Effective April 1, 1984 we will no longer distribute magnetic tapes written in 7-track format. Anyone who would be adversely affected by this decision should inform Brookhaven as soon as possible.

As we previously announced, we are now distributing two new products, a "yearly tape (fiche)" and a "current tape (fiche)". These are referred to as YEAR83TP, YEAR83FI, PART84TP, and PART84FI in our order form. Our October 1983 Newsletter has the details on these products. To aid our users in deciding which tape service to use, a new directory-producing program called DRCTRY has now been included on our distribution tape. This program produces a table of contents of our tapes which includes the dates of accession and latest revision (for those entries with the REVDAT records). To receive a printout of the latest directory, check the appropriate box on the order form (page 5).

The Cambridge Data Centre has announced that they would prefer that no check be enclosed with orders. Inclusion of a purchase order is desirable but not mandatory. A reminder to this effect has now been included in our order form.

Inquiries and suggestions may be addressed to any of the persons listed below. The order form on pages 5-6 of this Newsletter may be used to order data from Brookhaven or Cambridge; users in Australia or Japan should contact their centers for detailed information.

Area	Address of Center	Name	
The Americas	Protein Data Bank Chemistry Department Brookhaven National Laboratory Upton, New York 11973 USA	E. E. Abola F. C. Bernstein T. F. Koetzle	516-282-4383 516-282-4382 516-282-4384
Europe and Worldwide	University Chemical Laboratory Lensfield Road Cambridge CB2 1EW, England	O. Kennard S. Bellard	0223-66499
Australia	CSIRO Central Information Service P. O. Box 89, East Melbourne Victoria 3002 Australia	C. Garrow	03-418-7333
Japan	Institute for Protein Research Osaka University Yamadaoka, 3-2, Suita, Osaka 565 Japan	N. Yasuoka	(06) 877-5111 ext. 3912

Supported by the U. S. National Science Foundation and U. S. National Institutes of Health.

TABLE 1. PROTEIN DATA BANK, INFORMATION AVAILABLE ON MAGNETIC TAPE

18-JAN-84

CODE	ITEM	NO.TAPES 800	1600	6250	AVAILABILITY US	UK	JA	AUS
DATAPRTP	ALL CURRENT PROGRAMS, BIBLIOGRAPHIC ENTRIES, COORDINATE ENTRIES (TABLES 3, 4, 7)	2	2	1	X	X	X	X
YEAR83TP	*NEW OR REVISED COORDINATE ENTRIES FOR 1983	1	1	1	X			
PART84TP	*NEW OR REVISED COORD ENTRIES 1984(TO DATE)	1	1	1	X			
NONST1TP	STRUCTURE FACTOR HOLDINGS (PART 1 - TABLE 5)	2	1	1	X	X	X	
NONST2TP	STRUCTURE FACTOR HOLDINGS (PART 2 - TABLE 6)	2	1	1	X	X	X	
BENDERTP	PARAMETERS FOR BENT-WIRE MODELS	1	1	1	X			
BLDKITTP	MODEL BUILDER'S KIT	PLEASE INQUIRE AT US CENTER						
CONECTTP	CONNECTIVITY SPECIFICATIONS FOR ALL ATOMS	2	1	1	X			
DGPLOTTP	DIAGONAL PLOTS (LINE PRINTER)	1	1	1	X			
DIHDRLTP	COMPLETE TORSION ANGLES	2	1	1	X			
DSTNCETP	CONNECTIVITY SPECIFICATIONS WITH DISTANCES	2	1	1	X			
FISIPLTP	PHI/PSI PLOTS (LINE PRINTER)	1	1	1	X			
PHIPSITP	LISTS OF PHI/PSI/OMEGA VALUES	1	1	1	X			

* NEW OR REPLACEMENT ENTRY SINCE OCT-83 NEWSLETTER

TABLE 2. PROTEIN DATA BANK, INFORMATION AVAILABLE ON MICROFICHE

18-JAN-84

CODE	ITEM	AVAILABILITY US	UK	JA	AUS
DATAPRFI	ALL CURRENT PROGRAMS, BIBLIOGRAPHIC ENTRIES, COORDINATE ENTRIES (TABLES 3, 4, 7)	X	X	X	
YEAR83FI	*NEW OR REVISED COORDINATE ENTRIES FOR 1983	X			
PART84FI	*NEW OR REVISED COORD ENTRIES 1984(TO DATE)	X			
NONST1FI	STRUCTURE FACTOR HOLDINGS (PART 1 - TABLE 5)	X	X	X	
NONST2FI	STRUCTURE FACTOR HOLDINGS (PART 2 - TABLE 6)	X	X	X	
CORR13FI	*LIST OF CORRECTIONS NO. 13 (JUL/83 - JAN/84)	X	X	X	X
BENDERFI	PARAMETERS FOR BENT-WIRE MODELS	X			
BLDKITFI	MODEL BUILDER'S KIT	PLEASE INQUIRE AT US CENTER			
CONECTFI	CONNECTIVITY SPECIFICATIONS FOR ALL ATOMS	X			
DGPLOTFI	DIAGONAL PLOTS (LINE PRINTER)	X			
DIHDRLFI	COMPLETE TORSION ANGLES	X			
DSTNCEFI	CONNECTIVITY SPECIFICATIONS WITH DISTANCES	X			
FISIPLFI	PHI/PSI PLOTS (LINE PRINTER)	X			
PHIPSIFI	LISTS OF PHI/PSI/OMEGA VALUES	X			

* NEW OR REPLACEMENT ENTRY SINCE OCT-83 NEWSLETTER

TABLE 4. PROTEIN DATA BANK, AVAILABLE PROGRAMS

18-JAN-84

NAME	PURPOSE	AUTHOR(S)	REV DATE/ SUPPORTED	
BENDER	PARAMETERS FOR BENT-WIRE MODELS	G.WILLIAMS	4/82	YES
BLDKIT	MODEL BUILDER*S KIT	E.ABOLA	5/82	YES
CHIRAL	CHECK CHIRALITY	E.ABOLA	1/82	YES
CONECT	GENERATE FULL CONNECTIVITY	F.BERNSTEIN	8/82	YES
CONTCT	INTERMOLECULAR CONTACTS	L.ANDREWS	5/83	NO
DGPLOT	DIAGONAL PLOTS ON PRINTER	E.SWANSON,F.BERNSTEIN	1/83	YES
DIHDRL	COMPLETE TORSION ANGLES	E.ABOLA	3/80	YES
DRCTRY	*DIRECTORY OF PDB DISTRIBUTION TAPE	E.ABOLA	1/84	YES
DSSP	*SECONDARY STRUCTURE,SOLVENT EXPOSURE	W.KABSCH,C.SANDER	12/83	NO
DSTNCE	CALC DISTANCES FROM CONECT RECORDS	F.BERNSTEIN	8/82	YES
FISIPL	PHI/PSI PLOTS ON PRINTER	F.BERNSTEIN	5/79	YES
LSM	COLOR-CODED ALPHA-CARBON MODELS	R.MATELA,R.FLETTERICK	3/82	NO
NAMOD	BALL-AND-STICK MODEL DISPLAY	Y.BEPPU	11/78	NO
PHIPSI	MAIN-CHAIN TORSION ANGLES	ANDREWS,WILLIAMS,BERNSTEIN	2/79	YES
REFMTE	*REFORMAT DATA FOR SUPERTAB,SUPERB	L.RELLICK,J.DUANE	12/83	NO
STEREO	EXTRACT X,Y,Z FROM STEREO DIAGRAMS	M.ROSSMANN	6/79	NO
TAPDIR	PRINT DIRECTORY OF TAPE CONTENTS	H.BERNSTEIN,F.BERNSTEIN	11/79	YES
THEOD	MEASURE COORDINATES WITH THEODOLITE	L.LEBIODA	1/82	NO
TORSRU	COMPLETE TORSION ANGLES	G.REEKE	10/79	NO
TOTALS	VALIDATION OF MASTER RECORD	L.ANDREWS,F.BERNSTEIN	3/82	YES

* NEW OR REPLACEMENT ENTRY SINCE OCT-83 NEWSLETTER

SUPPORTED PROGRAMS ARE THOSE FOR WHICH STAFF OF THE PROTEIN DATA BANK WILL PROVIDE CORRECTIONS FOR DEMONSTRATED ERRORS.

