Mol	Chain	Res	Type
1	2	1573	A
1	2	1615	C
1	2	1657	U
1	2	1761	U
36	1	43	A
36	1	65	A
36	1	169	U
36	1	210	U
36	1	239	G
36	1	282	G
36	1	547	G
36	1	715	A
36	1	726	G
36	1	763	G
36	1	873	C
36	1	896	A
36	1	916	G
36	1	937	G
36	1	961	C
36	1	979	U
36	1	981	U
36	1	993	G
36	1	1064	A
36	1	1094	U
36	1	1097	G
36	1	1103	A
36	1	1196	C
36	1	1273	A
36	1	1307	G
36	1	1317	A
36	1	1329	U
36	1	1331	U
36	1	1352	A
36	1	1355	A
36	1	1467	A
36	1	1484	U
36	1	1554	U
36	1	1556	C
36	1	1562	C
36	1	1589	A
36	1	1716	U
36	1	1724	U

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Mol	Chain	Res	Type
36	1	1751	G
36	1	1778	G
36	1	1815	U
36	1	1816	A
36	1	1820	U
36	1	1846	C
36	1	1849	C
36	1	1858	A
36	1	1931	U
36	1	2101	C
36	1	2112	U
36	1	2209	U
36	1	2249	G
36	1	2372	A
36	1	2374	C
36	1	2418	G
36	1	2443	A
36	1	2513	U
36	1	2523	A
36	1	2525	G
36	1	2537	U
36	1	2538	U
36	1	2541	U
36	1	2554	A
36	1	2585	G
36	1	2593	A
36	1	2677	G
36	1	2689	A
36	1	2704	A
36	1	2728	G
36	1	2752	U
36	1	2772	C
36	1	2801	A
36	1	2818	U
36	1	2954	U
36	1	3056	U
36	1	3078	U
36	1	3121	U
36	1	3139	A
36	1	3195	U
36	1	3218	A
36	1	3228	C

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Mol	Chain	Res	Type
36	1	3269	U
36	1	3275	U
36	1	3319	U
36	1	3350	C
36	1	3351	U
36	1	3353	G
36	1	3375	A
37	3	13	A
37	3	52	G
38	4	59	A
38	4	82	U
38	4	85	G
38	4	111	A
38	4	125	U
1	6	25	C
1	6	66	U
1	6	75	U
1	6	76	A
1	6	103	A
1	6	114	C
1	6	136	C
1	6	139	C
1	6	158	U
1	6	187	G
1	6	192	U
1	6	217	A
1	6	240	U
1	6	272	U
1	6	277	U
1	6	345	U
1	6	400	A
1	6	417	A
1	6	454	U
1	6	512	A
1	6	542	A
1	6	543	C
1	6	555	A
1	6	557	G
1	6	558	U
1	6	651	G
1	6	667	U
1	6	678	A

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Mol	Chain	Res	Type
1	6	697	C
1	6	717	C
1	6	755	A
1	6	829	A
1	6	1051	G
1	6	1058	U
1	6	1081	A
1	6	1097	U
1	6	1137	A
1	6	1227	A
1	6	1244	A
1	6	1255	G
1	6	1344	A
1	6	1481	C
1	6	1489	U
1	6	1491	U
1	6	1535	U
1	6	1568	C
1	6	1573	A
1	6	1615	C
1	6	1620	C
1	6	1657	U
1	6	1696	G
1	6	1698	G
1	6	1700	C
36	5	43	A
36	5	122	A
36	5	210	U
36	5	238	A
36	5	264	G
36	5	546	C
36	5	648	C
36	5	715	A
36	5	765	C
36	5	873	C
36	5	896	A
36	5	916	G
36	5	937	G
36	5	993	G
36	5	1027	A
36	5	1064	A
36	5	1081	U

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Mol	Chain	Res	Type
36	5	1094	U
36	5	1152	G
36	5	1160	C
36	5	1181	U
36	5	1222	G
36	5	1238	C
36	5	1241	U
36	5	1307	G
36	5	1329	U
36	5	1331	U
36	5	1352	A
36	5	1355	A
36	5	1481	A
36	5	1507	G
36	5	1554	U
36	5	1560	G
36	5	1574	C
36	5	1580	A
36	5	1716	U
36	5	1724	U
36	5	1751	G
36	5	1792	C
36	5	1816	A
36	5	1819	U
36	5	1841	A
36	5	1846	C
36	5	1879	A
36	5	2101	C
36	5	2112	U
36	5	2204	C
36	5	2209	U
36	5	2249	G
36	5	2255	A
36	5	2257	C
36	5	2281	A
36	5	2309	A
36	5	2372	A
36	5	2374	C
36	5	2440	G
36	5	2507	C
36	5	2513	U
36	5	2531	C

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Mol	Chain	Res	Type
36	5	2583	C
36	5	2593	A
36	5	2728	G
36	5	2772	C
36	5	2801	A
36	5	2818	U
36	5	2872	A
36	5	2970	C
36	5	2971	A
36	5	3078	U
36	5	3121	U
36	5	3154	C
36	5	3167	A
36	5	3195	U
36	5	3218	A
36	5	3228	C
36	5	3269	U
36	5	3275	U
36	5	3289	G
36	5	3317	U
36	5	3340	G
36	5	3341	U
36	5	3357	U
37	7	49	G
37	7	77	G
38	8	89	A
38	8	126	A

