



## wwPDB EM Validation Summary Report ⓘ

Nov 6, 2022 – 11:11 PM EST

PDB ID : 6BY7  
EMDB ID : EMD-7304  
Title : Folding DNA into a lipid-conjugated nano-barrel for controlled reconstitution of membrane proteins  
Authors : Dong, Y.; Chen, S.; Zhang, S.; Sodroski, J.; Yang, Z.; Liu, D.; Mao, Y.  
Deposited on : 2017-12-20  
Resolution : 7.50 Å(reported)

This is a wwPDB EM Validation Summary 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/EMValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

EMDB validation analysis : 0.0.1.dev43  
MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.31.2

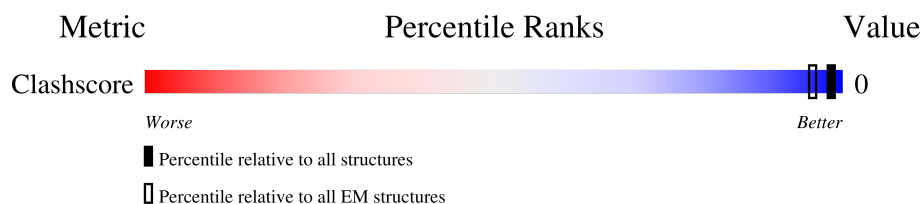
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*


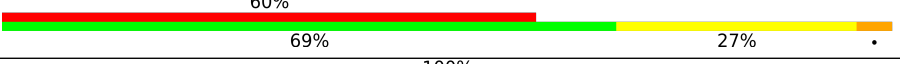


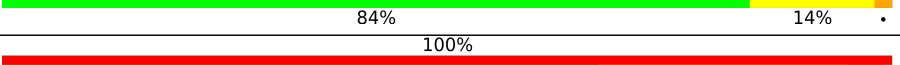





The reported resolution of this entry is 7.50 Å.

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)	EM structures (#Entries)
Clashscore	158937	4297

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	1A	52	
2	1B	55	
3	1C	16	
4	1D	59	
5	1E	51	
6	1F	46	
7	1G	16	
8	1H	48	
9	1I	47	
10	1J	24	

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Mol	Chain	Length	Quality of chain
11	1K	46	
12	1L	16	
13	1M	32	
14	1O	40	
15	1P	46	
16	1Q	37	
17	1R	48	
18	1S	37	
19	1T	16	
20	1U	40	
21	1V	26	
22	1W	40	
23	1X	48	
24	1Y	27	
25	1Z	26	
26	1a	47	
27	1b	32	
28	1c	40	
29	1d	40	
30	1e	26	
31	1f	40	
32	1g	48	
33	1h	48	
34	1i	48	
35	1j	32	

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Mol	Chain	Length	Quality of chain
36	1k	40	
37	1l	48	
38	1m	16	
39	1n	56	
40	1o	40	
41	1p	40	
42	1q	48	
43	1r	32	
44	1s	32	
45	1t	32	
46	1u	48	
47	1v	16	
48	1w	40	
49	1x	16	
50	2N	36	
51	2A	32	
52	2B	48	
53	2C	26	
54	2D	32	
55	2E	40	
56	2F	48	
57	2G	40	
58	2H	40	
59	2I	16	
60	2J	29	

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Mol	Chain	Length	Quality of chain
61	2K	24	
62	2L	32	
63	2M	24	
64	2O	26	
65	2P	40	
66	2Q	40	
67	2R	40	
68	2S	58	
69	2T	24	
70	2U	52	
71	2V	40	
72	2W	48	
73	2X	48	
74	2Y	32	
75	2Z	40	
76	2a	58	
77	2b	56	
78	2c	45	
79	2d	52	
80	2e	37	
81	2f	48	
82	2g	48	
83	2h	56	
84	2i	32	
85	2j	16	

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Mol	Chain	Length	Quality of chain
86	2k	32	
87	2l	48	
88	2m	48	
89	2n	16	
90	2o	32	
91	2p	32	
92	2q	40	
93	2r	24	
94	2s	32	
95	2t	40	
96	2u	32	
97	2v	32	
98	2w	47	
99	2x	16	
100	3N	4346	
101	3A	40	
102	3B	40	
103	3C	48	
104	3D	48	
105	3E	48	
106	3F	56	
107	3G	16	
108	3H	56	
109	3I	36	
110	3J	35	

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Mol	Chain	Length	Quality of chain
111	3S	32	<div>78%</div> <div>88%12%</div>
112	3K	48	<div>63%</div> <div>90%8%</div>
113	3L	37	<div>65%</div> <div>95%5%</div>
114	3M	55	<div>65%</div> <div>80%20%</div>
115	3O	48	<div>75%</div> <div>83%15%</div>
116	3P	38	<div>100%</div> <div>97%</div>
117	3Q	26	<div>88%</div> <div>81%15%</div>
118	3R	32	<div>22%</div> <div>84%16%</div>

## 2 Entry composition

There are 118 unique types of molecules in this entry. The entry contains 180167 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 DNA chain called DNA (52-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
1	1A	52	Total	C	N	O	P	0	0
			1082	516	213	302	51		

- Molecule 2 is a DNA chain called DNA (55-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
2	1B	55	Total	C	N	O	P	0	0
			1137	540	219	324	54		

- Molecule 3 is a DNA chain called DNA (5'-D(\*AP\*AP\*TP\*AP\*AP\*CP\*GP\*GP\*CP\*TP\*CP\*AP\*GP\*AP\*GP\*C)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
3	1C	16	Total	C	N	O	P	0	0
			327	156	66	90	15		

- Molecule 4 is a DNA chain called DNA (59-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
4	1D	59	Total	C	N	O	P	0	0
			1220	584	229	349	58		

- Molecule 5 is a DNA chain called DNA (51-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
5	1E	51	Total	C	N	O	P	0	0
			1052	502	206	294	50		

- Molecule 6 is a DNA chain called DNA (46-MER).



Mol	Chain	Residues	Atoms					AltConf	Trace
6	1F	46	Total	C	N	O	P	0	0
			950	455	181	269	45		

- Molecule 7 is a DNA chain called DNA (5'-D(\*TP\*CP\*AP\*AP\*CP\*CP\*GP\*AP\*GP\*CP\*TP\*TP\*GP\*CP\*TP\*T)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
7	1G	16	Total	C	N	O	P	0	0
			321	155	55	96	15		

- Molecule 8 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
8	1H	48	Total	C	N	O	P	0	0
			970	465	177	281	47		

- Molecule 9 is a DNA chain called DNA (47-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
9	1I	47	Total	C	N	O	P	0	0
			971	462	183	280	46		

- Molecule 10 is a DNA chain called DNA (5'-D(\*TP\*AP\*TP\*TP\*AP\*GP\*CP\*GP\*AP\*GP\*AP\*TP\*GP\*GP\*TP\*TP\*TP\*TP\*AP\*TP\*TP\*AP\*CP\*A)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
10	1J	24	Total	C	N	O	P	0	0
			492	238	86	145	23		

- Molecule 11 is a DNA chain called DNA (46-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
11	1K	46	Total	C	N	O	P	0	0
			945	450	177	273	45		

- Molecule 12 is a DNA chain called DNA (5'-D(\*CP\*GP\*AP\*CP\*AP\*GP\*AP\*AP\*TP\*GP\*AP\*AP\*AP\*GP\*AP\*G)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
12	1L	16	Total	C	N	O	P	0	0
			333	158	73	87	15		

- Molecule 13 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
13	1M	32	Total	C	N	O	P	0	0
			645	306	120	188	31		

- Molecule 14 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
14	1O	40	Total	C	N	O	P	0	0
			808	386	154	229	39		

- Molecule 15 is a DNA chain called DNA (46-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
15	1P	46	Total	C	N	O	P	0	0
			948	451	182	270	45		

- Molecule 16 is a DNA chain called DNA (37-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
16	1Q	37	Total	C	N	O	P	0	0
			752	358	149	209	36		

- Molecule 17 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
17	1R	48	Total	C	N	O	P	0	0
			976	464	181	284	47		

- Molecule 18 is a DNA chain called DNA (37-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
18	1S	37	Total	C	N	O	P	0	0
			763	365	145	217	36		

- Molecule 19 is a DNA chain called DNA (5'-D(\*CP\*GP\*CP\*CP\*AP\*CP\*CP\*AP\*GP\*AP\*TP\*TP\*CP\*AP\*TP\*C)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
19	1T	16	Total	C	N	O	P	0	0
			318	153	57	93	15		

- Molecule 20 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
20	1U	40	Total	C	N	O	P	0	0
			826	393	168	226	39		

- Molecule 21 is a DNA chain called DNA (26-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
21	1V	26	Total	C	N	O	P	0	0
			521	252	84	160	25		

- Molecule 22 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
22	1W	40	Total	C	N	O	P	0	0
			830	397	158	236	39		

- Molecule 23 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
23	1X	48	Total	C	N	O	P	0	0
			983	468	192	276	47		

- Molecule 24 is a DNA chain called DNA (27-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
24	1Y	27	Total	C	N	O	P	0	0
			544	262	92	164	26		

- Molecule 25 is a DNA chain called DNA (26-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
25	1Z	26	Total	C	N	O	P	0	0
			531	254	100	152	25		

- Molecule 26 is a DNA chain called DNA (47-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
26	1a	47	Total	C	N	O	P	0	0
			965	465	183	271	46		

- Molecule 27 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
27	1b	32	Total	C	N	O	P	0	0
			665	317	133	184	31		

- Molecule 28 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
28	1c	40	Total	C	N	O	P	0	0
			820	395	151	235	39		

- Molecule 29 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
29	1d	40	Total	C	N	O	P	0	0
			826	396	162	229	39		

- Molecule 30 is a DNA chain called DNA (26-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
30	1e	26	Total	C	N	O	P	0	0
			524	252	96	151	25		

- Molecule 31 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
31	1f	40	Total	C	N	O	P	0	0
			804	387	141	237	39		

- Molecule 32 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
32	1g	48	Total	C	N	O	P	0	0
			982	469	191	275	47		

- Molecule 33 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
33	1h	48	Total	C	N	O	P	0	0
			993	474	192	280	47		

- Molecule 34 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
34	1i	48	Total	C	N	O	P	0	0
			986	473	184	282	47		

- Molecule 35 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
35	1j	32	Total	C	N	O	P	0	0
			659	314	130	184	31		

- Molecule 36 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
36	1k	40	Total	C	N	O	P	0	0
			827	397	152	239	39		

- Molecule 37 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
37	1l	48	Total	C	N	O	P	0	0
			980	470	175	288	47		

- Molecule 38 is a DNA chain called DNA (5'-D(P\*TP\*CP\*GP\*AP\*GP\*GP\*TP\*GP\*AP\*T  
P\*TP\*CP\*GP\*CP\*GP\*T)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
38	1m	16	Total	C	N	O	P	0	0
			328	157	59	97	15		

- Molecule 39 is a DNA chain called DNA (56-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
39	1n	56	Total	C	N	O	P	0	0
			1148	548	217	328	55		

- Molecule 40 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
40	1o	40	Total	C	N	O	P	0	0
			821	390	156	236	39		

- Molecule 41 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
41	1p	40	Total	C	N	O	P	0	0
			816	389	157	231	39		

- Molecule 42 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
42	1q	48	Total	C	N	O	P	0	0
			981	468	183	283	47		

- Molecule 43 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
43	1r	32	Total	C	N	O	P	0	0
			654	310	125	188	31		

- Molecule 44 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
44	1s	32	Total	C	N	O	P	0	0
			649	312	117	189	31		

- Molecule 45 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
45	1t	32	Total	C	N	O	P	0	0
			651	310	119	191	31		

- Molecule 46 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
46	1u	48	Total	C	N	O	P	0	0
			982	469	176	290	47		

- Molecule 47 is a DNA chain called DNA (5'-D(P\*CP\*CP\*CP\*CP\*CP\*AP\*GP\*CP\*TP\*GP\*GP\*TP\*CP\*AP\*TP\*A)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
47	1v	16	Total	C	N	O	P	0	0
			319	153	57	94	15		

- Molecule 48 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
48	1w	40	Total	C	N	O	P	0	0
			808	387	144	238	39		

- Molecule 49 is a DNA chain called DNA (5'-D(P\*GP\*AP\*CP\*AP\*GP\*AP\*TP\*GP\*CP\*GP\*TP\*GP\*CP\*CP\*AP\*G)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
49	1x	16	Total	C	N	O	P	0	0
			329	156	66	92	15		

- Molecule 50 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
50	2N	36	Total	C	N	O	P	0	0
			736	353	133	215	35		

- Molecule 51 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
51	2A	32	Total	C	N	O	P	0	0
			665	315	135	184	31		

- Molecule 52 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
52	2B	48	Total	C	N	O	P	0	0
			975	465	186	277	47		

- Molecule 53 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
53	2C	26	Total	C	N	O	P	0	0
			527	256	83	163	25		

- Molecule 54 is a DNA chain called DNA (29-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
54	2D	32	Total	C	N	O	P	0	0
			652	314	124	183	31		

- Molecule 55 is a DNA chain called DNA (5'-D(P\*CP\*AP\*TP\*AP\*AP\*CP\*GP\*CP\*AP\*T\*P\*AP\*AP\*AP\*AP\*CP\*GP\*AP\*GP\*GP\*AP\*GP\*GP\*TP\*T)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
55	2E	40	Total	C	N	O	P	0	0
			816	393	147	237	39		

- Molecule 56 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
56	2F	48	Total	C	N	O	P	0	0
			988	473	181	287	47		

- Molecule 57 is a DNA chain called DNA (26-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
57	2G	40	Total	C	N	O	P	0	0
			820	393	147	241	39		

- Molecule 58 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
58	2H	40	Total	C	N	O	P	0	0
			807	389	148	231	39		

- Molecule 59 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
59	2I	16	Total	C	N	O	P	0	0
			328	158	61	94	15		

- Molecule 60 is a DNA chain called DNA (58-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
60	2J	29	Total	C	N	O	P	0	0
			599	285	117	169	28		

- Molecule 61 is a DNA chain called DNA (52-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
61	2K	24	Total	C	N	O	P	0	0
			495	236	100	136	23		

- Molecule 62 is a DNA chain called DNA (40-MER).



Mol	Chain	Residues	Atoms					AltConf	Trace
62	2L	32	Total	C	N	O	P	0	0
			653	314	121	187	31		

- Molecule 63 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
63	2M	24	Total	C	N	O	P	0	0
			488	233	94	138	23		

- Molecule 64 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
64	2O	26	Total	C	N	O	P	0	0
			532	257	97	153	25		

- Molecule 65 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
65	2P	40	Total	C	N	O	P	0	0
			822	390	162	231	39		

- Molecule 66 is a DNA chain called DNA (58-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
66	2Q	40	Total	C	N	O	P	0	0
			818	392	151	236	39		

- Molecule 67 is a DNA chain called DNA (56-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
67	2R	40	Total	C	N	O	P	0	0
			822	394	155	234	39		

- Molecule 68 is a DNA chain called DNA (52-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
68	2S	58	Total	C	N	O	P	0	0
			1192	566	232	337	57		

- Molecule 69 is a DNA chain called DNA (37-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
69	2T	24	Total	C	N	O	P	0	0
			494	236	94	141	23		

- Molecule 70 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
70	2U	52	Total	C	N	O	P	0	0
			1059	508	191	309	51		

- Molecule 71 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
71	2V	40	Total	C	N	O	P	0	0
			815	393	141	242	39		

- Molecule 72 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
72	2W	48	Total	C	N	O	P	0	0
			987	472	185	283	47		

- Molecule 73 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
73	2X	48	Total	C	N	O	P	0	0
			974	463	179	285	47		

- Molecule 74 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
74	2Y	32	Total	C	N	O	P	0	0
			656	312	126	187	31		

- Molecule 75 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
75	2Z	40	Total	C	N	O	P	0	0
			818	394	146	239	39		

- Molecule 76 is a DNA chain called DNA (5'-D(P\*TP\*TP\*TP\*GP\*TP\*TP\*AP\*AP\*AP\*A P\*CP\*CP\*GP\*AP\*TP\*A)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
76	2a	58	Total	C	N	O	P	0	0
			1179	566	214	342	57		

- Molecule 77 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
77	2b	56	Total	C	N	O	P	0	0
			1149	549	213	332	55		

- Molecule 78 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
78	2c	45	Total	C	N	O	P	0	0
			914	441	165	264	44		

- Molecule 79 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
79	2d	52	Total	C	N	O	P	0	0
			1075	508	218	298	51		

- Molecule 80 is a DNA chain called DNA (5'-D(P\*CP\*TP\*GP\*GP\*CP\*CP\*TP\*TP\*CP\*C  
P\*TP\*GP\*TP\*AP\*GP\*CP\*CP\*AP\*AP\*AP\*AP\*AP\*TP\*A)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
80	2e	37	Total	C	N	O	P	0	0
			766	367	143	220	36		

- Molecule 81 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
81	2f	48	Total	C	N	O	P	0	0
			976	467	184	278	47		

- Molecule 82 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
82	2g	48	Total	C	N	O	P	0	0
			972	464	184	277	47		

- Molecule 83 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
83	2h	56	Total	C	N	O	P	0	0
			1156	551	223	327	55		

- Molecule 84 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
84	2i	32	Total	C	N	O	P	0	0
			661	315	135	180	31		

- Molecule 85 is a DNA chain called DNA (47-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
85	2j	16	Total	C	N	O	P	0	0
			326	157	59	95	15		

- Molecule 86 is a DNA chain called DNA (5'-D(P\*CP\*CP\*AP\*GP\*TP\*GP\*CP\*CP\*AP\*A P\*AP\*TP\*CP\*CP\*GP\*C)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
86	2k	32	Total	C	N	O	P	0	0
			652	312	123	186	31		

- Molecule 87 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
87	2l	48	Total	C	N	O	P	0	0
			980	466	191	276	47		

- Molecule 88 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
88	2m	48	Total	C	N	O	P	0	0
			984	472	185	280	47		

- Molecule 89 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
89	2n	16	Total	C	N	O	P	0	0
			325	158	58	94	15		

- Molecule 90 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
90	2o	32	Total	C	N	O	P	0	0
			653	314	112	196	31		

- Molecule 91 is a DNA chain called DNA (56-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
91	2p	32	Total	C	N	O	P	0	0
			656	312	120	193	31		

- Molecule 92 is a DNA chain called DNA (56-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
92	2q	40	Total	C	N	O	P	0	0
			805	386	136	244	39		

- Molecule 93 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
93	2r	24	Total	C	N	O	P	0	0
			485	233	88	141	23		

- Molecule 94 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
94	2s	32	Total	C	N	O	P	0	0
			655	311	130	183	31		

- Molecule 95 is a DNA chain called DNA (37-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
95	2t	40	Total	C	N	O	P	0	0
			824	391	164	230	39		

- Molecule 96 is a DNA chain called DNA (55-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
96	2u	32	Total	C	N	O	P	0	0
			652	311	121	189	31		

- Molecule 97 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
97	2v	32	Total	C	N	O	P	0	0
			651	313	107	200	31		

- Molecule 98 is a DNA chain called DNA (38-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
98	2w	47	Total	C	N	O	P	0	0
			974	464	202	262	46		

- Molecule 99 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
99	2x	16	Total	C	N	O	P	0	0
			320	153	60	92	15		

- Molecule 100 is a DNA chain called DNA (4346-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
100	3N	4346	Total	C	N	O	P	0	0
			88890	42499	15686	26368	4337		

- Molecule 101 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
101	3A	40	Total	C	N	O	P	0	0
			841	395	175	232	39		

- Molecule 102 is a DNA chain called DNA (40-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
102	3B	40	Total	C	N	O	P	0	0
			818	389	157	233	39		

- Molecule 103 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
103	3C	48	Total	C	N	O	P	0	0
			982	469	185	281	47		

- Molecule 104 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
104	3D	48	Total	C	N	O	P	0	0
			999	473	193	286	47		

- Molecule 105 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
105	3E	48	Total	C	N	O	P	0	0
			991	468	198	278	47		

- Molecule 106 is a DNA chain called DNA (56-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
106	3F	56	Total	C	N	O	P	0	0
			1131	544	197	335	55		

- Molecule 107 is a DNA chain called DNA (5'-D(\*GP\*TP\*GP\*CP\*CP\*TP\*AP\*AP\*GP\*GP\*AP\*TP\*AP\*TP\*TP\*C)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
107	3G	16	Total	C	N	O	P	0	0
			326	157	59	95	15		

- Molecule 108 is a DNA chain called DNA (56-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
108	3H	56	Total	C	N	O	P	0	0
			1142	546	210	331	55		

- Molecule 109 is a DNA chain called DNA (36-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
109	3I	36	Total	C	N	O	P	0	0
			736	350	139	212	35		

- Molecule 110 is a DNA chain called DNA (35-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
110	3J	35	Total	C	N	O	P	0	0
			714	341	133	206	34		

- Molecule 111 is a DNA chain called DNA (32-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
111	3S	32	Total	C	N	O	P	0	0
			655	314	121	189	31		

- Molecule 112 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
112	3K	48	Total	C	N	O	P	0	0
			988	469	197	275	47		

- Molecule 113 is a DNA chain called DNA (37-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
113	3L	37	Total	C	N	O	P	0	0
			760	358	146	220	36		

- Molecule 114 is a DNA chain called DNA (55-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
114	3M	55	Total	C	N	O	P	0	0
			1129	539	214	322	54		

- Molecule 115 is a DNA chain called DNA (48-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
115	3O	48	Total	C	N	O	P	0	0
			985	471	189	278	47		

- Molecule 116 is a DNA chain called DNA (38-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
116	3P	38	Total	C	N	O	P	0	0
			785	375	150	223	37		

- Molecule 117 is a DNA chain called DNA (26-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
117	3Q	26	Total	C	N	O	P	0	0
			539	255	114	145	25		

- Molecule 118 is a DNA chain called DNA (32-MER).

