Full wwPDB X-ray Structure Validation Report ⓘ

Oct 17, 2023 – 05:21 PM EDT

PDB ID	:	2DYS
Title	:	Bovine heart cytochrome C oxidase modified by DCCD
Authors	:	Shinzawa-Itoh, K.; Aoyama, H.; Muramoto, K.; Kurauchi, T.; Mizushima, T.; Yamashita, E.; Tsukihara, T.; Yoshikawa, S.
Deposited on	:	2006-09-16
Resolution	:	2.20 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
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.

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

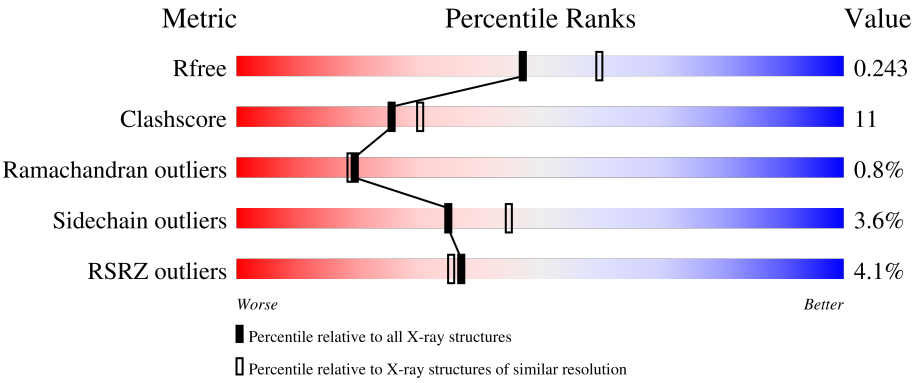
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.20 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	4898 (2.20-2.20)
Clashscore	141614	5594 (2.20-2.20)
Ramachandran outliers	138981	5503 (2.20-2.20)
Sidechain outliers	138945	5504 (2.20-2.20)
RSRZ outliers	127900	4800 (2.20-2.20)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	514	84% 15%
1	N	514	82% 17%
2	B	227	74% 24%
2	O	227	% 67% 29%
3	C	261	82% 16%

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Mol	Chain	Length	Quality of chain
3	P	261	84% 15%
4	D	147	3% 85% 12%
4	Q	147	12% 78% 20%
5	E	109	2% 76% 19%
5	R	109	6% 72% 22%
6	F	98	8% 83% 14%
6	S	98	9% 84% 11%
7	G	85	19% 68% 24% 6%
7	T	85	20% 66% 25% 7%
8	H	85	11% 75% 16% 7%
8	U	85	15% 75% 14% 7%
9	I	73	% 85% 15%
9	V	73	10% 79% 21%
10	J	59	10% 81% 15%
10	W	59	7% 83% 14%
11	K	56	79% 9% 12%
11	X	56	9% 71% 14% 12%
12	L	47	81% 17%
12	Y	47	4% 79% 19%
13	M	46	7% 61% 30% 7%
13	Z	46	15% 65% 28% 7%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
20	TGL	L	101	-	-	X	-
21	PSC	B	303	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	PSC	O	304	-	-	X	-
22	CHD	C	310	X	-	-	-
22	CHD	J	101	X	-	-	-
22	CHD	P	310	X	-	-	-
22	CHD	W	101	X	-	-	-
23	DCW	C	301	-	-	X	-
24	DMU	C	302	X	-	-	X
24	DMU	M	101	X	-	-	-
24	DMU	P	302	X	-	-	X
24	DMU	Z	101	X	-	-	-
26	PEK	G	102	-	-	-	X
26	PEK	T	101	-	-	-	X
27	CDL	T	102	-	-	X	-
9	SAC	V	1	-	X	-	X

2 Entry composition (i)

There are 29 unique types of molecules in this entry. The entry contains 32170 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Cytochrome c oxidase subunit 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	514	Total	C	N	O	S	0	0	0
			4027	2691	623	678	35			
1	N	514	Total	C	N	O	S	0	0	0
			4027	2691	623	678	35			

- Molecule 2 is a protein called Cytochrome c oxidase subunit 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	227	Total	C	N	O	S	0	0	0
			1824	1185	281	340	18			
2	O	227	Total	C	N	O	S	0	0	0
			1824	1185	281	340	18			

- Molecule 3 is a protein called Cytochrome c oxidase subunit 3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	259	Total	C	N	O	S	0	0	0
			2109	1412	336	349	12			
3	P	259	Total	C	N	O	S	0	0	0
			2109	1412	336	349	12			

- Molecule 4 is a protein called Cytochrome c oxidase subunit 4 isoform 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	144	Total	C	N	O	S	0	0	0
			1195	777	196	218	4			
4	Q	144	Total	C	N	O	S	0	0	0
			1195	777	196	218	4			

- Molecule 5 is a protein called Cytochrome c oxidase polypeptide Va.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	105	Total	C	N	O	S	0	0	0
			852	544	144	162	2			
5	R	105	Total	C	N	O	S	0	0	0
			852	544	144	162	2			

- Molecule 6 is a protein called Cytochrome c oxidase polypeptide Vb.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	98	Total	C	N	O	S	0	0	0
			748	464	134	145	5			
6	S	98	Total	C	N	O	S	0	0	0
			748	464	134	145	5			

- Molecule 7 is a protein called Cytochrome c oxidase polypeptide VIa-heart.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
7	G	84	Total	C	N	O	P	S	0	0	0
			675	431	129	113	1	1			
7	T	84	Total	C	N	O	P	S	0	0	0
			675	431	129	113	1	1			

- Molecule 8 is a protein called Cytochrome c oxidase subunit VIb isoform 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	79	Total	C	N	O	S	0	0	0
			662	417	121	119	5			
8	U	79	Total	C	N	O	S	0	0	0
			662	417	121	119	5			

- Molecule 9 is a protein called Cytochrome c oxidase polypeptide VIc.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	73	Total	C	N	O	S	0	0	0
			601	390	107	100	4			
9	V	73	Total	C	N	O	S	0	0	0
			601	390	107	100	4			

- Molecule 10 is a protein called Cytochrome c oxidase polypeptide VIIa-heart.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	58	Total	C	N	O	S	0	0	0
			460	297	78	82	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	W	58	Total	C	N	O	S	0	0	0
			460	297	78	82	3			

- Molecule 11 is a protein called Cytochrome c oxidase polypeptide VIIb.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	49	Total	C	N	O	S	0	0	0
			384	250	65	67	2			
11	X	49	Total	C	N	O	S	0	0	0
			384	250	65	67	2			

- Molecule 12 is a protein called Cytochrome c oxidase polypeptide VIIc.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	46	Total	C	N	O	S	0	0	0
			380	254	64	60	2			
12	Y	46	Total	C	N	O	S	0	0	0
			380	254	64	60	2			

- Molecule 13 is a protein called Cytochrome c oxidase polypeptide VIII-heart.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
13	M	43	Total	C	N	O	0	0	0
			335	223	53	59			
13	Z	43	Total	C	N	O	0	0	0
			335	223	53	59			

- Molecule 14 is COPPER (II) ION (three-letter code: CU) (formula: Cu).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
14	A	1	Total	Cu	0	0
			1	1		
14	N	1	Total	Cu	0	0
			1	1		

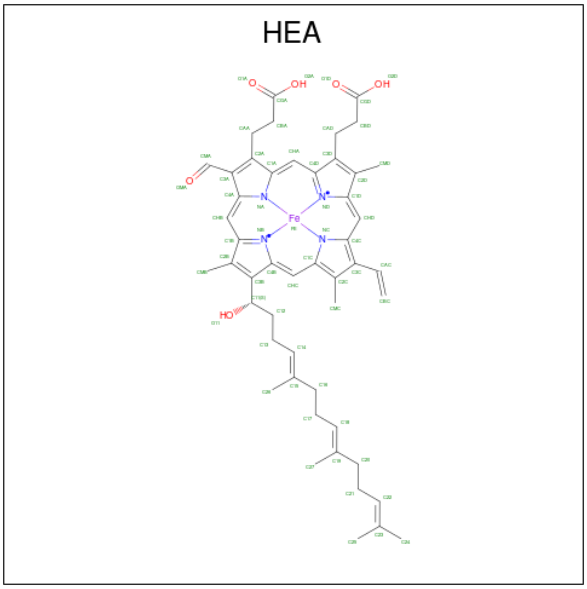
- Molecule 15 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
15	A	1	Total	Mg	0	0
			1	1		
15	N	1	Total	Mg	0	0
			1	1		

- Molecule 16 is SODIUM ION (three-letter code: NA) (formula: Na).

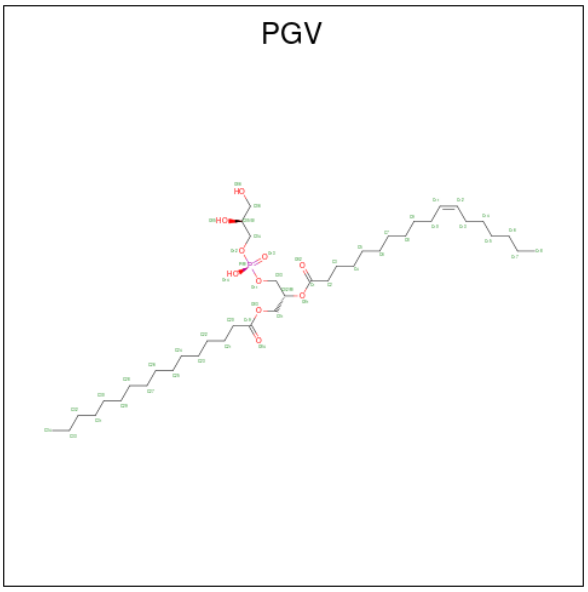
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
16	A	1	Total Na 1 1	0	0
16	N	1	Total Na 1 1	0	0

- Molecule 17 is HEME-A (three-letter code: HEA) (formula: $C_{49}H_{56}FeN_4O_6$).



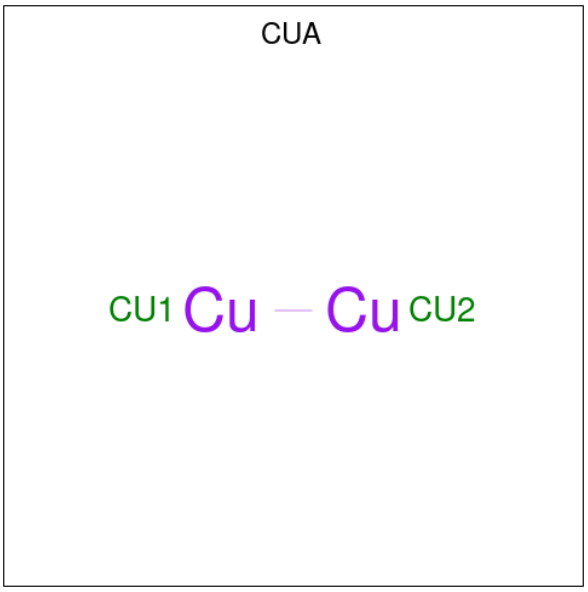
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
17	A	1	Total C Fe N O 60 49 1 4 6	0	0
17	A	1	Total C Fe N O 60 49 1 4 6	0	0
17	N	1	Total C Fe N O 60 49 1 4 6	0	0
17	N	1	Total C Fe N O 60 49 1 4 6	0	0

- Molecule 18 is (1R)-2-{[{[(2S)-2,3-DIHYDROXYPROPYL]OXY}(HYDROXY)PHOSPHORYL]OXY}-1-[(PALMITOYLOXY)METHYL]ETHYL (11E)-OCTADEC-11-ENOATE (three-letter code: PGV) (formula: $C_{40}H_{77}O_{10}P$).