## 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 2560 ligands modelled in this entry, 1426 are monoatomic - leaving 1134 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
86	OHX	1	4008	-	0,6,6	0.00	-	-		
86	OHX	5	4120	-	0,6,6	0.00	-	-		
86	OHX	1	3876	-	0,6,6	0.00	-	-		
86	OHX	1	3978	-	0,6,6	0.00	-	-		
86	OHX	2	2027	-	0,6,6	0.00	-	-		
86	OHX	1	4137	-	0,6,6	0.00	-	-		
86	OHX	2	2087	-	0,6,6	0.00	-	-		
86	OHX	1	3981	-	0,6,6	0.00	-	-		
86	OHX	1	4017	-	0,6,6	0.00	-	-		
86	OHX	1	4151	-	0,6,6	0.00	-	-		
86	OHX	5	4023	-	0,6,6	0.00	-	-		
86	OHX	5	3958	-	0,6,6	0.00	-	-		
86	OHX	1	4028	-	0,6,6	0.00	-	-		
86	OHX	1	4097	-	0,6,6	0.00	-	-		
86	OHX	2	2111	-	0,6,6	0.00	-	-		
86	OHX	5	4218	-	0,6,6	0.00	-	-		
86	OHX	2	2033	-	0,6,6	0.00	-	-		
86	OHX	1	4193	-	0,6,6	0.00	-	-		
86	OHX	5	4052	-	0,6,6	0.00	-	-		
86	OHX	1	4201	-	0,6,6	0.00	-	-		
86	OHX	5	4116	-	0,6,6	0.00	-	-		
86	OHX	6	2100	-	0,6,6	0.00	-	-		
86	OHX	1	3915	-	0,6,6	0.00	-	-		
86	OHX	1	4108	-	0,6,6	0.00	-	-		
86	OHX	6	2190	-	0,6,6	0.00	-	-		
86	OHX	1	3877	-	0,6,6	0.00	-	-		
86	OHX	5	4160	-	0,6,6	0.00	-	-		
86	OHX	6	2090	-	0,6,6	0.00	-	-		
86	OHX	5	4177	-	0,6,6	0.00	-	-		
86	OHX	2	2156	-	0,6,6	0.00	-	-		
86	OHX	1	3982	-	0,6,6	0.00	-	-		
86	OHX	5	3987	-	0,6,6	0.00	-	-		
86	OHX	1	4037	-	0,6,6	0.00	-	-		
86	OHX	1	4140	-	0,6,6	0.00	-	-		
86	OHX	d9	102	-	0,6,6	0.00	-	-		
86	OHX	5	4077	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	4056	-	0,6,6	0.00	-	-		
86	OHX	5	4101	-	0,6,6	0.00	-	-		
86	OHX	5	4058	-	0,6,6	0.00	-	-		
86	OHX	m1	203	-	0,6,6	0.00	-	-		
86	OHX	2	2141	-	0,6,6	0.00	-	-		
86	OHX	5	3894	-	0,6,6	0.00	-	-		
86	OHX	n3	203	-	0,6,6	0.00	-	-		
86	OHX	1	4173	-	0,6,6	0.00	-	-		
86	OHX	2	2040	-	0,6,6	0.00	-	-		
86	OHX	1	4034	-	0,6,6	0.00	-	-		
86	OHX	1	3900	-	0,6,6	0.00	-	-		
86	OHX	6	2150	-	0,6,6	0.00	-	-		
86	OHX	5	4017	-	0,6,6	0.00	-	-		
86	OHX	5	4170	-	0,6,6	0.00	-	-		
86	OHX	2	2159	-	0,6,6	0.00	-	-		
86	OHX	1	3945	-	0,6,6	0.00	-	-		
86	OHX	2	2153	-	0,6,6	0.00	-	-		
86	OHX	1	3972	-	0,6,6	0.00	-	-		
86	OHX	5	4148	-	0,6,6	0.00	-	-		
86	OHX	5	4163	-	0,6,6	0.00	-	-		
86	OHX	5	3928	-	0,6,6	0.00	-	-		
86	OHX	5	3923	-	0,6,6	0.00	-	-		
86	OHX	1	4035	-	0,6,6	0.00	-	-		
86	OHX	6	2152	-	0,6,6	0.00	-	-		
86	OHX	5	4133	-	0,6,6	0.00	-	-		
86	OHX	O3	201	-	0,6,6	0.00	-	-		
86	OHX	1	4027	-	0,6,6	0.00	-	-		
86	OHX	5	4235	-	0,6,6	0.00	-	-		
86	OHX	5	3979	-	0,6,6	0.00	-	-		
86	OHX	5	3948	-	0,6,6	0.00	-	-		
86	OHX	2	2154	-	0,6,6	0.00	-	-		
86	OHX	5	4243	-	0,6,6	0.00	-	-		
86	OHX	1	4044	-	0,6,6	0.00	-	-		
86	OHX	6	2158	-	0,6,6	0.00	-	-		
86	OHX	L3	405	-	0,6,6	0.00	-	-		
86	OHX	1	3951	-	0,6,6	0.00	-	-		
86	OHX	5	4121	-	0,6,6	0.00	-	-		
86	OHX	2	2038	-	0,6,6	0.00	-	-		
86	OHX	5	3927	-	0,6,6	0.00	-	-		
86	OHX	o3	202	-	0,6,6	0.00	-	-		
86	OHX	5	3980	-	0,6,6	0.00	-	-		
86	OHX	1	4071	-	0,6,6	0.00	-	-		
86	OHX	4	232	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	2	2063	-	0,6,6	0.00	-	-		
86	OHX	6	2069	-	0,6,6	0.00	-	-		
86	OHX	2	2095	-	0,6,6	0.00	-	-		
86	OHX	5	4037	-	0,6,6	0.00	-	-		
86	OHX	2	2049	-	0,6,6	0.00	-	-		
86	OHX	6	2134	-	0,6,6	0.00	-	-		
86	OHX	5	4106	-	0,6,6	0.00	-	-		
86	OHX	7	228	-	0,6,6	0.00	-	-		
86	OHX	D9	102	-	0,6,6	0.00	-	-		
86	OHX	5	4217	-	0,6,6	0.00	-	-		
86	OHX	2	2138	-	0,6,6	0.00	-	-		
86	OHX	5	4012	-	0,6,6	0.00	-	-		
86	OHX	1	4203	-	0,6,6	0.00	-	-		
86	OHX	6	2051	-	0,6,6	0.00	-	-		
86	OHX	6	2148	-	0,6,6	0.00	-	-		
86	OHX	1	3929	-	0,6,6	0.00	-	-		
86	OHX	6	2053	-	0,6,6	0.00	-	-		
86	OHX	6	2074	-	0,6,6	0.00	-	-		
86	OHX	2	2123	-	0,6,6	0.00	-	-		
86	OHX	2	2163	-	0,6,6	0.00	-	-		
86	OHX	5	4215	-	0,6,6	0.00	-	-		
86	OHX	5	3960	-	0,6,6	0.00	-	-		
86	OHX	M7	205	-	0,6,6	0.00	-	-		
86	OHX	6	2054	-	0,6,6	0.00	-	-		
86	OHX	2	2047	-	0,6,6	0.00	-	-		
86	OHX	5	3900	-	0,6,6	0.00	-	-		
86	OHX	1	4007	-	0,6,6	0.00	-	-		
86	OHX	2	2104	-	0,6,6	0.00	-	-		
86	OHX	5	4207	-	0,6,6	0.00	-	-		
86	OHX	1	3997	-	0,6,6	0.00	-	-		
86	OHX	6	2187	1	0,6,6	0.00	-	-		
86	OHX	5	3959	-	0,6,6	0.00	-	-		
86	OHX	5	4236	-	0,6,6	0.00	-	-		
86	OHX	2	2131	-	0,6,6	0.00	-	-		
86	OHX	5	4038	-	0,6,6	0.00	-	-		
86	OHX	5	4045	-	0,6,6	0.00	-	-		
86	OHX	5	4113	-	0,6,6	0.00	-	-		
86	OHX	2	2113	-	0,6,6	0.00	-	-		
86	OHX	2	2107	-	0,6,6	0.00	-	-		
86	OHX	1	4141	-	0,6,6	0.00	-	-		
86	OHX	2	2061	-	0,6,6	0.00	-	-		
86	OHX	5	4194	-	0,6,6	0.00	-	-		
86	OHX	1	3969	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	2	2073	-	0,6,6	0.00	-	-		
86	OHX	1	4002	-	0,6,6	0.00	-	-		
86	OHX	5	4066	-	0,6,6	0.00	-	-		
86	OHX	5	4081	-	0,6,6	0.00	-	-		
86	OHX	6	2087	-	0,6,6	0.00	-	-		
86	OHX	5	3897	-	0,6,6	0.00	-	-		
86	OHX	2	2096	-	0,6,6	0.00	-	-		
86	OHX	1	3864	-	0,6,6	0.00	-	-		
86	OHX	1	4065	-	0,6,6	0.00	-	-		
86	OHX	1	3922	-	0,6,6	0.00	-	-		
86	OHX	6	2086	-	0,6,6	0.00	-	-		
86	OHX	5	4216	-	0,6,6	0.00	-	-		
86	OHX	1	4026	-	0,6,6	0.00	-	-		
86	OHX	5	3922	-	0,6,6	0.00	-	-		
86	OHX	6	2154	-	0,6,6	0.00	-	-		
86	OHX	6	2175	-	0,6,6	0.00	-	-		
86	OHX	5	3993	-	0,6,6	0.00	-	-		
86	OHX	6	2107	-	0,6,6	0.00	-	-		
86	OHX	6	2103	-	0,6,6	0.00	-	-		
86	OHX	1	3928	-	0,6,6	0.00	-	-		
86	OHX	6	2060	-	0,6,6	0.00	-	-		
86	OHX	1	4096	-	0,6,6	0.00	-	-		
86	OHX	5	4007	-	0,6,6	0.00	-	-		
86	OHX	5	4086	-	0,6,6	0.00	-	-		
86	OHX	6	2185	-	0,6,6	0.00	-	-		
86	OHX	L4	403	-	0,6,6	0.00	-	-		
86	OHX	2	2022	-	0,6,6	0.00	-	-		
86	OHX	5	3940	-	0,6,6	0.00	-	-		
86	OHX	5	3978	-	0,6,6	0.00	-	-		
86	OHX	5	4104	-	0,6,6	0.00	-	-		
86	OHX	1	4099	-	0,6,6	0.00	-	-		
86	OHX	5	4090	-	0,6,6	0.00	-	-		
86	OHX	m5	304	-	0,6,6	0.00	-	-		
86	OHX	1	4211	-	0,6,6	0.00	-	-		
86	OHX	2	2146	-	0,6,6	0.00	-	-		
86	OHX	5	4071	-	0,6,6	0.00	-	-		
86	OHX	5	4202	-	0,6,6	0.00	-	-		
86	OHX	1	4132	-	0,6,6	0.00	-	-		
86	OHX	1	3905	-	0,6,6	0.00	-	-		
86	OHX	2	2064	-	0,6,6	0.00	-	-		
86	OHX	1	4169	-	0,6,6	0.00	-	-		
86	OHX	5	3916	-	0,6,6	0.00	-	-		
86	OHX	n3	204	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	6	2136	-	0,6,6	0.00	-	-		
86	OHX	5	3965	-	0,6,6	0.00	-	-		
86	OHX	1	3874	-	0,6,6	0.00	-	-		
86	OHX	5	4204	-	0,6,6	0.00	-	-		
86	OHX	6	2117	-	0,6,6	0.00	-	-		
86	OHX	1	3925	-	0,6,6	0.00	-	-		
86	OHX	2	2024	-	0,6,6	0.00	-	-		
86	OHX	c8	202	-	0,6,6	0.00	-	-		
86	OHX	2	2167	-	0,6,6	0.00	-	-		
86	OHX	6	2077	-	0,6,6	0.00	-	-		
86	OHX	1	4153	-	0,6,6	0.00	-	-		
86	OHX	1	4174	-	0,6,6	0.00	-	-		
86	OHX	7	227	-	0,6,6	0.00	-	-		
86	OHX	5	4153	-	0,6,6	0.00	-	-		
86	OHX	2	2157	-	0,6,6	0.00	-	-		
86	OHX	2	2068	-	0,6,6	0.00	-	-		
86	OHX	2	2152	-	0,6,6	0.00	-	-		
86	OHX	5	3910	-	0,6,6	0.00	-	-		
86	OHX	5	4034	-	0,6,6	0.00	-	-		
86	OHX	s8	303	-	0,6,6	0.00	-	-		
86	OHX	m0	302	-	0,6,6	0.00	-	-		
88	3L2	5	4246	-	40,40,40	1.23	5 (12%)	59,62,62	1.67	9 (15%)
86	OHX	1	3940	-	0,6,6	0.00	-	-		
86	OHX	2	2129	-	0,6,6	0.00	-	-		
86	OHX	2	2135	-	0,6,6	0.00	-	-		
86	OHX	6	2180	-	0,6,6	0.00	-	-		
86	OHX	5	4111	-	0,6,6	0.00	-	-		
86	OHX	8	217	-	0,6,6	0.00	-	-		
86	OHX	6	2068	-	0,6,6	0.00	-	-		
86	OHX	4	234	-	0,6,6	0.00	-	-		
86	OHX	5	4070	-	0,6,6	0.00	-	-		
86	OHX	1	3924	-	0,6,6	0.00	-	-		
86	OHX	5	4130	-	0,6,6	0.00	-	-		
86	OHX	5	4155	-	0,6,6	0.00	-	-		
86	OHX	5	3988	-	0,6,6	0.00	-	-		
86	OHX	5	4164	-	0,6,6	0.00	-	-		
86	OHX	2	2177	-	0,6,6	0.00	-	-		
86	OHX	2	2116	-	0,6,6	0.00	-	-		
86	OHX	5	4119	-	0,6,6	0.00	-	-		
86	OHX	6	2076	-	0,6,6	0.00	-	-		
86	OHX	5	3945	-	0,6,6	0.00	-	-		
86	OHX	5	4089	-	0,6,6	0.00	-	-		
86	OHX	6	2163	-	0,6,6	0.00	-	-		