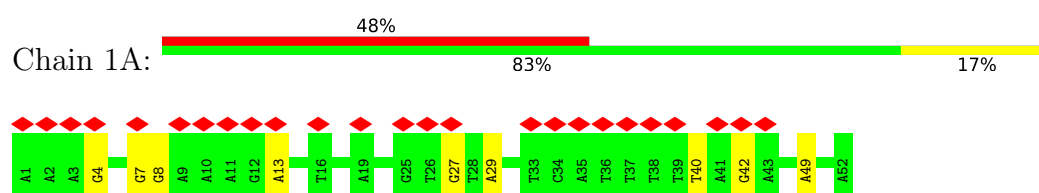


Mol	Chain	Residues	Atoms					AltConf	Trace
118	3R	32	Total 666	C 317	N 127	O 191	P 31	0	0

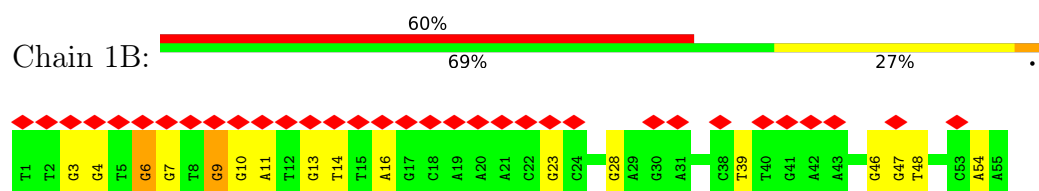
### 3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

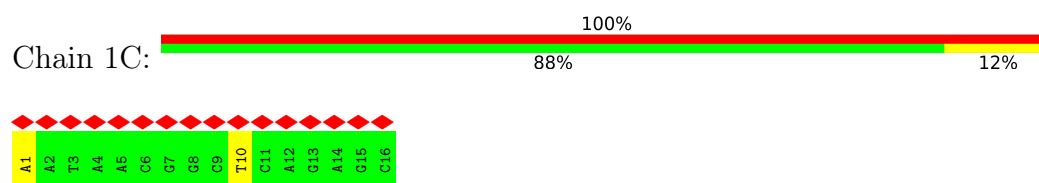
- Molecule 1: DNA (52-MER)



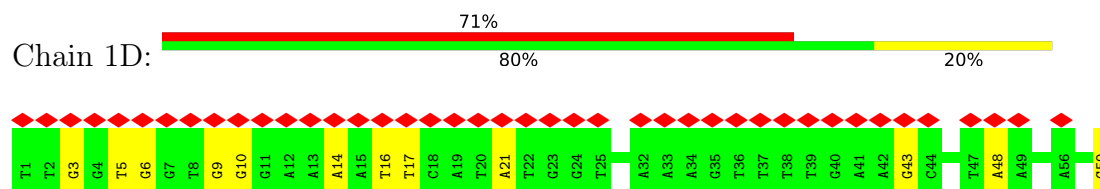
- Molecule 2: DNA (55-MER)



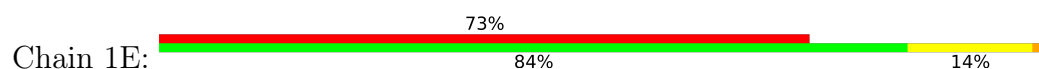
- Molecule 3: DNA (5'-D(\*AP\*AP\*TP\*AP\*AP\*CP\*GP\*GP\*CP\*TP\*CP\*AP\*GP\*AP\*GP\*C)-3')



- Molecule 4: DNA (59-MER)



- Molecule 5: DNA (51-MER)

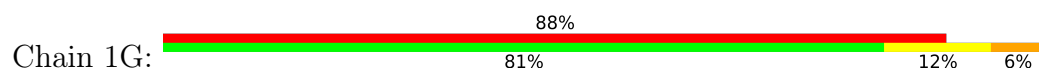




• Molecule 6: DNA (46-MER)



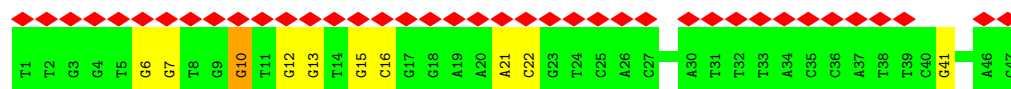
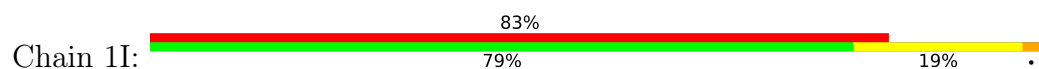
• Molecule 7: DNA (5'-D(\*TP\*CP\*AP\*AP\*CP\*CP\*GP\*AP\*GP\*CP\*TP\*TP\*GP\*CP\*TP\*T)-3')



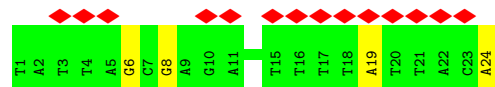
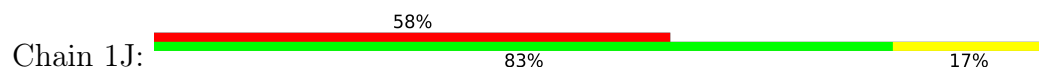
• Molecule 8: DNA (48-MER)



• Molecule 9: DNA (47-MER)



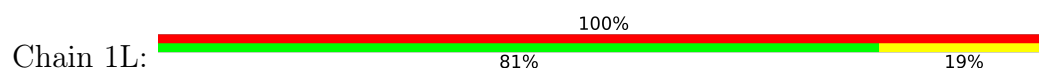
• Molecule 10: DNA (5'-D(\*TP\*AP\*TP\*TP\*AP\*GP\*CP\*GP\*AP\*GP\*AP\*TP\*GP\*GP\*TP\*TP\*TP\*TP\*AP\*TP\*AP\*CP\*A)-3')



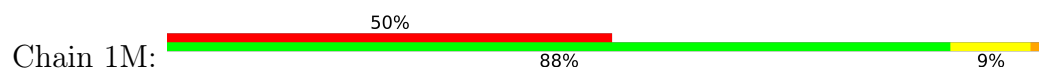
• Molecule 11: DNA (46-MER)



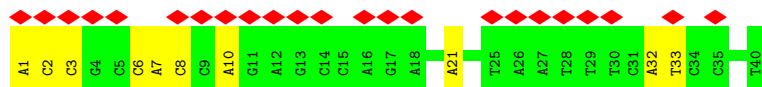
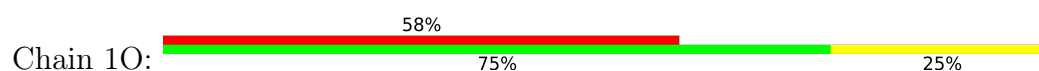
- Molecule 12: DNA (5'-D(\*CP\*GP\*AP\*CP\*AP\*GP\*AP\*AP\*TP\*GP\*AP\*AP\*AP\*GP\*AP\*G)-3')



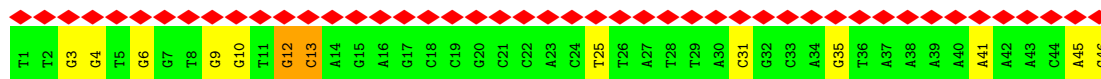
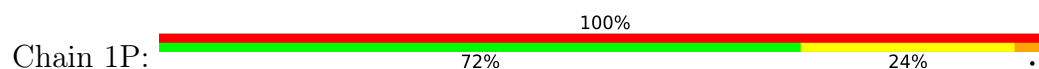
- Molecule 13: DNA (32-MER)



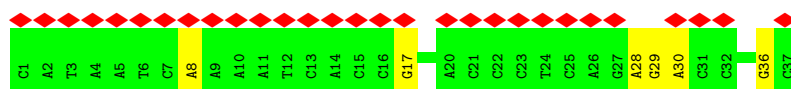
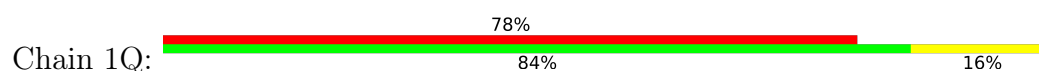
- Molecule 14: DNA (40-MER)



- Molecule 15: DNA (46-MER)



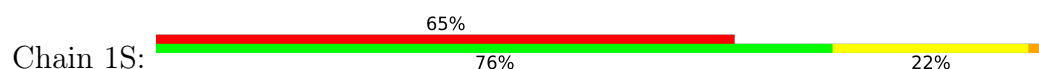
- Molecule 16: DNA (37-MER)

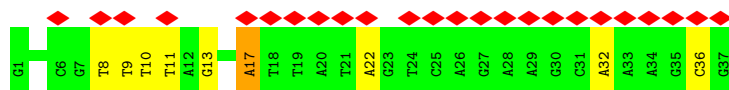


- Molecule 17: DNA (48-MER)

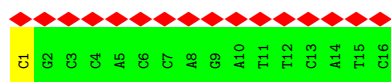


- Molecule 18: DNA (37-MER)

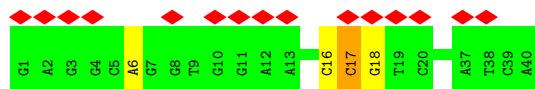
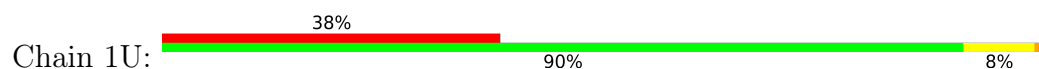




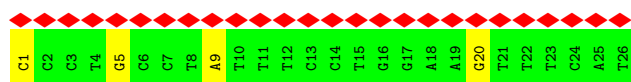
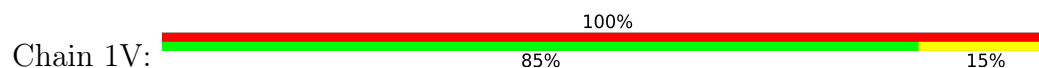
- Molecule 19: DNA (5'-D(\*CP\*GP\*CP\*CP\*AP\*CP\*CP\*AP\*GP\*AP\*TP\*TP\*CP\*AP\*TP\*C)-3')



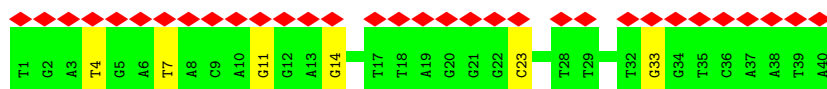
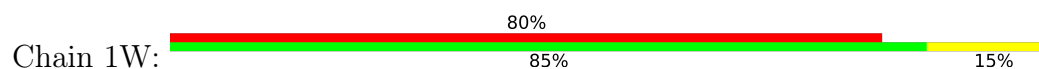
- Molecule 20: DNA (40-MER)



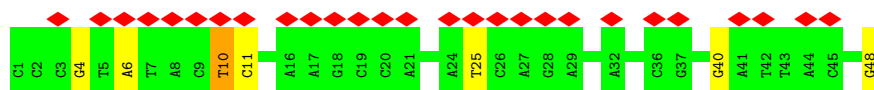
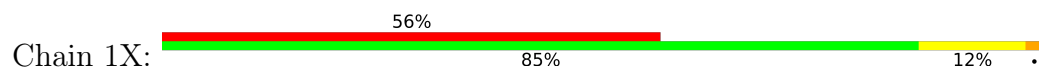
- Molecule 21: DNA (26-MER)



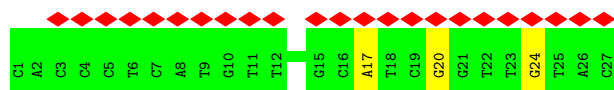
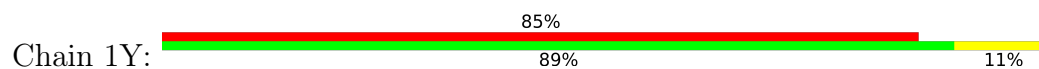
- Molecule 22: DNA (40-MER)



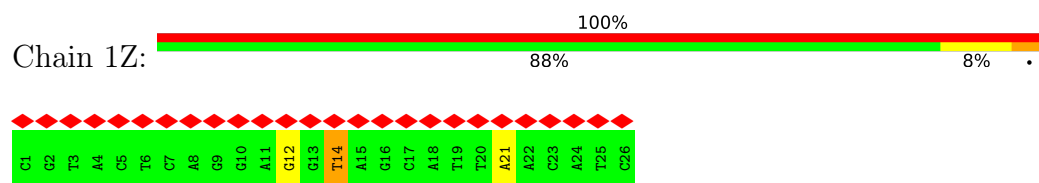
- Molecule 23: DNA (48-MER)



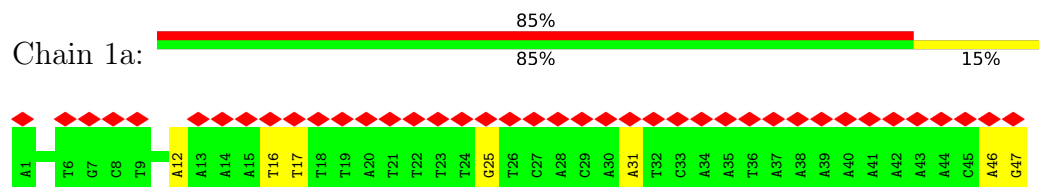
- Molecule 24: DNA (27-MER)



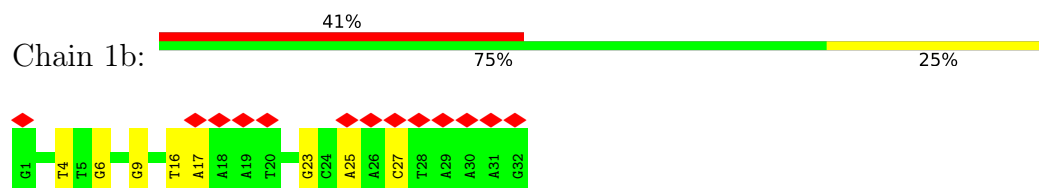
## ● Molecule 25: DNA (26-MER)



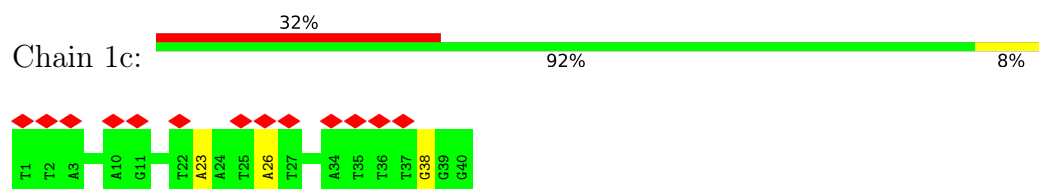
## ● Molecule 26: DNA (47-MER)



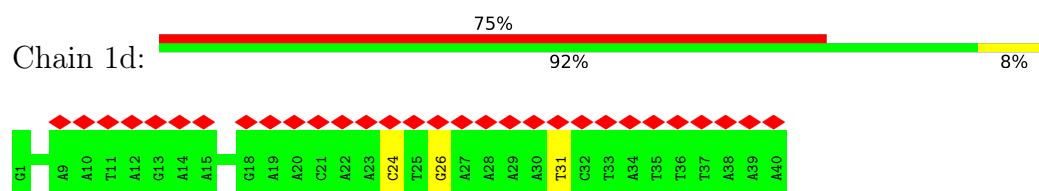
## ● Molecule 27: DNA (32-MER)



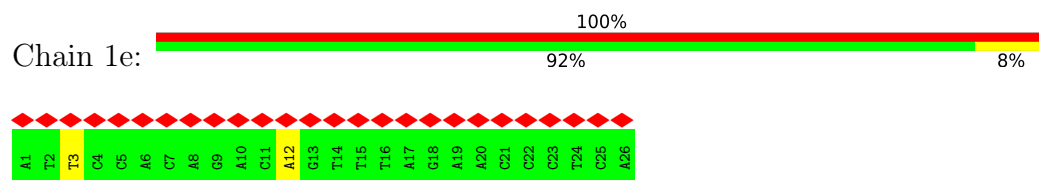
## ● Molecule 28: DNA (40-MER)



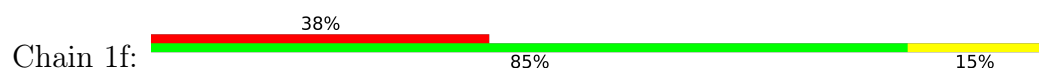
## ● Molecule 29: DNA (40-MER)

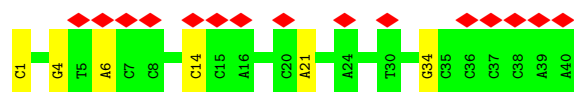


## ● Molecule 30: DNA (26-MER)

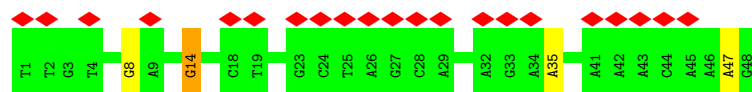
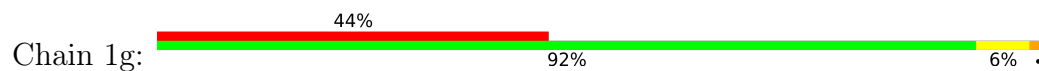