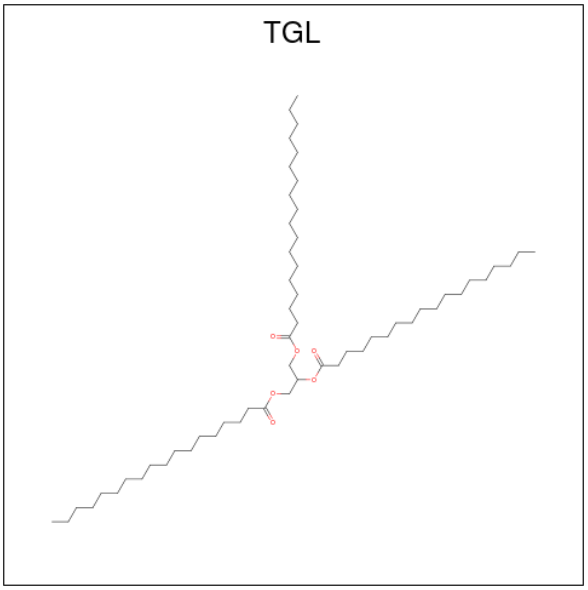
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
18	A	1	Total	C	O	P	0	0
			51	40	10	1		
18	A	1	Total	C	O	P	0	0
			51	40	10	1		
18	C	1	Total	C	O	P	0	0
			51	40	10	1		
18	C	1	Total	C	O	P	0	0
			51	40	10	1		
18	N	1	Total	C	O	P	0	0
			51	40	10	1		
18	N	1	Total	C	O	P	0	0
			51	40	10	1		
18	P	1	Total	C	O	P	0	0
			51	40	10	1		
18	P	1	Total	C	O	P	0	0
			51	40	10	1		

- Molecule 19 is DINUCLEAR COPPER ION (three-letter code: CUA) (formula: Cu_2).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
19	B	1	Total Cu 2 2	0	0
19	O	1	Total Cu 2 2	0	0

- Molecule 20 is TRISTEAROYLGLYCEROL (three-letter code: TGL) (formula: $C_{57}H_{110}O_6$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
20	B	1	Total C O 63 57 6	0	0
20	D	1	Total C O 63 57 6	0	0

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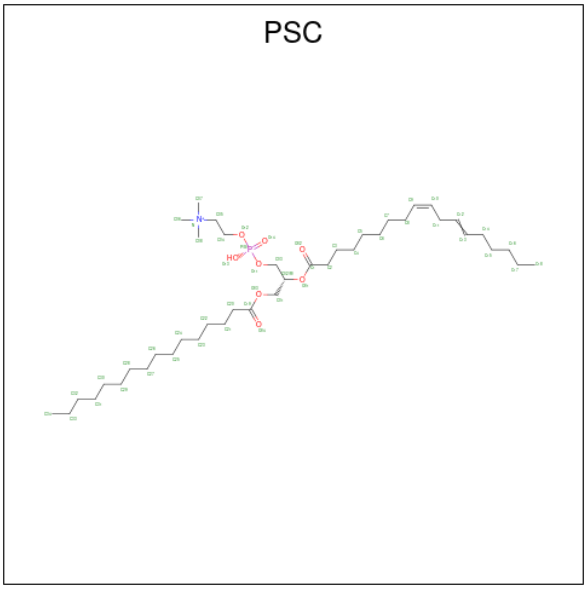
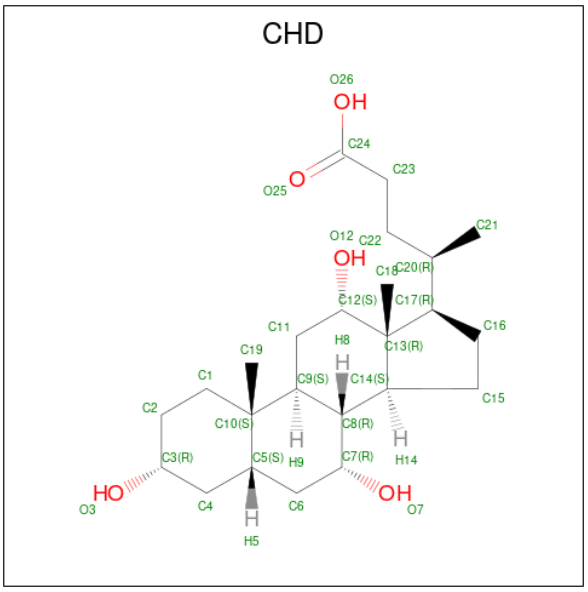
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
20	L	1	Total C O 63 57 6	0	0
20	N	1	Total C O 63 57 6	0	0
20	N	1	Total C O 63 57 6	0	0
20	O	1	Total C O 63 57 6	0	0

- Molecule 21 is (7R,17E,20E)-4-HYDROXY-N,N,N-TRIMETHYL-9-OXO-7-[(PALMITOYLOXY)METHYL]-3,5,8-TRIOXA-4-PHOSPHAHEXACOSA-17,20-DIEN-1-AMINIUM 4-OXIDE (three-letter code: PSC) (formula: $C_{42}H_{81}NO_8P$).



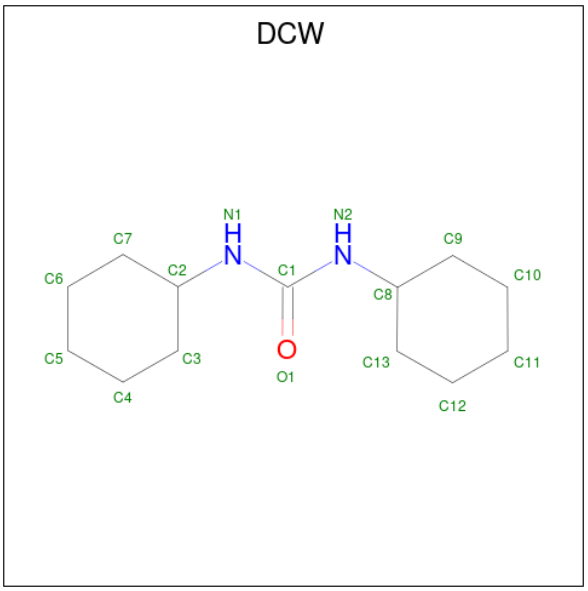
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
21	B	1	Total C N O P 52 42 1 8 1	0	0
21	O	1	Total C N O P 52 42 1 8 1	0	0

- Molecule 22 is CHOLIC ACID (three-letter code: CHD) (formula: $C_{24}H_{40}O_5$).



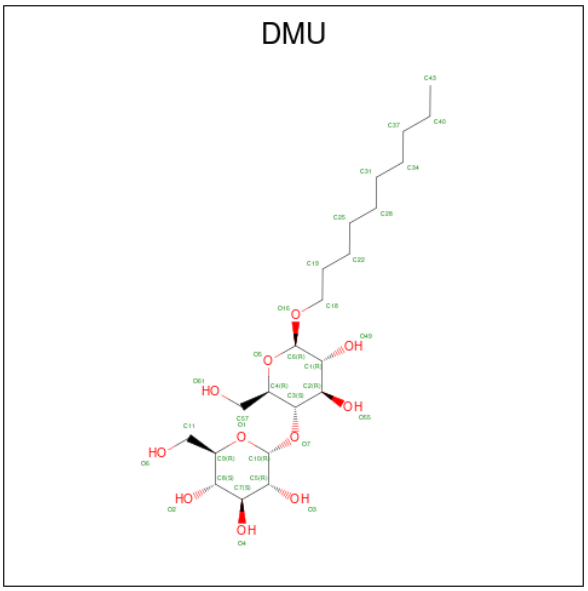
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
22	B	1	Total C O 29 24 5	0	0
22	C	1	Total C O 29 24 5	0	0
22	C	1	Total C O 29 24 5	0	0
22	J	1	Total C O 29 24 5	0	0
22	O	1	Total C O 29 24 5	0	0
22	P	1	Total C O 29 24 5	0	0
22	P	1	Total C O 29 24 5	0	0
22	W	1	Total C O 29 24 5	0	0

- Molecule 23 is DICYCLOHEXYLUREA (three-letter code: DCW) (formula: $C_{13}H_{24}N_2O$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
23	C	1	Total C N O 16 13 2 1	0	0
23	P	1	Total C N O 16 13 2 1	0	0

- Molecule 24 is DECYL-BETA-D-MALTOPYRANOSIDE (three-letter code: DMU) (formula: $C_{22}H_{42}O_{11}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
24	C	1	Total C O 33 22 11	0	0

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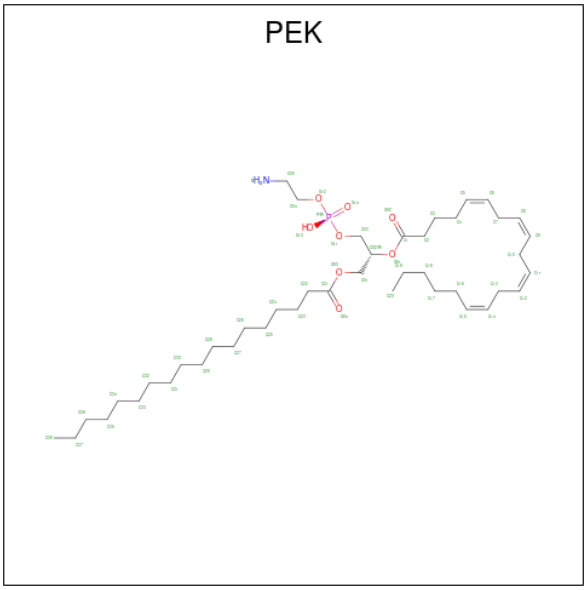
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
24	M	1	Total C O 33 22 11	0	0
24	P	1	Total C O 33 22 11	0	0
24	Z	1	Total C O 33 22 11	0	0

- Molecule 25 is UNKNOWN ATOM OR ION (three-letter code: UNX) (formula: X).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
25	C	1	Total X 1 1	0	0
25	P	1	Total X 1 1	0	0

- Molecule 26 is (1S)-2-{[(2-AMINOETHOXY)(HYDROXY)PHOSPHORYL]OXY}-1-[(STEAROYLOXY)METHYL]ETHYL (5E,8E,11E,14E)-ICOSA-5,8,11,14-TETRAENOATE (three-letter code: PEK) (formula: $C_{43}H_{78}NO_8P$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
26	C	1	Total C N O P 53 43 1 8 1	0	0
26	C	1	Total C N O P 53 43 1 8 1	0	0
26	G	1	Total C N O P 53 43 1 8 1	0	0