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	4136	-	0,6,6	0.00	-	-		
86	OHX	1	4045	-	0,6,6	0.00	-	-		
86	OHX	6	2165	-	0,6,6	0.00	-	-		
86	OHX	5	4063	-	0,6,6	0.00	-	-		
86	OHX	1	4176	-	0,6,6	0.00	-	-		
86	OHX	1	3996	-	0,6,6	0.00	-	-		
86	OHX	1	4058	-	0,6,6	0.00	-	-		
86	OHX	1	4134	-	0,6,6	0.00	-	-		
86	OHX	2	2082	-	0,6,6	0.00	-	-		
86	OHX	2	2101	-	0,6,6	0.00	-	-		
86	OHX	6	2073	-	0,6,6	0.00	-	-		
86	OHX	1	4104	-	0,6,6	0.00	-	-		
86	OHX	1	3871	-	0,6,6	0.00	-	-		
86	OHX	1	3898	-	0,6,6	0.00	-	-		
86	OHX	6	2047	-	0,6,6	0.00	-	-		
86	OHX	1	3870	-	0,6,6	0.00	-	-		
86	OHX	5	4103	-	0,6,6	0.00	-	-		
86	OHX	1	4011	-	0,6,6	0.00	-	-		
86	OHX	C8	201	-	0,6,6	0.00	-	-		
86	OHX	2	2161	-	0,6,6	0.00	-	-		
86	OHX	1	4067	-	0,6,6	0.00	-	-		
86	OHX	5	4191	-	0,6,6	0.00	-	-		
86	OHX	5	4003	-	0,6,6	0.00	-	-		
86	OHX	1	4198	-	0,6,6	0.00	-	-		
86	OHX	5	3996	-	0,6,6	0.00	-	-		
86	OHX	1	4031	-	0,6,6	0.00	-	-		
86	OHX	1	3903	-	0,6,6	0.00	-	-		
86	OHX	5	4200	-	0,6,6	0.00	-	-		
86	OHX	5	3917	-	0,6,6	0.00	-	-		
86	OHX	5	4029	-	0,6,6	0.00	-	-		
86	OHX	1	4024	-	0,6,6	0.00	-	-		
86	OHX	1	4001	-	0,6,6	0.00	-	-		
86	OHX	5	3957	-	0,6,6	0.00	-	-		
86	OHX	1	4126	-	0,6,6	0.00	-	-		
86	OHX	5	4006	-	0,6,6	0.00	-	-		
86	OHX	5	4240	-	0,6,6	0.00	-	-		
86	OHX	M7	204	-	0,6,6	0.00	-	-		
86	OHX	6	2200	-	0,6,6	0.00	-	-		
86	OHX	6	2056	-	0,6,6	0.00	-	-		
86	OHX	2	2174	-	0,6,6	0.00	-	-		
86	OHX	1	4061	-	0,6,6	0.00	-	-		
86	OHX	6	2151	-	0,6,6	0.00	-	-		
86	OHX	5	3977	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	1	3961	-	0,6,6	0.00	-	-		
86	OHX	5	3995	-	0,6,6	0.00	-	-		
86	OHX	6	2112	-	0,6,6	0.00	-	-		
86	OHX	5	3990	-	0,6,6	0.00	-	-		
86	OHX	7	220	-	0,6,6	0.00	-	-		
86	OHX	6	2126	-	0,6,6	0.00	-	-		
86	OHX	5	4199	-	0,6,6	0.00	-	-		
86	OHX	5	4185	-	0,6,6	0.00	-	-		
86	OHX	5	4036	-	0,6,6	0.00	-	-		
86	OHX	1	4121	-	0,6,6	0.00	-	-		
86	OHX	5	4149	-	0,6,6	0.00	-	-		
86	OHX	5	3942	-	0,6,6	0.00	-	-		
86	OHX	6	2166	-	0,6,6	0.00	-	-		
86	OHX	2	2071	-	0,6,6	0.00	-	-		
86	OHX	5	4172	-	0,6,6	0.00	-	-		
86	OHX	1	4202	-	0,6,6	0.00	-	-		
86	OHX	2	2051	-	0,6,6	0.00	-	-		
86	OHX	1	4086	-	0,6,6	0.00	-	-		
86	OHX	2	2173	-	0,6,6	0.00	-	-		
86	OHX	6	2105	-	0,6,6	0.00	-	-		
86	OHX	1	4101	-	0,6,6	0.00	-	-		
86	OHX	5	4061	-	0,6,6	0.00	-	-		
86	OHX	6	2108	-	0,6,6	0.00	-	-		
86	OHX	1	3881	-	0,6,6	0.00	-	-		
86	OHX	8	227	-	0,6,6	0.00	-	-		
86	OHX	1	4131	-	0,6,6	0.00	-	-		
86	OHX	1	4119	-	0,6,6	0.00	-	-		
86	OHX	1	3888	-	0,6,6	0.00	-	-		
86	OHX	2	2092	-	0,6,6	0.00	-	-		
86	OHX	5	3938	-	0,6,6	0.00	-	-		
86	OHX	5	4097	-	0,6,6	0.00	-	-		
86	OHX	5	4068	-	0,6,6	0.00	-	-		
86	OHX	2	2117	-	0,6,6	0.00	-	-		
86	OHX	5	4124	-	0,6,6	0.00	-	-		
86	OHX	5	4046	-	0,6,6	0.00	-	-		
86	OHX	2	2108	-	0,6,6	0.00	-	-		
86	OHX	5	3920	-	0,6,6	0.00	-	-		
86	OHX	6	2097	-	0,6,6	0.00	-	-		
86	OHX	5	4088	-	0,6,6	0.00	-	-		
86	OHX	5	4087	-	0,6,6	0.00	-	-		
86	OHX	2	2094	-	0,6,6	0.00	-	-		
86	OHX	5	4228	-	0,6,6	0.00	-	-		
86	OHX	6	2052	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	4167	-	0,6,6	0.00	-	-		
86	OHX	8	223	-	0,6,6	0.00	-	-		
86	OHX	5	4110	-	0,6,6	0.00	-	-		
86	OHX	5	4147	-	0,6,6	0.00	-	-		
86	OHX	5	4127	-	0,6,6	0.00	-	-		
86	OHX	5	4234	-	0,6,6	0.00	-	-		
86	OHX	2	2029	-	0,6,6	0.00	-	-		
86	OHX	1	3980	-	0,6,6	0.00	-	-		
86	OHX	5	4166	-	0,6,6	0.00	-	-		
86	OHX	2	2168	-	0,6,6	0.00	-	-		
86	OHX	2	2028	-	0,6,6	0.00	-	-		
86	OHX	2	2136	-	0,6,6	0.00	-	-		
86	OHX	1	4091	-	0,6,6	0.00	-	-		
86	OHX	1	3977	-	0,6,6	0.00	-	-		
86	OHX	5	4069	-	0,6,6	0.00	-	-		
86	OHX	1	4150	-	0,6,6	0.00	-	-		
86	OHX	5	4018	-	0,6,6	0.00	-	-		
86	OHX	5	4226	-	0,6,6	0.00	-	-		
86	OHX	4	240	-	0,6,6	0.00	-	-		
86	OHX	2	2144	-	0,6,6	0.00	-	-		
86	OHX	1	4032	-	0,6,6	0.00	-	-		
86	OHX	1	4147	-	0,6,6	0.00	-	-		
86	OHX	2	2042	-	0,6,6	0.00	-	-		
86	OHX	5	4213	-	0,6,6	0.00	-	-		
86	OHX	1	4194	-	0,6,6	0.00	-	-		
86	OHX	6	2177	-	0,6,6	0.00	-	-		
86	OHX	1	3882	-	0,6,6	0.00	-	-		
86	OHX	C5	201	-	0,6,6	0.00	-	-		
86	OHX	1	4084	-	0,6,6	0.00	-	-		
86	OHX	5	4020	-	0,6,6	0.00	-	-		
86	OHX	1	4136	-	0,6,6	0.00	-	-		
86	OHX	2	2143	-	0,6,6	0.00	-	-		
86	OHX	1	4123	-	0,6,6	0.00	-	-		
86	OHX	3	218	-	0,6,6	0.00	-	-		
86	OHX	2	2137	-	0,6,6	0.00	-	-		
86	OHX	6	2138	-	0,6,6	0.00	-	-		
86	OHX	2	2158	-	0,6,6	0.00	-	-		
86	OHX	1	4010	-	0,6,6	0.00	-	-		
86	OHX	5	4051	-	0,6,6	0.00	-	-		
86	OHX	6	2121	-	0,6,6	0.00	-	-		
86	OHX	2	2166	-	0,6,6	0.00	-	-		
86	OHX	5	3952	-	0,6,6	0.00	-	-		
86	OHX	2	2119	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	4128	-	0,6,6	0.00	-	-		
86	OHX	1	3991	-	0,6,6	0.00	-	-		
86	OHX	1	3974	-	0,6,6	0.00	-	-		
86	OHX	5	3908	-	0,6,6	0.00	-	-		
86	OHX	1	4107	-	0,6,6	0.00	-	-		
86	OHX	5	4186	-	0,6,6	0.00	-	-		
86	OHX	2	2164	-	0,6,6	0.00	-	-		
86	OHX	1	4166	-	0,6,6	0.00	-	-		
86	OHX	1	4062	-	0,6,6	0.00	-	-		
86	OHX	7	226	-	0,6,6	0.00	-	-		
86	OHX	6	2050	-	0,6,6	0.00	-	-		
86	OHX	1	4175	-	0,6,6	0.00	-	-		
86	OHX	14	403	-	0,6,6	0.00	-	-		
86	OHX	5	4220	-	0,6,6	0.00	-	-		
86	OHX	6	2169	-	0,6,6	0.00	-	-		
86	OHX	1	4154	-	0,6,6	0.00	-	-		
86	OHX	3	219	-	0,6,6	0.00	-	-		
86	OHX	1	3889	-	0,6,6	0.00	-	-		
86	OHX	1	4177	-	0,6,6	0.00	-	-		
86	OHX	5	4075	-	0,6,6	0.00	-	-		
86	OHX	5	4062	-	0,6,6	0.00	-	-		
86	OHX	5	3983	-	0,6,6	0.00	-	-		
86	OHX	5	3911	-	0,6,6	0.00	-	-		
86	OHX	S6	301	-	0,6,6	0.00	-	-		
86	OHX	6	2186	-	0,6,6	0.00	-	-		
86	OHX	1	3904	-	0,6,6	0.00	-	-		
86	OHX	1	4148	-	0,6,6	0.00	-	-		
86	OHX	5	3918	-	0,6,6	0.00	-	-		
86	OHX	5	4064	-	0,6,6	0.00	-	-		
86	OHX	2	2080	-	0,6,6	0.00	-	-		
86	OHX	1	4182	-	0,6,6	0.00	-	-		
86	OHX	1	3911	-	0,6,6	0.00	-	-		
86	OHX	5	3893	-	0,6,6	0.00	-	-		
86	OHX	5	3951	-	0,6,6	0.00	-	-		
86	OHX	6	2059	-	0,6,6	0.00	-	-		
86	OHX	2	2142	-	0,6,6	0.00	-	-		
86	OHX	5	4100	-	0,6,6	0.00	-	-		
86	OHX	1	3985	-	0,6,6	0.00	-	-		
86	OHX	5	3973	-	0,6,6	0.00	-	-		
86	OHX	5	3976	-	0,6,6	0.00	-	-		
86	OHX	1	4139	-	0,6,6	0.00	-	-		
86	OHX	5	4195	-	0,6,6	0.00	-	-		