## ● Molecule 31: DNA (40-MER)

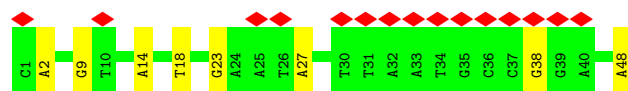
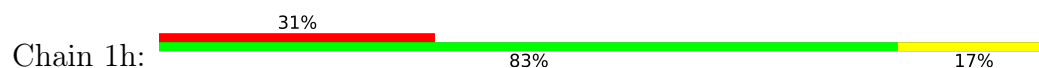




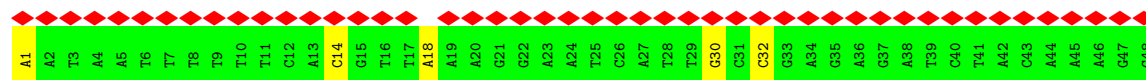
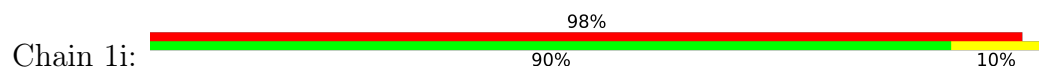
- Molecule 32: DNA (48-MER)



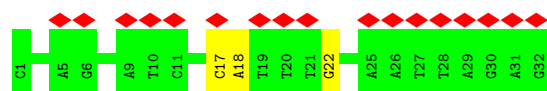
- Molecule 33: DNA (48-MER)



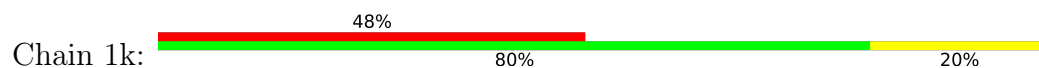
- Molecule 34: DNA (48-MER)



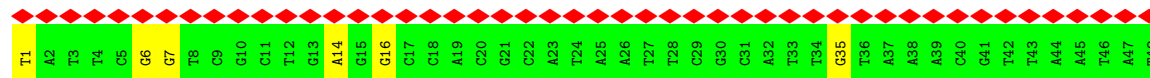
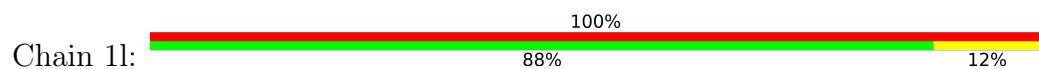
- Molecule 35: DNA (32-MER)



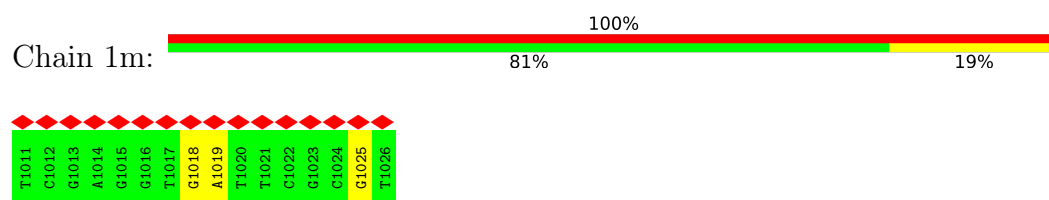
- Molecule 36: DNA (40-MER)



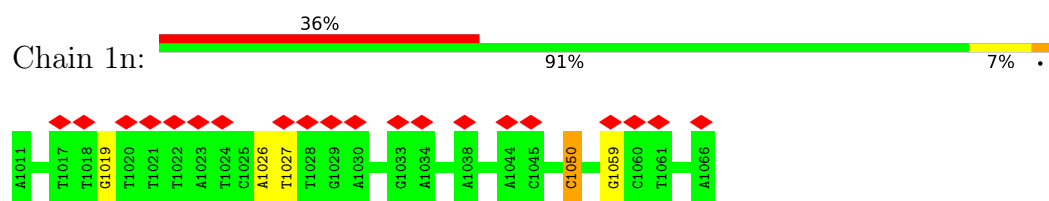
- Molecule 37: DNA (48-MER)



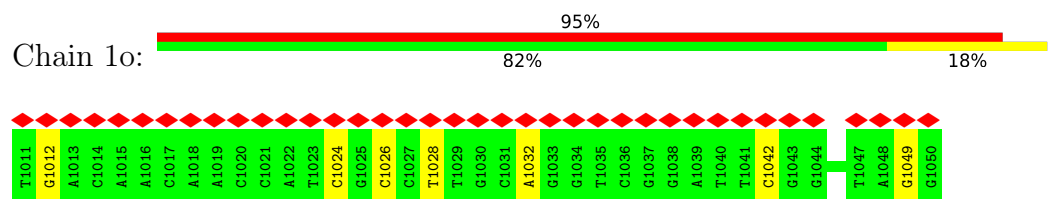
- Molecule 38: DNA (5'-D(P\*TP\*CP\*GP\*AP\*GP\*GP\*TP\*GP\*AP\*TP\*TP\*CP\*GP\*CP\*GP\*T)-3')



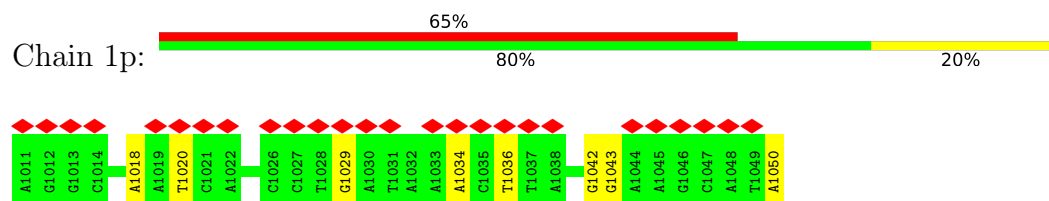
- Molecule 39: DNA (56-MER)



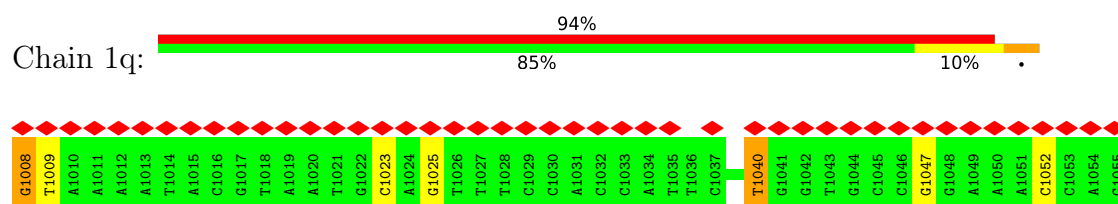
- Molecule 40: DNA (40-MER)



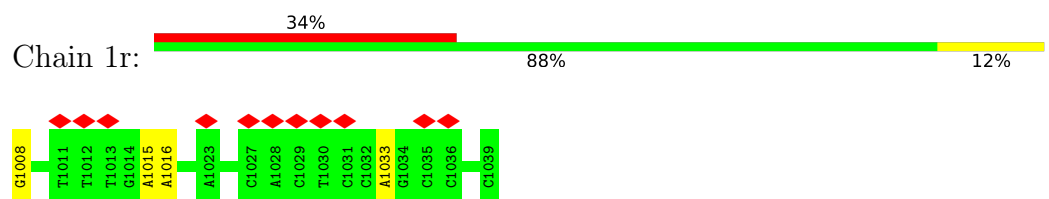
- Molecule 41: DNA (40-MER)



- Molecule 42: DNA (48-MER)

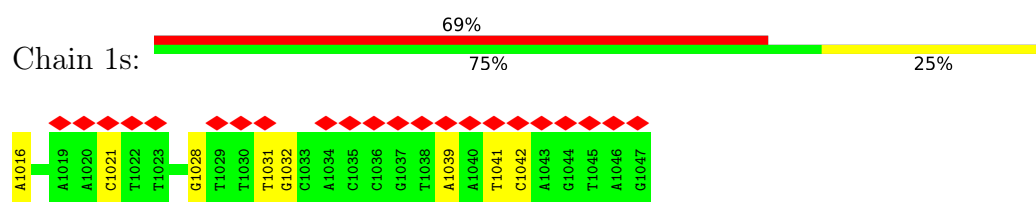


- Molecule 43: DNA (32-MER)

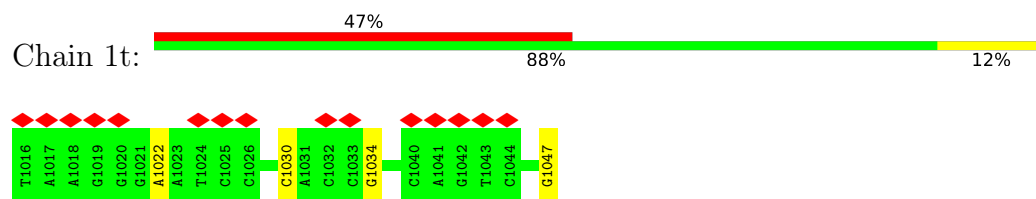


- Molecule 44: DNA (32-MER)

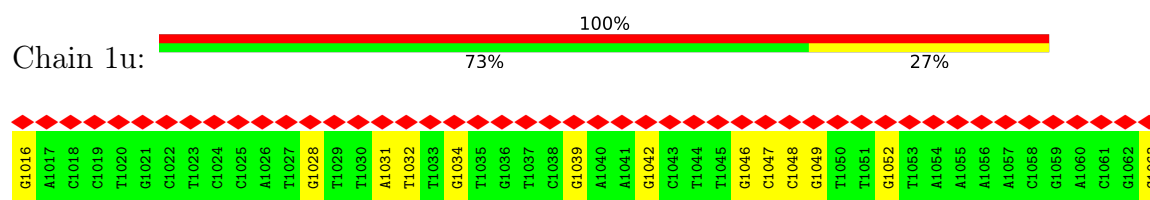




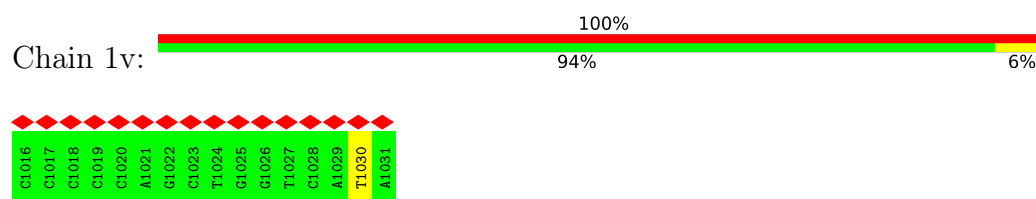
- Molecule 45: DNA (32-MER)



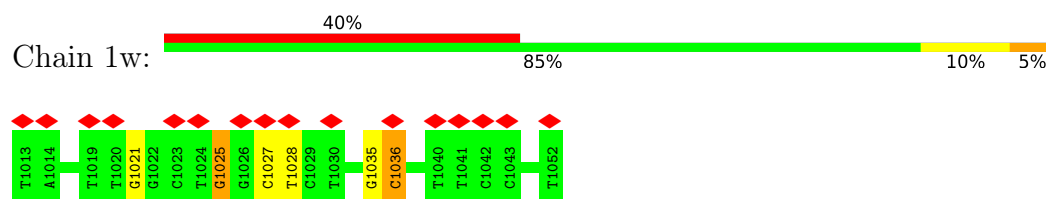
- Molecule 46: DNA (48-MER)



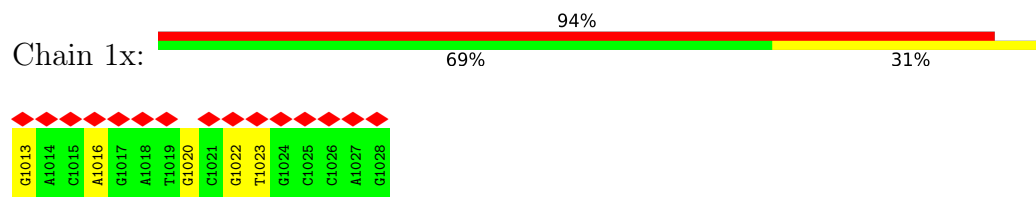
- Molecule 47: DNA (5'-D(P\*CP\*CP\*CP\*CP\*CP\*AP\*GP\*CP\*TP\*GP\*GP\*TP\*CP\*AP\*TP\*A)-3')



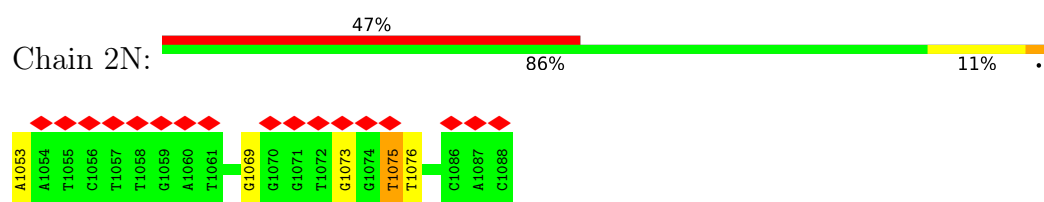
- Molecule 48: DNA (40-MER)



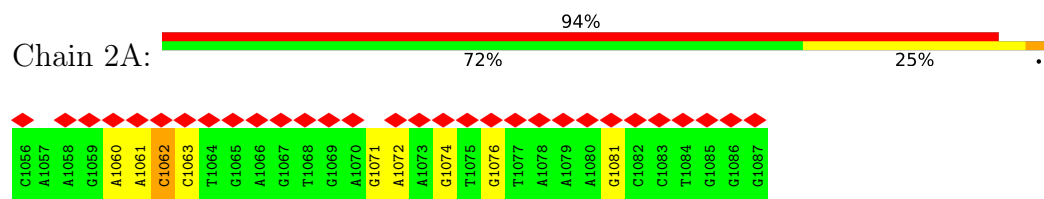
- Molecule 49: DNA (5'-D(P\*GP\*AP\*CP\*AP\*GP\*AP\*TP\*GP\*CP\*GP\*TP\*GP\*CP\*CP\*AP\*G)-3')



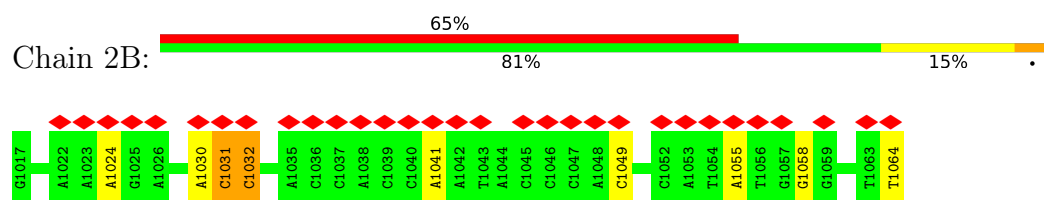
- Molecule 50: DNA (48-MER)



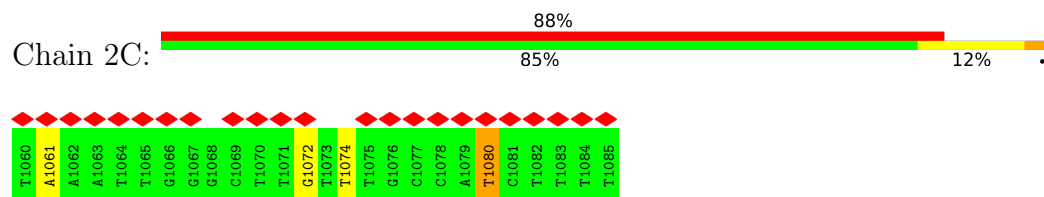
- Molecule 51: DNA (40-MER)



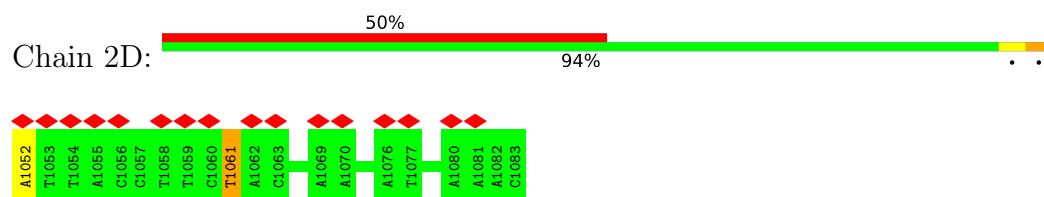
- Molecule 52: DNA (48-MER)



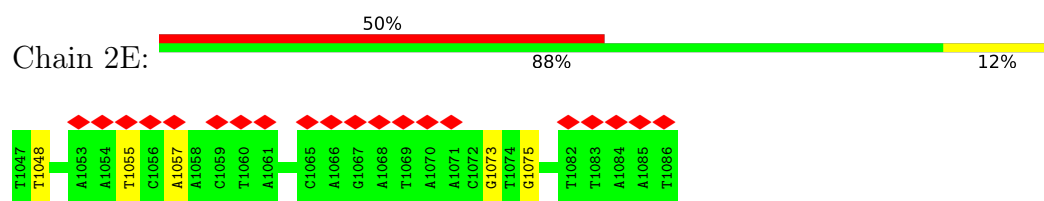
- Molecule 53: DNA (40-MER)



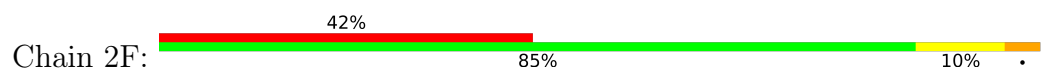
- Molecule 54: DNA (29-MER)

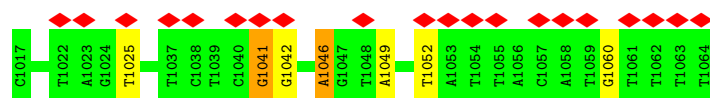


- Molecule 55: DNA (5'-D(P\*CP\*AP\*TP\*AP\*AP\*CP\*GP\*CP\*AP\*TP\*AP\*AP\*AP\*AP\*CP\*GP\*AP\*GP\*GP\*AP\*GP\*GP\*TP\*T)-3')

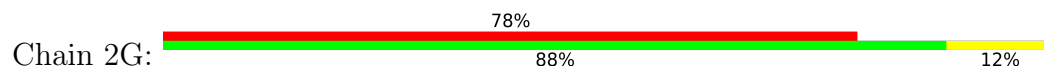


- Molecule 56: DNA (32-MER)

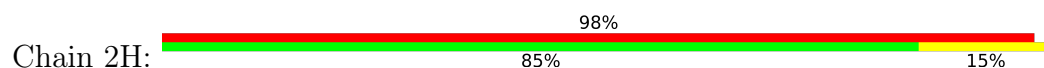




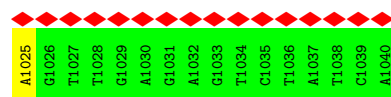
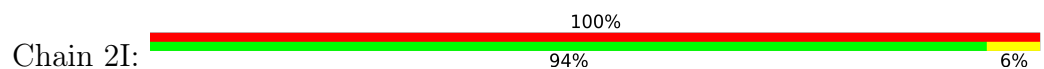
• Molecule 57: DNA (26-MER)