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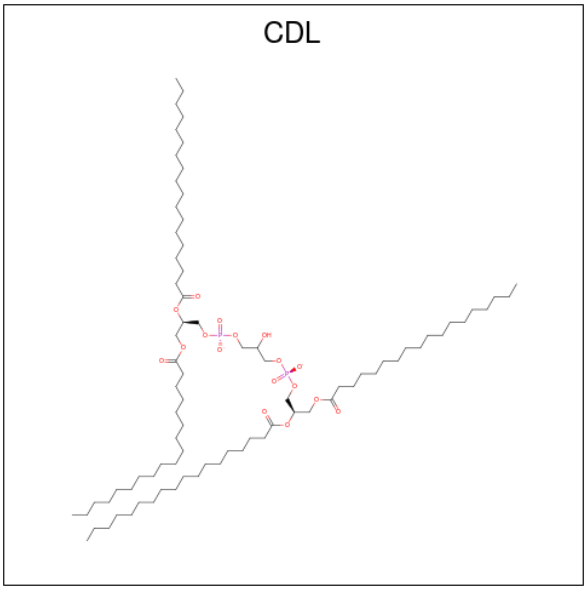
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
26	P	1	Total	C	N	O	P	0	0
			53	43	1	8	1		
26	P	1	Total	C	N	O	P	0	0
			53	43	1	8	1		
26	T	1	Total	C	N	O	P	0	0
			53	43	1	8	1		

- Molecule 27 is CARDIOLIPIN (three-letter code: CDL) (formula: $C_{81}H_{156}O_{17}P_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
27	C	1	Total	C	O	P	0	0
			100	81	17	2		
27	G	1	Total	C	O	P	0	0
			100	81	17	2		
27	P	1	Total	C	O	P	0	0
			100	81	17	2		
27	T	1	Total	C	O	P	0	0
			100	81	17	2		

- Molecule 28 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
28	F	1	Total	Zn	0	0
			1	1		
28	S	1	Total	Zn	0	0
			1	1		

- Molecule 29 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
29	A	199	Total O 199 199	0	0
29	B	119	Total O 119 119	0	0
29	C	82	Total O 82 82	0	0
29	D	79	Total O 79 79	0	0
29	E	58	Total O 58 58	0	0
29	F	64	Total O 64 64	0	0
29	G	35	Total O 35 35	0	0
29	H	39	Total O 39 39	0	0
29	I	29	Total O 29 29	0	0
29	J	14	Total O 14 14	0	0
29	K	21	Total O 21 21	0	0
29	L	17	Total O 17 17	0	0
29	M	14	Total O 14 14	0	0
29	N	176	Total O 176 176	0	0
29	O	103	Total O 103 103	0	0
29	P	74	Total O 74 74	0	0
29	Q	46	Total O 46 46	0	0
29	R	41	Total O 41 41	0	0
29	S	56	Total O 56 56	0	0
29	T	30	Total O 30 30	0	0
29	U	39	Total O 39 39	0	0

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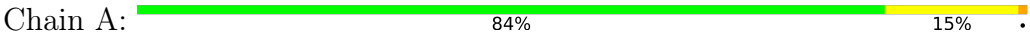
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
29	V	19	Total O 19 19	0	0
29	W	14	Total O 14 14	0	0
29	X	17	Total O 17 17	0	0
29	Y	13	Total O 13 13	0	0
29	Z	10	Total O 10 10	0	0

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 electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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.

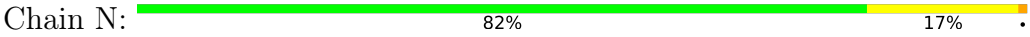
• Molecule 1: Cytochrome c oxidase subunit 1

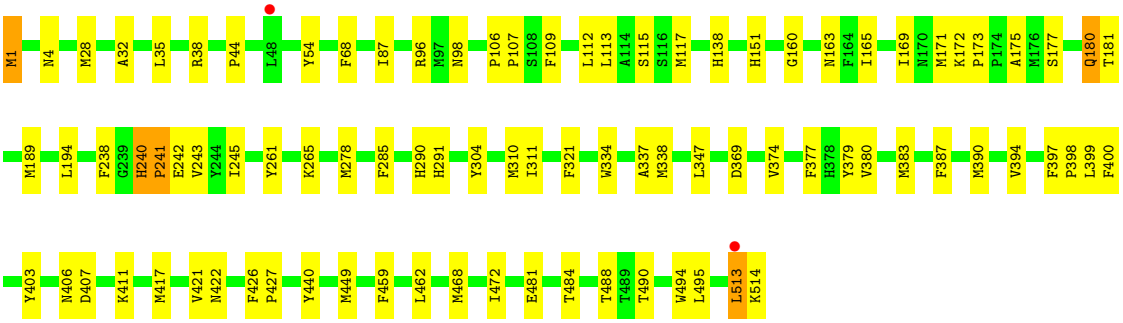
Chain A:



• Molecule 1: Cytochrome c oxidase subunit 1

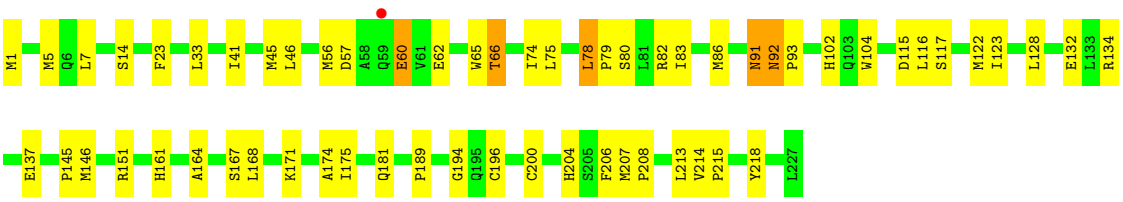
Chain N:





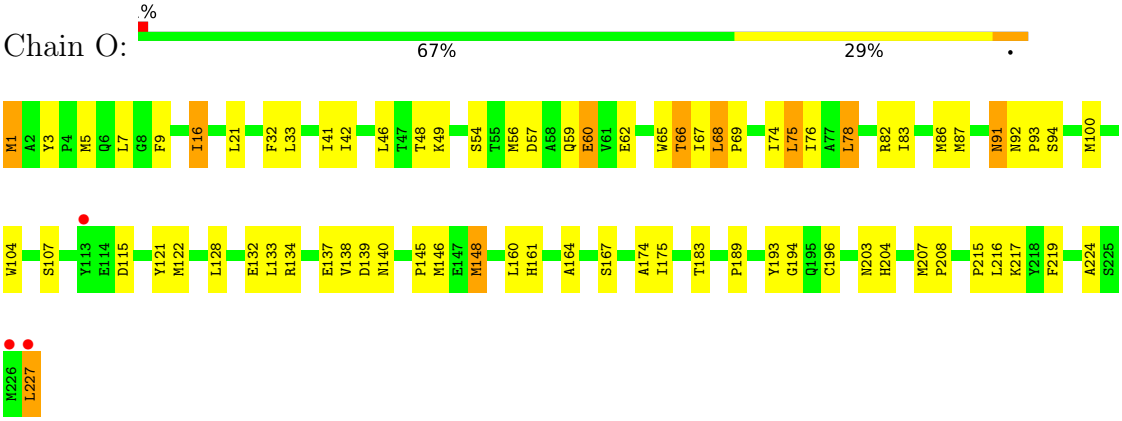
• Molecule 2: Cytochrome c oxidase subunit 2

Chain B:



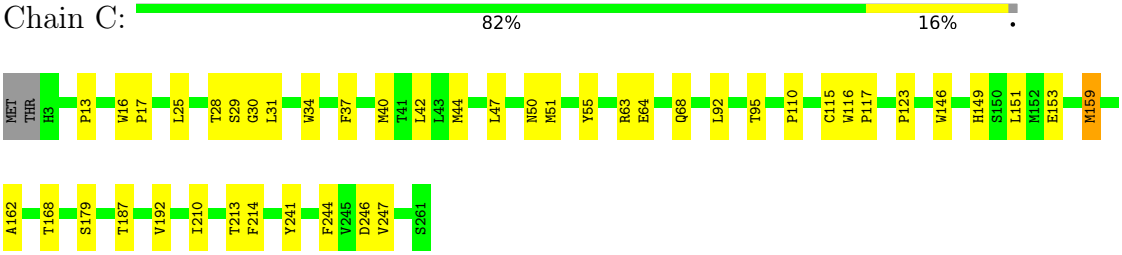
• Molecule 2: Cytochrome c oxidase subunit 2

Chain O:



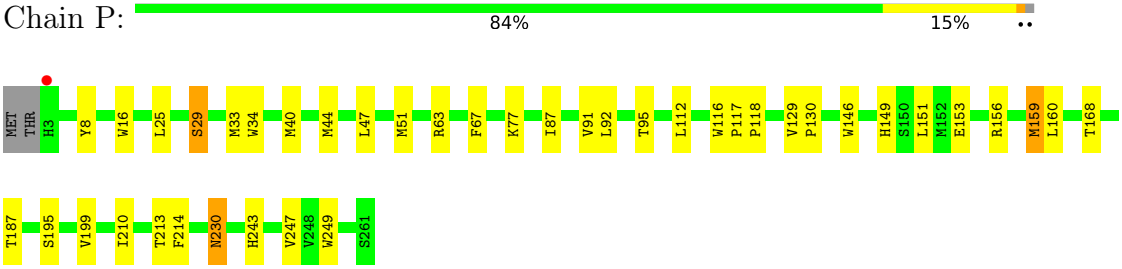
• Molecule 3: Cytochrome c oxidase subunit 3

Chain C:



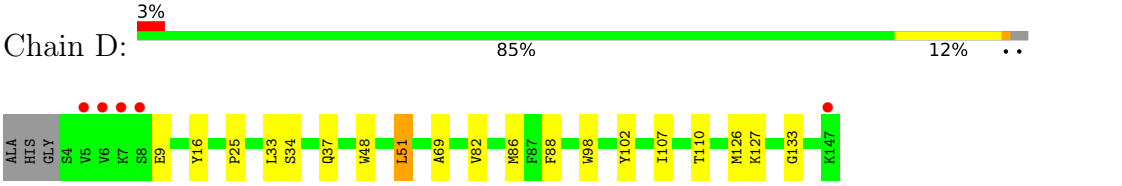
• Molecule 3: Cytochrome c oxidase subunit 3

Chain P:



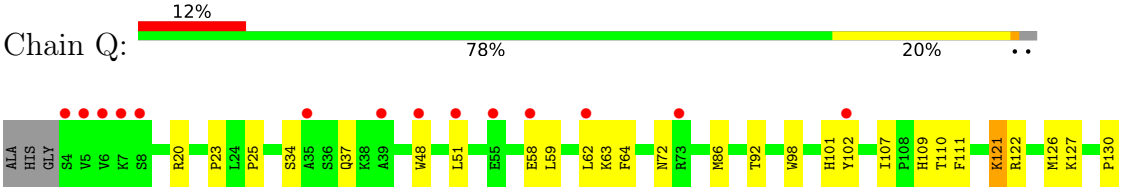
• Molecule 4: Cytochrome c oxidase subunit 4 isoform 1

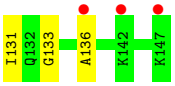
Chain D:



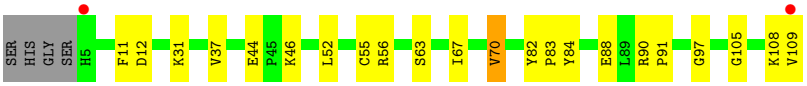
• Molecule 4: Cytochrome c oxidase subunit 4 isoform 1

Chain Q:

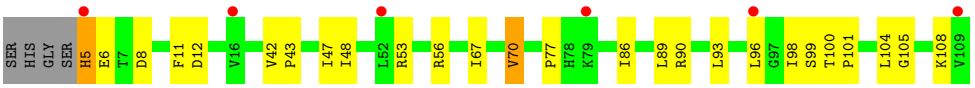




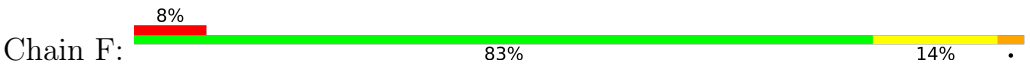
• Molecule 5: Cytochrome c oxidase polypeptide Va