86	OHX	1	3927	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	4137	-	0,6,6	0.00	-	-		
86	OHX	6	2196	-	0,6,6	0.00	-	-		
86	OHX	1	4168	-	0,6,6	0.00	-	-		
86	OHX	1	3992	-	0,6,6	0.00	-	-		
86	OHX	5	3935	-	0,6,6	0.00	-	-		
86	OHX	1	3990	-	0,6,6	0.00	-	-		
86	OHX	5	4112	-	0,6,6	0.00	-	-		
86	OHX	5	3895	-	0,6,6	0.00	-	-		
86	OHX	6	2098	-	0,6,6	0.00	-	-		
86	OHX	5	4178	-	0,6,6	0.00	-	-		
86	OHX	5	4131	-	0,6,6	0.00	-	-		
86	OHX	2	2175	-	0,6,6	0.00	-	-		
86	OHX	1	3899	-	0,6,6	0.00	-	-		
86	OHX	1	3916	-	0,6,6	0.00	-	-		
86	OHX	2	2077	-	0,6,6	0.00	-	-		
86	OHX	5	3905	-	0,6,6	0.00	-	-		
86	OHX	5	3971	-	0,6,6	0.00	-	-		
86	OHX	7	219	-	0,6,6	0.00	-	-		
86	OHX	6	2140	-	0,6,6	0.00	-	-		
86	OHX	5	4010	-	0,6,6	0.00	-	-		
86	OHX	2	2036	-	0,6,6	0.00	-	-		
86	OHX	5	3989	-	0,6,6	0.00	-	-		
86	OHX	1	4143	-	0,6,6	0.00	-	-		
86	OHX	m7	206	-	0,6,6	0.00	-	-		
86	OHX	2	2172	-	0,6,6	0.00	-	-		
86	OHX	19	600	-	0,6,6	0.00	-	-		
86	OHX	4	238	-	0,6,6	0.00	-	-		
86	OHX	2	2127	-	0,6,6	0.00	-	-		
86	OHX	1	4206	-	0,6,6	0.00	-	-		
86	OHX	1	3942	-	0,6,6	0.00	-	-		
86	OHX	1	4183	-	0,6,6	0.00	-	-		
86	OHX	1	3932	-	0,6,6	0.00	-	-		
86	OHX	1	3933	-	0,6,6	0.00	-	-		
86	OHX	5	4009	-	0,6,6	0.00	-	-		
86	OHX	5	3902	-	0,6,6	0.00	-	-		
86	OHX	1	4033	-	0,6,6	0.00	-	-		
86	OHX	1	3984	-	0,6,6	0.00	-	-		
86	OHX	1	3883	-	0,6,6	0.00	-	-		
86	OHX	5	4203	-	0,6,6	0.00	-	-		
86	OHX	6	2045	-	0,6,6	0.00	-	-		
86	OHX	1	3966	-	0,6,6	0.00	-	-		
86	OHX	5	3914	-	0,6,6	0.00	-	-		
86	OHX	1	4171	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	3969	-	0,6,6	0.00	-	-		
86	OHX	5	4005	-	0,6,6	0.00	-	-		
86	OHX	2	2176	-	0,6,6	0.00	-	-		
86	OHX	6	2193	-	0,6,6	0.00	-	-		
86	OHX	2	2103	-	0,6,6	0.00	-	-		
86	OHX	n9	102	-	0,6,6	0.00	-	-		
86	OHX	1	4189	-	0,6,6	0.00	-	-		
86	OHX	5	4099	-	0,6,6	0.00	-	-		
86	OHX	4	227	-	0,6,6	0.00	-	-		
86	OHX	6	2144	-	0,6,6	0.00	-	-		
86	OHX	5	4142	-	0,6,6	0.00	-	-		
86	OHX	1	4184	-	0,6,6	0.00	-	-		
86	OHX	6	2195	-	0,6,6	0.00	-	-		
86	OHX	6	2075	-	0,6,6	0.00	-	-		
86	OHX	6	2129	-	0,6,6	0.00	-	-		
86	OHX	2	2105	-	0,6,6	0.00	-	-		
86	OHX	2	2139	-	0,6,6	0.00	-	-		
86	OHX	5	4205	-	0,6,6	0.00	-	-		
86	OHX	1	4208	-	0,6,6	0.00	-	-		
86	OHX	4	241	-	0,6,6	0.00	-	-		
86	OHX	8	231	-	0,6,6	0.00	-	-		
86	OHX	1	3937	-	0,6,6	0.00	-	-		
86	OHX	5	4085	-	0,6,6	0.00	-	-		
86	OHX	1	3885	-	0,6,6	0.00	-	-		
86	OHX	5	4026	-	0,6,6	0.00	-	-		
86	OHX	1	4165	-	0,6,6	0.00	-	-		
86	OHX	5	4221	-	0,6,6	0.00	-	-		
86	OHX	5	3985	-	0,6,6	0.00	-	-		
86	OHX	6	2106	-	0,6,6	0.00	-	-		
86	OHX	5	4035	-	0,6,6	0.00	-	-		
86	OHX	2	2086	-	0,6,6	0.00	-	-		
86	OHX	1	4118	-	0,6,6	0.00	-	-		
86	OHX	2	2041	-	0,6,6	0.00	-	-		
86	OHX	5	3930	-	0,6,6	0.00	-	-		
86	OHX	3	216	-	0,6,6	0.00	-	-		
86	OHX	2	2115	-	0,6,6	0.00	-	-		
86	OHX	1	3909	-	0,6,6	0.00	-	-		
86	OHX	1	4068	-	0,6,6	0.00	-	-		
86	OHX	5	3968	-	0,6,6	0.00	-	-		
86	OHX	5	4040	-	0,6,6	0.00	-	-		
86	OHX	5	4183	-	0,6,6	0.00	-	-		
86	OHX	5	4188	-	0,6,6	0.00	-	-		
86	OHX	6	2070	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	1	3906	-	0,6,6	0.00	-	-		
86	OHX	1	4070	-	0,6,6	0.00	-	-		
86	OHX	1	4109	-	0,6,6	0.00	-	-		
86	OHX	6	2128	-	0,6,6	0.00	-	-		
86	OHX	6	2089	-	0,6,6	0.00	-	-		
86	OHX	1	3894	-	0,6,6	0.00	-	-		
86	OHX	5	4117	-	0,6,6	0.00	-	-		
86	OHX	1	4156	-	0,6,6	0.00	-	-		
86	OHX	6	2146	-	0,6,6	0.00	-	-		
86	OHX	c3	201	-	0,6,6	0.00	-	-		
86	OHX	5	4214	-	0,6,6	0.00	-	-		
86	OHX	6	2124	-	0,6,6	0.00	-	-		
86	OHX	5	4143	-	0,6,6	0.00	-	-		
86	OHX	1	3919	-	0,6,6	0.00	-	-		
86	OHX	2	2074	-	0,6,6	0.00	-	-		
86	OHX	1	3887	-	0,6,6	0.00	-	-		
86	OHX	5	3943	-	0,6,6	0.00	-	-		
86	OHX	6	2082	-	0,6,6	0.00	-	-		
86	OHX	5	3925	-	0,6,6	0.00	-	-		
86	OHX	sR	401	-	0,6,6	0.00	-	-		
86	OHX	1	4204	-	0,6,6	0.00	-	-		
86	OHX	6	2167	-	0,6,6	0.00	-	-		
86	OHX	5	4140	-	0,6,6	0.00	-	-		
86	OHX	l3	404	-	0,6,6	0.00	-	-		
86	OHX	6	2183	-	0,6,6	0.00	-	-		
86	OHX	5	4141	-	0,6,6	0.00	-	-		
86	OHX	5	4224	-	0,6,6	0.00	-	-		
86	OHX	5	4021	-	0,6,6	0.00	-	-		
86	OHX	5	4171	-	0,6,6	0.00	-	-		
86	OHX	1	3948	-	0,6,6	0.00	-	-		
86	OHX	5	4102	-	0,6,6	0.00	-	-		
86	OHX	5	4244	-	0,6,6	0.00	-	-		
86	OHX	1	4105	-	0,6,6	0.00	-	-		
86	OHX	1	4120	-	0,6,6	0.00	-	-		
86	OHX	2	2148	-	0,6,6	0.00	-	-		
86	OHX	2	2097	-	0,6,6	0.00	-	-		
86	OHX	1	3957	-	0,6,6	0.00	-	-		
86	OHX	8	221	-	0,6,6	0.00	-	-		
86	OHX	1	4087	-	0,6,6	0.00	-	-		
86	OHX	6	2048	-	0,6,6	0.00	-	-		
86	OHX	4	226	-	0,6,6	0.00	-	-		
86	OHX	1	4110	-	0,6,6	0.00	-	-		
86	OHX	6	2061	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	1	4115	-	0,6,6	0.00	-	-		
86	OHX	1	3884	-	0,6,6	0.00	-	-		
86	OHX	1	4057	-	0,6,6	0.00	-	-		
86	OHX	5	3972	-	0,6,6	0.00	-	-		
86	OHX	8	218	-	0,6,6	0.00	-	-		
86	OHX	15	302	-	0,6,6	0.00	-	-		
86	OHX	1	4060	-	0,6,6	0.00	-	-		
86	OHX	2	2171	-	0,6,6	0.00	-	-		
86	OHX	1	4161	-	0,6,6	0.00	-	-		
88	3L2	1	4212	-	40,40,40	0.68	1 (2%)	59,62,62	1.41	8 (13%)
86	OHX	1	4155	-	0,6,6	0.00	-	-		
86	OHX	5	4138	-	0,6,6	0.00	-	-		
86	OHX	2	2102	-	0,6,6	0.00	-	-		
86	OHX	2	2133	-	0,6,6	0.00	-	-		
86	OHX	7	221	-	0,6,6	0.00	-	-		
86	OHX	5	4227	-	0,6,6	0.00	-	-		
86	OHX	O7	104	-	0,6,6	0.00	-	-		
86	OHX	2	2122	-	0,6,6	0.00	-	-		
86	OHX	2	2030	-	0,6,6	0.00	-	-		
86	OHX	8	216	-	0,6,6	0.00	-	-		
86	OHX	6	2139	-	0,6,6	0.00	-	-		
86	OHX	m8	201	-	0,6,6	0.00	-	-		
86	OHX	6	2049	-	0,6,6	0.00	-	-		
86	OHX	2	2121	-	0,6,6	0.00	-	-		
86	OHX	m4	201	-	0,6,6	0.00	-	-		
86	OHX	5	4150	-	0,6,6	0.00	-	-		
86	OHX	1	3908	-	0,6,6	0.00	-	-		
86	OHX	1	3890	-	0,6,6	0.00	-	-		
86	OHX	6	2162	-	0,6,6	0.00	-	-		
86	OHX	q2	502	-	0,6,6	0.00	-	-		
86	OHX	5	3955	-	0,6,6	0.00	-	-		
86	OHX	2	2037	-	0,6,6	0.00	-	-		
86	OHX	1	4114	-	0,6,6	0.00	-	-		
86	OHX	6	2118	-	0,6,6	0.00	-	-		
86	OHX	2	2098	-	0,6,6	0.00	-	-		
86	OHX	6	2078	-	0,6,6	0.00	-	-		
86	OHX	5	3984	-	0,6,6	0.00	-	-		
86	OHX	6	2178	-	0,6,6	0.00	-	-		
86	OHX	5	3913	-	0,6,6	0.00	-	-		
86	OHX	1	4191	-	0,6,6	0.00	-	-		
86	OHX	6	2188	-	0,6,6	0.00	-	-		
86	OHX	1	4195	-	0,6,6	0.00	-	-		
86	OHX	6	2197	-	0,6,6	0.00	-	-		