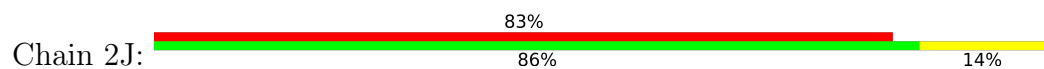
• Molecule 58: DNA (40-MER)



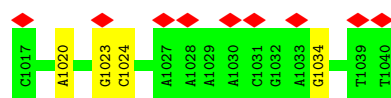
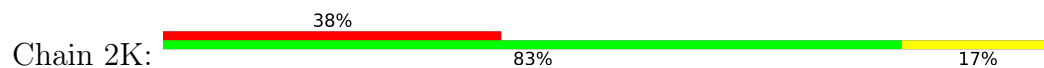
• Molecule 59: DNA (40-MER)



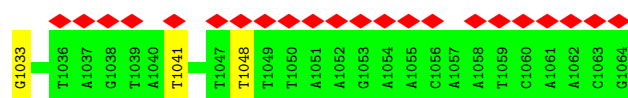
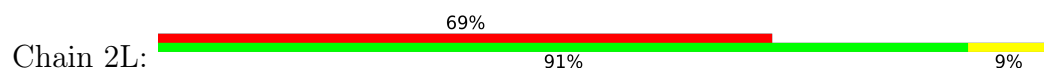
• Molecule 60: DNA (58-MER)



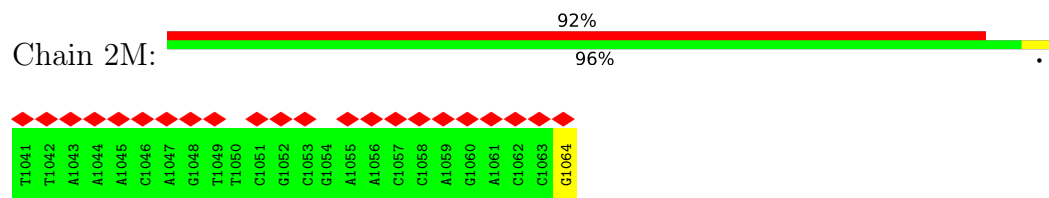
• Molecule 61: DNA (52-MER)



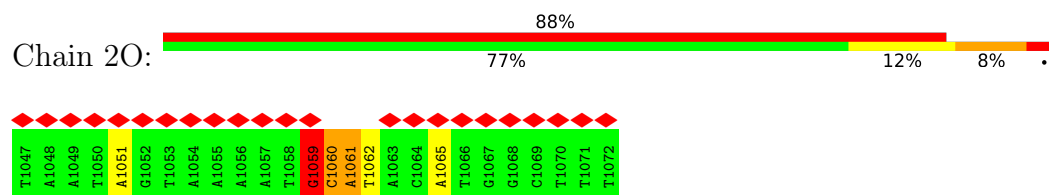
• Molecule 62: DNA (40-MER)



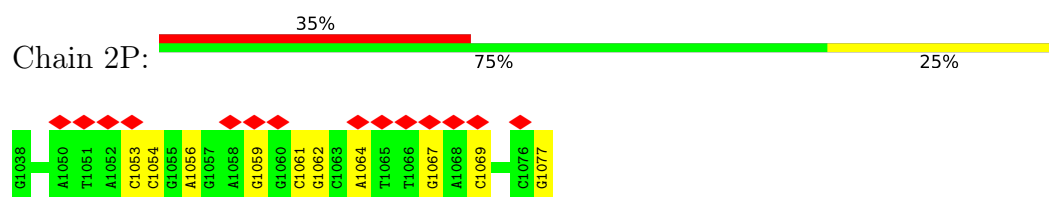
- Molecule 63: DNA (48-MER)



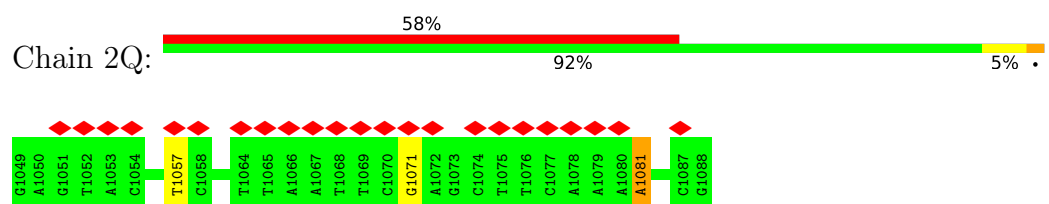
- Molecule 64: DNA (48-MER)



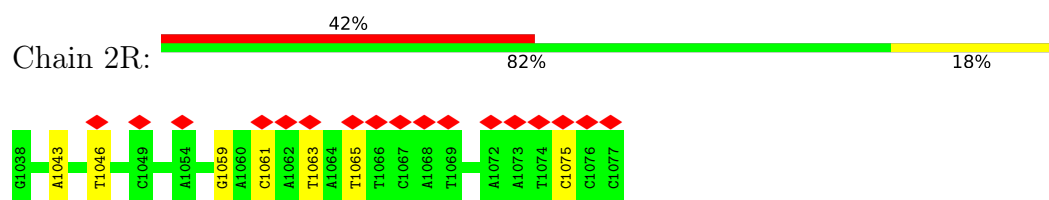
- Molecule 65: DNA (32-MER)



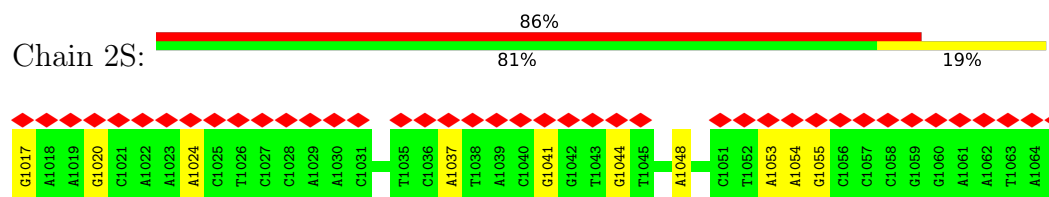
- Molecule 66: DNA (58-MER)



- Molecule 67: DNA (56-MER)

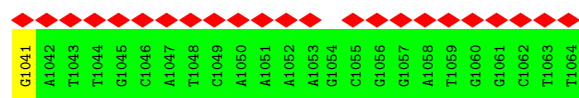


- Molecule 68: DNA (52-MER)

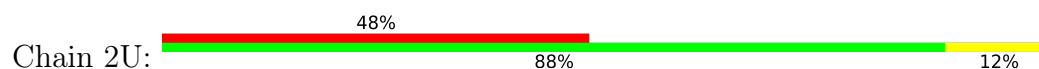


- Molecule 69: DNA (37-MER)

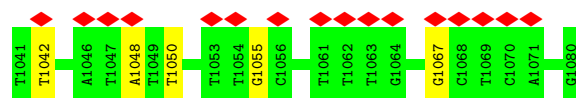
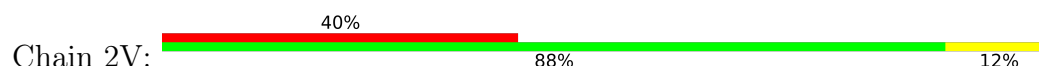




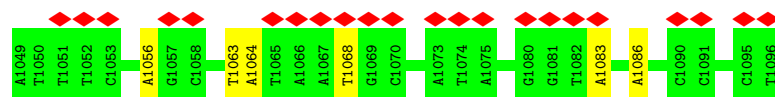
• Molecule 70: DNA (48-MER)



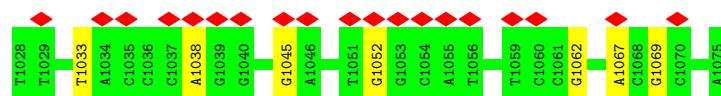
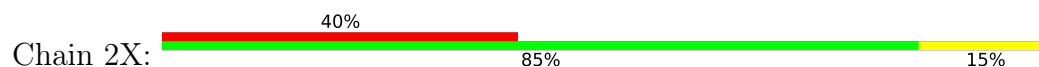
• Molecule 71: DNA (48-MER)



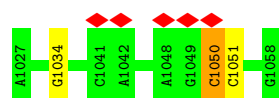
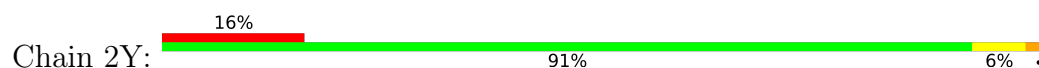
• Molecule 72: DNA (32-MER)



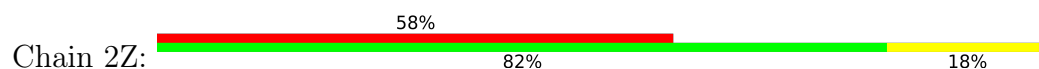
• Molecule 73: DNA (32-MER)



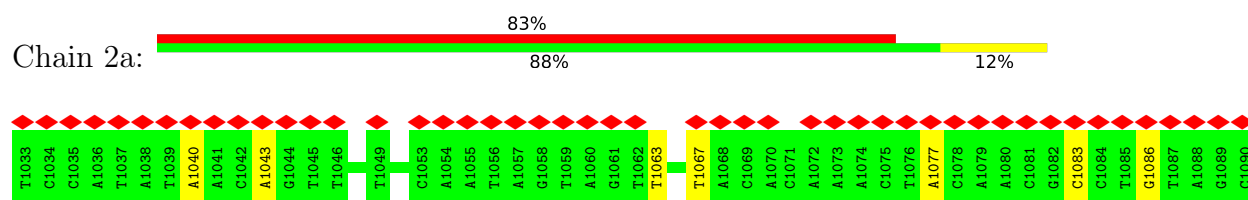
• Molecule 74: DNA (48-MER)



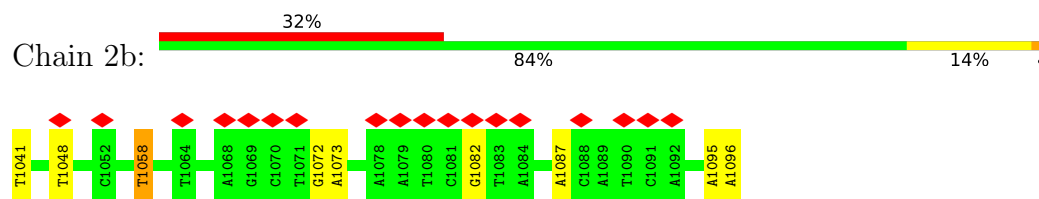
• Molecule 75: DNA (48-MER)



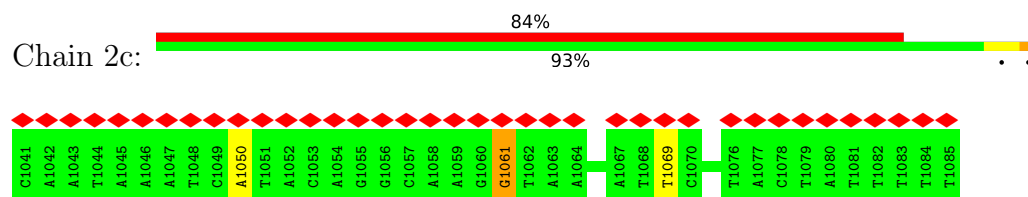
- Molecule 76: DNA (5'-D(P\*TP\*TP\*TP\*GP\*TP\*TP\*AP\*AP\*AP\*AP\*CP\*CP\*GP\*AP\*TP\*A)-3')



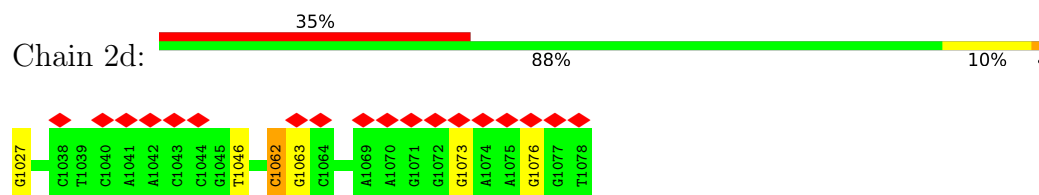
- Molecule 77: DNA (32-MER)



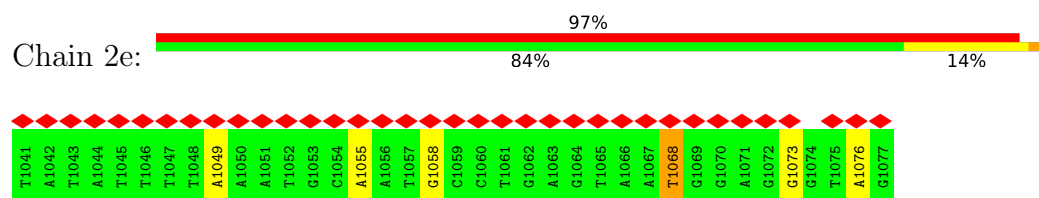
- Molecule 78: DNA (32-MER)



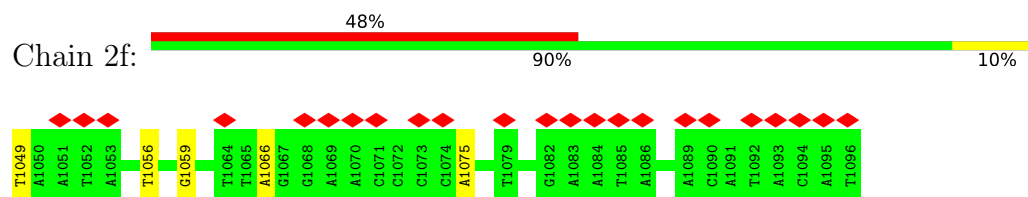
- Molecule 79: DNA (40-MER)



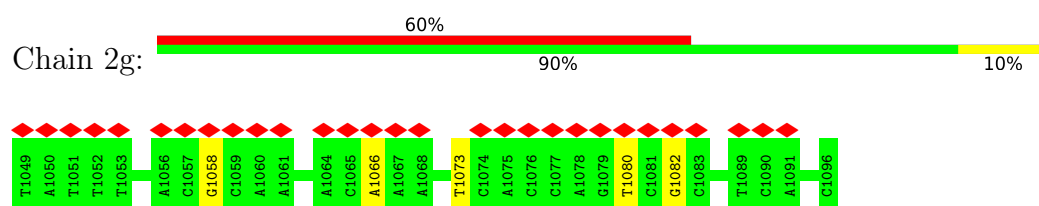
- Molecule 80: DNA (5'-D(P\*CP\*TP\*GP\*GP\*CP\*CP\*TP\*TP\*CP\*CP\*TP\*GP\*TP\*AP\*GP\*CP\*CP\*AP\*AP\*AP\*AP\*TP\*A)-3')



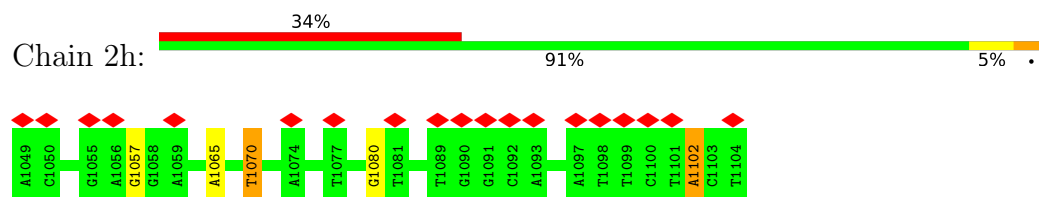
- Molecule 81: DNA (32-MER)



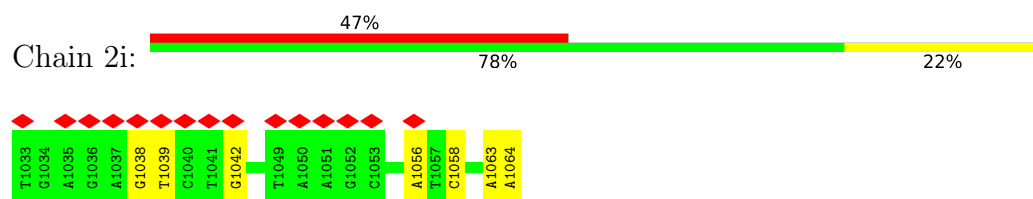
- Molecule 82: DNA (40-MER)



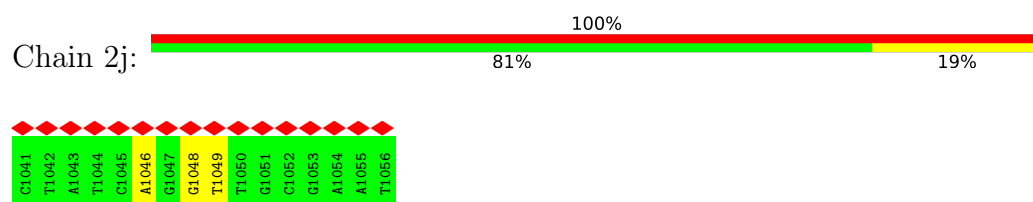
- Molecule 83: DNA (32-MER)



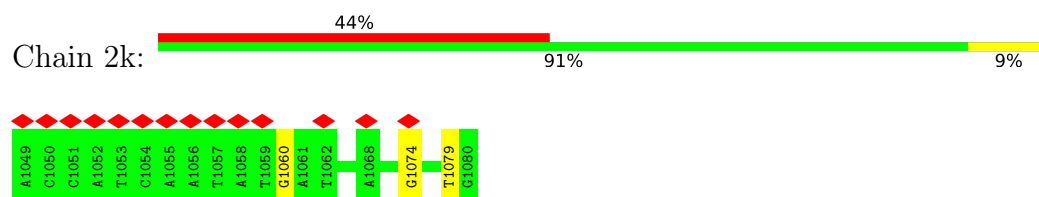
- Molecule 84: DNA (32-MER)



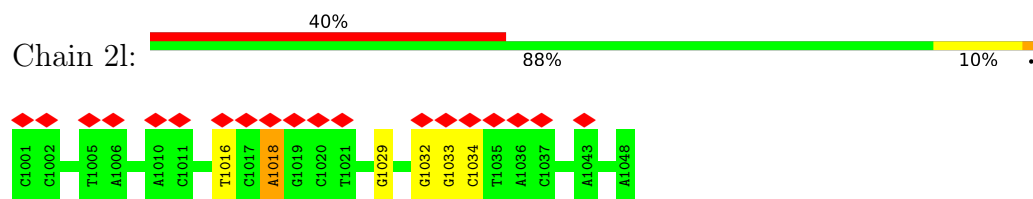
- Molecule 85: DNA (47-MER)



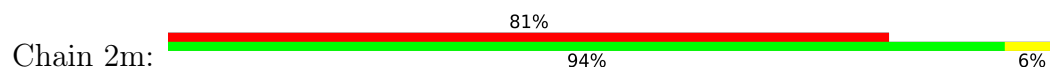
- Molecule 86: DNA (5'-D(P\*CP\*CP\*AP\*GP\*TP\*GP\*CP\*CP\*AP\*AP\*AP\*TP\*CP\*CP\*GP\*C)-3')

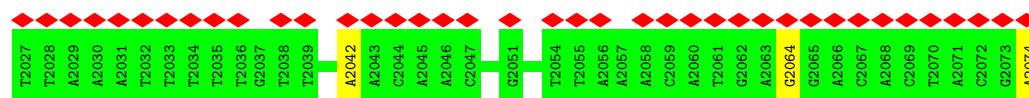


- Molecule 87: DNA (40-MER)