TABLE 5. PROTEIN DATA BANK, STRUCTURE FACTOR HOLDINGS (PART 1, SEE ALSO TABLE 6)

18-JAN-84

IDENT CODE	MOLECULE	DEPOSITOR	DATE/ CODE	
R1ACTSF	ACTINIDIN	E.BAKER	7/77	SF
CHYMOF	ALPHA-CHYMOTRYPSIN (TOSYL)	D.BLOW	4/73	SF
RCARP04	CALCIUM-BINDING PARVALBUMIN	R.KRETSINGER	2/74	SF
RCARP05	CALCIUM-BINDING PARVALBUMIN	R.KRETSINGER	2/74	SF
R2B5CSF	CYTOCHROME B5	F.S.MATHEWS	12/77	SF
R3CYTSF	CYTOCHROME C (ALBACORE, OXIDIZED)	T.TAKANO,R.DICKERSON	7/80	SF
R4CYTSF	CYTOCHROME C (ALBACORE, REDUCED)	T.TAKANO,R.DICKERSON	7/80	SF
RCYC5501	CYTOCHROME C550	R.TIMKOVICH	4/76	SF
R1ZNASF	DNA(Z',CGCG,HIGH-SALT,SYNTHETIC)	H.DREW,R.DICKERSON	1/81	SF
R1BNASF	DNA(B,CGCGAATTCGCG,SYNTHETIC,290 DEG K)	H.DREW,R.DICKERSON	1/81	SF
RGPDO4	GLYCERALDEHYDE-3-P-DEHYDROGENASE(LOBSTR)	M.ROSSMANN	8/75	SF
R2GPDSF	APO-GLYCERALDEHYDE-3-P-DEHYDROGENASE	M.ROSSMANN	12/79	SF
R2MHBSF	HEMOGLOBIN (HORSE, AQUO MET AND CO)	LADNER,HEIDNER,PERUTZ	6/80	SF
R1FDHSF	HEMOGLOBIN (HUMAN, FETAL, DEOXY)	J.FRIER	6/80	SF
RHUMDEH02	HEMOGLOBIN (HUMAN,DEOXY)	M.PERUTZ,G.FERMI	5/75	SF
LAMPRY1	HEMOGLOBIN (LAMPREY)	HENDRICKSON,LOVE,KARLE	5/73	SF
RLDH06	LACTATE DEHYDROGENASE	M.ROSSMANN	8/75	SF
RLDH07	LACTATE DEHYDROGENASE/NAD/PYRUVATE	M.ROSSMANN	8/75	SF
R5LDHSF	LACTATE DEHYDROGENASE/S-LAC/NAD (PIG)	U.GRAU,M.ROSSMANN	1/81	SF
R1LZHSF	LYSOZYME (HEN EGG-WHITE, MONOCLINIC)	C.BLAKE,D.RICE	6/81	SF
R2LZHSF	LYSOZYME (HEN EGG-WHITE, ORTHORHOMBIC)	C.BLAKE,D.RICE	6/81	SF
RMETMYSF1	MYOGLOBIN (SPERM WHALE, MET)	T.TAKANO	6/76	SF
RDEMYSF1	MYOGLOBIN (SPERM WHALE, DEOXY)	T.TAKANO	6/76	SF
RRUBY02	RUBREDOXIN	L.JENSEN	3/74	SF
R4TNASF	TRANSFER RNA (YEAST, PHE)	A.JACK,J.LADNER,A.KLUG	6/80	SF

CODES

SF STRUCTURE FACTORS

TABLE 6. PROTEIN DATA BANK, STRUCTURE FACTOR HOLDINGS (PART 2, SEE ALSO TABLE 5)

18-JAN-84

IDENT CODE	MOLECULE	DEPOSITOR	DATE/ CODE	
R1ICBSF	CALCIUM-BINDING PROTEIN(INTESTINAL)	D.SZEBENYI,K.MOFFAT	7/83	SF
R1CCRSF	CYTOCHROME C (RICE)	H.OCHI,N.TANAKA	3/83	SF
R1CYPSF	*CYTOCHROME C PEROXIDASE(YEAST)	FINZEL,POULOS,KRAUT	11/83	SF
R2C2CSF	*CYTOCHROME C2(OXIDIZED)	BHATIA,FINZEL,KRAUT	11/83	SF
R3C2CSF	*CYTOCHROME C2(REDUCED)	BHATIA,FINZEL,KRAUT	11/83	SF
R351CSF	CYTOCHROME C551 (OXIDIZED)	T.TAKANO,R.DICKERSON	9/81	SF
R451CSF	CYTOCHROME C551 (REDUCED)	T.TAKANO,R.DICKERSON	9/81	SF
R1ANASF	DNA(A,D-IODO-CCGG)SPACE GROUP P 43 21 2	B.CONNER,R.DICKERSON	6/82	SF
R1ANAP2	DNA(A,D-IODO-CCGG)SPACE GROUP P 21	B.CONNER,R.DICKERSON	6/82	SF
R2BNASF	DNA(B,CGCGAATTCGCG,SYNTHETIC,16 DEG K)	H.DREW,R.DICKERSON	11/81	SF
R3BNASF	DNA(B,9-BR-CGCGAATTCGCG,20 DEG C)	KOPKA,FRATINI,DICKERSON	2/82	SF
R4BNASF	DNA(B,9-BR-CGCGAATTCGCG, 7 DEG C)	KOPKA,FRATINI,DICKERSON	2/82	SF
R5BNASF	DNA(B,CGCGAATTCGCG,SYNTHETIC)/CISPLATIN	WING,PJURA,DREW,DCKRSN	8/83	SF
R1GAASF	GLUTAMINASE-ASPARAGINASE(ACINETOBACTER)	H.AMMON	12/82	SF
R1GASSF	GLUTAMINASE-ASPARAGINASE(PSEUDOMONAS 7A)	H.AMMON	12/82	SF
R1HMQSF	HEMERYTHRIN(MET)	STENKAMP,SIEKER,JENSEN	2/83	SF
R1HMZSF	HEMERYTHRIN(AZIDO,MET)	STENKAMP,SIEKER,JENSEN	2/83	SF
R2INSSF	INSULIN(BOVINE,2-ZINC)DES-PHE B1	C.REYNOLDS,G.DODSON	5/82	SF
R1LH1SF	LEGHEMOGLOBIN(ACETATE MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R2LH1SF	LEGHEMOGLOBIN(ACETATE MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R1LH2SF	LEGHEMOGLOBIN(AQUO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R2LH2SF	LEGHEMOGLOBIN(AQUO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R1LH3SF	LEGHEMOGLOBIN(CYANO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R2LH3SF	LEGHEMOGLOBIN(CYANO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R1LH4SF	LEGHEMOGLOBIN(DEOXY)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R2LH4SF	LEGHEMOGLOBIN(DEOXY)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R1LH5SF	LEGHEMOGLOBIN(FLUORO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R2LH5SF	LEGHEMOGLOBIN(FLUORO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R1LH6SF	LEGHEMOGLOBIN(NICOTINATE MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R2LH6SF	LEGHEMOGLOBIN(NICOTINATE MET)	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R1LH7SF	LEGHEMOGLOBIN(FERRO)/N!TROSOBENZENE	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R2LH7SF	LEGHEMOGLOBIN(FERRO)/N!TROSOBENZENE	VAINSHTEIN,HARUTYUNYAN	4/82	SF
R1LYMSF	LYSOZYME(HEN EGG-WHITE,MONOCLINIC)	HOGLE,RAO,SUNDARALINGAM	7/82	SF
R1MLTSF	MELITTIN	TERWILLIGER,EISENBERG	8/81	SF
R1OVOSF	OVOMUCOID FRAGMENT	E.PAPAMOKOS,R.HUBER	1/82	SF
R2BP2SF	PROPHOSPHOLIPASE A2 (BOVINE)	DIJKSTRA,HOL,DRENTH	9/81	SF
R1RP2SF	*PROTEINASE II(RAT MAST CELL)	S.REMINGTON,B.MATTHEWS	1/84	SF
R1PYPSF	INORGANIC PYROPHOSPHATASE	E.HARUTYUNYAN ET AL.	2/83	SF
R1RN3SF	RIBONUCLEASE A	BORKAKOTI,MOSS,PALMER	6/82	SF
R4RSASFX	RIBONUCLEASE A (XRAY)	A.WLODAWER	6/82	SF
R4RSASFN	RIBONUCLEASE A (NEUTRON)	A.WLODAWER	6/82	SF
R3TLNSF	THERMOLYSIN(NATIVE)	B.MATTHEWS,M.HOLMES	2/82	SF
R2PTNSF	TRYPSIN(ORTHORHOMBIC,2.4M (NH4)2SO4)	J.WALTER,R.HUBER	10/81	SF
R1TPOSF	TRYPSIN(ORTHORHOMBIC)	BODE,WALTER,HUBER	9/82	SF
R3PTNSF	TRYPSIN(TRIGONAL,2.4M (NH4)2SO4)	J.WALTER,R.HUBER	10/81	SF
R3PTBSF	TRYPSIN(BENZAMIDINE INHIBITED)	BODE,SCHWAGER,WALTER	9/82	SF
R1TPPSF	TRYPSIN/P-AMIDINO-PHENYL-PHYRUVATE	WALTER,BODE,HUBER	9/82	SF
R4PTISF	TRYPSIN INHIBITOR(BOVINE,PANCREAS)	R.HUBER,J.DEISENHOFER	9/82	SF
R2PTCSF	TRYPSIN/TRYPSIN INHIBITOR COMPLEX	R.HUBER,J.DEISENHOFER	9/82	SF
R1TPASF	TRYPSIN(ANHYDRO)/TRYPSIN INHIBITOR	HUBER,BODE,DEISENHOFER	9/82	SF
R2TGASF	TRYPSINOGEN(2.4M MGSO4)	J.WALTER,R.HUBER	10/81	SF
R1TGCSF	TRYPSINOGEN(.5 CH3OH,.5 HOH)	J.WALTER,R.HUBER	10/81	SF
R1TGTSF	TRYPSINOGEN(173 DEG K,.7 CH3OH,.3 HOH)	J.WALTER,R.HUBER	10/81	SF
R2TGTSF	TRYPSINOGEN(103 DEG K,.7 CH3OH,.3 HOH)	J.WALTER,R.HUBER	10/81	SF
R2TGPSF	TRYPSINOGEN/TRYPSIN INHIBITOR	R.HUBER ET AL.	9/82	SF
R3TPISF	TRYPSINOGEN/TRYPSIN INHIBITOR/ILE-VAL	R.HUBER ET AL.	9/82	SF
R2TPISF	TRYPSINOGEN/PTI/ILE-VAL (MERCURATED)	J.WALTER,R.HUBER	10/81	SF
R1TGSSF	TRYPSINOGEN/PSTI	R.HUBER ET AL.	9/82	SF