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	8	225	-	0,6,6	0.00	-	-		
86	OHX	5	3903	-	0,6,6	0.00	-	-		
86	OHX	6	2142	-	0,6,6	0.00	-	-		
86	OHX	8	230	-	0,6,6	0.00	-	-		
86	OHX	5	4022	-	0,6,6	0.00	-	-		
86	OHX	5	4169	-	0,6,6	0.00	-	-		
86	OHX	6	2101	-	0,6,6	0.00	-	-		
86	OHX	5	4126	-	0,6,6	0.00	-	-		
86	OHX	5	4048	-	0,6,6	0.00	-	-		
86	OHX	6	2066	-	0,6,6	0.00	-	-		
86	OHX	2	2106	-	0,6,6	0.00	-	-		
86	OHX	6	2096	-	0,6,6	0.00	-	-		
86	OHX	2	2060	-	0,6,6	0.00	-	-		
86	OHX	1	4077	-	0,6,6	0.00	-	-		
86	OHX	15	303	-	0,6,6	0.00	-	-		
86	OHX	5	4209	-	0,6,6	0.00	-	-		
86	OHX	2	2054	-	0,6,6	0.00	-	-		
86	OHX	1	4041	-	0,6,6	0.00	-	-		
86	OHX	1	4055	-	0,6,6	0.00	-	-		
86	OHX	5	3932	-	0,6,6	0.00	-	-		
86	OHX	5	4161	-	0,6,6	0.00	-	-		
86	OHX	1	4039	-	0,6,6	0.00	-	-		
86	OHX	1	3950	-	0,6,6	0.00	-	-		
86	OHX	1	3912	-	0,6,6	0.00	-	-		
86	OHX	6	2156	-	0,6,6	0.00	-	-		
86	OHX	5	4145	-	0,6,6	0.00	-	-		
86	OHX	1	3914	-	0,6,6	0.00	-	-		
86	OHX	5	3934	-	0,6,6	0.00	-	-		
86	OHX	1	4030	-	0,6,6	0.00	-	-		
86	OHX	5	3906	-	0,6,6	0.00	-	-		
86	OHX	2	2066	-	0,6,6	0.00	-	-		
86	OHX	1	4066	-	0,6,6	0.00	-	-		
86	OHX	2	2147	-	0,6,6	0.00	-	-		
86	OHX	6	2065	-	0,6,6	0.00	-	-		
86	OHX	3	225	-	0,6,6	0.00	-	-		
86	OHX	5	4206	-	0,6,6	0.00	-	-		
86	OHX	5	3997	-	0,6,6	0.00	-	-		
86	OHX	1	3963	-	0,6,6	0.00	-	-		
86	OHX	1	3872	-	0,6,6	0.00	-	-		
86	OHX	1	4056	-	0,6,6	0.00	-	-		
86	OHX	2	2081	-	0,6,6	0.00	-	-		
86	OHX	7	217	-	0,6,6	0.00	-	-		
86	OHX	1	4040	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	1	4129	-	0,6,6	0.00	-	-		
86	OHX	3	222	-	0,6,6	0.00	-	-		
86	OHX	1	4064	-	0,6,6	0.00	-	-		
86	OHX	2	2056	-	0,6,6	0.00	-	-		
86	OHX	5	4212	-	0,6,6	0.00	-	-		
86	OHX	6	2201	-	0,6,6	0.00	-	-		
86	OHX	6	2160	-	0,6,6	0.00	-	-		
86	OHX	5	4115	-	0,6,6	0.00	-	-		
86	OHX	5	4152	-	0,6,6	0.00	-	-		
86	OHX	2	2053	-	0,6,6	0.00	-	-		
86	OHX	5	4016	-	0,6,6	0.00	-	-		
86	OHX	6	2095	1	0,6,6	0.00	-	-		
86	OHX	1	4078	-	0,6,6	0.00	-	-		
86	OHX	5	3933	-	0,6,6	0.00	-	-		
86	OHX	1	3917	-	0,6,6	0.00	-	-		
86	OHX	1	4199	-	0,6,6	0.00	-	-		
86	OHX	6	2179	-	0,6,6	0.00	-	-		
86	OHX	5	4197	-	0,6,6	0.00	-	-		
86	OHX	1	4181	-	0,6,6	0.00	-	-		
86	OHX	5	4176	-	0,6,6	0.00	-	-		
86	OHX	5	4050	-	0,6,6	0.00	-	-		
86	OHX	5	4118	-	0,6,6	0.00	-	-		
86	OHX	6	2104	-	0,6,6	0.00	-	-		
86	OHX	1	4043	-	0,6,6	0.00	-	-		
86	OHX	5	3909	-	0,6,6	0.00	-	-		
86	OHX	5	3994	-	0,6,6	0.00	-	-		
86	OHX	5	3964	-	0,6,6	0.00	-	-		
86	OHX	5	3941	-	0,6,6	0.00	-	-		
86	OHX	1	4102	-	0,6,6	0.00	-	-		
86	OHX	5	4073	-	0,6,6	0.00	-	-		
86	OHX	5	4096	-	0,6,6	0.00	-	-		
86	OHX	1	3983	-	0,6,6	0.00	-	-		
86	OHX	6	2046	-	0,6,6	0.00	-	-		
86	OHX	s4	301	-	0,6,6	0.00	-	-		
86	OHX	5	4008	-	0,6,6	0.00	-	-		
86	OHX	5	4031	-	0,6,6	0.00	-	-		
86	OHX	1	3936	-	0,6,6	0.00	-	-		
86	OHX	2	2083	-	0,6,6	0.00	-	-		
86	OHX	2	2079	-	0,6,6	0.00	-	-		
86	OHX	1	4145	-	0,6,6	0.00	-	-		
86	OHX	5	4082	-	0,6,6	0.00	-	-		
86	OHX	s1	302	-	0,6,6	0.00	-	-		
86	OHX	1	3886	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	6	2168	-	0,6,6	0.00	-	-		
86	OHX	5	4173	-	0,6,6	0.00	-	-		
86	OHX	1	4023	-	0,6,6	0.00	-	-		
86	OHX	1	4197	-	0,6,6	0.00	-	-		
86	OHX	1	3934	-	0,6,6	0.00	-	-		
86	OHX	1	3935	-	0,6,6	0.00	-	-		
86	OHX	1	4083	-	0,6,6	0.00	-	-		
86	OHX	5	4024	-	0,6,6	0.00	-	-		
86	OHX	1	3953	-	0,6,6	0.00	-	-		
86	OHX	3	217	-	0,6,6	0.00	-	-		
86	OHX	M5	302	-	0,6,6	0.00	-	-		
86	OHX	1	3923	-	0,6,6	0.00	-	-		
86	OHX	1	4080	-	0,6,6	0.00	-	-		
86	OHX	3	223	-	0,6,6	0.00	-	-		
86	OHX	4	229	-	0,6,6	0.00	-	-		
86	OHX	1	3988	-	0,6,6	0.00	-	-		
86	OHX	6	2153	-	0,6,6	0.00	-	-		
86	OHX	1	4095	-	0,6,6	0.00	-	-		
86	OHX	6	2079	-	0,6,6	0.00	-	-		
86	OHX	5	4065	-	0,6,6	0.00	-	-		
86	OHX	5	3974	-	0,6,6	0.00	-	-		
86	OHX	5	4054	-	0,6,6	0.00	-	-		
86	OHX	6	2094	-	0,6,6	0.00	-	-		
86	OHX	2	2140	-	0,6,6	0.00	-	-		
86	OHX	2	2109	-	0,6,6	0.00	-	-		
86	OHX	5	4193	-	0,6,6	0.00	-	-		
86	OHX	1	4000	-	0,6,6	0.00	-	-		
86	OHX	1	4005	-	0,6,6	0.00	-	-		
86	OHX	6	2189	-	0,6,6	0.00	-	-		
86	OHX	1	4152	-	0,6,6	0.00	-	-		
86	OHX	1	4111	-	0,6,6	0.00	-	-		
86	OHX	1	3946	-	0,6,6	0.00	-	-		
86	OHX	6	2080	-	0,6,6	0.00	-	-		
86	OHX	6	2125	-	0,6,6	0.00	-	-		
86	OHX	s9	201	-	0,6,6	0.00	-	-		
86	OHX	2	2034	-	0,6,6	0.00	-	-		
86	OHX	5	4098	-	0,6,6	0.00	-	-		
86	OHX	Q2	503	-	0,6,6	0.00	-	-		
86	OHX	1	4117	-	0,6,6	0.00	-	-		
86	OHX	6	2198	-	0,6,6	0.00	-	-		
86	OHX	6	2173	-	0,6,6	0.00	-	-		
86	OHX	3	221	-	0,6,6	0.00	-	-		
86	OHX	1	4159	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	6	2176	-	0,6,6	0.00	-	-		
86	OHX	1	4180	-	0,6,6	0.00	-	-		
86	OHX	5	4079	-	0,6,6	0.00	-	-		
86	OHX	6	2123	-	0,6,6	0.00	-	-		
86	OHX	1	3896	-	0,6,6	0.00	-	-		
86	OHX	5	3919	-	0,6,6	0.00	-	-		
86	OHX	1	4092	-	0,6,6	0.00	-	-		
86	OHX	5	4028	-	0,6,6	0.00	-	-		
86	OHX	1	4015	-	0,6,6	0.00	-	-		
86	OHX	2	2046	-	0,6,6	0.00	-	-		
86	OHX	3	226	-	0,6,6	0.00	-	-		
86	OHX	5	3950	-	0,6,6	0.00	-	-		
86	OHX	1	3944	-	0,6,6	0.00	-	-		
86	OHX	5	4231	-	0,6,6	0.00	-	-		
86	OHX	2	2075	-	0,6,6	0.00	-	-		
86	OHX	1	3891	-	0,6,6	0.00	-	-		
86	OHX	1	4074	-	0,6,6	0.00	-	-		
86	OHX	4	239	-	0,6,6	0.00	-	-		
86	OHX	6	2058	-	0,6,6	0.00	-	-		
86	OHX	6	2102	-	0,6,6	0.00	-	-		
86	OHX	1	4135	-	0,6,6	0.00	-	-		
86	OHX	5	4059	-	0,6,6	0.00	-	-		
86	OHX	14	404	-	0,6,6	0.00	-	-		
86	OHX	1	4167	-	0,6,6	0.00	-	-		
86	OHX	6	2137	-	0,6,6	0.00	-	-		
86	OHX	6	2092	-	0,6,6	0.00	-	-		
86	OHX	6	2192	-	0,6,6	0.00	-	-		
86	OHX	5	4219	-	0,6,6	0.00	-	-		
86	OHX	3	215	-	0,6,6	0.00	-	-		
86	OHX	5	4105	-	0,6,6	0.00	-	-		
86	OHX	1	4157	-	0,6,6	0.00	-	-		
86	OHX	6	2062	-	0,6,6	0.00	-	-		
86	OHX	5	4179	-	0,6,6	0.00	-	-		
86	OHX	1	3973	-	0,6,6	0.00	-	-		
86	OHX	5	4002	-	0,6,6	0.00	-	-		
86	OHX	5	4004	-	0,6,6	0.00	-	-		
86	OHX	1	3895	-	0,6,6	0.00	-	-		
86	OHX	2	2065	-	0,6,6	0.00	-	-		
86	OHX	5	4157	-	0,6,6	0.00	-	-		
86	OHX	8	220	-	0,6,6	0.00	-	-		
86	OHX	2	2169	-	0,6,6	0.00	-	-		
86	OHX	6	2057	-	0,6,6	0.00	-	-		