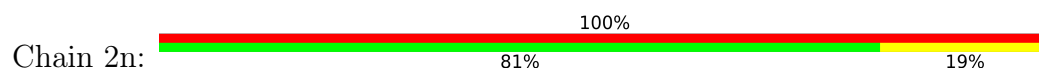


- Molecule 88: DNA (48-MER)

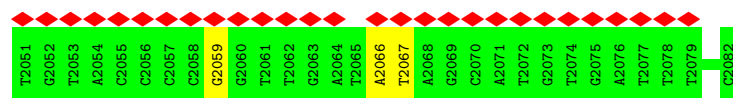




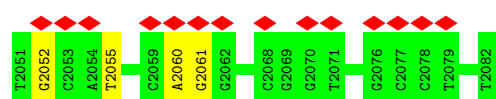
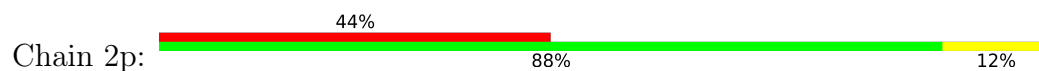
• Molecule 89: DNA (48-MER)



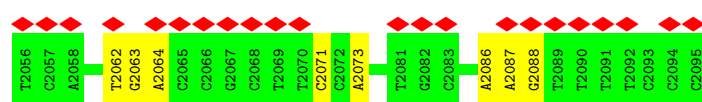
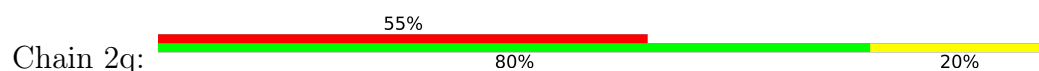
• Molecule 90: DNA (48-MER)



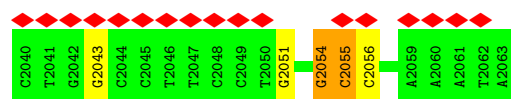
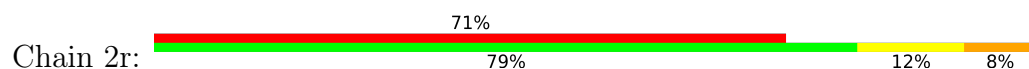
• Molecule 91: DNA (56-MER)



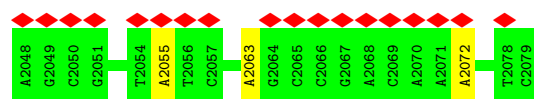
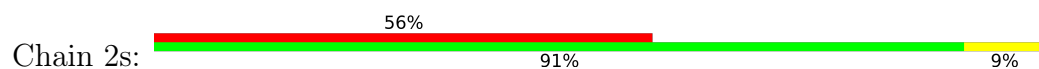
• Molecule 92: DNA (56-MER)



• Molecule 93: DNA (32-MER)

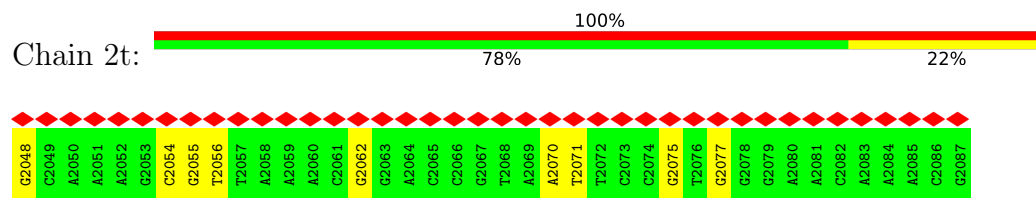


• Molecule 94: DNA (48-MER)

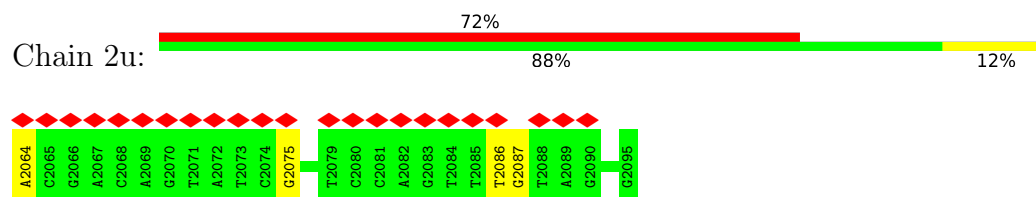




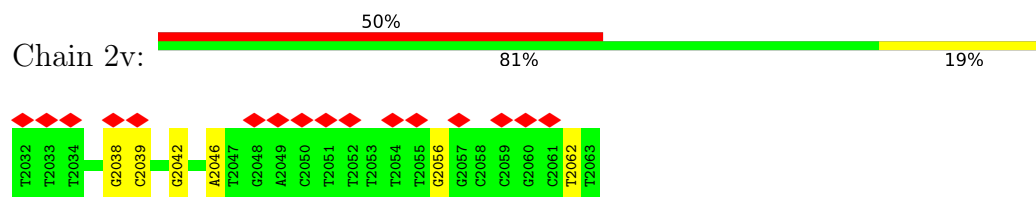
- Molecule 95: DNA (37-MER)



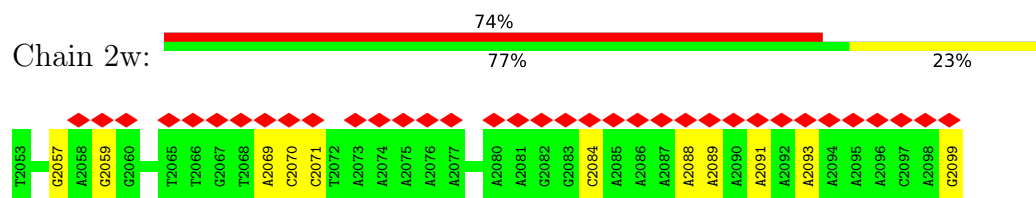
- Molecule 96: DNA (55-MER)



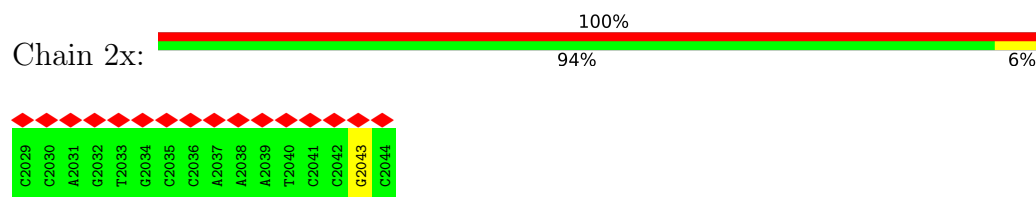
- Molecule 97: DNA (48-MER)



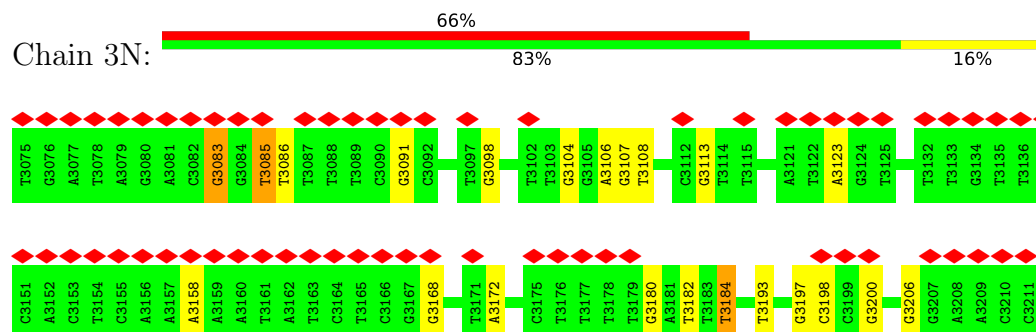
- Molecule 98: DNA (38-MER)



- Molecule 99: DNA (32-MER)

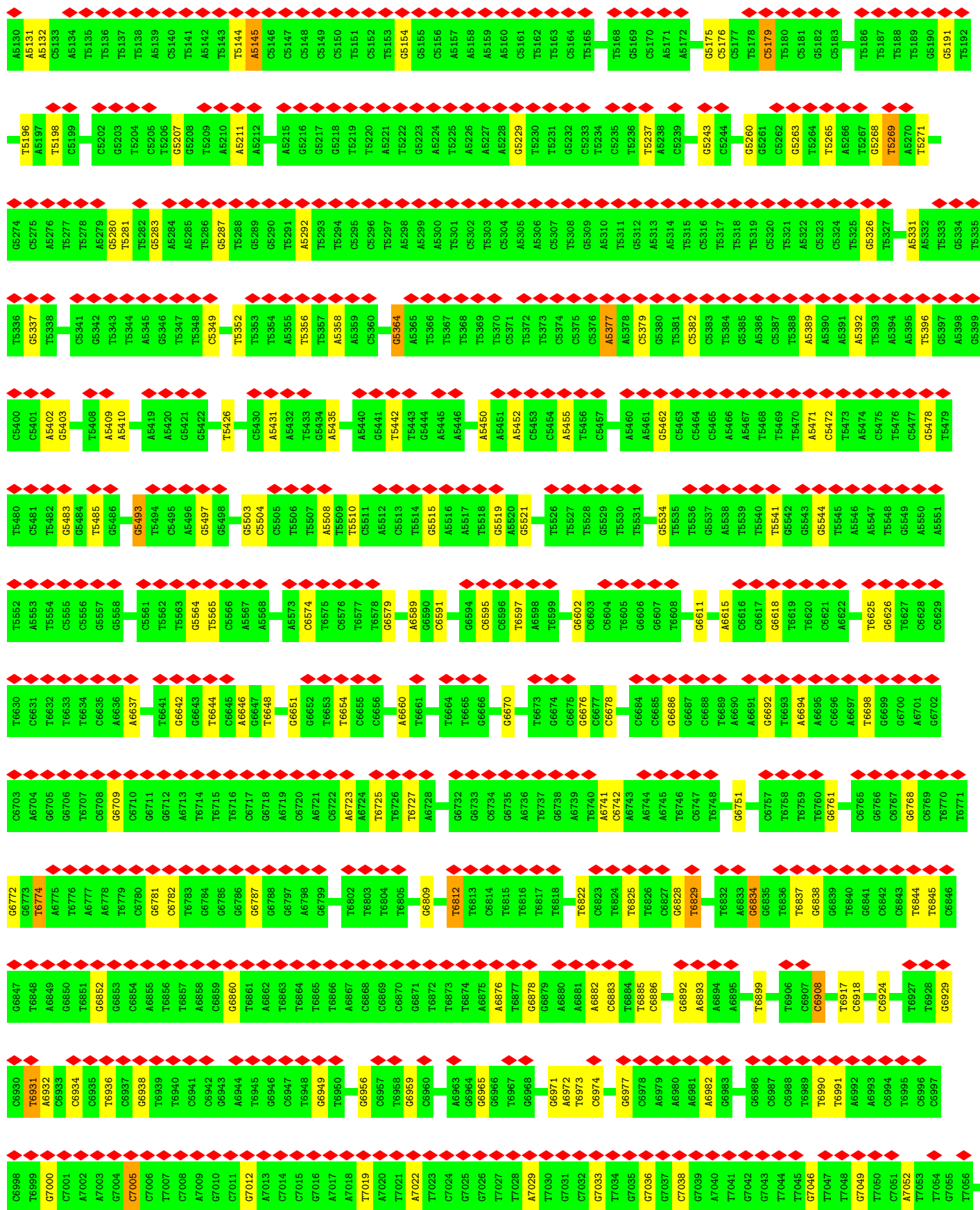


- Molecule 100: DNA (4346-MER)

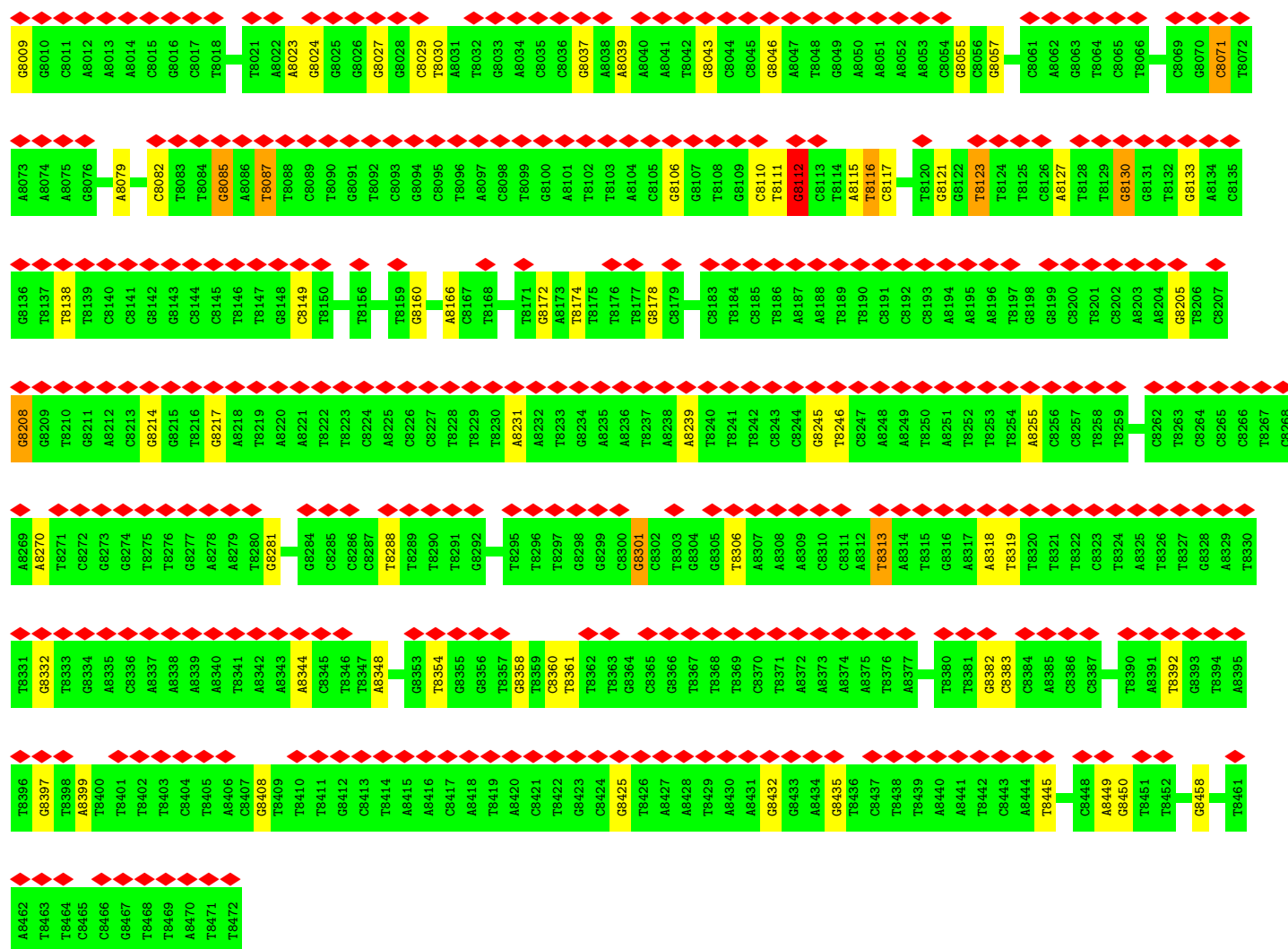


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T4111	A4043	A3964	G3892	A3811	C3739	T3654	G3582	T3615	G3450	G3379	T3305	G3231
A4112	T4044	A3965	G3893	A3812	G3740	G3655	C3588	G3616	T3451	A3381	T3306	C3232
A4113	G4045	T3966	T3894	A3813	C3741	A3656	G3589	G3520	G3452	T3382	G3307	C3233
C4114	G4046	C3967	T3895	G3815	G3745	G3657	T3584	T3521	A3453	T3383	C3308	T3234
C4115	C4047	G3968	A3896	G3816	A3746	T3658	C3595	T3522	T3454	T3384	C3309	C3235
T4116	T4050	G3969	C3897	G3817	T3753	G3659	T3594	T3523	T3455	T3385	C3310	C3236
T4117	A4054	A3970	G3898	T3818	G3756	G3660	T3597	T3525	T3456	A3386	T3312	T3237
T4118	G3971	C3972	G3903	G3819	C3759	G3661	T3598	A3526	T3457	T3387	C3313	G3238
A4119	G3972	G3973	C3904	C3820	A3761	A3662	T3599	G3527	T3458	A3388	T3314	G3239
C4120	G3974	G3974	C3906	G3822	C3760	A3663	A3600	G3528	T3459	T3389	C3315	G3240
A4121	T3978	T3979	A3907	A3824	A3762	G3666	G3603	G3531	T3460	A3389	C3316	G3241
A4122	A3980	G3981	G3910	G3827	G3763	G3670	G3606	A3532	A3462	T3390	C3317	C3242
T4123	C3982	T3982	A3913	G3832	T3764	G3673	G3610	A3533	C3463	C3392	T3318	A3244
A4126	C3983	C3983	C3914	T3833	G3765	A3681	G3611	A3534	T3464	A3393	G3319	A3245
A4128	T3992	T3992	C3915	G3834	C3766	C3682	C3612	A3535	C3465	G3394	G3320	C3246
A4130	T3993	T3993	A3916	T3684	G3770	T3683	A3613	A3536	T3467	T3395	T3321	C3247
T4131	A3994	A3994	A3917	A3685	C3771	A3685	G3614	T3537	T3468	C3396	G3322	A3248
T4132	T4067	T4067	C3918	G3840	C3772	A3685	G3615	T3538	T3469	G3397	A3323	G3249
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T4139	T4075	C3847	T3920	C3847	A3776	T3692	A3617	C3540	G3471	C3399	A3325	G3251
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A4141	A4005	G3852	C3923	G3852	T3778	G3694	A3621	C3542	A3473	C3401	G3327	G3253
A4142	A4006	G3853	C3924	G3853	G3779	C3695	A3622	A3544	C3474	A3405	A3328	G3258
A4143	T3925	C3854	T3925	C3854	C3780	A3696	G3623	A3545	C3475	C3406	A3329	C3259
A4144	A3926	G3855	G3926	G3855	G3781	G3697	G3624	G3546	C3476	G3407	A3330	T3260
A4145	T3927	G3856	T3927	G3856	C3782	T3697	T3625	A3547	G3477	T3408	A3331	T3261
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A4148	C4012	A3859	C3929	A3859	T3784	T3702	G3628	A3550	G3480	C3411	A3334	T3270
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A4153	G4017	C3864	A3934	C3864	C3789	C3707	T3632	A3555	A3486	G3437	C3344	C3281
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A4172	T4036	T4037	G3961	T4037	C3808	A3734	T3651	G3580	T3513	A3448	T3375	G3302
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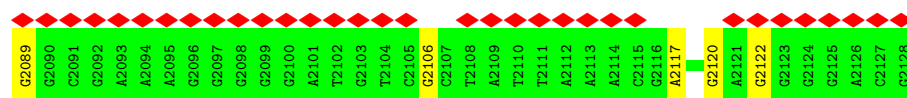
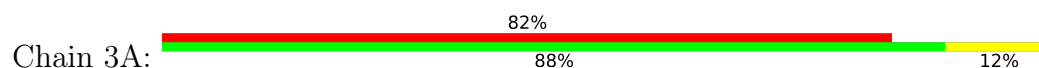
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G4905	G4906	T4907	C4908	T4909	G4910	G4911	T4912	C4913	A4914	G4915	C4916	T4917	T4918	A4922	G4923	C4924	T4925	C4926	C4927	A4928	A4932	A4935	C4936	G4937	C4938	G4939	A4943	T4944	T4945	G4946	A4947	T4954	C4955	G4956	C4957	C4958	C4959	T4960	T4961	C4962	C4965	T4966	T4967	A4968	A4969	T4970	T5004	T4972	T4973	T4974	T4975	T4976						
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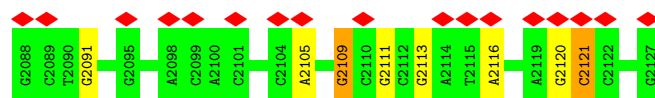
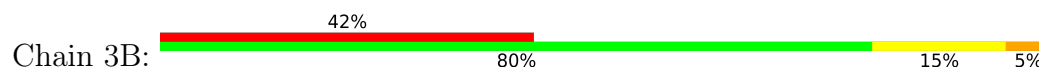