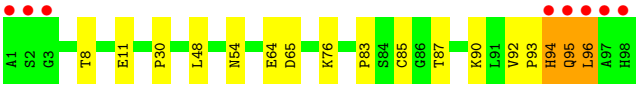


• Molecule 5: Cytochrome c oxidase polypeptide Va

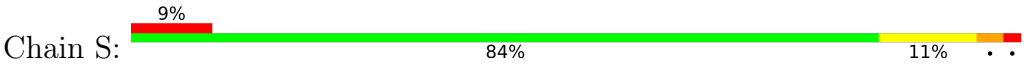


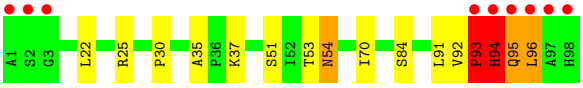
• Molecule 6: Cytochrome c oxidase polypeptide Vb



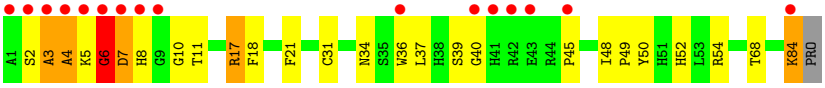


• Molecule 6: Cytochrome c oxidase polypeptide Vb

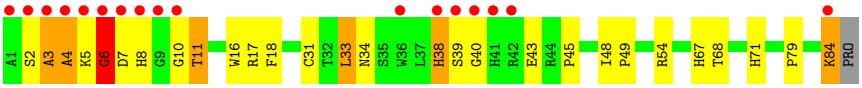




• Molecule 7: Cytochrome c oxidase polypeptide VIa-heart

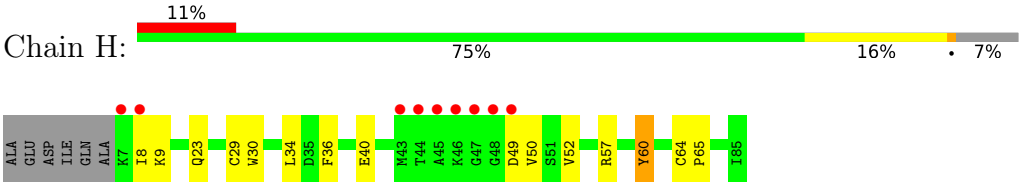


• Molecule 7: Cytochrome c oxidase polypeptide VIa-heart



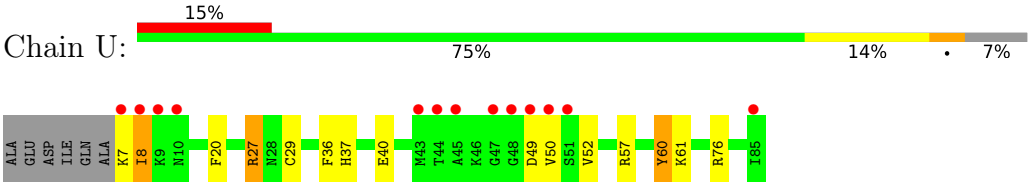
• Molecule 8: Cytochrome c oxidase subunit VIb isoform 1

Chain H:



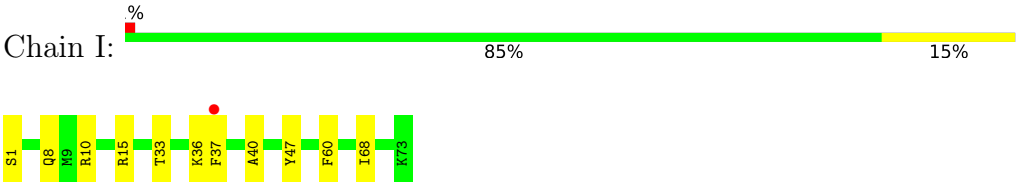
• Molecule 8: Cytochrome c oxidase subunit VIb isoform 1

Chain U:



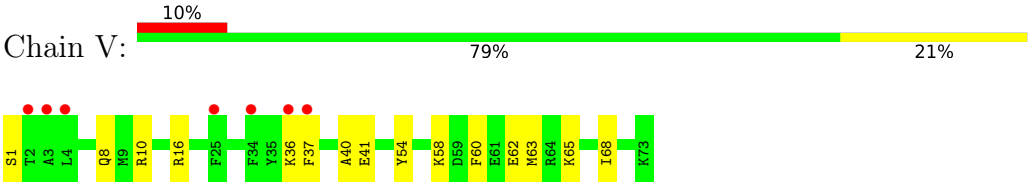
• Molecule 9: Cytochrome c oxidase polypeptide VIc

Chain I:



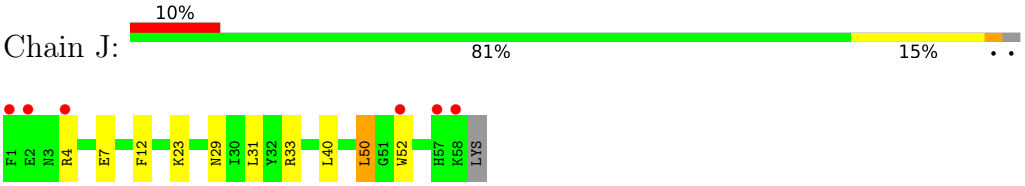
• Molecule 9: Cytochrome c oxidase polypeptide VIc

Chain V:



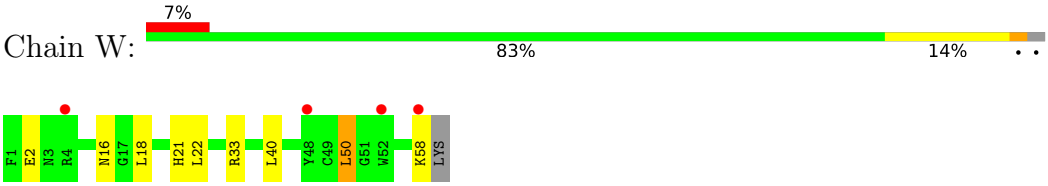
• Molecule 10: Cytochrome c oxidase polypeptide VIIa-heart

Chain J:



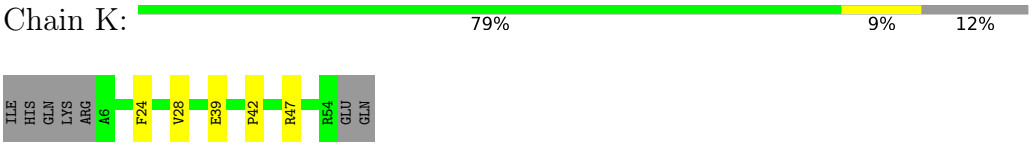
• Molecule 10: Cytochrome c oxidase polypeptide VIIa-heart

Chain W:



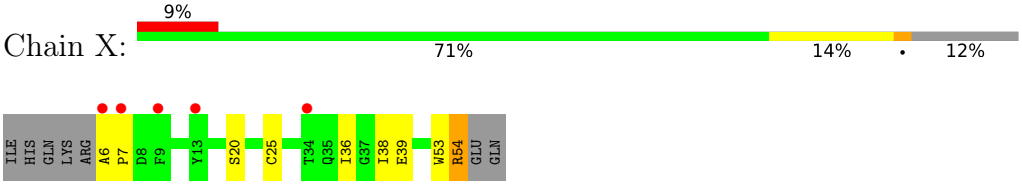
• Molecule 11: Cytochrome c oxidase polypeptide VIIb

Chain K:



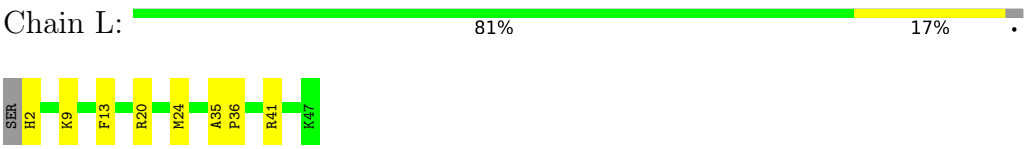
• Molecule 11: Cytochrome c oxidase polypeptide VIIb

Chain X:



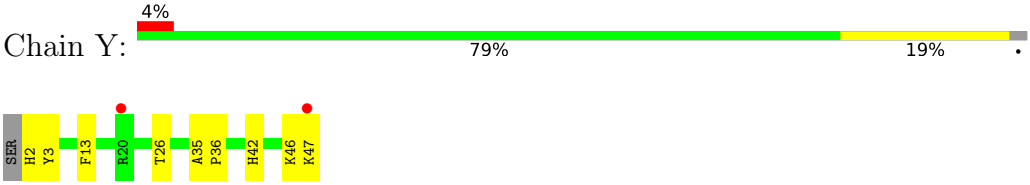
• Molecule 12: Cytochrome c oxidase polypeptide VIIc

Chain L:



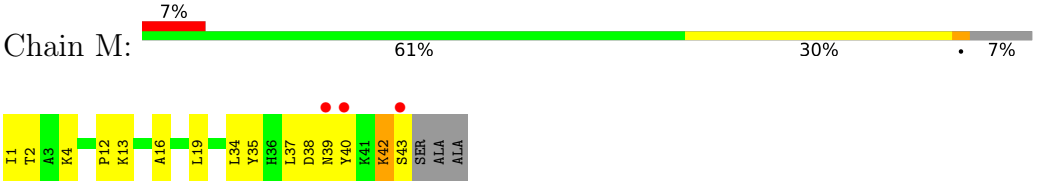
• Molecule 12: Cytochrome c oxidase polypeptide VIIc

Chain Y:



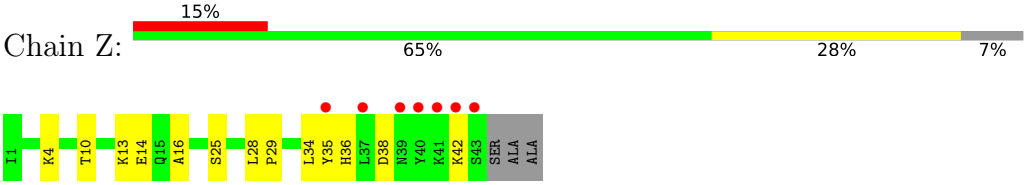
• Molecule 13: Cytochrome c oxidase polypeptide VIII-heart

Chain M:



• Molecule 13: Cytochrome c oxidase polypeptide VIII-heart

Chain Z:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	184.13Å 207.23Å 178.24Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 2.20 58.85 – 2.20	Depositor EDS
% Data completeness (in resolution range)	(Not available) (40.00-2.20) 99.3 (58.85-2.20)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.57 (at 2.20Å)	Xtriage
Refinement program	X-PLOR 3.851	Depositor
R, R_{free}	0.197 , 0.242 0.207 , 0.243	Depositor DCC
R_{free} test set	16860 reflections (4.95%)	wwPDB-VP
Wilson B-factor (Å^2)	33.2	Xtriage
Anisotropy	0.058	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 62.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	0.006 for l,-k,h	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	32170	wwPDB-VP
Average B, all atoms (Å^2)	42.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.63% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PEK, NA, TPO, CU, MG, DCW, SAC, CUA, DMU, FME, ZN, HEA, UNX, PSC, CHD, CDL, TGL, PGV

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	A	0.59	0/4156	0.72	1/5678 (0.0%)
1	N	0.55	0/4156	0.69	0/5678
2	B	0.56	0/1860	0.79	0/2534
2	O	0.55	0/1860	0.80	1/2534 (0.0%)
3	C	0.59	0/2196	0.64	0/3003
3	P	0.56	0/2196	0.64	0/3003
4	D	0.59	0/1229	0.73	2/1658 (0.1%)
4	Q	0.59	0/1229	0.69	1/1658 (0.1%)
5	E	0.53	0/871	0.69	0/1182
5	R	0.54	0/871	0.71	1/1182 (0.1%)
6	F	0.54	0/765	0.84	2/1038 (0.2%)
6	S	0.54	0/765	0.85	2/1038 (0.2%)
7	G	0.61	0/690	0.76	1/937 (0.1%)
7	T	0.60	0/690	0.79	2/937 (0.2%)
8	H	0.53	0/682	0.70	0/921
8	U	0.49	0/682	0.68	0/921
9	I	0.56	0/605	0.65	0/802
9	V	0.57	0/605	0.62	0/802
10	J	0.51	0/471	0.67	0/636
10	W	0.51	0/471	0.72	0/636
11	K	0.56	0/398	0.70	0/546
11	X	0.50	0/398	0.68	0/546
12	L	0.59	0/393	0.61	0/526
12	Y	0.52	0/393	0.64	0/526
13	M	0.55	0/345	0.65	0/470
13	Z	0.53	0/345	0.66	0/470
All	All	0.56	0/29322	0.71	13/39862 (0.0%)

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	A	0	1
1	N	0	2
9	I	0	1
All	All	0	4

There are no bond length outliers.