* NEW OR REPLACEMENT ENTRY SINCE OCT-83 NEWSLETTER

CODES

SF STRUCTURE FACTORS

TABLE 3. PROTEIN DATA BANK, ATOMIC COORDINATE HOLDINGS

18-JAN-84

IDENT CODE	MOLECULE	DEPOSITOR(S)	DATE/ STATUS	
2APE	ACID PROTEINASE(ENDOTHIA PARASITICA)	T.BLUNDELL	9/81	
2APP	ACID PROTEINASE(PENICILLIUMJANTHINELLUM)	A.SIELECKI,M.JAMES	1/83	R
1APR	ACID PROTEINASE(RHIZOPUS CHINENSIS)	D.DAVIES	8/79	
2ACT	ACTINIDIN	E.BAKER	11/79	
1ACX	ACTINOXANTHIN	V.PLETNEV,A.KUZIN	12/82	
2ADK	ADENYLATE KINASE (PORCINE MUSCLE)	G.SCHULZ	3/77	
1AGA	AGAROSE	S.ARNOTT	5/78	
2AGA	AGGLUTININ (WHEAT GERM)	C.WRIGHT	5/80	
4ADH	ALCOHOL DEHYDROGENASE (APO)	C.-I.BRANDEN	8/79	
5ADH	*ALCOHOL DEHYDROGENASE(APO)/ADP-RIBOSE	H.EKLUND,T.JONES	1/84	P
6ADH	*ALCOHOL DEHYDROGENASE(HOLO)/NADH/DMSO	H.EKLUND	1/84	P
7ADH	*ALCOHOL DEHYDRGNSE(↑SONICOTINIMIDYLATED)	B.PLAPP,H.EKLUND	1/84	P
1ALP	ALPHA LYTIC PROTEASE	BRAYER,DELBAERE,JAMES	6/79	
2TAA	TAKA-AMYLASE	KUSUNOKI,MATSUURA,KAKUDO	10/82	
1ABP	L-ARABINOSE-BINDING PROTEIN	F.QUIOCHO,G.GILLILAND	5/80	
1AAT	CYTOSOLIC ASPARTATE AMINOTRANSFERASE	HARUTYUNYAN,MALASHKEVICH	4/82	A
2ATC	ASPARTATE CARBAMOYLTRANSFERASE	W.LIPSCOMB	3/82	
3ATC	ASPARTATE CARBAMOYLTRANSFERASE/CTP	W.LIPSCOMB	3/82	R
1AZU	AZURIN	E.ADMAN,L.SIEKER,L.JENSEN	8/80	
2BCL	BACTERIOCHLOROPHYLL A-PROTEIN	B.MATTHEWS	1/79	A
1ABX	ALPHA-BUNGAROTOXIN	D.AGARD,S.SPENCER,R.STROUD	4/80	A
1CPV	CALCIUM-BINDING PARVALBUMIN SET 6A	R.KRETSINGER	8/74	
2CPV	CALCIUM-BINDING PARVALBUMIN SET 6H	R.KRETSINGER	8/74	
3CPV	CALCIUM-BINDING PARVALBUMIN SET 6I	R.KRETSINGER	8/74	
1ICB	CALCIUM-BINDING PROTEIN(INTESTINAL)	D.SZEBENYI,K.MOFFAT	7/83	
1CAP	CAPSULAR POLYSACCHARIDE (E. COLI M41)	S.ARNOTT	5/78	
2CAB	*CARBONIC ANHYDRASE B (HUMAN)	K.KANNAN	10/83	R
1CAC	CARBONIC ANHYDRASE C (HUMAN)	K.KANNAN	5/76	
3CPA	CARBOXYPEPTIDASE A/GLYCYLTYROSINE	D.REES,W.LIPSCOMB	3/82	R
4CPA	CARBOXYPEPTIDASE A/POTATO INHIBITOR	D.REES,W.LIPSCOMB	3/82	
5CPA	CARBOXYPEPTIDASE A/WATER (BOVINE)	D.REES,W.LIPSCOMB	5/82	
1CPB	CARBOXYPEPTIDASE B (BOVINE)	M.SCHMID,J.HERRIOTT	6/76	A
1CAR	CARRAGEENAN	S.ARNOTT	5/78	
4CAT	CATALASE(PENICILLIUM VITALE)	B.VAINSHTEIN ET AL.	2/83	B
5CAT	*CATALASE(BEEF LIVER)	I.FITA,M.ROSSMANN	12/83	RP
6CAT	*CATALASE(BEEF LIVER)	I.FITA,M.ROSSMANN	12/83	RP
1C4S	CHONDROITIN-4-SULFATE	S.ARNOTT	5/78	
2C4S	CHONDROITIN-4-SULFATE (CA SALT)	S.ARNOTT	5/78	
2CHA	ALPHA-CHYMOTRYPSIN (TOSYL)	D.BLOW	1/75	
3CHA	ALPHA-CHYMOTRYPSIN	A.TULINSKY	8/76	
2GCH	GAMMA-CHYMOTRYPSIN	COHEN,DAVIES,SILVERTON	5/80	
1CHG	CHYMOTRYPSINOGEN	J.KRAUT,J.BIRKTOFT	3/75	
1CTX	ALPHA COBRATOXIN	W.SAENGER,M.WALKINSHAW	3/82	
2CNA	CONCANAVALIN A	G.REEKE,J.BECKER,G.EDELMAN	4/75	
3CNA	CONCANAVALIN A	K.HARDMAN	9/76	
1CN1	CONCANAVALIN A (DEMETALLIZED)	M.SHOHAM	12/81	
1CRN	CRAMBIN	W.HENDRICKSON,M.TEETER	5/81	
2B5C	CYTOCHROME B5 (OXIDIZED)	F.S.MATHEWS	12/77	
1SBB	CYTOCHROME B562 (E.COLI,OXIDIZED)	BETHGE,CZERWINSKI,MATHEWS	8/79	
3CYT	CYTOCHROME C (ALBACORE, OXIDIZED)	T.TAKANO,R.DICKERSON	7/80	
4CYT	CYTOCHROME C (ALBACORE, REDUCED)	T.TAKANO,R.DICKERSON	7/80	
1CYC	CYTOCHROME C (BONITO, HEART)	M.KAKUDO	8/76	
1CCR	CYTOCHROME C (RICE)	H.OCHI,N.TANAKA	3/83	
1CCY	CYTOCHROME C.PRIME.	P.WEBER,R.SALEMME	8/81	
1CYP	*CYTOCHROME C PEROXIDASE(YEAST)	B.FINZEL,T.POULOS,J,KRAUT	11/83	
2C2C	*CYTOCHROME C2(OXIDIZED)	G.BHATIA,B.FINZEL,J,KRAUT	11/83	R
3C2C	*CYTOCHROME C2(REDUCED)	G.BHATIA,B.FINZEL,J,KRAUT	11/83	
2CDV	*CYTOCHROME C3(DESULFOVIBRIO VULGARIS)	N.YASUOKA,M.KAKUDO	11/83	RN
155C	CYTOCHROME C550	R.TIMKOVICH	8/76	
351C	CYTOCHROME C551 (OXIDIZED)	MATSUURA,TAKANO,DICKERSON	7/81	
451C	CYTOCHROME C551 (REDUCED)	MATSUURA,TAKANO,DICKERSON	7/81	
3DFR	DIHYDROFOLATE REDUCTASE (L.CASEI)	J.BOLIN,D.MATTHEWS,J.KRAUT	6/82	R
4DFR	DIHYDROFOLATE REDUCTASE (E. COLI)	J.BOLIN,D.MATTHEWS,J.KRAUT	6/82	R
1ANA	DNA(A,5(PRIME)-D-IODO-CCGG-3(PRIME))	B.CONNER,R.DICKERSON	6/82	
1BNA	DNA(B,CGCGAATTCGCG,SYNTHETIC,290 DEG K)	H.DREW,R.DICKERSON	1/81	
2BNA	DNA(B,CGCGAATTCGCG,SYNTHETIC,16 DEG K)	H.DREW,R.DICKERSON	11/81	
3BNA	DNA(B,9-BR-CGCGAATTCGCG,20 DEG C)	KOPKA,FRATINI,DICKERSON	2/82	
4BNA	DNA(B,9-BR-CGCGAATTCGCG, 7 DEG C)	KOPKA,FRATINI,DICKERSON	2/82	
5BNA	DNA(B,CGCGAATTCGCG,SYNTHETIC)/CISPLATIN	WING,PJURA,DREW,DICKERSON	8/83	
1ZNA	DNA(Z',CGCG,HIGH-SALT,SYNTHETIC)	H.DREW,R.DICKERSON	1/81	
1EST	ELASTASE (PORCINE, TOSYL)	H.WATSON	5/76	
1ECD	ERYTHROCRUORIN (REDUCED, DEOXY)	W.STEIGEMANN,E.WEBER	3/79	
1ECO	ERYTHROCRUORIN (CARBONMONOXY)	W.STEIGEMANN,E.WEBER	3/79	
1ECA	ERYTHROCRUORIN (AQUO, MET)	W.STEIGEMANN,E.WEBER	3/79	
1ECN	ERYTHROCRUORIN (CYANO, MET)	W.STEIGEMANN,E.WEBER	3/79	
2FDI	FERREDOXIN (AZOTOBACTER VINELANDII)	STOUT,GHOSH,FUREY,ODONNELL	11/81	
1FDX	FERREDOXIN (PEPTOCOCCUS AEROGENES)	E.ADMAN,L.SIEKER,L.JENSEN	8/76	