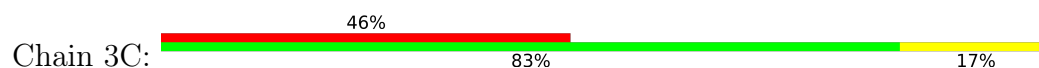
• Molecule 101: DNA (40-MER)



• Molecule 102: DNA (40-MER)

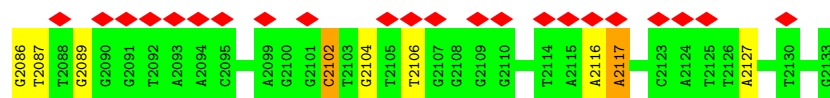
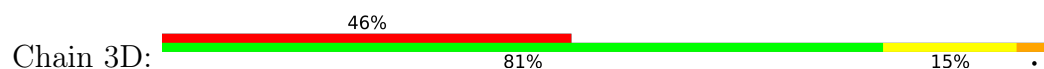


• Molecule 103: DNA (48-MER)

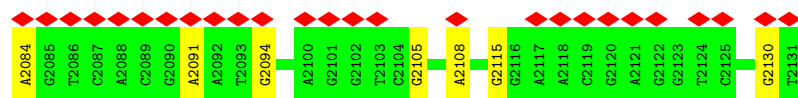
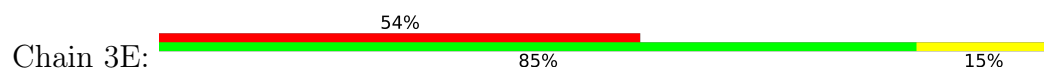




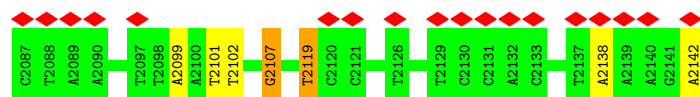
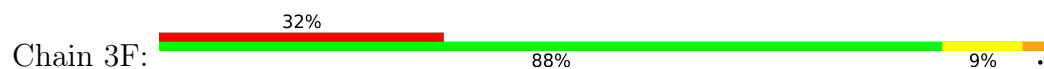
• Molecule 104: DNA (48-MER)



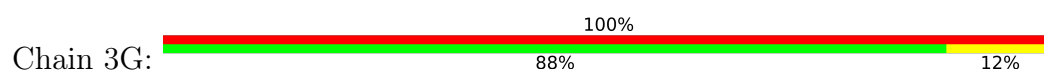
• Molecule 105: DNA (48-MER)



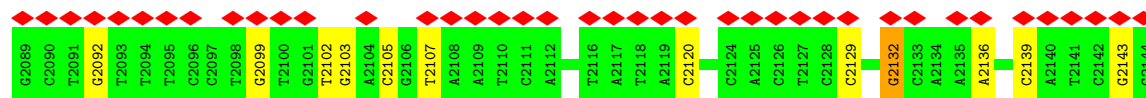
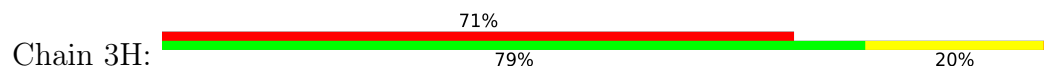
• Molecule 106: DNA (56-MER)



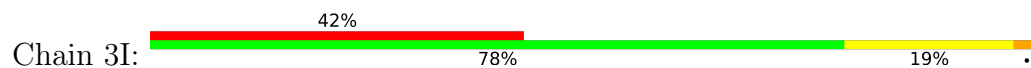
• Molecule 107: DNA (5'-D(\*GP\*TP\*GP\*CP\*CP\*TP\*AP\*AP\*GP\*GP\*AP\*TP\*AP\*TP\*TP\*C)-3')

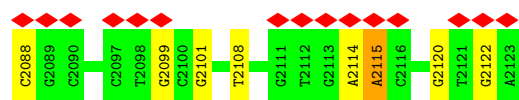


• Molecule 108: DNA (56-MER)

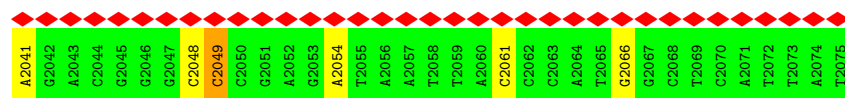
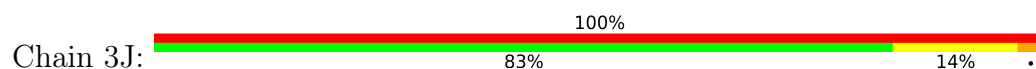


• Molecule 109: DNA (36-MER)

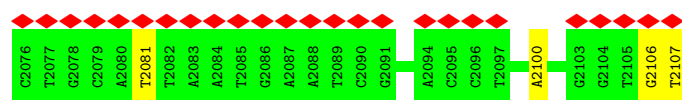
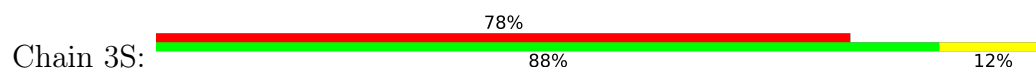




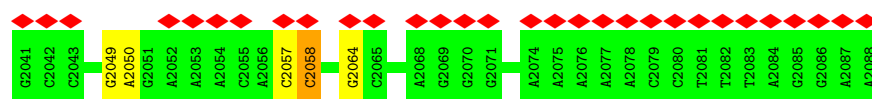
• Molecule 110: DNA (35-MER)



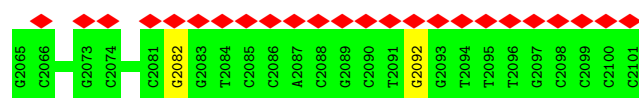
• Molecule 111: DNA (32-MER)



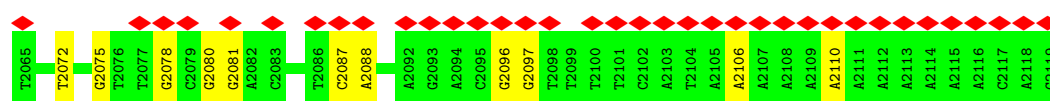
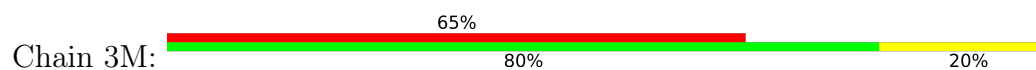
• Molecule 112: DNA (48-MER)



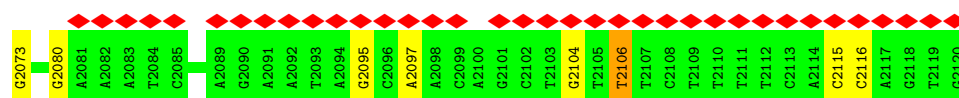
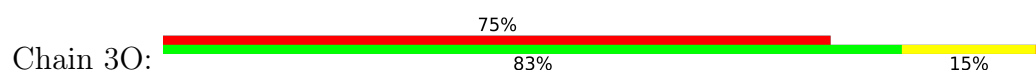
• Molecule 113: DNA (37-MER)



• Molecule 114: DNA (55-MER)

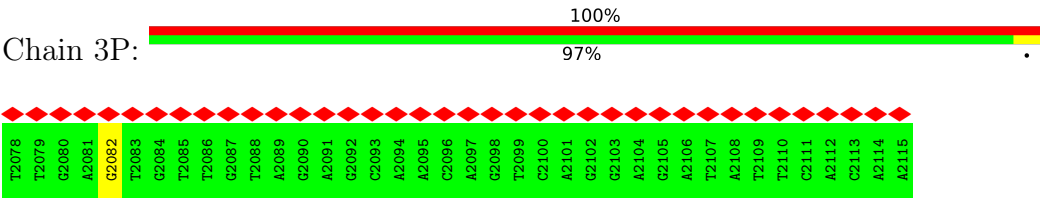


• Molecule 115: DNA (48-MER)

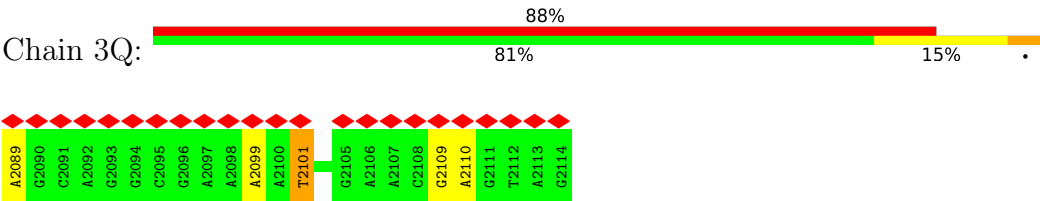




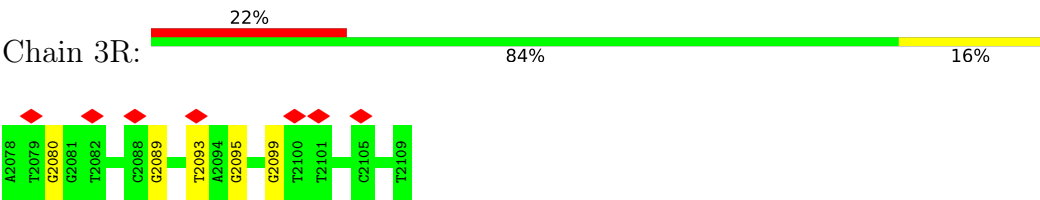
• Molecule 116: DNA (38-MER)



• Molecule 117: DNA (26-MER)



• Molecule 118: DNA (32-MER)



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	108931	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TECNAI ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	48	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	23500	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.005	Depositor
Minimum map value	-0.001	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.003	Depositor
Map size (Å)	456.0, 456.0, 456.0	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.76, 0.76, 0.76	Depositor

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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	1A	1.12	0/1220	1.18	9/1885 (0.5%)
2	1B	1.16	0/1279	1.27	12/1975 (0.6%)
3	1C	1.13	0/368	1.28	5/566 (0.9%)
4	1D	1.12	0/1372	1.16	9/2119 (0.4%)
5	1E	1.12	0/1185	1.14	5/1828 (0.3%)
6	1F	1.15	0/1069	1.43	15/1650 (0.9%)
7	1G	1.10	0/358	1.30	4/550 (0.7%)
8	1H	1.11	0/1087	1.29	10/1671 (0.6%)
9	1I	1.19	0/1091	1.27	6/1685 (0.4%)
10	1J	1.10	0/551	1.13	3/850 (0.4%)
11	1K	1.18	0/1061	1.39	12/1637 (0.7%)
12	1L	1.11	0/377	1.18	2/581 (0.3%)
13	1M	1.15	0/722	1.31	7/1110 (0.6%)
14	1O	1.13	0/907	1.20	3/1394 (0.2%)
15	1P	1.15	0/1066	1.36	13/1645 (0.8%)
16	1Q	1.09	0/846	1.23	5/1301 (0.4%)
17	1R	1.17	0/1094	1.35	13/1685 (0.8%)
18	1S	1.16	0/858	1.27	9/1324 (0.7%)
19	1T	1.08	0/355	1.28	2/544 (0.4%)
20	1U	1.14	1/932 (0.1%)	1.73	9/1437 (0.6%)
21	1V	1.11	0/580	1.19	6/892 (0.7%)
22	1W	1.12	0/934	1.18	7/1443 (0.5%)
23	1X	1.13	0/1106	1.18	2/1704 (0.1%)
24	1Y	1.11	0/607	1.15	3/934 (0.3%)
25	1Z	1.10	0/596	1.23	5/918 (0.5%)
26	1a	1.08	0/1086	1.19	4/1674 (0.2%)
27	1b	1.12	0/750	1.27	9/1158 (0.8%)
28	1c	1.10	0/921	1.14	5/1420 (0.4%)
29	1d	1.10	0/931	1.15	2/1436 (0.1%)
30	1e	1.09	0/587	1.13	2/902 (0.2%)
31	1f	1.14	0/899	1.27	9/1382 (0.7%)
32	1g	1.11	0/1105	1.19	6/1702 (0.4%)
33	1h	1.11	0/1118	1.16	6/1726 (0.3%)
34	1i	1.10	0/1108	1.18	6/1709 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
35	1j	1.13	0/742	1.15	4/1144 (0.3%)
36	1k	1.10	0/929	1.15	7/1435 (0.5%)
37	1l	1.12	0/1098	1.16	7/1693 (0.4%)
38	1m	1.15	0/367	1.35	4/566 (0.7%)
39	1n	1.12	0/1290	1.23	6/1989 (0.3%)
40	1o	1.16	0/922	1.25	5/1422 (0.4%)
41	1p	1.14	0/917	1.34	10/1412 (0.7%)
42	1q	1.12	0/1101	1.18	10/1697 (0.6%)
43	1r	1.12	0/734	1.26	5/1131 (0.4%)
44	1s	1.11	0/727	1.34	8/1119 (0.7%)
45	1t	1.15	0/729	1.28	7/1123 (0.6%)
46	1u	1.15	0/1100	1.35	17/1697 (1.0%)
47	1v	1.12	0/356	1.10	0/546
48	1w	1.12	0/904	1.32	7/1391 (0.5%)
49	1x	1.17	0/370	1.29	5/570 (0.9%)
50	2N	1.11	0/825	1.20	7/1272 (0.6%)
51	2A	1.16	0/750	1.32	10/1158 (0.9%)
52	2B	1.14	0/1095	1.28	5/1685 (0.3%)
53	2C	1.11	0/587	1.20	5/905 (0.6%)
54	2D	1.09	0/733	1.19	5/1128 (0.4%)
55	2E	1.10	0/915	1.22	9/1410 (0.6%)
56	2F	1.12	0/1109	1.11	4/1712 (0.2%)
57	2G	1.10	0/919	1.16	5/1418 (0.4%)
58	2H	1.09	0/905	1.27	8/1391 (0.6%)
59	2I	1.07	0/368	1.16	3/567 (0.5%)
60	2J	1.13	0/674	1.22	5/1040 (0.5%)
61	2K	1.12	0/558	1.15	3/860 (0.3%)
62	2L	1.10	0/733	1.18	5/1129 (0.4%)
63	2M	1.10	0/548	1.14	1/843 (0.1%)
64	2O	1.18	2/597 (0.3%)	1.48	10/920 (1.1%)
65	2P	1.12	0/925	1.64	12/1426 (0.8%)
66	2Q	1.10	0/918	1.21	5/1415 (0.4%)
67	2R	1.11	0/924	1.23	8/1425 (0.6%)
68	2S	1.12	0/1341	1.51	18/2068 (0.9%)
69	2T	1.10	0/555	1.16	4/856 (0.5%)
70	2U	1.10	1/1187 (0.1%)	1.15	4/1829 (0.2%)
71	2V	1.11	0/912	1.15	5/1406 (0.4%)
72	2W	1.11	0/1109	1.10	4/1711 (0.2%)
73	2X	1.13	0/1091	1.23	6/1680 (0.4%)
74	2Y	1.13	0/737	1.19	4/1136 (0.4%)
75	2Z	1.11	0/917	1.24	7/1414 (0.5%)
76	2a	1.09	0/1322	1.23	11/2036 (0.5%)
77	2b	1.12	0/1290	1.55	15/1990 (0.8%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
78	2c	1.07	0/1025	1.08	3/1578 (0.2%)
79	2d	1.13	0/1212	1.24	9/1870 (0.5%)
80	2e	1.08	0/861	1.11	6/1330 (0.5%)
81	2f	1.11	0/1096	1.24	7/1687 (0.4%)
82	2g	1.12	0/1091	1.27	7/1678 (0.4%)
83	2h	1.12	0/1301	1.18	6/2008 (0.3%)
84	2i	1.12	0/746	1.21	4/1150 (0.3%)
85	2j	1.14	0/365	1.11	1/562 (0.2%)
86	2k	1.11	0/732	1.15	3/1127 (0.3%)
87	2l	1.11	0/1102	1.18	6/1697 (0.4%)
88	2m	1.10	0/1106	1.10	2/1705 (0.1%)
89	2n	1.11	0/364	1.23	2/560 (0.4%)
90	2o	1.10	0/730	1.10	2/1126 (0.2%)
91	2p	1.13	0/735	1.25	4/1134 (0.4%)
92	2q	1.12	0/898	1.24	8/1382 (0.6%)
93	2r	1.15	0/543	1.48	10/835 (1.2%)
94	2s	1.14	0/737	1.24	3/1135 (0.3%)
95	2t	1.14	0/928	1.44	14/1431 (1.0%)
96	2u	1.13	0/731	1.27	6/1126 (0.5%)
97	2v	1.14	0/726	1.31	5/1120 (0.4%)
98	2w	1.14	0/1101	1.33	14/1698 (0.8%)
99	2x	1.10	0/358	1.17	1/549 (0.2%)
100	3N	1.12	0/99584	1.25	838/153695 (0.5%)
101	3A	1.14	0/950	1.14	4/1470 (0.3%)
102	3B	1.13	0/919	1.22	8/1416 (0.6%)
103	3C	1.12	0/1103	1.22	7/1700 (0.4%)
104	3D	1.15	0/1124	1.28	12/1738 (0.7%)
105	3E	1.14	0/1116	1.34	15/1722 (0.9%)
106	3F	1.09	0/1265	1.21	7/1947 (0.4%)
107	3G	1.12	0/365	1.15	1/562 (0.2%)
108	3H	1.14	0/1281	1.30	12/1974 (0.6%)
109	3I	1.15	0/826	1.30	9/1273 (0.7%)
110	3J	1.14	0/801	1.26	7/1234 (0.6%)
111	3S	1.11	0/735	1.25	4/1133 (0.4%)
112	3K	1.12	0/1113	1.14	1/1716 (0.1%)
113	3L	1.13	0/853	1.21	3/1316 (0.2%)
114	3M	1.13	0/1269	1.29	11/1957 (0.6%)
115	3O	1.09	0/1108	1.19	11/1708 (0.6%)
116	3P	1.10	0/883	1.10	2/1363 (0.1%)
117	3Q	1.12	0/609	1.25	3/939 (0.3%)
118	3R	1.13	0/749	1.29	8/1158 (0.7%)
All	All	1.12	4/202097 (0.0%)	1.25	1601/311711 (0.5%)

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
1	1A	0	2
2	1B	0	9
4	1D	0	5
5	1E	0	3
6	1F	0	5
7	1G	0	1
8	1H	0	4
9	1I	0	6
10	1J	0	1
11	1K	0	8
12	1L	0	1
13	1M	0	1
14	1O	0	5
15	1P	0	9
16	1Q	0	1
17	1R	0	3
18	1S	0	2
20	1U	0	1
22	1W	0	1
23	1X	0	4
25	1Z	0	1
26	1a	0	4
27	1b	0	2
29	1d	0	1
31	1f	0	1
32	1g	0	1
33	1h	0	3
34	1i	0	1
35	1j	0	1
36	1k	0	3
37	1l	0	2
39	1n	0	1
40	1o	0	2
41	1p	0	2
42	1q	0	3
44	1s	0	3
46	1u	0	1
47	1v	0	1
48	1w	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
50	2N	0	2
52	2B	0	4
53	2C	0	1
54	2D	0	1
56	2F	0	5
57	2G	0	2
58	2H	0	1
60	2J	0	1
64	2O	0	3
65	2P	0	3
66	2Q	0	2
67	2R	0	2
68	2S	0	2
70	2U	0	1
71	2V	0	1
72	2W	0	2
73	2X	0	1
74	2Y	0	1
75	2Z	0	1
77	2b	0	3
78	2c	0	2
79	2d	0	1
80	2e	0	1
82	2g	0	1
83	2h	0	4
84	2i	0	3
85	2j	0	2
87	2l	0	2
88	2m	0	1
89	2n	0	1
90	2o	0	1
91	2p	0	1
92	2q	0	4
93	2r	0	2
95	2t	0	1
96	2u	0	1
97	2v	0	2
98	2w	0	3
100	3N	0	176
101	3A	0	2
102	3B	0	1
103	3C	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
104	3D	0	3
106	3F	0	4
107	3G	0	1
108	3H	0	5
109	3I	0	2
110	3J	0	2
111	3S	0	1
112	3K	0	3
114	3M	0	2
115	3O	0	1
117	3Q	0	4
All	All	0	390

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
64	2O	1059	DG	C5'-C4'	5.71	1.57	1.51
20	1U	17	DC	N1-C6	5.49	1.40	1.37
64	2O	1060	DC	C5'-C4'	5.38	1.57	1.51
70	2U	1047	DT	C5'-C4'	5.03	1.56	1.51

The worst 5 of 1601 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	1U	17	DC	C6-N1-C2	-42.12	103.45	120.30
77	2b	1073	DA	O5'-P-OP1	-26.14	79.33	110.70
65	2P	1062	DG	O5'-P-OP1	-24.68	81.09	110.70
68	2S	1054	DA	O5'-P-OP1	-24.15	81.72	110.70
77	2b	1073	DA	O5'-P-OP2	-23.92	81.99	110.70

There are no chirality outliers.