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	T	33	LEU	CA-CB-CG	6.86	131.08	115.30
6	S	94	HIS	N-CA-C	6.48	128.49	111.00
6	F	94	HIS	N-CA-C	6.21	127.75	111.00
4	D	51	LEU	CA-CB-CG	6.02	129.15	115.30
6	F	93	PRO	N-CA-C	5.85	127.30	112.10
5	R	42	VAL	N-CA-C	-5.42	96.38	111.00
2	O	227	LEU	CA-CB-CG	5.38	127.67	115.30
1	A	435	GLY	N-CA-C	5.36	126.50	113.10
4	Q	133	GLY	N-CA-C	5.33	126.43	113.10
4	D	133	GLY	N-CA-C	5.28	126.30	113.10
7	G	6	GLY	N-CA-C	5.15	125.98	113.10
6	S	93	PRO	N-CA-C	5.15	125.49	112.10
7	T	6	GLY	N-CA-C	5.09	125.84	113.10

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	240	HIS	Sidechain
9	I	47	TYR	Sidechain
1	N	240	HIS	Sidechain
1	N	304	TYR	Sidechain

5.2 Too-close contacts (i)

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	A	4027	0	4001	69	0
1	N	4027	0	4001	72	0
2	B	1824	0	1833	44	0
2	O	1824	0	1833	57	0
3	C	2109	0	2027	40	0
3	P	2109	0	2027	40	0
4	D	1195	0	1183	17	0
4	Q	1195	0	1183	25	0
5	E	852	0	845	15	0
5	R	852	0	845	16	0
6	F	748	0	728	9	0
6	S	748	0	728	12	0
7	G	675	0	644	24	0
7	T	675	0	644	28	0
8	H	662	0	623	9	0
8	U	662	0	623	12	0
9	I	601	0	613	6	0
9	V	601	0	613	12	0
10	J	460	0	459	8	0
10	W	460	0	459	8	0
11	K	384	0	366	4	0
11	X	384	0	366	10	0
12	L	380	0	380	13	0
12	Y	380	0	380	9	0
13	M	335	0	352	10	0
13	Z	335	0	352	8	0
14	A	1	0	0	0	0
14	N	1	0	0	0	0
15	A	1	0	0	0	0
15	N	1	0	0	0	0
16	A	1	0	0	0	0
16	N	1	0	0	0	0
17	A	120	0	108	5	0
17	N	120	0	108	6	0
18	A	102	0	152	16	0
18	C	102	0	152	9	0
18	N	102	0	152	13	0
18	P	102	0	152	9	0
19	B	2	0	0	0	0
19	O	2	0	0	0	0
20	B	63	0	110	6	0
20	D	63	0	110	6	0
20	L	63	0	110	23	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
20	N	126	0	220	19	0
20	O	63	0	110	7	0
21	B	52	0	80	23	0
21	O	52	0	80	21	0
22	B	29	0	39	1	0
22	C	58	0	77	1	0
22	J	29	0	39	2	0
22	O	29	0	39	0	0
22	P	58	0	78	2	0
22	W	29	0	39	4	0
23	C	16	0	23	9	0
23	P	16	0	23	8	0
24	C	33	0	37	5	0
24	M	33	0	37	1	0
24	P	33	0	37	5	0
24	Z	33	0	37	1	0
25	C	1	0	0	0	0
25	P	1	0	0	0	0
26	C	106	0	154	18	0
26	G	53	0	77	10	0
26	P	106	0	154	17	0
26	T	53	0	77	8	0
27	C	100	0	156	15	0
27	G	100	0	156	15	0
27	P	100	0	156	14	0
27	T	100	0	156	21	0
28	F	1	0	0	0	0
28	S	1	0	0	0	0
29	A	199	0	0	6	0
29	B	119	0	0	2	0
29	C	82	0	0	2	0
29	D	79	0	0	2	0
29	E	58	0	0	3	0
29	F	64	0	0	2	0
29	G	35	0	0	1	0
29	H	39	0	0	1	0
29	I	29	0	0	4	0
29	J	14	0	0	1	0
29	K	21	0	0	0	0
29	L	17	0	0	2	0
29	M	14	0	0	1	0
29	N	176	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	O	103	0	0	5	0
29	P	74	0	0	3	0
29	Q	46	0	0	2	0
29	R	41	0	0	1	0
29	S	56	0	0	3	0
29	T	30	0	0	2	0
29	U	39	0	0	0	0
29	V	19	0	0	0	0
29	W	14	0	0	2	0
29	X	17	0	0	0	0
29	Y	13	0	0	0	0
29	Z	10	0	0	1	0
All	All	32170	0	31343	655	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 11.