86	OHX	m0	301	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	2	2048	-	0,6,6	0.00	-	-		
86	OHX	1	3959	-	0,6,6	0.00	-	-		
86	OHX	5	3896	-	0,6,6	0.00	-	-		
86	OHX	5	3975	-	0,6,6	0.00	-	-		
86	OHX	6	2088	-	0,6,6	0.00	-	-		
86	OHX	1	4149	-	0,6,6	0.00	-	-		
86	OHX	6	2194	-	0,6,6	0.00	-	-		
86	OHX	2	2134	-	0,6,6	0.00	-	-		
86	OHX	2	2170	-	0,6,6	0.00	-	-		
86	OHX	5	3898	-	0,6,6	0.00	-	-		
86	OHX	1	4081	-	0,6,6	0.00	-	-		
86	OHX	5	3892	-	0,6,6	0.00	-	-		
86	OHX	6	2133	-	0,6,6	0.00	-	-		
86	OHX	5	3901	-	0,6,6	0.00	-	-		
86	OHX	8	219	-	0,6,6	0.00	-	-		
86	OHX	1	4036	-	0,6,6	0.00	-	-		
86	OHX	5	4132	-	0,6,6	0.00	-	-		
86	OHX	1	3901	-	0,6,6	0.00	-	-		
86	OHX	o7	502	-	0,6,6	0.00	-	-		
86	OHX	5	4014	-	0,6,6	0.00	-	-		
86	OHX	5	4095	-	0,6,6	0.00	-	-		
86	OHX	6	2083	-	0,6,6	0.00	-	-		
86	OHX	1	4004	-	0,6,6	0.00	-	-		
86	OHX	1	4164	-	0,6,6	0.00	-	-		
86	OHX	O7	103	-	0,6,6	0.00	-	-		
86	OHX	1	4158	-	0,6,6	0.00	-	-		
86	OHX	6	2119	-	0,6,6	0.00	-	-		
86	OHX	1	3964	-	0,6,6	0.00	-	-		
86	OHX	1	3941	-	0,6,6	0.00	-	-		
86	OHX	5	4201	-	0,6,6	0.00	-	-		
86	OHX	5	4114	-	0,6,6	0.00	-	-		
86	OHX	1	3866	-	0,6,6	0.00	-	-		
86	OHX	1	3879	-	0,6,6	0.00	-	-		
86	OHX	2	2114	-	0,6,6	0.00	-	-		
86	OHX	1	3880	-	0,6,6	0.00	-	-		
86	OHX	1	4082	-	0,6,6	0.00	-	-		
86	OHX	1	4122	-	0,6,6	0.00	-	-		
86	OHX	1	4076	-	0,6,6	0.00	-	-		
86	OHX	2	2093	-	0,6,6	0.00	-	-		
86	OHX	7	225	-	0,6,6	0.00	-	-		
86	OHX	1	3907	-	0,6,6	0.00	-	-		
86	OHX	5	4210	-	0,6,6	0.00	-	-		
86	OHX	1	4100	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	3992	-	0,6,6	0.00	-	-		
86	OHX	1	3910	-	0,6,6	0.00	-	-		
86	OHX	5	4080	-	0,6,6	0.00	-	-		
86	OHX	5	3949	-	0,6,6	0.00	-	-		
86	OHX	5	3998	-	0,6,6	0.00	-	-		
86	OHX	1	4020	-	0,6,6	0.00	-	-		
86	OHX	5	3967	-	0,6,6	0.00	-	-		
86	OHX	7	223	-	0,6,6	0.00	-	-		
86	OHX	M9	202	-	0,6,6	0.00	-	-		
86	OHX	1	3873	-	0,6,6	0.00	-	-		
86	OHX	2	2035	-	0,6,6	0.00	-	-		
86	OHX	5	4076	-	0,6,6	0.00	-	-		
86	OHX	1	4051	-	0,6,6	0.00	-	-		
86	OHX	1	4138	-	0,6,6	0.00	-	-		
86	OHX	5	3899	-	0,6,6	0.00	-	-		
86	OHX	2	2069	-	0,6,6	0.00	-	-		
86	OHX	5	4187	-	0,6,6	0.00	-	-		
86	OHX	6	2202	-	0,6,6	0.00	-	-		
86	OHX	1	3869	-	0,6,6	0.00	-	-		
86	OHX	5	4053	-	0,6,6	0.00	-	-		
86	OHX	2	2150	-	0,6,6	0.00	-	-		
86	OHX	2	2162	-	0,6,6	0.00	-	-		
86	OHX	5	3966	-	0,6,6	0.00	-	-		
86	OHX	5	3981	-	0,6,6	0.00	-	-		
86	OHX	1	3918	-	0,6,6	0.00	-	-		
86	OHX	6	2131	-	0,6,6	0.00	-	-		
86	OHX	1	4192	-	0,6,6	0.00	-	-		
86	OHX	5	4222	-	0,6,6	0.00	-	-		
86	OHX	5	4198	-	0,6,6	0.00	-	-		
86	OHX	5	4151	-	0,6,6	0.00	-	-		
86	OHX	5	4027	-	0,6,6	0.00	-	-		
86	OHX	1	4163	-	0,6,6	0.00	-	-		
86	OHX	1	4029	-	0,6,6	0.00	-	-		
86	OHX	6	2111	-	0,6,6	0.00	-	-		
86	OHX	6	2114	-	0,6,6	0.00	-	-		
86	OHX	5	4019	-	0,6,6	0.00	-	-		
86	OHX	5	4078	-	0,6,6	0.00	-	-		
86	OHX	1	4142	-	0,6,6	0.00	-	-		
86	OHX	1	3865	-	0,6,6	0.00	-	-		
86	OHX	5	4175	-	0,6,6	0.00	-	-		
86	OHX	2	2067	-	0,6,6	0.00	-	-		
86	OHX	1	4188	-	0,6,6	0.00	-	-		
86	OHX	2	2145	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	1	3892	-	0,6,6	0.00	-	-		
86	OHX	2	2055	-	0,6,6	0.00	-	-		
86	OHX	1	4048	-	0,6,6	0.00	-	-		
86	OHX	1	3971	-	0,6,6	0.00	-	-		
86	OHX	5	4083	-	0,6,6	0.00	-	-		
86	OHX	5	3953	-	0,6,6	0.00	-	-		
86	OHX	6	2081	-	0,6,6	0.00	-	-		
86	OHX	5	4184	-	0,6,6	0.00	-	-		
86	OHX	5	4135	-	0,6,6	0.00	-	-		
86	OHX	2	2044	-	0,6,6	0.00	-	-		
86	OHX	5	4122	-	0,6,6	0.00	-	-		
86	OHX	5	4074	-	0,6,6	0.00	-	-		
86	OHX	5	4237	-	0,6,6	0.00	-	-		
86	OHX	5	4041	-	0,6,6	0.00	-	-		
86	OHX	5	3986	-	0,6,6	0.00	-	-		
86	OHX	1	4052	-	0,6,6	0.00	-	-		
86	OHX	6	2113	-	0,6,6	0.00	-	-		
86	OHX	1	4133	-	0,6,6	0.00	-	-		
86	OHX	5	3954	-	0,6,6	0.00	-	-		
86	OHX	1	3867	-	0,6,6	0.00	-	-		
86	OHX	6	2164	-	0,6,6	0.00	-	-		
86	OHX	2	2132	-	0,6,6	0.00	-	-		
86	OHX	2	2039	-	0,6,6	0.00	-	-		
86	OHX	4	235	-	0,6,6	0.00	-	-		
86	OHX	5	4230	-	0,6,6	0.00	-	-		
86	OHX	6	2115	-	0,6,6	0.00	-	-		
86	OHX	6	2155	-	0,6,6	0.00	-	-		
86	OHX	2	2089	-	0,6,6	0.00	-	-		
86	OHX	1	4209	-	0,6,6	0.00	-	-		
86	OHX	8	228	-	0,6,6	0.00	-	-		
86	OHX	6	2064	-	0,6,6	0.00	-	-		
86	OHX	5	4015	-	0,6,6	0.00	-	-		
86	OHX	1	3955	-	0,6,6	0.00	-	-		
86	OHX	1	4210	-	0,6,6	0.00	-	-		
86	OHX	1	4063	-	0,6,6	0.00	-	-		
86	OHX	2	2058	-	0,6,6	0.00	-	-		
86	OHX	2	2125	-	0,6,6	0.00	-	-		
86	OHX	1	4009	-	0,6,6	0.00	-	-		
86	OHX	5	4229	-	0,6,6	0.00	-	-		
86	OHX	1	4160	-	0,6,6	0.00	-	-		
86	OHX	8	229	-	0,6,6	0.00	-	-		
86	OHX	5	4123	-	0,6,6	0.00	-	-		
86	OHX	1	3913	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	1	4089	-	0,6,6	0.00	-	-		
86	OHX	5	4049	-	0,6,6	0.00	-	-		
86	OHX	6	2199	-	0,6,6	0.00	-	-		
86	OHX	1	3956	-	0,6,6	0.00	-	-		
86	OHX	6	2099	-	0,6,6	0.00	-	-		
86	OHX	1	3949	-	0,6,6	0.00	-	-		
86	OHX	6	2085	-	0,6,6	0.00	-	-		
86	OHX	M0	303	-	0,6,6	0.00	-	-		
86	OHX	1	4125	-	0,6,6	0.00	-	-		
86	OHX	S8	302	-	0,6,6	0.00	-	-		
86	OHX	d4	202	-	0,6,6	0.00	-	-		
86	OHX	5	4168	-	0,6,6	0.00	-	-		
86	OHX	6	2067	-	0,6,6	0.00	-	-		
86	OHX	6	2135	-	0,6,6	0.00	-	-		
86	OHX	1	4090	-	0,6,6	0.00	-	-		
86	OHX	1	3986	-	0,6,6	0.00	-	-		
86	OHX	6	2170	-	0,6,6	0.00	-	-		
86	OHX	5	4139	-	0,6,6	0.00	-	-		
86	OHX	6	2091	-	0,6,6	0.00	-	-		
86	OHX	6	2191	-	0,6,6	0.00	-	-		
86	OHX	5	3931	-	0,6,6	0.00	-	-		
86	OHX	2	2091	-	0,6,6	0.00	-	-		
86	OHX	3	220	-	0,6,6	0.00	-	-		
86	OHX	5	4030	-	0,6,6	0.00	-	-		
86	OHX	5	3926	-	0,6,6	0.00	-	-		
86	OHX	l3	406	-	0,6,6	0.00	-	-		
86	OHX	1	3962	-	0,6,6	0.00	-	-		
86	OHX	1	3943	-	0,6,6	0.00	-	-		
86	OHX	1	4018	-	0,6,6	0.00	-	-		
86	OHX	1	4172	-	0,6,6	0.00	-	-		
86	OHX	6	2184	-	0,6,6	0.00	-	-		
86	OHX	5	3936	-	0,6,6	0.00	-	-		
86	OHX	6	2181	-	0,6,6	0.00	-	-		
86	OHX	1	4127	-	0,6,6	0.00	-	-		
86	OHX	1	4128	-	0,6,6	0.00	-	-		
86	OHX	2	2070	-	0,6,6	0.00	-	-		
86	OHX	4	236	-	0,6,6	0.00	-	-		
86	OHX	1	3952	-	0,6,6	0.00	-	-		
86	OHX	2	2124	-	0,6,6	0.00	-	-		
86	OHX	1	3863	-	0,6,6	0.00	-	-		
86	OHX	2	2178	-	0,6,6	0.00	-	-		
86	OHX	o2	201	-	0,6,6	0.00	-	-		
86	OHX	1	4093	-	0,6,6	0.00	-	-		