5 of 390 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1A	40	DT	Sidechain
1	1A	49	DA	Sidechain
2	1B	3	DG	Sidechain
2	1B	4	DG	Sidechain
2	1B	6	DG	Sidechain



## 5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1A	1082	0	587	0	0
2	1B	1137	0	619	0	0
3	1C	327	0	180	0	0
4	1D	1220	0	669	0	0
5	1E	1052	0	574	1	0
6	1F	950	0	521	1	0
7	1G	321	0	183	1	0
8	1H	970	0	541	0	0
9	1I	971	0	531	1	0
10	1J	492	0	276	0	0
11	1K	945	0	519	0	0
12	1L	333	0	179	0	0
13	1M	645	0	358	0	0
14	1O	808	0	448	1	0
15	1P	948	0	518	0	0
16	1Q	752	0	413	0	0
17	1R	976	0	539	0	0
18	1S	763	0	419	1	0
19	1T	318	0	181	0	0
20	1U	826	0	448	0	0
21	1V	521	0	298	0	0
22	1W	830	0	454	0	0
23	1X	983	0	538	1	0
24	1Y	544	0	308	0	0
25	1Z	531	0	294	0	0
26	1a	965	0	533	0	0
27	1b	665	0	361	0	0
28	1c	820	0	455	0	0
29	1d	826	0	452	0	0
30	1e	524	0	294	0	0
31	1f	804	0	453	0	0
32	1g	982	0	539	0	0
33	1h	993	0	542	0	0
34	1i	986	0	544	0	0
35	1j	659	0	360	0	0
36	1k	827	0	456	0	0
37	1l	980	0	545	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	1m	328	0	183	0	0
39	1n	1148	0	631	0	0
40	1o	821	0	450	0	0
41	1p	816	0	449	0	0
42	1q	981	0	541	0	0
43	1r	654	0	359	0	0
44	1s	649	0	363	0	0
45	1t	651	0	361	0	0
46	1u	982	0	544	0	0
47	1v	319	0	181	0	0
48	1w	808	0	452	0	0
49	1x	329	0	180	0	0
50	2N	736	0	409	0	0
51	2A	665	0	359	1	0
52	2B	975	0	538	1	0
53	2C	527	0	301	0	0
54	2D	652	0	362	0	0
55	2E	816	0	455	0	0
56	2F	988	0	545	0	0
57	2G	820	0	455	0	0
58	2H	807	0	452	0	0
59	2I	328	0	183	0	0
60	2J	599	0	327	0	0
61	2K	495	0	270	1	0
62	2L	653	0	363	0	0
63	2M	488	0	270	0	0
64	2O	532	0	297	2	0
65	2P	822	0	448	0	0
66	2Q	818	0	453	0	0
67	2R	822	0	453	0	0
68	2S	1192	0	650	0	0
69	2T	494	0	272	0	0
70	2U	1059	0	589	0	0
71	2V	815	0	457	0	0
72	2W	987	0	543	0	0
73	2X	974	0	539	0	0
74	2Y	656	0	360	0	0
75	2Z	818	0	456	0	0
76	2a	1179	0	656	0	0
77	2b	1149	0	633	0	0
78	2c	914	0	511	0	0
79	2d	1075	0	580	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
80	2e	766	0	421	0	0
81	2f	976	0	540	0	0
82	2g	972	0	538	0	0
83	2h	1156	0	631	0	0
84	2i	661	0	359	0	0
85	2j	326	0	183	0	0
86	2k	652	0	361	0	0
87	2l	980	0	537	0	0
88	2m	984	0	543	0	0
89	2n	325	0	184	0	0
90	2o	653	0	366	0	0
91	2p	656	0	362	0	0
92	2q	805	0	454	0	0
93	2r	485	0	272	0	0
94	2s	655	0	358	0	0
95	2t	824	0	448	0	0
96	2u	652	0	361	0	0
97	2v	651	0	367	0	0
98	2w	974	0	526	0	0
99	2x	320	0	180	0	0
100	3N	88890	0	49198	32	0
101	3A	841	0	447	0	0
102	3B	818	0	449	1	0
103	3C	982	0	541	0	0
104	3D	999	0	541	0	0
105	3E	991	0	536	0	0
106	3F	1131	0	635	0	0
107	3G	326	0	183	0	0
108	3H	1142	0	632	0	0
109	3I	736	0	405	0	0
110	3J	714	0	395	0	0
111	3S	655	0	363	0	0
112	3K	988	0	537	1	0
113	3L	760	0	414	0	0
114	3M	1129	0	620	0	0
115	3O	985	0	541	1	0
116	3P	785	0	430	0	0
117	3Q	539	0	290	0	0
118	3R	666	0	363	0	0
All	All	180167	0	99520	45	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 0.

The worst 5 of 45 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
100:3N:3913:DA:H2''	100:3N:3914:DC:C6	2.46	0.50
18:1S:8:DT:H1'	64:2O:1060:DC:C5	2.48	0.49
61:2K:1023:DG:H2'	61:2K:1024:DC:C5	2.48	0.48
102:3B:2120:DG:H2'	102:3B:2121:DC:C6	2.49	0.47
100:3N:3568:DA:H2'	100:3N:3569:DC:C6	2.49	0.47

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

### 5.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

## 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](#)

There are no ligands in this entry.

## 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.

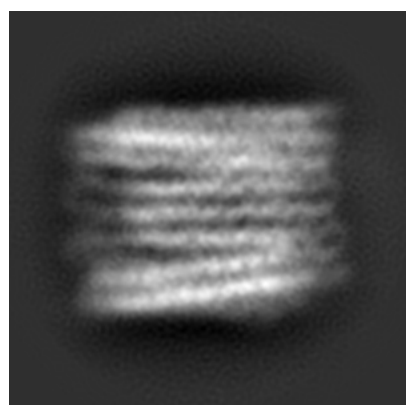
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-7304. These allow visual inspection of the internal detail of the map and identification of artifacts.

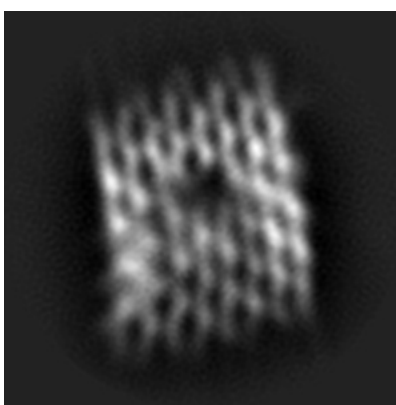
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

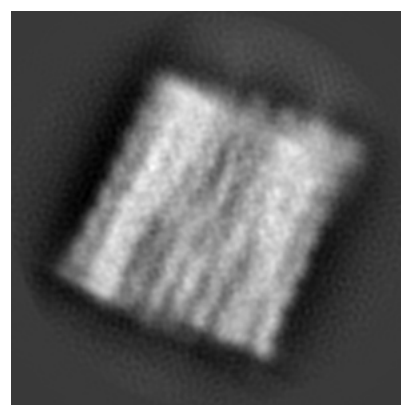
#### 6.1.1 Primary map



X



Y



Z

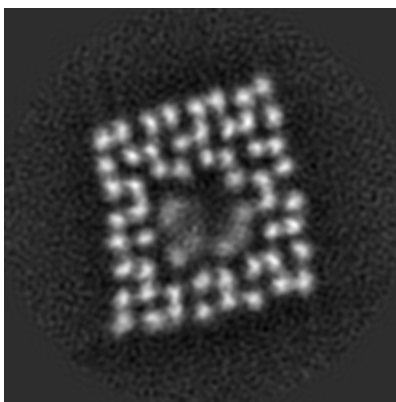
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

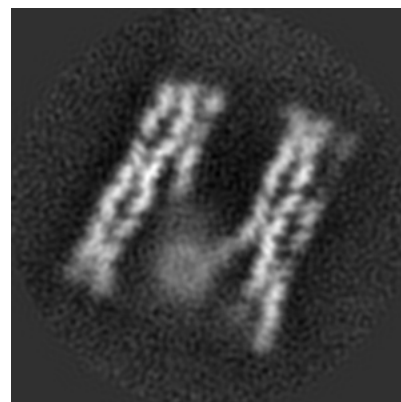
#### 6.2.1 Primary map



X Index: 300



Y Index: 300

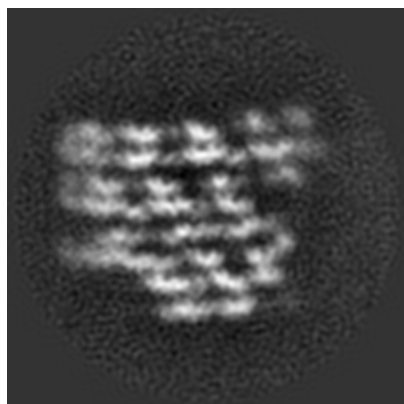


Z Index: 300

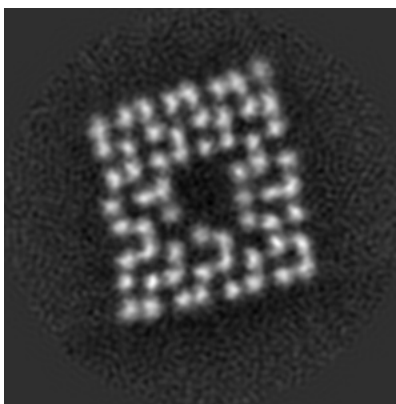
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

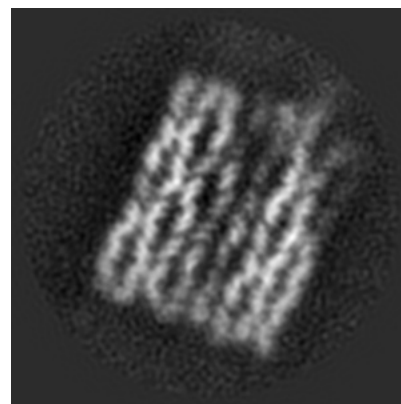
### 6.3.1 Primary map



X Index: 389



Y Index: 340

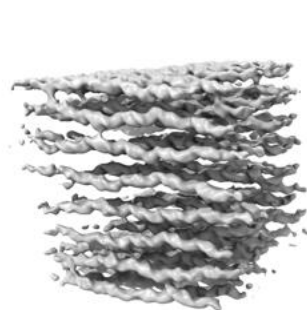


Z Index: 408

The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views [i](#)

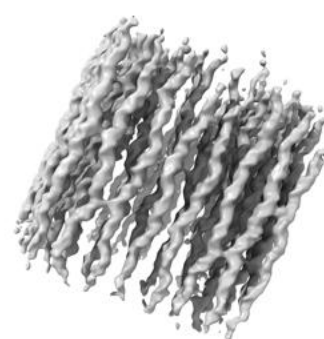
### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.003. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

## 6.5 Mask visualisation

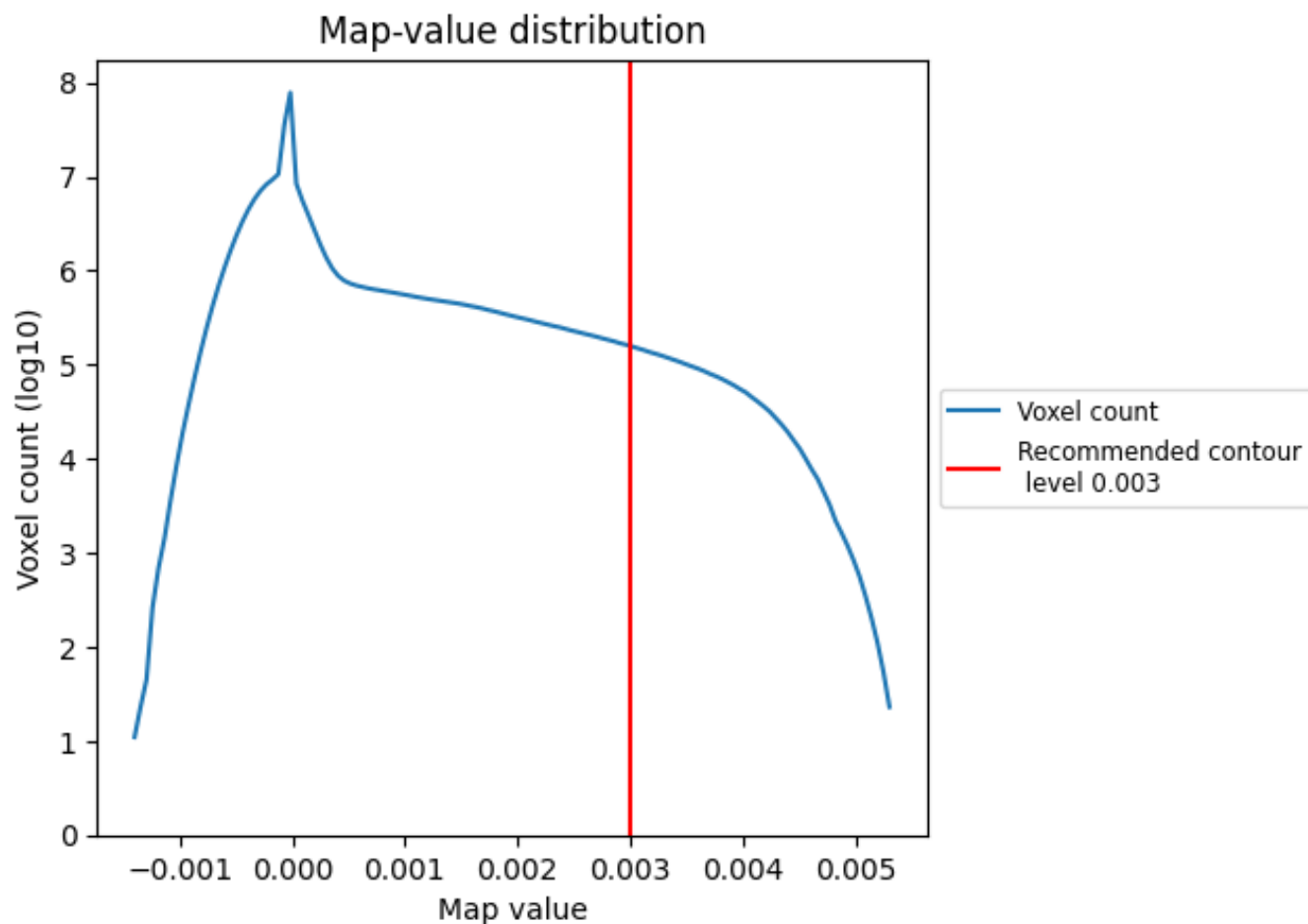
This section was not generated. No masks/segmentation were deposited.