3FXC	FERREDOXIN (SPIRULINA PLATENSIS	TSUKIHARA,KATSUBE,KAKUDO	12/81	
3FXN	FLAVODOXIN (CLOSTRIDIUM MP,OXIDIZED)	M.LUDWIG	12/77	
4FXN	FLAVODOXIN (CLOSTRIDIUM MP,SEMIQUINONE)	M.LUDWIG	12/77	
1GBP	GALACTOSE-BINDING PROTEIN	S.MOWBRAY,G.PETSKO	8/83	A
1GCN	GLUCAGON	T.BLUNDELL	10/77	
1PGI	GLUCOSE-6-PHOSPHATE ISOMERASE	H.MUIRHEAD	7/77	
2GRS	GLUTATHIONE REDUCTASE (HUMAN)	G.SCHULZ	11/81	
1GPD	GLYCERALDEHYDE-3-P-DEHYDROGENASE(LOBSTR)	M.ROSSMANN	7/75	
2GPD	APO-GLYCERALDEHYDE-3-P-DEHYDROGENASE	M.ROSSMANN	12/79	
3GPD	GLYCERALDEHYDE-3-P-DEHYDROGENASE(HUMAN)	H.WATSON,J.CAMPBELL	6/83	
1HRB	HEMERYTHRIN B	W.HENDRICKSON	6/76	A
1HMQ	HEMERYTHRIN(MET)	STENKAMP,SIEKER,JENSEN	2/83	R
1HMZ	HEMERYTHRIN(AZIDO,MET)	STENKAMP,SIEKER,JENSEN	2/83	
1HR3	HEMERYTHRIN(AZIDO,MET,SIPHONOSOMA)	SMITH,HENDRICKSON,ADDISON	5/83	
1HDS	HEMOGLOBIN (DEER, SICKLE CELL)	E.AMMA,R.GIRLING	10/79	
2MHB	HEMOGLOBIN (HORSE, AQUO MET)	R.LADNER,HEIDNER,PERUTZ	2/77	
2DHB	HEMOGLOBIN (HORSE, DEOXY)	M.PERUTZ,G.FERMI	11/73	
1HHB	HEMOGLOBIN (HUMAN, DEOXY)	M.PERUTZ,G.FERMI	4/75	
1HCO	HEMOGLOBIN(HUMAN,CARBONMONOXY)	J.BALDWIN	8/79	
2HCO	HEMOGLOBIN(HUMAN,CARBONMONOXY,NRG REFND)	J.BALDWIN	8/79	
1HHO	HEMOGLOBIN (HUMAN, OXY)	B.SHAANAN	6/83	
1FDH	HEMOGLOBIN (HUMAN, FETAL, DEOXY)	J.FRIER	8/76	
1HBS	HEMOGLOBIN S (HUMAN,SICKLE CELL)	E.PADLAN,W.LOVE	6/82	
1LHB	HEMOGLOBIN (LAMPREY)	HENDRICKSON,LOVE,KARLE	3/73	
2YHX	HEXOKINASE (YEAST) FORM B!!!	STEITZ,ANDERSON,STENKAMP	3/78	
1HKG	HEXOKINASE A - GLUCOSE COMPLEX (YEAST)	W.BENNETT JR.,T.STEITZ	12/80	
1HIP	HIGH POTENTIAL IRON PROTEIN	J.KRAUT	4/75	
1HYA	HYALURONIC ACID (NA SALT, 3-FOLD HELIX)	S.ARNOTT	11/77	
2HYA	HYALURONIC ACID (NA SALT, 4-FOLD HELIX)	S.ARNOTT	5/78	
3HYA	HYALURONIC ACID (NA SALT, 2-FOLD HELIX)	S.ARNOTT	5/78	
4HYA	HYALURONIC ACID (CA SALT, 3-FOLD HELIX)	S.ARNOTT	5/78	
1FB4	IMMUNOGLOBULIN FAB (LAMBDA) KOL	M.MARQUART,R.HUBER	5/83	
3FAB	IMMUNOGLOBULIN FAB.PRIME. NEW	R.POLJAK	9/81	
1MCG	IMMUNOGLOBULIN B-J INTACT MCG	SCHIFFER,EDMUNDSON ET AL.	5/78	A
1REI	IMMUNOGLOBULIN B-J FRAGMENT(V-DIMER)REI	O.EPP,R.HUBER	3/76	
2RHE	IMMUNOGLOBULIN B-J FRAGMENT(V-MNMER)RHE	FUREY,WANG,YOO,SAX	6/83	R
1FC1	IMMUNOGLOBULIN FC (HUMAN)	J.DEISENHOFER	5/81	
1FC2	IMMUNOGLOBULIN FC-FRAGMENT B COMPLEX	J.DEISENHOFER	5/81	
1IG2	IMMUNOGLOBULIN G1 (LAMBDA) KOL	M.MARQUART,R.HUBER	5/83	
1INS	INSULIN(PORCINE,2-ZINC)	G.DODSON,D.HODGKIN	7/80	
2INS	INSULIN(BOVINE,2-ZINC) DES-PHE B1	C.REYNOLDS,G.DODSON	5/82	
1PKA	*KALLIKREIN A(PORCINE)	W.BODE,Z.CHEN	11/83	N
1KAI	*KALLIKREIN A(PORCINE)/PTI(BOVINE)	W.BODE,Z.CHEN	11/83	N
1KGA	KDPG ALDOLASE	A.TULINSKY	8/78	A
1KES	KERATAN SULFATE	S.ARNOTT	5/78	
4LDH	LACTATE DEHYDROGENASE (DOGFISH)	W.EVENTOFF,M.ROSSMANN	4/77	
3LDH	LACTATE DEHYDROGENASE/NAD/PYRUVATE(DOGF)	M.ROSSMANN	11/74	
5LDH	LACTATE DEHYDROGENASE/S-LAC/NAD (PIG)	U.GRAU,M.ROSSMANN	10/80	
1LDX	LACTATE DEHYDROGENASE (MOUSE TESTES)	W.MUSICK,M.ROSSMANN	9/78	
1LH1	LEGHEMOGLOBIN(ACETATE MET)	VAINSHTEIN,HARUTYUNYAN	4/82	R
2LH1	LEGHEMOGLOBIN(ACETATE MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
1LH2	LEGHEMOGLOBIN(AQUO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
2LH2	LEGHEMOGLOBIN(AQUO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
1LH3	LEGHEMOGLOBIN(CYANO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
2LH3	LEGHEMOGLOBIN(CYANO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
1LH4	LEGHEMOGLOBIN(DEOXY)	VAINSHTEIN,HARUTYUNYAN	4/82	
2LH4	LEGHEMOGLOBIN(DEOXY)	VAINSHTEIN,HARUTYUNYAN	4/82	
1LH5	LEGHEMOGLOBIN(FLUORO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
2LH5	LEGHEMOGLOBIN(FLUORO MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
1LH6	LEGHEMOGLOBIN(NICOTINATE MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
2LH6	LEGHEMOGLOBIN(NICOTINATE MET)	VAINSHTEIN,HARUTYUNYAN	4/82	
1LH7	LEGHEMOGLOBIN(FERRO)/NITROSOBENZENE	VAINSHTEIN,HARUTYUNYAN	4/82	
2LH7	LEGHEMOGLOBIN(FERRO)/NITROSOBENZENE	VAINSHTEIN,HARUTYUNYAN	4/82	
1LZM	LYSOZYME (BACTERIOPHAGE T4)	B.MATTHEWS	3/77	
1LYZ	LYSOZYME (HEN EGG-WHITE, SET W2)	R.DIAMOND,D.PHILLIPS	2/75	
2LYZ	LYSOZYME (HEN EGG-WHITE, SET RS5D)	R.DIAMOND,D.PHILLIPS	2/75	
3LYZ	LYSOZYME (HEN EGG-WHITE, SET RS6A)	R.DIAMOND,D.PHILLIPS	2/75	
4LYZ	LYSOZYME (HEN EGG-WHITE, SET RS9A)	R.DIAMOND,D.PHILLIPS	2/75	
5LYZ	LYSOZYME (HEN EGG-WHITE, SET RS12A)	R.DIAMOND,D.PHILLIPS	2/75	
6LYZ	LYSOZYME (HEN EGG-WHITE, SET RS16)	R.DIAMOND,D.PHILLIPS	2/75	
7LYZ	LYSOZYME (HEN EGG-WHITE, TRICLINIC)	A.YONATH	5/77	
8LYZ	LYSOZYME (HEN EGG-WHITE, INACTIVATED)	S.OATLEY	9/77	
9LYZ	LYSOZYME(HEN,NAM-NAG-NAM SUBSTRATE ONLY)	J.KELLY,M.JAMES	12/79	
1LZH	LYSOZYME (HEN EGG-WHITE,MONOCLINIC)	ARTYMIUK,BLAKE,RICE,WILSON	6/81	A
2LZH	LYSOZYME (HEN EGG-WHITE,ORTHORHOMBIC)	ARTYMIUK,BLAKE,RICE,WILSON	6/81	A