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	L3	404	-	0,6,6	0.00	-	-		
86	OHX	2	2084	-	0,6,6	0.00	-	-		
86	OHX	1	3931	-	0,6,6	0.00	-	-		
86	OHX	2	2059	-	0,6,6	0.00	-	-		
86	OHX	5	4241	-	0,6,6	0.00	-	-		
86	OHX	1	4207	-	0,6,6	0.00	-	-		
86	OHX	1	4049	-	0,6,6	0.00	-	-		
86	OHX	SR	401	-	0,6,6	0.00	-	-		
86	OHX	2	2032	-	0,6,6	0.00	-	-		
86	OHX	1	4053	-	0,6,6	0.00	-	-		
86	OHX	5	3999	-	0,6,6	0.00	-	-		
86	OHX	5	4242	-	0,6,6	0.00	-	-		
86	OHX	6	2161	-	0,6,6	0.00	-	-		
86	OHX	5	3912	-	0,6,6	0.00	-	-		
86	OHX	l3	405	-	0,6,6	0.00	-	-		
86	OHX	5	4044	-	0,6,6	0.00	-	-		
86	OHX	5	4072	-	0,6,6	0.00	-	-		
86	OHX	6	2132	-	0,6,6	0.00	-	-		
86	OHX	5	3924	-	0,6,6	0.00	-	-		
86	OHX	1	3893	-	0,6,6	0.00	-	-		
86	OHX	1	4014	-	0,6,6	0.00	-	-		
86	OHX	5	4196	-	0,6,6	0.00	-	-		
86	OHX	5	4108	-	0,6,6	0.00	-	-		
86	OHX	6	2109	-	0,6,6	0.00	-	-		
86	OHX	2	2062	-	0,6,6	0.00	-	-		
86	OHX	2	2090	-	0,6,6	0.00	-	-		
86	OHX	5	4239	-	0,6,6	0.00	-	-		
86	OHX	6	2130	-	0,6,6	0.00	-	-		
86	OHX	m6	202	-	0,6,6	0.00	-	-		
86	OHX	6	2149	-	0,6,6	0.00	-	-		
86	OHX	1	3930	-	0,6,6	0.00	-	-		
86	OHX	5	4109	-	0,6,6	0.00	-	-		
86	OHX	2	2165	-	0,6,6	0.00	-	-		
86	OHX	5	3946	-	0,6,6	0.00	-	-		
86	OHX	6	2084	-	0,6,6	0.00	-	-		
86	OHX	5	4156	-	0,6,6	0.00	-	-		
86	OHX	5	4025	-	0,6,6	0.00	-	-		
86	OHX	5	3937	-	0,6,6	0.00	-	-		
86	OHX	1	4022	-	0,6,6	0.00	-	-		
86	OHX	5	4159	-	0,6,6	0.00	-	-		
86	OHX	2	2057	-	0,6,6	0.00	-	-		
86	OHX	1	3954	-	0,6,6	0.00	-	-		
86	OHX	5	4165	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	4000	-	0,6,6	0.00	-	-		
86	OHX	5	4001	-	0,6,6	0.00	-	-		
86	OHX	1	3976	-	0,6,6	0.00	-	-		
86	OHX	1	4103	-	0,6,6	0.00	-	-		
86	OHX	5	3956	-	0,6,6	0.00	-	-		
86	OHX	2	2078	-	0,6,6	0.00	-	-		
86	OHX	6	2157	-	0,6,6	0.00	-	-		
86	OHX	5	4125	-	0,6,6	0.00	-	-		
86	OHX	5	4084	-	0,6,6	0.00	-	-		
86	OHX	6	2110	-	0,6,6	0.00	-	-		
86	OHX	7	222	-	0,6,6	0.00	-	-		
86	OHX	2	2026	-	0,6,6	0.00	-	-		
86	OHX	5	4233	-	0,6,6	0.00	-	-		
86	OHX	1	4042	-	0,6,6	0.00	-	-		
86	OHX	2	2031	-	0,6,6	0.00	-	-		
86	OHX	1	3897	-	0,6,6	0.00	-	-		
86	OHX	5	3929	-	0,6,6	0.00	-	-		
86	OHX	2	2112	-	0,6,6	0.00	-	-		
86	OHX	1	4050	-	0,6,6	0.00	-	-		
86	OHX	5	3970	-	0,6,6	0.00	-	-		
86	OHX	5	4174	-	0,6,6	0.00	-	-		
86	OHX	1	4073	-	0,6,6	0.00	-	-		
86	OHX	2	2076	-	0,6,6	0.00	-	-		
86	OHX	7	224	-	0,6,6	0.00	-	-		
86	OHX	1	4162	-	0,6,6	0.00	-	-		
86	OHX	4	228	-	0,6,6	0.00	-	-		
86	OHX	5	4162	-	0,6,6	0.00	-	-		
86	OHX	1	3878	-	0,6,6	0.00	-	-		
86	OHX	6	2063	-	0,6,6	0.00	-	-		
86	OHX	1	3920	-	0,6,6	0.00	-	-		
86	OHX	5	4055	-	0,6,6	0.00	-	-		
86	OHX	n6	202	-	0,6,6	0.00	-	-		
86	OHX	5	4208	-	0,6,6	0.00	-	-		
86	OHX	1	3921	-	0,6,6	0.00	-	-		
86	OHX	1	3995	-	0,6,6	0.00	-	-		
86	OHX	2	2151	-	0,6,6	0.00	-	-		
86	OHX	2	2085	-	0,6,6	0.00	-	-		
86	OHX	1	4012	-	0,6,6	0.00	-	-		
86	OHX	6	2159	-	0,6,6	0.00	-	-		
86	OHX	1	4075	-	0,6,6	0.00	-	-		
86	OHX	5	3961	-	0,6,6	0.00	-	-		
86	OHX	1	4187	-	0,6,6	0.00	-	-		
86	OHX	5	4211	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	2	2099	-	0,6,6	0.00	-	-		
86	OHX	6	2174	-	0,6,6	0.00	-	-		
86	OHX	1	3926	-	0,6,6	0.00	-	-		
86	OHX	1	3975	-	0,6,6	0.00	-	-		
86	OHX	1	4098	-	0,6,6	0.00	-	-		
86	OHX	1	4019	-	0,6,6	0.00	-	-		
86	OHX	1	4072	-	0,6,6	0.00	-	-		
86	OHX	4	237	-	0,6,6	0.00	-	-		
86	OHX	1	4054	-	0,6,6	0.00	-	-		
86	OHX	1	4200	-	0,6,6	0.00	-	-		
86	OHX	1	3967	-	0,6,6	0.00	-	-		
86	OHX	1	4021	-	0,6,6	0.00	-	-		
86	OHX	1	4190	-	0,6,6	0.00	-	-		
86	OHX	1	3958	-	0,6,6	0.00	-	-		
86	OHX	2	2023	-	0,6,6	0.00	-	-		
86	OHX	1	3938	-	0,6,6	0.00	-	-		
86	OHX	2	2120	-	0,6,6	0.00	-	-		
86	OHX	5	4092	-	0,6,6	0.00	-	-		
86	OHX	1	4069	-	0,6,6	0.00	-	-		
86	OHX	5	4042	-	0,6,6	0.00	-	-		
86	OHX	5	4033	-	0,6,6	0.00	-	-		
86	OHX	7	218	-	0,6,6	0.00	-	-		
86	OHX	5	4146	-	0,6,6	0.00	-	-		
86	OHX	5	4060	-	0,6,6	0.00	-	-		
86	OHX	1	4185	-	0,6,6	0.00	-	-		
86	OHX	5	4043	-	0,6,6	0.00	-	-		
86	OHX	2	2025	-	0,6,6	0.00	-	-		
86	OHX	1	4116	-	0,6,6	0.00	-	-		
86	OHX	1	4146	-	0,6,6	0.00	-	-		
86	OHX	1	3968	-	0,6,6	0.00	-	-		
86	OHX	1	3993	-	0,6,6	0.00	-	-		
86	OHX	1	4144	-	0,6,6	0.00	-	-		
86	OHX	1	4205	-	0,6,6	0.00	-	-		
86	OHX	6	2072	-	0,6,6	0.00	-	-		
86	OHX	2	2045	-	0,6,6	0.00	-	-		
86	OHX	6	2171	-	0,6,6	0.00	-	-		
86	OHX	N1	201	-	0,6,6	0.00	-	-		
86	OHX	4	231	-	0,6,6	0.00	-	-		
86	OHX	5	4245	-	0,6,6	0.00	-	-		
86	OHX	6	2120	-	0,6,6	0.00	-	-		
86	OHX	1	4085	-	0,6,6	0.00	-	-		
86	OHX	5	4182	-	0,6,6	0.00	-	-		
86	OHX	1	4006	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	8	226	-	0,6,6	0.00	-	-		
86	OHX	1	3960	-	0,6,6	0.00	-	-		
86	OHX	6	2141	-	0,6,6	0.00	-	-		
86	OHX	5	4091	-	0,6,6	0.00	-	-		
86	OHX	2	2130	-	0,6,6	0.00	-	-		
86	OHX	5	4094	-	0,6,6	0.00	-	-		
86	OHX	5	3991	-	0,6,6	0.00	-	-		
86	OHX	2	2149	-	0,6,6	0.00	-	-		
86	OHX	6	2071	-	0,6,6	0.00	-	-		
86	OHX	5	4057	-	0,6,6	0.00	-	-		
86	OHX	3	224	-	0,6,6	0.00	-	-		
86	OHX	5	4107	-	0,6,6	0.00	-	-		
86	OHX	1	4079	-	0,6,6	0.00	-	-		
86	OHX	1	3987	-	0,6,6	0.00	-	-		
86	OHX	1	3989	-	0,6,6	0.00	-	-		
86	OHX	2	2110	-	0,6,6	0.00	-	-		
86	OHX	5	4067	-	0,6,6	0.00	-	-		
86	OHX	6	2122	-	0,6,6	0.00	-	-		
86	OHX	1	4112	-	0,6,6	0.00	-	-		
86	OHX	5	3947	-	0,6,6	0.00	-	-		
86	OHX	5	4154	-	0,6,6	0.00	-	-		
86	OHX	1	4047	-	0,6,6	0.00	-	-		
86	OHX	1	4186	-	0,6,6	0.00	-	-		
86	OHX	6	2145	-	0,6,6	0.00	-	-		
86	OHX	1	4178	-	0,6,6	0.00	-	-		
86	OHX	1	3868	-	0,6,6	0.00	-	-		
86	OHX	2	2155	-	0,6,6	0.00	-	-		
86	OHX	5	3963	-	0,6,6	0.00	-	-		
86	OHX	1	4094	-	0,6,6	0.00	-	-		
86	OHX	5	3982	-	0,6,6	0.00	-	-		
86	OHX	5	3904	-	0,6,6	0.00	-	-		
86	OHX	2	2118	-	0,6,6	0.00	-	-		
86	OHX	5	3944	-	0,6,6	0.00	-	-		
86	OHX	6	2172	-	0,6,6	0.00	-	-		
86	OHX	1	4016	-	0,6,6	0.00	-	-		
86	OHX	1	4025	-	0,6,6	0.00	-	-		
86	OHX	5	3939	-	0,6,6	0.00	-	-		
86	OHX	1	4106	-	0,6,6	0.00	-	-		
86	OHX	1	4088	-	0,6,6	0.00	-	-		
86	OHX	2	2050	-	0,6,6	0.00	-	-		
86	OHX	s1	303	-	0,6,6	0.00	-	-		
86	OHX	4	233	-	0,6,6	0.00	-	-		
86	OHX	5	4232	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	6	2143	-	0,6,6	0.00	-	-		
86	OHX	5	4225	-	0,6,6	0.00	-	-		
86	OHX	2	2126	-	0,6,6	0.00	-	-		
86	OHX	1	4013	-	0,6,6	0.00	-	-		
86	OHX	2	2100	-	0,6,6	0.00	-	-		
86	OHX	5	4013	-	0,6,6	0.00	-	-		
86	OHX	1	3939	-	0,6,6	0.00	-	-		
86	OHX	2	2072	-	0,6,6	0.00	-	-		
86	OHX	N9	101	-	0,6,6	0.00	-	-		
86	OHX	1	3875	-	0,6,6	0.00	-	-		
86	OHX	5	4047	-	0,6,6	0.00	-	-		
86	OHX	5	4129	-	0,6,6	0.00	-	-		
86	OHX	5	3962	-	0,6,6	0.00	-	-		
86	OHX	5	4144	-	0,6,6	0.00	-	-		
86	OHX	2	2043	-	0,6,6	0.00	-	-		
86	OHX	6	2147	-	0,6,6	0.00	-	-		
86	OHX	1	4196	-	0,6,6	0.00	-	-		
86	OHX	o7	503	-	0,6,6	0.00	-	-		
86	OHX	5	4093	-	0,6,6	0.00	-	-		
86	OHX	5	4223	-	0,6,6	0.00	-	-		
86	OHX	6	2182	-	0,6,6	0.00	-	-		
86	OHX	5	4192	-	0,6,6	0.00	-	-		
86	OHX	1	3965	-	0,6,6	0.00	-	-		
86	OHX	1	3979	-	0,6,6	0.00	-	-		
86	OHX	1	4003	-	0,6,6	0.00	-	-		
86	OHX	4	230	-	0,6,6	0.00	-	-		
86	OHX	5	4011	-	0,6,6	0.00	-	-		
86	OHX	5	4189	-	0,6,6	0.00	-	-		
86	OHX	8	224	-	0,6,6	0.00	-	-		
86	OHX	5	4158	-	0,6,6	0.00	-	-		
86	OHX	6	2093	-	0,6,6	0.00	-	-		
86	OHX	1	4124	-	0,6,6	0.00	-	-		
86	OHX	5	3915	-	0,6,6	0.00	-	-		
86	OHX	2	2052	-	0,6,6	0.00	-	-		
86	OHX	2	2160	-	0,6,6	0.00	-	-		
86	OHX	1	3970	-	0,6,6	0.00	-	-		
86	OHX	5	3907	-	0,6,6	0.00	-	-		
86	OHX	5	4032	-	0,6,6	0.00	-	-		
86	OHX	1	4113	-	0,6,6	0.00	-	-		
86	OHX	L3	403	-	0,6,6	0.00	-	-		
86	OHX	6	2127	-	0,6,6	0.00	-	-		
86	OHX	5	4134	-	0,6,6	0.00	-	-		
86	OHX	1	3999	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
86	OHX	5	4039	-	0,6,6	0.00	-	-		
86	OHX	5	4238	-	0,6,6	0.00	-	-		
86	OHX	5	4190	-	0,6,6	0.00	-	-		
86	OHX	2	2128	-	0,6,6	0.00	-	-		
86	OHX	1	3998	-	0,6,6	0.00	-	-		
86	OHX	1	4059	-	0,6,6	0.00	-	-		
86	OHX	6	2116	-	0,6,6	0.00	-	-		
86	OHX	C3	201	-	0,6,6	0.00	-	-		
86	OHX	1	4038	-	0,6,6	0.00	-	-		
86	OHX	1	4046	-	0,6,6	0.00	-	-		
86	OHX	1	3947	-	0,6,6	0.00	-	-		
86	OHX	1	3902	-	0,6,6	0.00	-	-		
86	OHX	5	4181	-	0,6,6	0.00	-	-		
86	OHX	1	4179	-	0,6,6	0.00	-	-		
86	OHX	5	3921	-	0,6,6	0.00	-	-		
86	OHX	c5	201	-	0,6,6	0.00	-	-		
86	OHX	8	222	-	0,6,6	0.00	-	-		
86	OHX	1	4170	-	0,6,6	0.00	-	-		
86	OHX	1	3994	-	0,6,6	0.00	-	-		
86	OHX	6	2055	-	0,6,6	0.00	-	-		
86	OHX	2	2088	-	0,6,6	0.00	-	-		
86	OHX	1	4130	-	0,6,6	0.00	-	-		
86	OHX	5	4180	-	0,6,6	0.00	-	-		