All (655) 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)
10:W:33:ARG:HG2	22:W:101:CHD:H152	1.31	1.10
21:B:303:PSC:H343	21:B:303:PSC:H142	1.31	1.07
21:O:304:PSC:H142	21:O:304:PSC:H343	1.28	1.06
7:G:84:LYS:H	7:G:84:LYS:HD2	1.22	1.05
12:L:20:ARG:HH12	20:L:101:TGL:HC61	1.15	1.05
7:T:5:LYS:HB2	26:T:101:PEK:H362	1.39	1.04
4:D:34:SER:H	4:D:37:GLN:HE21	1.09	1.01
20:O:303:TGL:H281	20:O:303:TGL:H102	1.43	1.01
7:T:84:LYS:HD2	7:T:84:LYS:H	1.27	0.98
7:G:5:LYS:HB2	26:G:102:PEK:H362	1.46	0.97
7:T:31:CYS:SG	27:T:102:CDL:H532	2.04	0.97
20:B:302:TGL:H281	20:B:302:TGL:H102	1.45	0.97
3:C:63:ARG:HE	27:C:309:CDL:HA22	1.31	0.93
27:G:101:CDL:H541	27:G:101:CDL:H231	1.54	0.90
20:L:101:TGL:HC62	20:L:101:TGL:HC22	1.54	0.90
18:A:607:PGV:H343	23:C:301:DCW:H41C	1.54	0.89
6:S:94:HIS:CD2	6:S:95:GLN:H	1.89	0.89
20:N:606:TGL:HC22	20:N:606:TGL:HC62	1.54	0.88
7:G:31:CYS:SG	27:G:101:CDL:H532	2.14	0.88
18:N:609:PGV:H321	26:P:305:PEK:H361	1.53	0.87
20:O:303:TGL:H102	20:O:303:TGL:C28	2.05	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:20:ARG:NH1	20:L:101:TGL:HC61	1.91	0.85
3:P:63:ARG:HE	27:P:309:CDL:HA22	1.38	0.85
27:C:309:CDL:H191	27:C:309:CDL:H642	1.59	0.84
20:B:302:TGL:H102	20:B:302:TGL:C28	2.07	0.84
26:P:305:PEK:H102	26:P:305:PEK:H161	1.60	0.84
2:O:224:ALA:O	2:O:227:LEU:HG	1.78	0.84
26:C:305:PEK:H102	26:C:305:PEK:H161	1.60	0.84
27:P:309:CDL:H642	27:P:309:CDL:H191	1.59	0.83
20:N:606:TGL:HC31	12:Y:13:PHE:HA	1.62	0.82
10:J:33:ARG:HG2	22:J:101:CHD:H152	1.62	0.82
27:T:102:CDL:H541	27:T:102:CDL:H231	1.60	0.82
7:G:5:LYS:HB3	1:N:278:MET:SD	2.21	0.80
18:A:607:PGV:H321	26:C:305:PEK:H361	1.63	0.79
12:L:13:PHE:HA	20:L:101:TGL:HC31	1.65	0.79
1:N:472:ILE:HG21	20:N:606:TGL:HA92	1.64	0.78
5:E:82:TYR:HB3	5:E:83:PRO:HD3	1.67	0.77
1:A:472:ILE:HG21	20:L:101:TGL:HA92	1.67	0.75
7:T:5:LYS:HG3	26:T:101:PEK:H383	1.68	0.75
2:O:57:ASP:H	21:O:304:PSC:H201	1.49	0.75
20:N:607:TGL:HG11	20:N:607:TGL:HC21	1.67	0.75
20:N:606:TGL:H242	20:N:606:TGL:H202	1.69	0.74
27:G:101:CDL:H622	18:P:308:PGV:H152	1.66	0.74
20:L:101:TGL:H242	20:L:101:TGL:H202	1.69	0.74
20:D:201:TGL:HC21	20:D:201:TGL:HG11	1.69	0.73
27:G:101:CDL:H541	27:G:101:CDL:C23	2.19	0.73
1:A:321:PHE:CD2	21:B:303:PSC:H341	2.23	0.73
7:G:84:LYS:H	7:G:84:LYS:CD	1.98	0.73
8:U:20:PHE:HE2	8:U:27:ARG:HG2	1.53	0.73
3:P:25:LEU:O	3:P:29:SER:HB2	1.89	0.72
2:B:65:TRP:CZ3	21:B:303:PSC:H331	2.23	0.72
7:G:5:LYS:HG3	26:G:102:PEK:H383	1.71	0.72
21:B:303:PSC:C07	9:I:10:ARG:HH21	2.02	0.71
4:D:34:SER:H	4:D:37:GLN:NE2	1.84	0.71
1:N:113:LEU:CD1	20:N:606:TGL:H292	2.21	0.71
21:O:304:PSC:H21	21:O:304:PSC:H222	1.71	0.71
21:B:303:PSC:H222	21:B:303:PSC:H21	1.73	0.70
13:M:42:LYS:HE3	13:M:42:LYS:HA	1.73	0.70
29:O:500:HOH:O	8:U:61:LYS:HE3	1.91	0.70
1:N:321:PHE:CD2	21:O:304:PSC:H341	2.27	0.69
9:V:63:MET:HB3	9:V:68:ILE:HD11	1.73	0.69
7:T:38:HIS:NE2	27:T:102:CDL:H111	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:34:TRP:HZ2	24:C:302:DMU:H29	1.57	0.69
1:A:113:LEU:CD1	20:L:101:TGL:H292	2.23	0.69
21:B:303:PSC:H072	9:I:10:ARG:HH21	1.57	0.69
18:C:308:PGV:H152	27:T:102:CDL:H622	1.74	0.69
26:P:305:PEK:H71	26:P:305:PEK:H32	1.73	0.69
7:T:84:LYS:H	7:T:84:LYS:CD	2.05	0.69
20:B:302:TGL:H241	20:B:302:TGL:H201	1.75	0.69
7:T:45:PRO:HD2	29:T:204:HOH:O	1.92	0.68
2:O:56:MET:HA	21:O:304:PSC:C20	2.24	0.68
1:A:379:TYR:O	1:A:383:MET:HB2	1.93	0.68
1:N:334:TRP:CZ3	20:N:607:TGL:HA51	2.29	0.68
6:S:94:HIS:CD2	6:S:95:GLN:N	2.61	0.68
1:N:1:FME:HCN	1:N:4:ASN:H	1.59	0.68
6:S:94:HIS:CG	6:S:95:GLN:H	2.08	0.67
26:C:305:PEK:H71	26:C:305:PEK:H32	1.75	0.67
1:N:321:PHE:CZ	21:O:304:PSC:H171	2.30	0.67
20:O:303:TGL:H241	20:O:303:TGL:H201	1.76	0.66
3:C:146:TRP:CZ2	7:G:17:ARG:HG3	2.30	0.66
9:V:58:LYS:O	9:V:62:GLU:HG3	1.95	0.66
27:T:102:CDL:H541	27:T:102:CDL:C23	2.24	0.66
1:A:113:LEU:HD12	20:L:101:TGL:H292	1.76	0.66
18:A:607:PGV:H343	23:C:301:DCW:C4	2.24	0.66
1:A:161:ALA:O	1:A:165:ILE:HG13	1.95	0.65
12:L:20:ARG:HH22	20:L:101:TGL:HC32	1.61	0.65
20:O:303:TGL:HC92	29:O:486:HOH:O	1.96	0.65
3:C:51:MET:HB3	27:C:309:CDL:H622	1.77	0.65
3:C:34:TRP:CZ2	24:C:302:DMU:H29	2.31	0.65
20:L:101:TGL:H361	20:L:101:TGL:HB91	1.79	0.64
1:N:417:MET:O	1:N:421:VAL:HG22	1.98	0.64
7:G:45:PRO:HD2	29:G:202:HOH:O	1.97	0.64
3:P:187:THR:HB	7:T:68:THR:HG21	1.80	0.64
1:A:177:SER:H	1:A:180:GLN:NE2	1.95	0.64
2:B:41:ILE:HD13	21:B:303:PSC:H342	1.79	0.64
2:O:41:ILE:CD1	21:O:304:PSC:H342	2.28	0.64
7:T:5:LYS:HD2	26:T:101:PEK:H371	1.78	0.64
27:G:101:CDL:H202	27:G:101:CDL:H522	1.80	0.63
26:C:306:PEK:C38	27:G:101:CDL:H273	2.28	0.63
18:C:307:PGV:H172	27:C:309:CDL:H662	1.78	0.63
5:R:89:LEU:O	5:R:93:LEU:HG	1.99	0.63
2:B:122:MET:HB2	2:B:208:PRO:HD2	1.81	0.63
10:W:58:LYS:HE3	12:Y:47:LYS:HE3	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:87:ILE:O	1:N:173:PRO:HD3	1.98	0.62
3:P:210:ILE:HG23	18:P:307:PGV:H102	1.81	0.62
27:T:102:CDL:H511	27:T:102:CDL:H172	1.81	0.62
3:C:40:MET:O	3:C:44:MET:HG2	1.99	0.62
12:L:9:LYS:HG3	29:L:216:HOH:O	1.99	0.62
1:N:35:LEU:HD11	1:N:462:LEU:HD13	1.82	0.62
3:P:34:TRP:CZ2	24:P:302:DMU:H29	2.35	0.62
18:C:307:PGV:H182	27:C:309:CDL:H673	1.82	0.61
7:G:5:LYS:HD2	26:G:102:PEK:H371	1.82	0.61
18:N:608:PGV:H152	18:N:608:PGV:H321	1.81	0.61
18:A:606:PGV:H062	29:M:201:HOH:O	2.00	0.61
27:G:101:CDL:H511	27:G:101:CDL:H172	1.82	0.61
26:P:306:PEK:C38	27:T:102:CDL:H273	2.31	0.61
2:O:56:MET:HG2	21:O:304:PSC:H211	1.83	0.61
2:O:122:MET:HB2	2:O:208:PRO:HD2	1.83	0.61
27:T:102:CDL:H202	27:T:102:CDL:H522	1.83	0.61
12:L:20:ARG:HH12	20:L:101:TGL:CC6	2.03	0.60
1:A:383:MET:O	1:A:387:PHE:HB2	2.00	0.60
2:B:14:SER:HB3	2:B:168:LEU:HD23	1.84	0.60
29:B:2065:HOH:O	7:T:17:ARG:HD3	2.00	0.60
27:P:309:CDL:H112	29:P:467:HOH:O	2.01	0.60
1:A:177:SER:H	1:A:180:GLN:HE21	1.48	0.60
2:O:42:ILE:O	2:O:46:LEU:HG	2.02	0.60
3:P:146:TRP:CZ2	7:T:17:ARG:HG3	2.36	0.60
1:A:240:HIS:O	1:A:243:VAL:HG22	2.01	0.60
1:A:484:THR:HB	13:M:2:THR:OG1	2.02	0.60
3:C:210:ILE:HG23	18:C:307:PGV:H102	1.82	0.60
1:N:334:TRP:CH2	2:O:46:LEU:HD13	2.38	0.59
23:P:301:DCW:H62C	18:P:307:PGV:H301	1.84	0.59
18:A:606:PGV:H152	18:A:606:PGV:H321	1.85	0.59
13:Z:10:THR:HA	13:Z:14:GLU:OE2	2.03	0.59
3:C:246:ASP:HB2	29:C:467:HOH:O	2.03	0.59
2:O:91:ASN:HD21	2:O:183:THR:HG21	1.68	0.59
10:W:33:ARG:HG2	22:W:101:CHD:C15	2.20	0.59
20:N:606:TGL:H361	20:N:606:TGL:HB91	1.83	0.58
1:A:282:PHE:HA	7:T:4:ALA:HB3	1.85	0.58
9:V:65:LYS:O	11:X:54:ARG:NH1	2.34	0.58
1:A:334:TRP:CZ2	2:B:46:LEU:HB3	2.39	0.58
1:N:290:HIS:CD2	1:N:291:HIS:CD2	2.91	0.58
1:N:379:TYR:O	1:N:383:MET:HB2	2.03	0.58
2:O:56:MET:HA	21:O:304:PSC:H202	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:56:MET:HA	21:B:303:PSC:C20	2.33	0.58
10:J:7:GLU:HG3	29:J:209:HOH:O	2.03	0.58
5:E:84:TYR:O	5:E:88:GLU:HG2	2.04	0.58
18:P:307:PGV:H172	27:P:309:CDL:H662	1.86	0.57
10:W:40:LEU:HD12	22:W:101:CHD:H183	1.87	0.57
1:A:278:MET:SD	7:T:5:LYS:HB3	2.44	0.57
26:C:306:PEK:H383	27:G:101:CDL:H273	1.86	0.57
18:N:609:PGV:H343	23:P:301:DCW:H41C	1.86	0.57