1LYM	LYSOZYME(HEN EGG-WHITE,MONOCLINIC)	HOGLE,RAO,SUNDARALINGAM	7/82	
1LZ2	LYSOZYME (TURKEY EGG-WHITE)	R.BOTT,R.SARMA	9/81	A
2MDH	MALATE DEHYDROGENASE	J.BIRKTOFT,L.BANASZAK	3/83	
1MLT	MELITTIN	TERWILLIGER,EISENBERG	8/81	
1MBS	MYOGLOBIN (SEAL, MET)	H.SCOULOUDI	3/79	
1MBN	MYOGLOBIN (SPERM WHALE, MET)	H.WATSON	4/73	
2MBN	MYOGLOBIN (SPERM WHALE, MET)	T.TAKANO	9/76	
3MBN	MYOGLOBIN (SPERM WHALE, DEOXY)	T.TAKANO	9/76	
1MBD	MYOGLOBIN (SPERM WHALE, DEOXY)	S.PHILLIPS	8/81	
1MBO	MYOGLOBIN (SPERM WHALE, OXY)	S.PHILLIPS	8/81	
1MB5	MYOGLOBIN(SPERM WHALE,CO,NEUTRON)	HANSON,NORVELL,SCHOENBORN	11/82	
1MHR	MYOHEMERYTHRIN	W.HENDRICKSON	6/76	A
1NXB	NEUROTOXIN B (LATICAUDA SEMIFASCIATA)	D.TSERNOGLOU,G.PETSKO	8/80	
1SN3	SCORPION NEUROTOXIN(VARIANT 3)	C.BUGG ET AL.	12/82	
1OVO	OVOMUCOID THIRD DOMAIN(JAPANESE QUAIL)	E.PAPAMOKOS,R.HUBER	1/82	
1PPT	AVIAN PANCREATIC POLYPEPTIDE	T.BLUNDELL	1/81	
8PAP	PAPAIN (NATIVE)	J.DRENTH	11/76	
1PAD	PAPAIN (ACE-ALA-ALA-PHE-ALA, CYS-25)	J.DRENTH	11/76	
2PAD	PAPAIN (CYS DERIV OF CYS-25)	J.DRENTH	11/76	
3PAD	PAPAIN (OXIDIZED CYS-25)	J.DRENTH	11/76	
4PAD	PAPAIN (TOS-LYS, CYS-25)	J.DRENTH	11/76	
5PAD	PAPAIN (BZOXY-GLY-PHE-GLY, CYS-25)	J.DRENTH	11/76	
6PAD	PAPAIN (BZOXY-PHE-ALA, CYS-25)	J.DRENTH	11/76	
1PEP	PEPSIN (PORCINE)	N.ANDREEVA ET AL.	7/78	A
1PFC	PFC FRAGMENT OF AN IGG	L.M.AMZEL	10/81	
3PGK	PHOSPHOGLYCERATE KINASE (YEAST)	H.WATSON	7/82	
2PGK	PHOSPHOGLYCERATE KINASE (HORSE)	P.EVANS,C.BLAKE	9/76	B
3PGM	PHOSPHOGLYCERATE MUTASE	H.WATSON	4/82	R
1BP2	PHOSPHOLIPASE A2 (BOVINE)	B.DIJKSTRA,J.DRENTH	4/81	
2BP2	PROPHOSPHOLIPASE A2 (BOVINE)	B.DIJKSTRA,W.HOL,J.DRENTH	6/81	
3BP2	PHOSPHOLIPASE A2 (BOVINE) TRANSAMINATED	B.DIJKSTRA,J.DRENTH	6/83	
1P2P	PHOSPHOLIPASE A2 (PORCINE)	B.DIJKSTRA ET AL.	6/83	
2PCY	*PLASTOCYANIN(POPLAR)	GARRETT,GUSS,FREEMAN	11/83	RN
2PAB	PREALBUMIN (HUMAN, PLASMA)	S.OATLEY,C.BLAKE	9/77	
2SGA	PROTEINASE A(STREPTOMYCES GRISEUS)	M.JAMES,A.SIELECKI	1/83	R
3SGB	PROTEINASE B(STREP. GRISEUS)/OMTKY3	A.SIELECKI ET AL.	1/83	
1RP2	*PROTEINASE I(RAT MAST CELL)	S.REMINGTON,B.MATTHEWS	1/84	P
1PYP	INORGANIC PYROPHOSPHATASE	E.HARUTYUNYAN ET AL.	2/83	
1PYK	PYRUVATE KINASE (CAT)	H.MUIRHEAD	1/80	A
1RHD	RHODANESE	W.HOL	12/77	
4RSA	RIBONUCLEASE A (XRAY+NEUTRON)	A.WLODAWER	6/82	R
1RN3	RIBONUCLEASE A	BORKAKOTI,MOSS,PALMER	10/81	
1RNS	RIBONUCLEASE S	H.WYCKOFF,F.RICHARDS	4/73	
2RXN	RUBREDOXIN(CLOSTRIDIUM PASTEURIANUM)	L.JENSEN	1/75	
3RXN	RUBREDOXIN(DESULFOVIBRIO VULGARIS)	E.ADMAN,L.SIEKER,L.JENSEN	8/80	
2SNS	STAPHYLOCOCCAL NUCLEASE	M.LEGG,F.A.COTTON,E.HAZEN	5/82	R
2SSI	SUBTILISIN INHIBITOR (STREPTOMYCES)	Y.MITSUI ET AL.	4/80	
1SBT	SUBTILISIN BPN.PRIME.	J.KRAUT	8/72	
2SBT	SUBTILISIN NOVO	J.DRENTH	9/76	
2SOD	SUPEROXIDE DISMUTASE	J.RICHARDSON,D.RICHARDSON	3/80	
3TLN	THERMOLYSIN(NATIVE)	B.MATTHEWS,M.HOLMES	2/82	R
4TLN	THERMOLYSIN(L-LEU-NHOH)	B.MATTHEWS,M.HOLMES	2/82	
5TLN	THERMOLYSIN(HONH-BZMALONYL-A-G-NTROANLD)	B.MATTHEWS,M.HOLMES	2/82	
7TLN	THERMOLYSIN(CH2CO(N-OH)LEUOCH3)	B.MATTHEWS,M.HOLMES	1/83	R
1SRX	THIOREDOXIN (E. COLI, OXIDIZED)	B.-O.SODERBERG	5/76	A
4TNA	TRANSFER RNA (YEAST, PHE)	A.JACK,J.LADNER,A.KLUG	4/78	
6TNA	TRANSFER RNA (YEAST, PHE)	S.-H.KIM ET AL.	11/78	
8TNA	TRANSFER RNA (YEAST, PHE)	M.SUNDARALINGAM	2/79	
1TIM	TRIOSE PHOSPHATE ISOMERASE	I.WILSON,D.PHILLIPS	9/76	
2PTN	TRYPSIN(ORTHORHOMBIC,2.4M (NH4)2SO4)	J.WALTER,R.HUBER,W.BODE	10/81	
1TPO	TRYPSIN(ORTHORHOMBIC)	W.BODE,J.WALTER,R.HUBER	9/82	
3PTN	TRYPSIN(TRIGONAL,2.4M (NH4)2SO4)	J.WALTER,R.HUBER,W.BODE	10/81	
3PTB	TRYPSIN(BENZAMIDINE INHIBITED)	W.BODE,P.SCHWAGER,J.WALTER	9/82	R
1TPP	TRYPSIN/P-AMIDINO-PHENYL-PYRUVATE	J.WALTER,W.BODE,R.HUBER	9/82	
3PTP	TRYPSIN (DIP INHIBITED)	J.CHAMBERS,R.STROUD	12/77	
4PTI	TRYPSIN INHIBITOR (BOVINE, PANCREAS)	R.HUBER,J.DEISENHOFER	9/82	R
2PTC	TRYPSIN/TRYPSIN INHIBITOR COMPLEX	R.HUBER,J.DEISENHOFER	9/82	R
1TPA	TRYPSIN(ANHYDRO)/TRYPSIN INHIBITOR	HUBER,BODE,DEISENHOFER	9/82	
1TGN	TRYPSINOGEN	A.KOSSIAKOFF,R.STROUD	9/79	
2TGA	TRYPSINOGEN(2.4M MGSO4)	J.WALTER,R.HUBER,W.BODE	10/81	
1TGC	TRYPSINOGEN(.5 CH3OH, .5 HOH)	J.WALTER,R.HUBER,W.BODE	10/81	
1TGT	TRYPSINOGEN(173 DEG K,.7 CH3OH,.3 HOH)	J.WALTER,R.HUBER,W.BODE	10/81	
2TGT	TRYPSINOGEN(103 DEG K,.7 CH3OH,.3 HOH)	J.WALTER,R.HUBER,W.BODE	10/81	
1TGB	TRYPSINOGEN (WITH CA, FROM PEG)	BODE,FEHLHAMMER,HUBER	3/79	
2TGP	TRYPSINOGEN/TRYPSIN INHIBITOR	R.HUBER ET AL.	9/82	R
3TPI	TRYPSINOGEN/TRYPSIN INHIBITOR/ILE-VAL	R.HUBER ET AL.	9/82	R
2TPI	TRYPSINOGEN/PTI/ILE-VAL (MERCURATED)	J.WALTER,R.HUBER,W.BODE	10/81	
1TGS	TRYPSINOGEN/PSTI	R.HUBER ET AL.	9/82	
1TS1	TYROSYL TRANSFER RNA SYNTHETASE	BHAT,BLOW,BRICK,NYBORG	7/82	A
2SBV	VIRUS COAT PROTEIN(SOUTHERN BEAN MOSAIC)	M.ROSSMANN	5/82	R