## 7 Map analysis [i](#)

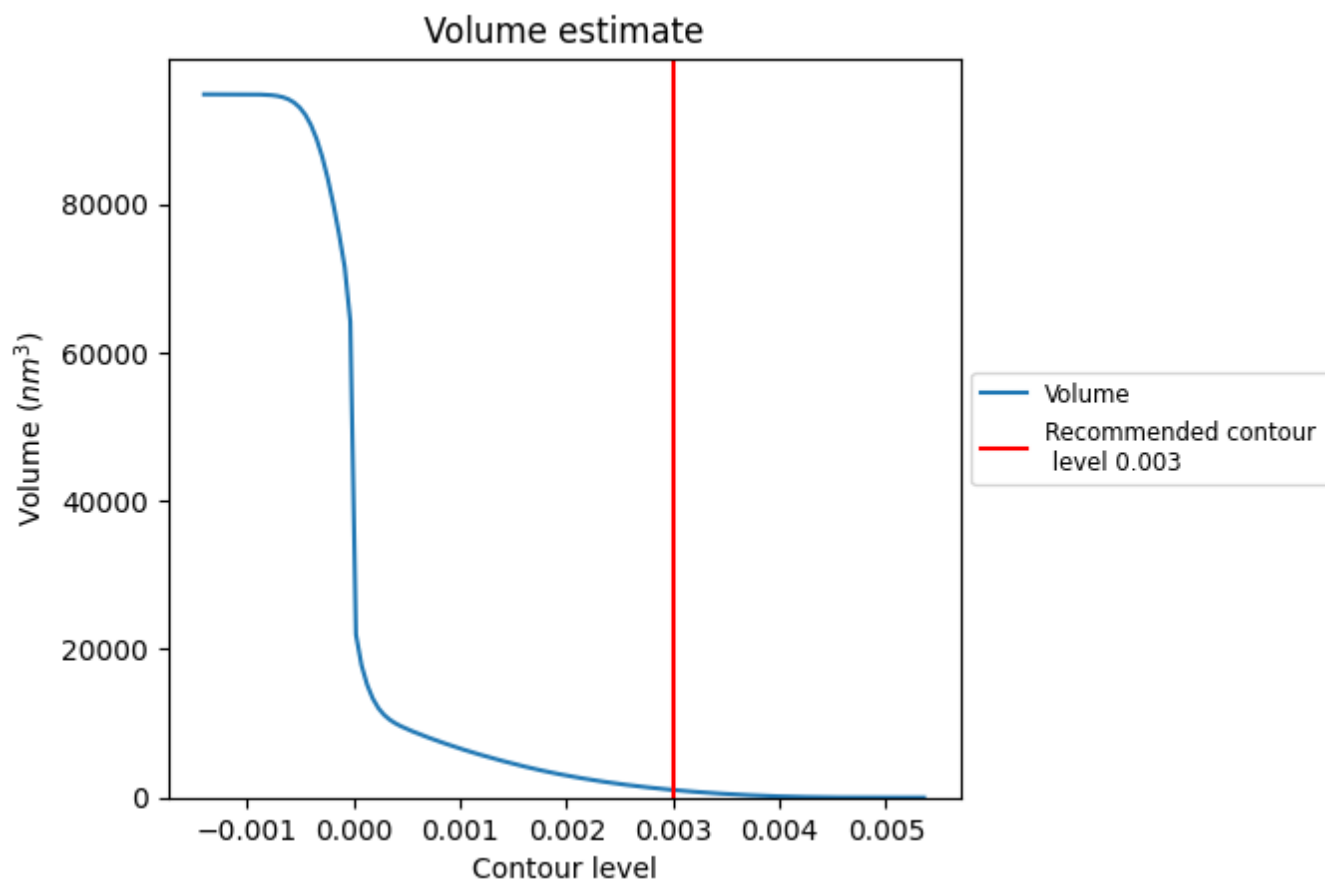
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

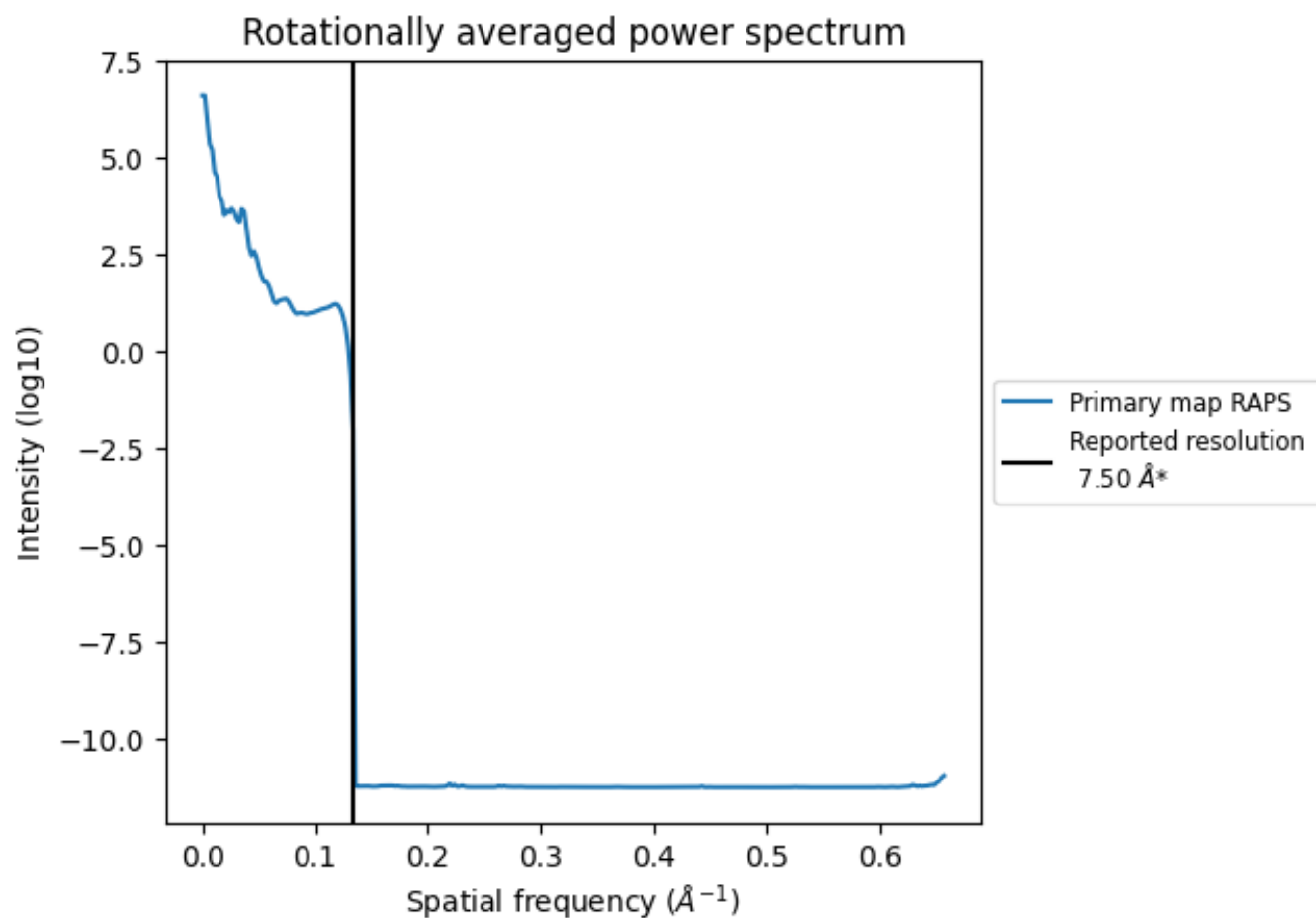
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1031 nm<sup>3</sup>; this corresponds to an approximate mass of 931 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum ⓘ



\*Reported resolution corresponds to spatial frequency of 0.133 Å<sup>-1</sup>

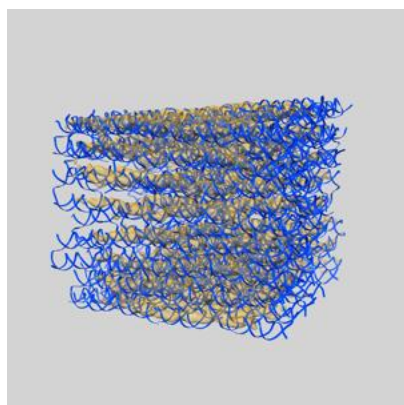
## 8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

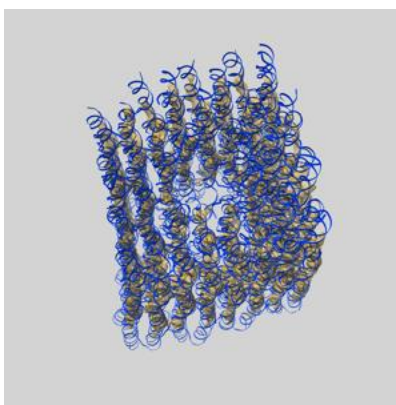
## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-7304 and PDB model 6BY7. Per-residue inclusion information can be found in section [3](#) on page [26](#).

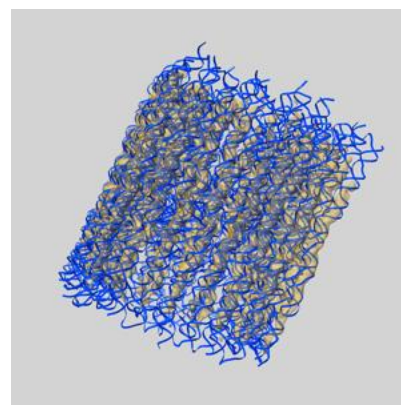
### 9.1 Map-model overlay [i](#)



X



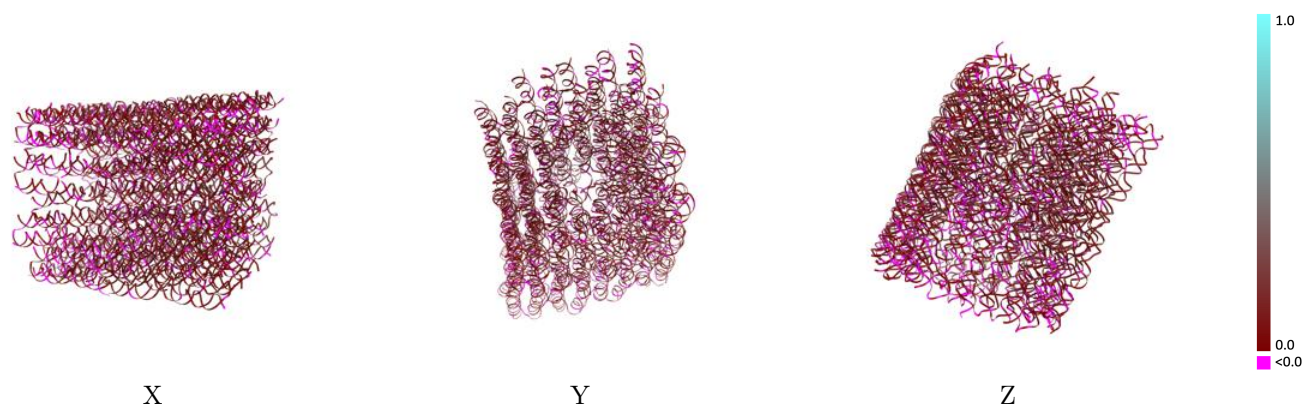
Y



Z

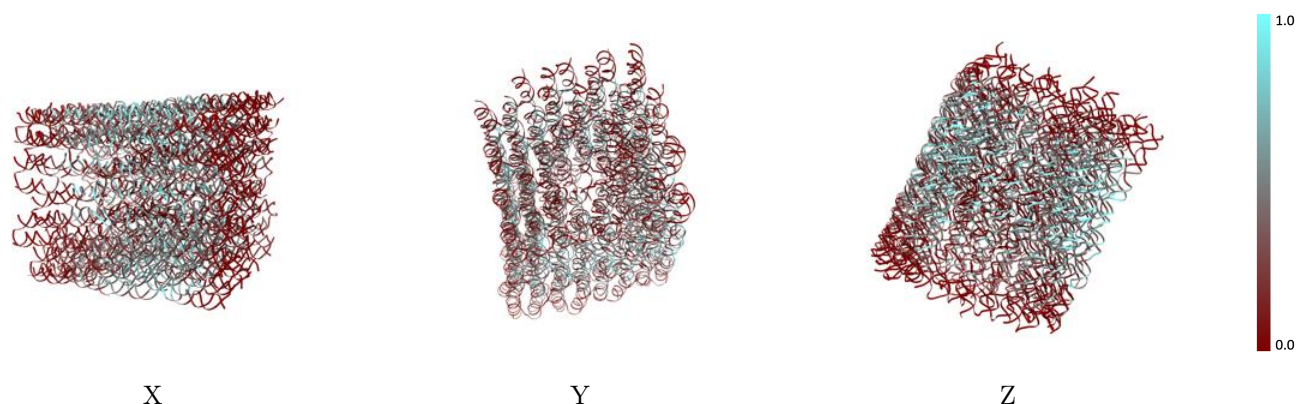
The images above show the 3D surface view of the map at the recommended contour level 0.003 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [i](#)



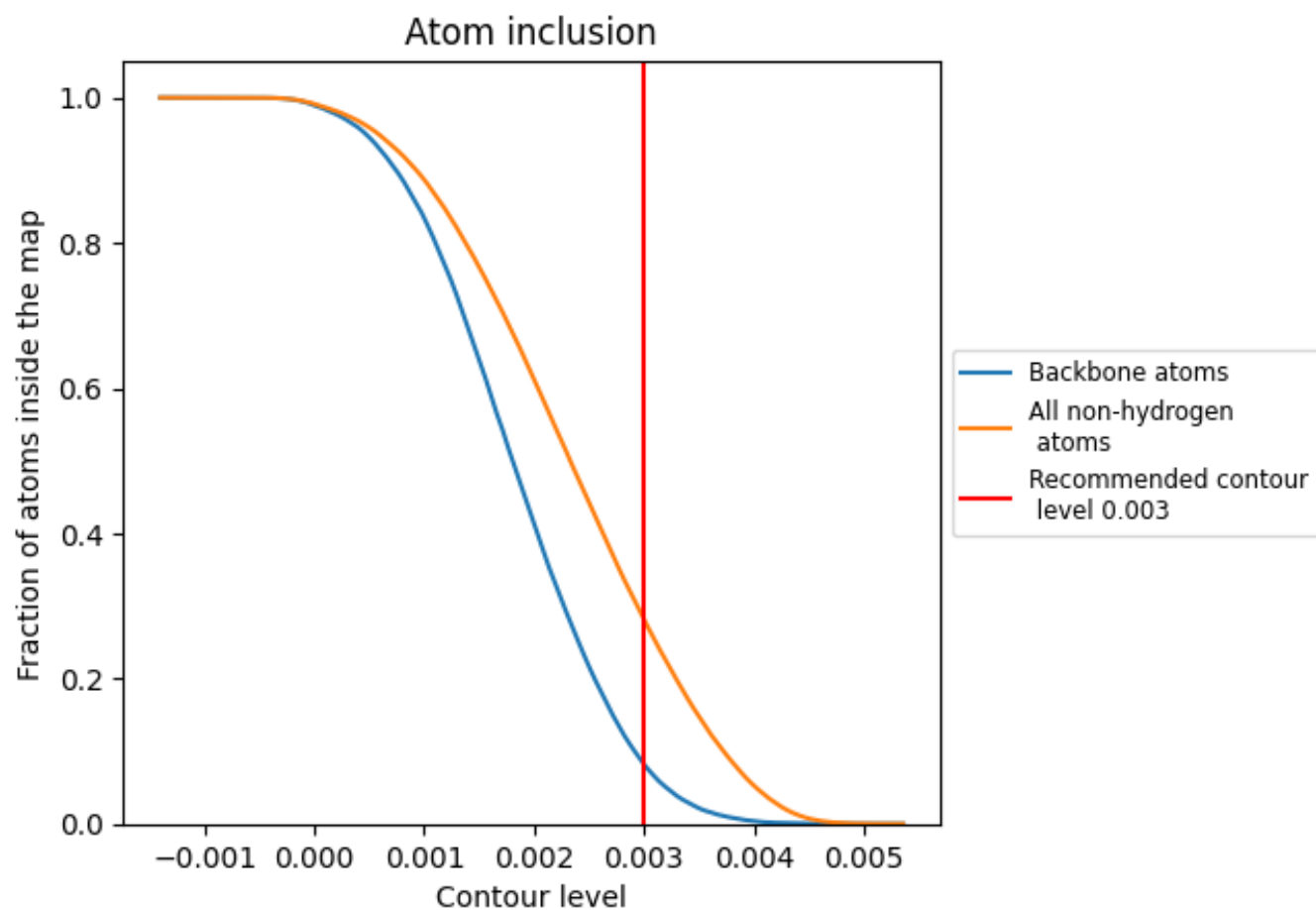
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.003).

## 9.4 Atom inclusion ⓘ



At the recommended contour level, 8% of all backbone atoms, 28% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.003) and Q-score for the entire model and for each chain.





















































































Chain	Atom inclusion	Q-score
All	0.2815	0.0890
1A	0.4307	0.1180
1B	0.2709	0.0740
1C	0.0092	0.0780
1D	0.2443	0.0490
1E	0.2148	0.1140
1F	0.0000	0.0400
1G	0.1308	0.1220
1H	0.3330	0.1020
1I	0.1668	0.0980
1J	0.4167	0.1090
1K	0.0063	0.0470
1L	0.0000	0.0590
1M	0.4419	0.0990
1O	0.3725	0.0990
1P	0.0000	-0.0000
1Q	0.1902	0.1280
1R	0.3402	0.0950
1S	0.2883	0.0950
1T	0.0000	0.0930
1U	0.4588	0.0920
1V	0.0192	0.0310
1W	0.2048	0.0910
1X	0.3408	0.1020
1Y	0.1415	0.0670
1Z	0.0000	0.0670
1a	0.1316	0.0190
1b	0.4165	0.0830
1c	0.4732	0.1360
1d	0.2361	0.0650
1e	0.0000	0.0700
1f	0.4652	0.1250
1g	0.4399	0.1200
1h	0.4663	0.1120
1i	0.0274	0.0570



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Chain	Atom inclusion	Q-score
1j	 0.3657	 0.1510
1k	 0.4220	 0.0920
1l	 0.0000	 0.0510
1m	 0.0152	 0.0160
1n	 0.4120	 0.1210
1o	 0.1023	 0.0550
1p	 0.3235	 0.1090
1q	 0.0652	 0.0520
1r	 0.4908	 0.1130
1s	 0.2311	 0.0940
1t	 0.4455	 0.0900
1u	 0.0367	 0.0790
1v	 0.0063	 0.0500
1w	 0.4864	 0.1150
1x	 0.0274	 0.0500
2A	 0.1128	 0.0550
2B	 0.3333	 0.1370
2C	 0.1328	 0.0840
2D	 0.4218	 0.0860
2E	 0.4056	 0.0880
2F	 0.4858	 0.0980
2G	 0.2415	 0.0520
2H	 0.0322	 0.0470
2I	 0.0000	 0.0590
2J	 0.1803	 0.1170
2K	 0.5333	 0.1140
2L	 0.2741	 0.0640
2M	 0.1066	 0.0640
2N	 0.3655	 0.0790
2O	 0.1090	 0.0950
2P	 0.4964	 0.1150
2Q	 0.4022	 0.1040
2R	 0.3978	 0.0720
2S	 0.1367	 0.0570
2T	 0.0466	 0.0780
2U	 0.4042	 0.1100
2V	 0.5043	 0.1000
2W	 0.4225	 0.1050
2X	 0.4405	 0.1060
2Y	 0.5838	 0.1150
2Z	 0.4144	 0.1130
2a	 0.1145	 0.0650

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Chain	Atom inclusion	Q-score
2b	 0.5065	 0.1260
2c	 0.1116	 0.0940
2d	 0.4400	 0.1170
2e	 0.0875	 0.0930
2f	 0.4365	 0.1190
2g	 0.3302	 0.0640
2h	 0.4516	 0.0990
2i	 0.3192	 0.1180
2j	 0.0000	 0.0590
2k	 0.3604	 0.1290
2l	 0.4582	 0.1040
2m	 0.2297	 0.0840
2n	 0.0000	 0.0420
2o	 0.1593	 0.1100
2p	 0.4665	 0.1170
2q	 0.3702	 0.0680
2r	 0.2309	 0.1120
2s	 0.3542	 0.0890
2t	 0.0012	 0.0280
2u	 0.2623	 0.1180
2v	 0.4101	 0.0770
2w	 0.2392	 0.0630
2x	 0.0000	 0.0770
3A	 0.1332	 0.1130
3B	 0.4438	 0.1230
3C	 0.4114	 0.0930
3D	 0.4545	 0.1100
3E	 0.3491	 0.0990
3F	 0.5349	 0.1310
3G	 0.0031	 0.0640
3H	 0.2688	 0.1010
3I	 0.4484	 0.1130
3J	 0.0266	 0.0240
3K	 0.3320	 0.0900
3L	 0.2526	 0.0910
3M	 0.2932	 0.0720
3N	 0.2819	 0.0900
3O	 0.2051	 0.0530
3P	 0.0204	 0.0660
3Q	 0.0761	 0.0580
3R	 0.5480	 0.1200
3S	 0.2168	 0.0700