5:E:67:ILE:O	5:E:70:VAL:HG12	2.05	0.57
2:O:59:GLN:O	2:O:59:GLN:HG3	2.05	0.57
1:A:87:ILE:O	1:A:173:PRO:HD3	2.05	0.57
1:N:151:HIS:CD2	26:P:305:PEK:H382	2.40	0.57
1:N:172:LYS:HD2	1:N:181:THR:CG2	2.35	0.57
2:O:41:ILE:HD13	21:O:304:PSC:H342	1.87	0.57
2:O:65:TRP:CZ3	21:O:304:PSC:H331	2.40	0.57
3:P:47:LEU:O	3:P:51:MET:HG2	2.05	0.57
1:N:397:PHE:HB3	1:N:398:PRO:HD3	1.87	0.56
18:N:608:PGV:H062	29:Z:201:HOH:O	2.04	0.56
1:N:377:PHE:HA	1:N:380:VAL:HG22	1.88	0.56
2:O:146:MET:SD	2:O:189:PRO:HB3	2.45	0.56
3:P:149:HIS:O	3:P:153:GLU:HG3	2.05	0.56
18:P:307:PGV:H182	27:P:309:CDL:H673	1.87	0.56
18:C:307:PGV:H12	18:C:307:PGV:H161	1.85	0.56
1:N:472:ILE:HG21	20:N:606:TGL:CA9	2.32	0.56
3:P:213:THR:HG23	27:P:309:CDL:H762	1.87	0.56
26:P:305:PEK:H102	26:P:305:PEK:C16	2.35	0.56
12:Y:35:ALA:HB3	12:Y:36:PRO:HD3	1.87	0.56
2:B:65:TRP:HZ3	21:B:303:PSC:H331	1.71	0.56
3:P:160:LEU:HD13	22:P:310:CHD:H181	1.88	0.56
2:B:56:MET:HG2	21:B:303:PSC:H211	1.86	0.56
27:G:101:CDL:H231	27:G:101:CDL:C54	2.33	0.56
3:P:168:THR:HG22	26:P:306:PEK:H14	1.86	0.56
1:A:472:ILE:HG21	20:L:101:TGL:CA9	2.35	0.56
9:V:36:LYS:HA	9:V:40:ALA:HB3	1.87	0.56
4:D:9:GLU:HB3	29:D:376:HOH:O	2.05	0.56
2:O:104:TRP:CG	2:O:203:ASN:HB2	2.40	0.56
6:F:92:VAL:HG23	6:F:92:VAL:O	2.04	0.56
12:L:24:MET:SD	20:L:101:TGL:H162	2.46	0.56
8:U:40:GLU:HG3	8:U:50:VAL:CG1	2.36	0.55
6:S:93:PRO:HB3	29:S:240:HOH:O	2.05	0.55
1:N:98:ASN:HB2	1:N:163:ASN:HD21	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:165:ILE:O	1:N:169:ILE:HG12	2.06	0.55
4:Q:109:HIS:HD2	29:Q:207:HOH:O	1.89	0.55
1:N:68:PHE:HE2	1:N:112:LEU:HD13	1.70	0.55
1:A:17:THR:OG1	20:L:101:TGL:H281	2.07	0.55
1:N:240:HIS:O	1:N:243:VAL:HG22	2.07	0.55
3:P:151:LEU:HB2	3:P:159:MET:HG3	1.89	0.55
12:Y:26:THR:HG23	13:Z:25:SER:CB	2.36	0.55
10:J:12:PHE:O	10:J:23:LYS:HE2	2.07	0.55
1:N:106:PRO:HB2	1:N:107:PRO:HD3	1.89	0.55
3:P:67:PHE:HE1	27:P:309:CDL:H1	1.72	0.55
18:A:607:PGV:C34	23:C:301:DCW:H41C	2.33	0.55
2:B:78:LEU:HD12	27:T:102:CDL:H351	1.89	0.55
7:G:50:TYR:HB3	7:G:52:HIS:CE1	2.42	0.55
12:L:20:ARG:NH2	20:L:101:TGL:HC32	2.22	0.55
5:E:105:GLY:O	5:E:108:LYS:HG2	2.07	0.54
4:Q:58:GLU:O	4:Q:62:LEU:HG	2.07	0.54
21:O:304:PSC:H071	9:V:10:ARG:HE	1.71	0.54
3:P:51:MET:HB3	27:P:309:CDL:H622	1.90	0.54
17:N:604:HEA:HBC1	17:N:604:HEA:HMC1	1.90	0.54
7:T:34:ASN:ND2	27:T:102:CDL:H151	2.22	0.54
8:H:49:ASP:O	8:H:52:VAL:HG22	2.08	0.54
2:O:67:ILE:HD11	29:O:488:HOH:O	2.06	0.54
21:O:304:PSC:C07	9:V:10:ARG:HE	2.21	0.54
4:D:88:PHE:HZ	13:M:19:LEU:HD21	1.73	0.54
2:B:57:ASP:H	21:B:303:PSC:H201	1.74	0.53
18:P:307:PGV:H161	18:P:307:PGV:H12	1.90	0.53
1:A:282:PHE:HA	7:T:4:ALA:CB	2.38	0.53
1:A:334:TRP:CZ3	20:D:201:TGL:HA51	2.42	0.53
1:N:406:ASN:HD21	18:N:608:PGV:H21	1.72	0.53
1:N:98:ASN:HB2	1:N:163:ASN:ND2	2.23	0.53
20:N:606:TGL:H202	20:N:606:TGL:C24	2.38	0.53
1:A:377:PHE:HA	1:A:380:VAL:HG22	1.88	0.53
2:B:146:MET:SD	2:B:189:PRO:HB3	2.48	0.53
3:C:213:THR:HG23	27:C:309:CDL:H762	1.90	0.53
23:C:301:DCW:C10	26:C:305:PEK:H371	2.39	0.53
2:B:132:GLU:HB3	2:B:137:GLU:HG3	1.91	0.53
7:G:37:LEU:HD21	27:G:101:CDL:H361	1.91	0.53
11:X:54:ARG:NH2	11:X:54:ARG:HG3	2.23	0.53
21:B:303:PSC:H032	29:E:203:HOH:O	2.09	0.53
8:H:60:TYR:CD1	8:H:60:TYR:C	2.81	0.53
9:I:33:THR:HG22	29:I:126:HOH:O	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:302:DMU:H25	26:P:305:PEK:H322	1.90	0.53
8:U:40:GLU:HG3	8:U:50:VAL:HG11	1.91	0.53
3:P:34:TRP:HZ2	24:P:302:DMU:H29	1.74	0.53
7:G:2:SER:OG	26:G:102:PEK:H301	2.09	0.52
1:N:383:MET:O	1:N:387:PHE:HB2	2.09	0.52
18:N:608:PGV:P	18:N:608:PGV:H061	2.49	0.52
7:G:17:ARG:HD2	29:O:401:HOH:O	2.09	0.52
7:T:3:ALA:HB1	26:T:101:PEK:H382	1.91	0.52
11:X:54:ARG:HG3	11:X:54:ARG:HH21	1.74	0.52
4:D:107:ILE:HD13	11:K:39:GLU:HB2	1.91	0.52
2:O:82:ARG:HG2	2:O:86:MET:HE3	1.91	0.52
27:C:309:CDL:H642	27:C:309:CDL:C19	2.36	0.52
1:N:449:MET:SD	2:O:5:MET:HG2	2.49	0.52
17:A:604:HEA:HBC1	17:A:604:HEA:HMC1	1.91	0.52
4:Q:107:ILE:HD13	11:X:39:GLU:HB2	1.91	0.52
5:R:8:ASP:HB3	9:V:10:ARG:CZ	2.39	0.52
2:B:56:MET:HA	21:B:303:PSC:H202	1.91	0.52
1:N:514:LYS:HE2	29:S:225:HOH:O	2.10	0.52
20:L:101:TGL:H362	29:L:214:HOH:O	2.08	0.52
1:N:406:ASN:HD21	18:N:608:PGV:C2	2.23	0.52
10:W:2:GLU:HA	29:W:213:HOH:O	2.10	0.52
1:N:175:ALA:CB	1:N:513:LEU:HD23	2.40	0.51
18:N:609:PGV:C32	26:P:305:PEK:H361	2.34	0.51
3:P:187:THR:CB	7:T:68:THR:HG21	2.39	0.51
1:A:160:GLY:HA3	29:A:741:HOH:O	2.10	0.51
1:A:337:ALA:HB2	1:A:394:VAL:HG23	1.91	0.51
3:C:168:THR:HG22	26:C:306:PEK:H14	1.91	0.51
8:U:49:ASP:O	8:U:52:VAL:HG22	2.11	0.51
2:B:146:MET:HA	2:B:213:LEU:HD12	1.93	0.51
5:R:67:ILE:O	5:R:70:VAL:HG12	2.10	0.51
5:R:99:SER:HB2	5:R:104:LEU:HD21	1.91	0.51
3:C:146:TRP:CE2	7:G:17:ARG:HG3	2.46	0.51
20:L:101:TGL:H202	20:L:101:TGL:C24	2.39	0.51
2:O:49:LYS:O	4:Q:20:ARG:NH2	2.43	0.51
1:A:240:HIS:HB3	1:A:241:PRO:HD3	1.93	0.51
6:F:30:PRO:O	6:F:96:LEU:HD11	2.11	0.51
7:T:3:ALA:O	7:T:4:ALA:HB2	2.11	0.51
8:U:20:PHE:CE2	8:U:27:ARG:HG2	2.39	0.51
20:B:302:TGL:HC82	29:B:2113:HOH:O	2.10	0.51
5:E:63:SER:O	5:E:67:ILE:HG13	2.11	0.51
2:B:62:GLU:O	2:B:66:THR:HB	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:14:SER:HB3	2:B:168:LEU:CD2	2.41	0.51
2:B:41:ILE:O	2:B:45:MET:HG2	2.11	0.51
20:D:201:TGL:HG11	20:D:201:TGL:CC2	2.39	0.50
1:A:290:HIS:CD2	1:A:291:HIS:CD2	2.98	0.50
26:P:306:PEK:H383	27:T:102:CDL:H273	1.92	0.50
6:S:22:LEU:O	6:S:25:ARG:HB3	2.11	0.50
2:O:145:PRO:HB2	2:O:148:MET:HG3	1.92	0.50
10:W:50:LEU:O	10:W:50:LEU:HD22	2.12	0.50
29:A:883:HOH:O	20:D:201:TGL:HG2	2.12	0.50
2:B:196:CYS:HB2	2:B:207:MET:HG3	1.93	0.50
3:C:55:TYR:HE1	27:C:309:CDL:H521	1.77	0.50
1:N:113:LEU:HD13	20:N:606:TGL:H292	1.93	0.50
1:N:240:HIS:HB3	1:N:241:PRO:HD3	1.93	0.50
26:C:306:PEK:H231	7:G:21:PHE:CD2	2.46	0.50
7:T:2:SER:OG	26:T:101:PEK:H301	2.11	0.50
1:A:98:ASN:HB2	1:A:163:ASN:ND2	2.27	0.50
1:N:175:ALA:HB1	1:N:513:LEU:HD23	1.94	0.50
12:Y:2:HIS:ND1	12:Y:3:TYR:N	2.60	0.50
26:C:305:PEK:H71	26:C:305:PEK:C3	2.42	0.49
4:D:127:LYS:HD2	29:I:108:HOH:O	2.10	0.49
2:O:7:LEU:HD11	20:O:303:TGL:H161	1.92	0.49
8:U:7:LYS:O	8:U:8:ILE:HG22	2.11	0.49
26:C:305:PEK:H102	26:C:305:PEK:C16	2.38	0.49
1:N:28:MET:CE	17:N:604:HEA:H271	2.43	0.49
3:P:210:ILE:HG12	18:P:307:PGV:H132	1.94	0.49
21:B:303:PSC:H073	5:E:11:PHE:CG	2.47	0.49
18:N:609:PGV:H262	18:P:307:PGV:H292	1.94	0.49
26:C:306:PEK:H383	27:G:101:CDL:C27	2.42	0.49
8:H:40:GLU:HG3	8:H:50:VAL:HG13	1.94	0.49
5:E:31:LYS:HE3	6:F:83:PRO:O	2.13	0.49
1:N:400:PHE:HB3	20:N:606:TGL:H283	1.95	0.49
2:O:161:HIS:HB2	2:O:174:ALA:HB3	1.93	0.49
2:B:218:TYR:HE1	29:I:117:HOH:O	1.95	0.49
2:O:1:FME:SD	2:O:133:LEU:CD1	3.01	0.49
1:A:107:PRO:HB3	3:C:25:LEU:HB2	1.95	0.48
3:C:116:TRP:HA	3:C:117:PRO:C	2.33	0.48
2:O:62:GLU:O	2:O:66:THR:HB	2.13	0.48
2:O:139:ASP:OD2	2:O:140:ASN:N	2.45	0.48
7:G:3:ALA:O	7:G:4:ALA:HB2	2.12	0.48
1:N:54:TYR:HB2	29:N:768:HOH:O	2.11	0.48
1:N:347:LEU:HD13	1:N:383:MET:SD	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Q:127:LYS:O	4:Q:130:PRO:HD3	2.13	0.48
2:B:102:HIS:O	2:B:104:TRP:HA	2.14	0.48