MODEL STRUCTURES

2ZNA	DNA(Z-I,CGCGCG,SYNTHETIC,MODEL)	A.RICH	2/81	
3ZNA	DNA(Z-II,CGCGCG,SYNTHETIC,MODEL)	A.RICH	2/81	
1DNN	DNA(ATCGGCTAAG...,MODEL)	J.SUSSMAN,E.TRIFONOV	11/82	
1GF1	INSULIN-LIKE GROWTH FACTOR I (MODEL)	BLUNDELL,BEDARKAR,HUMBEL	12/82	
1GF2	INSULIN-LIKE GROWTH FACTOR II (MODEL)	BLUNDELL,BEDARKAR,HUMBEL	12/82	
1MLP	MUREIN LIPOPROTEIN (MODEL)	A.MCLACHLAN	8/78	
1RLX	RELAXIN(MODEL,CONFORMATION A,UNREFINED)	A.EVANS,A.NORTH	3/78	
2RLX	RELAXIN(MODEL,CONFORMATION B,UNREFINED)	A.EVANS,A.NORTH	3/78	
3RLX	RELAXIN(MODEL,CONFORMATION A,REFINED)	A.EVANS,A.NORTH	3/78	
4RLX	RELAXIN(MODEL,CONFORMATION B,REFINED)	A.EVANS,A.NORTH	3/78	
1TNC	TROPONIN (CA-BINDING COMPONENT,MODEL)	R.KRETSINGER,C.BARRY	6/80	A

* NEW OR REPLACEMENT ENTRY SINCE OCT-83 NEWSLETTER

STATUS CODES

BLANK	STANDARD ENTRY AVAILABLE FOR DISTRIBUTION
A	ALPHA CARBON ATOMS ONLY
B	BACKBONE ONLY
N	NEW ENTRY AWAITING APPROVAL BY DEPOSITOR
P	IN PREPARATION
R	RECENT (1982-1984) REPLACEMENT FOR AN OUT-OF-DATE PARAMETER SET

TABLE 7. PROTEIN DATA BANK, BIBLIOGRAPHIC ENTRIES

18-JAN-84

0EAP	ACID PROTEINASE (ENDOTHIA PARASITICA)
0ADC	ADH-NADH-DIMETHYLSULFOXIDE COMPLEX
0AFI	APOFERRITIN (HORSE)
0MAA	MITOCHONDRIAL ASPARTATE AMINOTRANSFERASE
0AZA	AZURIN(ALCALIGENES DENITRIFICANS)
0RNB	BARNASE (BACILLUS AMYLOLIQUEFACIENS)
0CD1	CALOTROPIN DI (CALOTROPIS GIGANTEA)
0PTE	D-ALANYL-CARBOXYPEPTIDASE-TRANSPEPTIDASE
0ZGP	D-ALANYL-D-ALANINE PEPTIDASE (ZN2+ G PEPTIDASE)
0CTS	CITRATE SYNTHASE (PIG)
0CN2	CONCANAVALIN A (DEMETALLIZED)
0CRO	CRO REPRESSOR
0GCR	GAMMA-CRYSTALLIN II (CALF)
0CYP	CYTOCHROME C PEROXIDASE (SACCHAROMYCES CEREVISIAE)
0CY3	CYTOCHROME C3 (DESULFOVIBRIO DESULFURICANS NORWAY)
05C1	CYTOCHROME C555 (CHLOROBIUM THIOSULFATOPHILUM)
0C3A	DES-ARG77-C3A ANAPHYLATOXIN
0CDF	DIHYDROFOLATE REDUCTASE (CHICKEN LIVER)
0ANB	DNA(GGTATACC)
0ANB	DNA(GG-UA+UACC)
0ESZ	ELASTASE COMPLEX (PIG)
0ETU	ELONGATION FACTOR TU COMPLEX (E. COLI)
0EBX	ERABUTOXIN B
0FX1	FLAVODOXIN (DESULFOVIBRIO VULGARIS)
0FX2	FLAVODOXIN (REDUCED, CLOSTRIDIUM MP)
0GBP	D-GALACTOSE-BINDING PROTEIN(ESCHERICHIA COLI)
0GAP	CATABOLITE GENE ACTIVATOR PROTEIN
0GP1	GLUTATHIONE PEROXIDASE (BOVINE)
0GD1	D-GLYCERALDEHYDE 3-PHOSPHATE DEHYDROGENASE (BACILLUS STEAROTHERMOPHILUS)
0HMG	HEMAGGLUTININ
0DCH	HEMOGLOBIN (COBALT,DEOXY)
0HBG	HEMOGLOBIN (GLYCERA DIBRANCHIATA)
0PHH	P-HYDROXYBENZOATE HYDROXYLASE (PSEUDOMONAS FLUORESCENS)
0AUI	IMMUNOGLOBULIN, BENCE-JONES FRAGMENT (KAPPA) AU
0ROY	IMMUNOGLOBULIN, BENCE-JONES FRAGMENT (V-MONOMER,KAPPA) ROY
0MCP	IMMUNOGLOBULIN FAB (KAPPA) MCP603
0IG1	IMMUNOGLOBULIN G1 (KAPPA) DOB
0IN1	INSULIN (PORCINE)
0IN2	INSULIN (PORCINE)
0PKA	KALLIKREIN A(PORCINE)
0KAI	KALLIKREIN A/BOVINE PANCREATIC INHIBITOR
0LRP	N-TERMINAL DOMAIN OF LAMBDA REPRESSOR
0GLM	*LYSOZYME(EMBDEN GOOSE)
0LZ1	LYSOZYME (HUMAN)
0LZ5	LYSOZYME (HEN EGG-WHITE, NEUTRON STUDY)
0LZT	*LYSOZYME(HEN EGG-WHITE,HIGH-TEMPERATURE)
0LZ6	LYSOZYME (STREPTOMYCES ERYTHRAEUS)
0TEL	*LYSOZYME(TORTOISE EGG-WHITE)
0CTF	L7/L12 (E. COLI, C-TERMINUS)
0MBA	MYOGLOBIN (APLYSIA LIMACINA)
0MBM	MYOGLOBIN (SPERM WHALE, MET, TEMPERATURE STUDIES)
0MB3	MYOGLOBIN (SPERM WHALE, MET, NEUTRON STUDY)
0PFK	PHOSPHOFRUCTOKINASE (BACILLUS STEAROTHERMOPHILUS)
0PP2	PHOSPHOLIPASE A2 (RATTLESNAKE)
0PPA	PHOSPHORYLASE A (RABBIT)
0PB1	PHOSPHORYLASE B (RABBIT)
0RX5	RELAXIN (PORCINE, MODEL)
0RSA	RIBONUCLEASE A (BOVINE)
0RST	RIBONUCLEASE ST (STREPTOMYCES ERYTHREUS)
0RNT	RIBONUCLEASE T1-2(PRIME)-GUANYLIC ACID (ASPERGILLUS ORYZAE)
0SDE	*FE-SUPEROXIDE DISMUTASE(ESCHERICHIA COLI)
0SDP	*FE-SUPEROXIDE DISMUTASE(PSEUDOMONAS OVALIS)
0TT4	THIOREDOXIN REDUCTASE (BACTERIOPHAGE T4)
0FMT	INITIATOR TRANSFER RNA (E. COLI, F/MET)
0TA1	TRANSFER RNA (YEAST, ASP, A FORM)
0TA2	TRANSFER RNA (YEAST, ASP, B FORM)
0TR1	TRANSFER RNA (YEAST, PHE)
0MTS	METHIONYL TRANSFER RNA SYNTHETASE
0YPI	TRIOSE PHOSPHATE ISOMERASE (SACCHAROMYCES CEREVISIAE)
0GN5	GENE 5 DNA-UNWINDING PROTEIN (E. COLI)
0UTG	UTEROGLOBIN (RABBIT)
0STV	VIRUS (SATELLITE TOBACCO NECROSIS)
0TMV	VIRUS PROTEIN DISK (TOBACCO MOSAIC)
0TBV	VIRUS (TOMATO BUSHY STUNT)