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
88	3L2	5	4246	-	-	3/31/89/89	0/4/5/5
88	3L2	1	4212	-	-	4/31/89/89	0/4/5/5

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
88	5	4246	3L2	O8-C13	-2.76	1.39	1.44
88	5	4246	3L2	C25-C14	-2.64	1.47	1.53
88	1	4212	3L2	O8-C13	2.63	1.49	1.44
88	5	4246	3L2	C22-C15	2.46	1.57	1.53
88	5	4246	3L2	O3-C9	-2.40	1.29	1.34
88	5	4246	3L2	O5-C22	2.26	1.49	1.45

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
88	5	4246	3L2	O7-C24-C1	-5.73	98.81	110.40
88	5	4246	3L2	C16-C15-C20	5.61	111.97	107.90
88	1	4212	3L2	C7-C8-C9	4.25	133.81	123.36
88	1	4212	3L2	C15-C14-C10	4.01	112.53	108.19
88	5	4246	3L2	C11-C10-C14	3.90	108.30	106.07
88	1	4212	3L2	C11-C10-C14	-3.57	104.04	106.07
88	5	4246	3L2	C25-C14-C15	3.22	117.51	113.75
88	1	4212	3L2	O-C4-O1	3.04	129.61	122.93
88	1	4212	3L2	O-C4-C5	-2.85	103.98	111.55
88	5	4246	3L2	C14-C15-C20	2.78	111.52	109.28
88	5	4246	3L2	C10-C11-C12	-2.61	102.24	104.89
88	1	4212	3L2	O3-C10-C11	-2.57	104.34	111.07
88	5	4246	3L2	O4-C12-C13	2.37	111.28	108.31
88	5	4246	3L2	C21-C18-C19	-2.24	119.47	122.46
88	1	4212	3L2	O8-C26-C13	2.11	61.51	59.35
88	1	4212	3L2	C10-C11-C12	2.10	107.02	104.89
88	5	4246	3L2	C13-C14-C10	-2.09	97.19	100.48

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
88	1	4212	3L2	C16-C15-C22-O5
88	1	4212	3L2	C5-C6-C7-C8
88	1	4212	3L2	C5-C4-O-C3
88	5	4246	3L2	C6-C7-C8-C9
88	1	4212	3L2	O1-C4-O-C3
88	5	4246	3L2	C14-C10-O3-C9
88	5	4246	3L2	C5-C4-O-C3

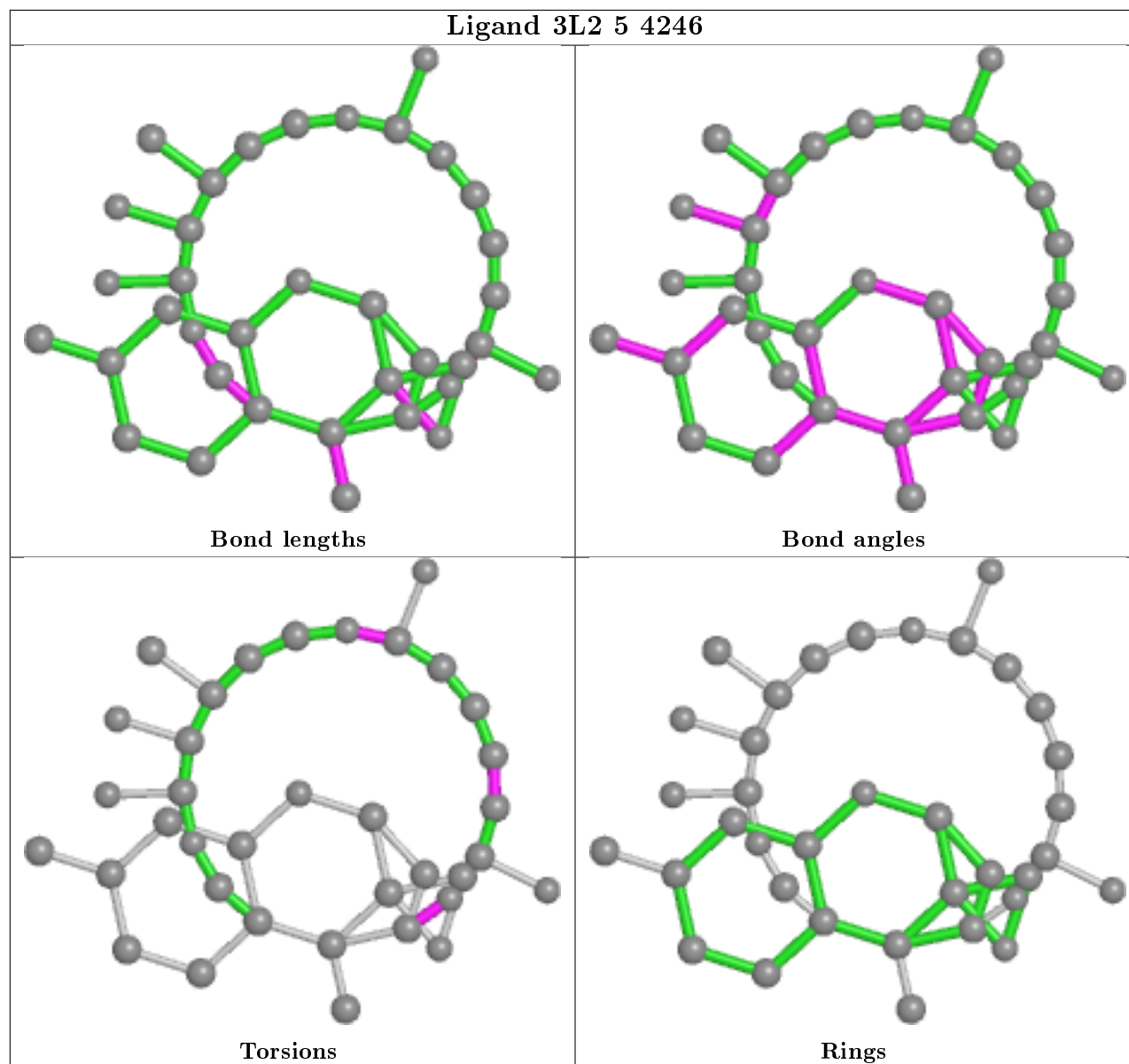
There are no ring outliers.

1 monomer is involved in 1 short contact:

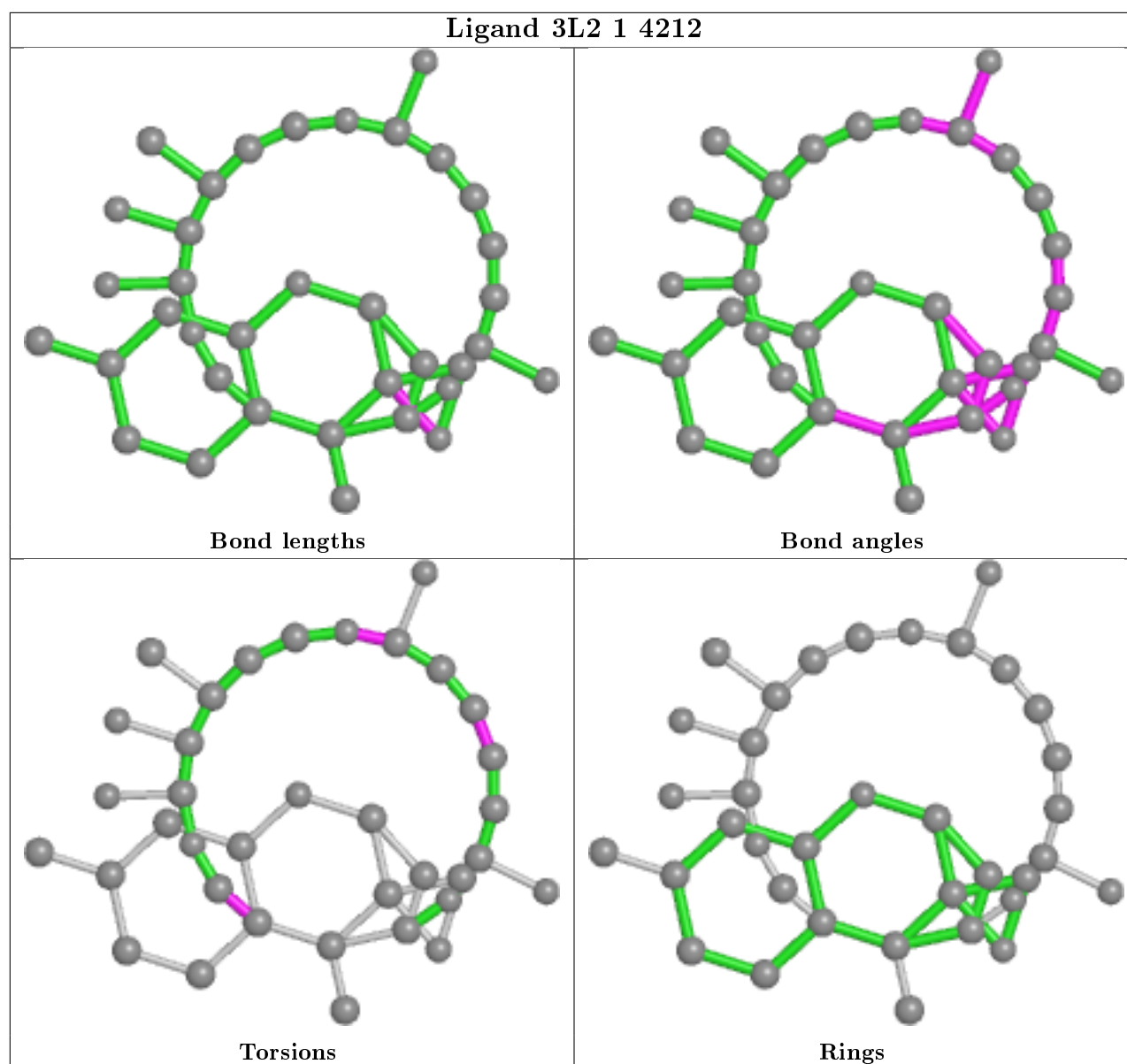
Mol	Chain	Res	Type	Clashes	Symm-Clashes
86	S6	301	OHX	0	1

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier.

Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.







## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

EDS failed to run properly - this section is therefore empty.

### 6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

EDS failed to run properly - this section is therefore empty.

### 6.3 Carbohydrates ⓘ

EDS failed to run properly - this section is therefore empty.

### 6.4 Ligands ⓘ

EDS failed to run properly - this section is therefore empty.

### 6.5 Other polymers ⓘ

EDS failed to run properly - this section is therefore empty.