* NEW OR REPLACEMENT ENTRY SINCE OCT-83 NEWSLETTER

TABLE 8. SUBSTANTIVE CORRECTIONS TO COORDINATE ENTRIES AND PROGRAMS

18-JAN-84

THE CORRECTIONS IN THIS TABLE ARE GIVEN IN THE FORM OF 'UPDATE' MODIFICATIONS, AND CONSIST OF 'UPDATE' DIRECTIVES PLUS NEW DATA RECORDS THAT ARE TO BE INSERTED OR THAT REPLACE ERRONEOUS RECORDS IN CERTAIN DATA BANK ENTRIES. 'UPDATE' IS THE CDC LIBRARY-FILE MANAGEMENT SYSTEM UNDER WHICH THE MASTER PROTEIN DATA BANK FILE IS MAINTAINED. FOR A DESCRIPTION OF 'UPDATE' USERS ARE REFERRED TO THE 'UPDATE REFERENCE MANUAL' PUBLICATION NUMBER 60342500, CONTROL DATA CORPORATION, ARDEN HILLS, MN, 1974. BRIEFLY, EACH DATA ENTRY IS GIVEN AN IDENTIFICATION CODE WHICH ALSO SERVES AS THE UPDATE 'DECK' NAME. EACH RECORD IN THE FILE IS IDENTIFIED WITH TWO TAGS. THE FIRST TAG IS SIMPLY THE 'DECK' NAME (OR AN 'IDENT' NAME -SEE BELOW) AND THE SECOND IS A SEQUENCE NUMBER WITHIN THE 'DECK' (OR 'IDENT'). THESE TAGS ARE INCLUDED IN CHARACTERS 73-80 OF THE RECORDS IN EACH DATA ENTRY AS DISTRIBUTED.

CORRECTIONS MAY BE MADE USING 'UPDATE' DIRECTIVES TO 'INSERT' NEW RECORDS OR 'DELETE' OLD ONES. EACH CORRECTION SET BEGINS WITH A '*IDENT' DIRECTIVE. THIS IDENTIFIES THE CORRECTION SET, E.G. AS '1MBNA' FOR THE (CHRONOLOGICALLY) FIRST CORRECTION TO DECK '1MBN' FOR SPERM-WHALE MYOGLOBIN, '1MBNB' FOR THE SECOND CORRECTION, ETC. '*DELETE' DIRECTIVES SPECIFY A RECORD OR INCLUSIVE RUN OF RECORDS TO BE DELETED, IF DATA RECORDS OCCUR IMMEDIATELY FOLLOWING '*DELETE', THESE ARE TO BE INSERTED IN PLACE OF THE RECORDS DELETED. '*INSERT' DIRECTIVES ARE USED TO SPECIFY A PARTICULAR RECORD AFTER WHICH INFORMATION IS TO BE INSERTED. THE RECORDS TO BE INSERTED FOLLOW IMMEDIATELY AFTER '*INSERT' IN THE CORRECTION SET. WITHIN EACH CORRECTION NEW RECORDS PLACED IN THE FILE ARE GIVEN THE 'IDENT' NAME AND NUMBERED SEQUENTIALLY.

```
*IDENT,1IG2B
*INSERT,1IG2A.4
REMARK   9
REMARK   9 CORRECTION. CORRECT (3,3) ELEMENT OF SCALE MATRIX.
REMARK   9  27-OCT-83.
*INSERT,1IG2.6
REVDAT   3   27-OCT-83 1IG2B   3       SCALE
*DELETE,1IG2.153
SCALE3      0.000000  0.000000   .012180        0.00000
*DELETE,1IG2A.5
MASTER       79    8    0    0    0    0    0    6 3384    1   12   52

*IDENT,5CPAC
*INSERT,5CPAB.8
REMARK   7
REMARK   7 THE COORDINATES FOR THE SOLVENT MOLECULES GIVEN BELOW
REMARK   7 INCLUDE SOME ATOMS WHICH ARE RELATED TO OTHERS IN THE LIST
REMARK   7 BY THE CRYSTAL SYMMETRY.  THIS EXPANDED LIST CONTAIN ALL
REMARK   7 THE SOLVENT MOLECULES WHICH COULD BE LOCATED IN THE FOURIER
REMARK   7 MAPS AND WHICH INTERACT WITH THE PROTEIN MOLECULE WHOSE
REMARK   7 COORDINATES ARE GIVEN IN THIS ENTRY.  SOLVENT ATOMS WHICH
REMARK   7 HAVE THE SAME SEQUENCE NUMBER ARE RELATED BY SYMMETRY
REMARK   7 AND DIFFERENT INSERTION CODES HAVE BEEN ASSIGNED TO
REMARK   7 DISTINGUISH THEM.  EACH *FTNOTE* RECORD GIVES THE
REMARK   7 SYMMETRY OPERATION RELATING A SOLVENT ATOM WITH INSERTION
REMARK   7 CODE *A* TO THE SOLVENT ATOM WITH THE *FTNOTE* AND THE
REMARK   7 SAME SEQUENCE NUMBER.
REMARK   8
REMARK   8 CORRECTION. REVISE COORDINATES OF WATER MOLECULES AS PER
REMARK   8  DEPOSITOR,S INSTRUCTIONS.  RESTORE SEQUENCE NUMBER FOR ZN.
REMARK   8  ADD REMARK 5.  01-NOV-83.
*INSERT,5CPA.6
REVDAT   4   01-NOV-83 5CPAC   3       REMARK FTNOTE FORMUL HETATM
*INSERT,5CPA.96
FTNOTE   2
FTNOTE   2 SEE REMARK 5. COORDINATES FOR THIS ATOM WERE SYMMETRY
FTNOTE   2 GENERATED USING THE OPERATION,
FTNOTE   2       (XB,YB,ZB) = (-XA,YA+30.135,-ZA)
FTNOTE   2 (XB,YB,ZB) ARE THE COORDINATES OF ATOMS WITH INSERT CODE
FTNOTE   2 *B*.  (XA,YA,ZA) ARE THE COORDINATES OF ATOMS WITH INSERT
FTNOTE   2 CODE *A*.
FTNOTE   3
FTNOTE   3 SEE REMARK 5. COORDINATES FOR THIS ATOM WERE SYMMETRY
FTNOTE   3 GENERATED USING THE OPERATION,
FTNOTE   3       (XC,YC,ZC) = (-XA+5.979,YA+30.135,-ZA-46.870)
FTNOTE   3 (XC,YC,ZC) ARE THE COORDINATES OF ATOMS WITH INSERT CODE
FTNOTE   3 *C*.  (XA,YA,ZA) ARE THE COORDINATES OF ATOMS WITH INSERT
FTNOTE   3 CODE *A*.
.
.
.
FTNOTE  12
FTNOTE  12 SEE REMARK 5. COORDINATES FOR THIS ATOM WERE SYMMETRY
FTNOTE  12 GENERATED USING THE OPERATION,
FTNOTE  12       (XL,YL,ZL) = (XA+5.979,YA,ZA-46.870)
FTNOTE  12 (XL,YL,ZL) ARE THE COORDINATES OF ATOMS WITH INSERT CODE
FTNOTE  12 *L*.  (XA,YA,ZA) ARE THE COORDINATES OF ATOMS WITH INSERT
FTNOTE  12 CODE *A*.
*DELETE,5CPA.99
FORMUL   3  HOH   *192(H2 O1)
*DELETE,5CPA.2594,2873
HETATM 2439 ZN    ZN   308      -3.304  26.331  -5.535  1.00  5.23
HETATM 2440  O   HOH   309A      1.940  30.255 -16.826  1.00 31.41
HETATM 2441  O   HOH   310A      1.858   3.566 -13.347  1.00 31.11
HETATM 2442  O   HOH   310C      4.122  33.701 -33.523  1.00 31.11    3
HETATM 2443  O   HOH   311A     -0.523  10.773   6.218  1.00 28.79
HETATM 2444  O   HOH   311B      0.523  40.908  -6.218  1.00 28.79    2
HETATM 2445  O   HOH   312A      3.364  26.638 -23.982  1.00 32.09
HETATM 2446  O   HOH   313A      1.914  29.077 -11.973  1.00 15.50
HETATM 2447  O   HOH   314A      0.455  30.804 -14.767  1.00 26.19
HETATM 2448  O   HOH   315A      3.770   8.910 -17.949  1.00 25.56
HETATM 2449  O   HOH   315C      2.210  39.045 -28.922  1.00 25.56    3
HETATM 2450  O   HOH   316A      2.394  21.473  -5.857  1.00  9.43
HETATM 2451  O   HOH   317A      4.457  13.917 -23.326  1.00 24.25
HETATM 2452  O   HOH   317C      1.523  44.052 -23.544  1.00 24.25    3
HETATM 2453  O   HOH   318A      4.105  20.727 -19.441  1.00 19.32
HETATM 2454  O   HOH   319A      2.617   1.885  -3.953  1.00 31.17
HETATM 2455  O   HOH   319B     -2.617  32.020   3.953  1.00 31.17    2
HETATM 2456  O   HOH   321A      2.627  13.790  -4.834  1.00  3.00
HETATM 2457  O   HOH   322A      0.560  20.655  10.858  1.00 27.95
HETATM 2458  O   HOH   323A      4.426   8.977 -15.442  1.00 21.73
HETATM 2459  O   HOH   323C      1.553  39.112 -31.428  1.00 21.73    3
HETATM 2460  O   HOH   324A      1.098  12.383  12.691  1.00 29.93
HETATM 2461  O   HOH   324B     -1.098  42.518 -12.691  1.00 29.93    2
HETATM 2462  O   HOH   325A      1.747  24.438   9.458  1.00 32.84
HETATM 2463  O   HOH   325D     -1.747  -5.697  -9.458  1.00 32.84    4
HETATM 2464  O   HOH   326A      2.844   9.673   5.739  1.00 28.05
HETATM 2465  O   HOH   326B     -2.844  39.808  -5.739  1.00 28.05    2
HETATM 2466  O   HOH   327A      6.643  28.464 -23.573  1.00 23.62
HETATM 2467  O   HOH   328A      4.118  12.104   4.426  1.00 19.28
.
.
.
HETATM 2746  O   HOH   582B      3.719  34.882 -10.076  1.00 24.11    2
HETATM 2747  O   HOH   583A     -0.930  13.965 -10.604  1.00 11.57
HETATM 2748  O   HOH   584A     -1.652   5.220  -1.479  1.00 28.71
HETATM 2749  O   HOH   584B      1.652  35.355   1.479  1.00 28.71    2
HETATM 2750  O   HOH   585A      0.601   9.285 -17.763  1.00 11.26
HETATM 2751  O   HOH   585C      5.505  39.420 -30.099  1.00 11.26    3
HETATM 2752  O   HOH   586A     -2.793  17.748   9.779  1.00 25.16
HETATM 2753  O   HOH   586B      2.920  47.883 -10.771  1.00 25.16    2
HETATM 2754  O   HOH   587A     -1.353  27.720  -2.085  1.00 23.59
*DELETE,5CPAB.9
MASTER       83   79    1    8    8   32    0    6 2753    1    6   24
```

ORDER FORM (Please include a self-addressed label)

1. Name _____ Date _____

   Address _____ Telephone _____

   _____

   _____

2. Documentation desired (no charge).
   - ( ) Latest Newsletter
   - ( ) Introduction to The Protein Data Bank (January 1984)
   - ( ) Sources of Visual Aids for Macromolecular Structure (January 1984)
   - ( ) Atomic Coordinate Entry Format Description for DATAPRTP and DATAPRFI (October 1983)
   - ( ) Current DATAPRTP Directory
   - ( ) Non-Standard Entries (Structure Factors) Format Description for NONST1TP and NONST1FI (April 1983)
   - ( ) Non-Standard Entries (Structure Factors) Format Description for NONST2TP and NONST2FI (January 1984)
   - ( ) Data Deposition form

3. Please send the following magnetic tape items (from Table 1). Each 1-tape item costs $184 (£123 from Cambridge); each 2-tape item costs $225 (£150). Domestic postage is included.

Item	Number of Tapes	Cost

Total _____

Special Instructions (to be completed for Brookhaven requests only). Please check the appropriate box.

( ) We are especially interested in the pending entries with the following Ident Codes: _____ _____ _____. Please delay shipment until the date _____ if any of these entries are expected to be available by that date.

( ) Normal order-will be processed as soon as possible.

4. Tape format desired (all tapes are unlabelled)

		Availability US	Availability UK
( )	9 track, 6250 cpi, EBCDIC	yes	yes
( )	9 track, 1600 cpi, EBCDIC	yes	yes
( )	9 track, 800 cpi, EBCDIC	yes	yes
( )	9 track, 6250 cpi, ASCII	yes	yes
( )	9 track, 1600 cpi, ASCII	yes	yes
( )	9 track, 800 cpi, ASCII	yes	yes
( )	7 track, 800 cpi, BCD	yes	please inquire

All tapes are distributed in blocked form with fixed record length and block size. Brookhaven normally uses a block size close to, but less than, 5120 characters. Please indicate here any difficulties this might cause.

5. Please send the following microfiche items (from Table 2). Each microfiche item costs $122 (£81), postage included. Correction fiche are free.

Item	Cost

Total _____

6. Please send the following printed listings. Each listing costs $71, (£47), postage included.

Ident Code (From Table 3)	Cost

Total _____

7. Foreign air mail postage from Brookhaven to destinations outside the U. S. and Canada or from Cambridge to destinations outside the United Kingdom. A postage surcharge of $15 (£10) is required per magnetic tape (not per item).

Number of tapes x $15.00 (£10) = _____

8. Total charges

Magnetic tape charges (3 above) _____

Microfiche charges (5 above) _____

Printed listing charges (6 above) _____

Foreign air mail postage charges (7 above) _____

Total _____

Method of Payment:

Cambridge: Cambridge prefers that no check is sent with order. Inclusion of purchase order is desirable but not mandatory.

Brookhaven: Brookhaven requires that either a check or written purchase order payable to Brookhaven National Laboratory be received before service is provided.

( ) check
( ) purchase order number _____

is ( ) enclosed
( ) sent separately

Please return to

Ms. F. C. Bernstein
Chemistry Department
Brookhaven National Laboratory
Upton, New York 11973 USA

or

Dr. S. Bellard
University Chemical Laboratory
Lensfield Road
Cambridge CB2 1EW, England

It is advisable to send a photocopy of this order form directly to the center filling the order; experience shows that purchasing departments often do not forward this form with the order.