24:C:302:DMU:H25	26:C:305:PEK:H322	1.94	0.48
5:E:46:LYS:HG2	29:E:238:HOH:O	2.13	0.48
29:H:138:HOH:O	8:U:8:ILE:HG21	2.14	0.48
3:P:187:THR:HG22	26:P:305:PEK:H052	1.94	0.48
2:B:161:HIS:HB2	2:B:174:ALA:HB3	1.95	0.48
1:N:32:ALA:HB3	12:Y:36:PRO:HG2	1.95	0.48
21:O:304:PSC:H62	21:O:304:PSC:H241	1.95	0.48
4:Q:101:HIS:HD2	4:Q:102:TYR:CE2	2.31	0.48
2:B:82:ARG:HG2	2:B:86:MET:HE3	1.94	0.48
23:C:301:DCW:H62C	18:C:307:PGV:H301	1.96	0.48
4:Q:51:LEU:HD21	4:Q:59:LEU:CD1	2.43	0.48
6:S:22:LEU:HD23	6:S:25:ARG:NH1	2.28	0.48
2:B:23:PHE:CZ	2:B:80:SER:HB2	2.49	0.48
2:B:79:PRO:O	2:B:83:ILE:HG13	2.13	0.48
9:I:36:LYS:HA	9:I:40:ALA:HB3	1.95	0.48
2:O:16:ILE:HD13	2:O:16:ILE:HA	1.73	0.48
3:P:116:TRP:HA	3:P:117:PRO:C	2.32	0.48
1:A:151:HIS:CD2	26:C:305:PEK:H382	2.49	0.48
20:N:607:TGL:H271	2:O:46:LEU:HD12	1.96	0.48
1:A:298:ASP:HB3	29:A:834:HOH:O	2.13	0.48
3:C:16:TRP:CE3	3:C:16:TRP:HA	2.48	0.48
1:A:1:FME:HCN	1:A:4:ASN:H	1.79	0.47
18:A:607:PGV:H262	18:C:307:PGV:H292	1.96	0.47
20:B:302:TGL:HC22	29:I:107:HOH:O	2.12	0.47
27:P:309:CDL:H642	27:P:309:CDL:C19	2.36	0.47
1:A:2:PHE:HB3	29:A:890:HOH:O	2.14	0.47
18:A:606:PGV:P	18:A:606:PGV:H061	2.54	0.47
21:B:303:PSC:H62	21:B:303:PSC:H241	1.96	0.47
5:E:84:TYR:CZ	5:E:88:GLU:HG3	2.49	0.47
4:Q:48:TRP:HB2	5:R:96:LEU:O	2.14	0.47
5:R:105:GLY:O	5:R:108:LYS:HG2	2.14	0.47
2:B:91:ASN:HD22	2:B:92:ASN:N	2.12	0.47
18:N:608:PGV:H311	13:Z:16:ALA:HA	1.97	0.47
1:A:406:ASN:HD21	18:A:606:PGV:C2	2.28	0.47
3:C:37:PHE:CD1	10:J:52:TRP:HZ3	2.33	0.47
3:C:168:THR:CG2	26:C:306:PEK:H14	2.45	0.47
27:C:309:CDL:H632	27:C:309:CDL:H602	1.67	0.47
27:G:101:CDL:H212	1:N:311:ILE:HD12	1.97	0.47
1:N:160:GLY:HA3	29:N:740:HOH:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:177:SER:H	1:N:180:GLN:NE2	2.13	0.47
2:O:132:GLU:HB3	2:O:137:GLU:HG3	1.96	0.47
3:P:210:ILE:HD13	23:P:301:DCW:H61C	1.94	0.47
26:P:306:PEK:H383	27:T:102:CDL:C27	2.45	0.47
6:S:54:ASN:HD22	6:S:54:ASN:C	2.18	0.47
1:A:314:ILE:HB	1:A:315:PRO:CD	2.45	0.47
5:E:37:VAL:HG11	5:E:70:VAL:HG21	1.97	0.47
11:K:24:PHE:O	11:K:28:VAL:HG12	2.15	0.47
1:N:44:PRO:HG2	4:Q:111:PHE:CZ	2.49	0.47
5:R:86:ILE:HD13	5:R:86:ILE:HA	1.68	0.47
10:J:29:ASN:HD22	10:J:29:ASN:H	1.63	0.47
1:A:1:FME:HCN	1:A:4:ASN:HB2	1.96	0.47
1:A:306:THR:O	1:A:310:MET:HG3	2.14	0.47
1:A:398:PRO:HA	1:A:403:TYR:O	2.15	0.47
6:F:85:CYS:SG	6:F:87:THR:HG23	2.55	0.47
1:N:472:ILE:HD13	20:N:606:TGL:HA91	1.96	0.47
2:O:83:ILE:O	2:O:87:MET:HG3	2.15	0.47
22:P:310:CHD:H161	29:P:469:HOH:O	2.14	0.47
11:X:36:ILE:HG13	11:X:38:ILE:HG13	1.97	0.46
1:N:398:PRO:HA	1:N:403:TYR:O	2.15	0.46
1:A:35:LEU:HD11	1:A:462:LEU:HB2	1.98	0.46
18:C:307:PGV:H182	27:C:309:CDL:C67	2.45	0.46
26:G:102:PEK:H042	3:P:77:LYS:NZ	2.30	0.46
12:L:41:ARG:HD2	13:M:40:TYR:CZ	2.51	0.46
4:Q:131:ILE:HD12	4:Q:131:ILE:H	1.81	0.46
1:A:296:GLY:HA2	8:H:23:GLN:OE1	2.15	0.46
3:C:146:TRP:CD2	3:C:162:ALA:HB2	2.50	0.46
7:G:2:SER:O	26:G:102:PEK:H322	2.15	0.46
3:P:168:THR:CG2	26:P:306:PEK:H14	2.45	0.46
3:C:16:TRP:HA	3:C:16:TRP:HE3	1.80	0.46
5:R:43:PRO:HB2	5:R:48:ILE:HD11	1.98	0.46
27:T:102:CDL:H571	27:T:102:CDL:H601	1.45	0.46
1:A:128:VAL:O	1:A:128:VAL:HG12	2.16	0.46
20:N:607:TGL:H212	20:N:607:TGL:H242	1.75	0.46
2:B:164:ALA:O	2:B:194:GLY:HA3	2.15	0.46
1:N:407:ASP:O	1:N:411:LYS:HG3	2.15	0.46
2:O:215:PRO:HD3	9:V:60:PHE:CD2	2.51	0.46
3:P:195:SER:O	3:P:199:VAL:HG23	2.16	0.46
4:Q:98:TRP:CD2	24:Z:101:DMU:H10	2.50	0.46
3:C:92:LEU:O	3:C:95:THR:HB	2.15	0.46
1:N:113:LEU:HD12	20:N:606:TGL:H292	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:N:607:TGL:HG11	20:N:607:TGL:CC2	2.39	0.46
1:A:400:PHE:HB3	20:L:101:TGL:H283	1.98	0.46
6:F:90:LYS:HD2	29:F:244:HOH:O	2.15	0.46
11:X:6:ALA:HA	11:X:7:PRO:HD2	1.86	0.46
1:A:321:PHE:CE2	21:B:303:PSC:H341	2.51	0.45
3:C:55:TYR:CE1	27:C:309:CDL:H521	2.51	0.45
1:N:440:TYR:HE2	2:O:204:HIS:CE1	2.34	0.45
2:O:62:GLU:HB2	29:O:490:HOH:O	2.16	0.45
2:O:217:LYS:HA	2:O:217:LYS:HE2	1.98	0.45
20:O:303:TGL:HC22	29:Q:220:HOH:O	2.16	0.45
5:R:5:HIS:HB3	5:R:6:GLU:H	1.63	0.45
1:N:242:GLU:HA	1:N:245:ILE:HD12	1.99	0.45
2:O:92:ASN:HA	2:O:93:PRO:HD2	1.79	0.45
21:B:303:PSC:H142	21:B:303:PSC:C34	2.23	0.45
10:J:40:LEU:HD12	22:J:101:CHD:H183	1.99	0.45
4:Q:63:LYS:HG2	4:Q:64:PHE:CE1	2.51	0.45
3:C:117:PRO:HG3	3:C:123:PRO:HG2	1.99	0.45
6:F:64:GLU:O	6:F:65:ASP:HB2	2.17	0.45
1:N:310:MET:HE1	2:O:76:ILE:HB	1.98	0.45
1:N:468:MET:O	1:N:472:ILE:HG13	2.16	0.45
4:Q:23:PRO:O	4:Q:25:PRO:HD3	2.16	0.45
1:A:482:VAL:HG22	13:M:1:ILE:HD11	1.98	0.45
21:B:303:PSC:H12	21:B:303:PSC:H322	1.99	0.45
12:L:20:ARG:HH22	20:L:101:TGL:CC4	2.29	0.45
13:M:42:LYS:HA	13:M:42:LYS:CE	2.44	0.45
2:O:68:LEU:CB	2:O:69:PRO:HD3	2.47	0.45
21:O:304:PSC:H032	29:R:203:HOH:O	2.17	0.45
3:P:112:LEU:HD13	3:P:118:PRO:HG3	1.97	0.45
18:A:606:PGV:H311	13:M:16:ALA:HA	1.98	0.45
12:L:20:ARG:HH22	20:L:101:TGL:CC3	2.28	0.45
2:O:216:LEU:O	2:O:219:PHE:HB3	2.17	0.45
3:P:92:LEU:O	3:P:95:THR:HB	2.16	0.45
1:A:32:ALA:HB3	12:L:36:PRO:HG2	1.98	0.45
2:O:164:ALA:O	2:O:194:GLY:HA3	2.15	0.45
6:S:70:ILE:HG13	6:S:84:SER:HB3	1.98	0.45
1:A:165:ILE:O	1:A:169:ILE:HG12	2.16	0.45
21:B:303:PSC:H251	21:B:303:PSC:H221	1.75	0.45
22:C:310:CHD:H112	22:C:310:CHD:H12A	1.71	0.45
4:D:102:TYR:CD1	13:M:35:TYR:HE1	2.35	0.45
1:N:194:LEU:HD22	1:N:285:PHE:HE2	1.82	0.45
5:E:12:ASP:OD1	5:E:44:GLU:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:95:GLN:OE1	6:F:95:GLN:HA	2.17	0.45
7:G:7:ASP:O	1:N:169:ILE:HD12	2.16	0.45
20:N:606:TGL:H272	20:N:606:TGL:H231	1.98	0.45
11:X:54:ARG:HH21	11:X:54:ARG:CG	2.30	0.45
4:D:16:TYR:CE1	4:D:25:PRO:HG2	2.52	0.45
1:N:265:LYS:HB2	1:N:490:THR:HG21	1.99	0.44
1:A:264:LYS:HE2	29:A:888:HOH:O	2.15	0.44
23:C:301:DCW:H101	26:C:305:PEK:C37	2.47	0.44
1:N:334:TRP:CZ2	2:O:46:LEU:HB3	2.53	0.44
10:W:16:ASN:ND2	10:W:18:LEU:HD12	2.33	0.44
1:A:406:ASN:HD21	18:A:606:PGV:H21	1.82	0.44
2:B:74:ILE:HD11	27:T:102:CDL:H452	1.98	0.44
3:C:247:VAL:HG11	26:T:101:PEK:H132	1.99	0.44
4:D:48:TRP:CH2	5:E:56:ARG:HA	2.53	0.44
11:K:42:PRO:HG2	11:K:47:ARG:NE	2.32	0.44
3:P:40:MET:O	3:P:44:MET:HG2	2.17	0.44
3:P:249:TRP:HD1	29:P:419:HOH:O	1.99	0.44
5:R:96:LEU:HD12	5:R:98:ILE:HD11	1.98	0.44
7:T:38:HIS:CD2	27:T:102:CDL:HA21	2.52	0.44
6:F:8:THR:OG1	6:F:11:GLU:HG3	2.17	0.44
1:N:488:THR:HB	1:N:495:LEU:HD13	1.99	0.44
1:A:472:ILE:HD13	20:L:101:TGL:HA91	2.00	0.44
8:H:30:TRP:CE2	8:H:34:LEU:HD11	2.51	0.44
7:T:6:GLY:O	26:T:101:PEK:H311	2.18	0.44
12:Y:42:HIS:NE2	12:Y:46:LYS:HD2	2.32	0.44
18:N:609:PGV:H343	23:P:301:DCW:C4	2.47	0.44
4:Q:122:ARG:HG2	4:Q:126:MET:CE	2.47	0.44
5:R:12:ASP:HA	5:R:47:ILE:HD11	1.99	0.44
3:C:42:LEU:HD23	3:C:42:LEU:HA	1.80	0.44
1:N:481:GLU:HB2	13:Z:4:LYS:HE2	1.97	0.44
2:O:100:MET:HB2	2:O:107:SER:OG	2.18	0.44
1:A:377:PHE:CD1	17:A:605:HEA:HAD1	2.53	0.44
3:C:30:GLY:HA2	3:C:42:LEU:HB3	2.00	0.44
1:A:449:MET:SD	2:B:5:MET:HG2	2.57	0.44
3:C:47:LEU:O	3:C:51:MET:HG2	2.18	0.44
7:G:84:LYS:HD2	7:G:84:LYS:N	2.07	0.44
2:O:196:CYS:HB2	2:O:207:MET:HG3	2.00	0.44
6:S:30:PRO:O	6:S:96:LEU:HD11	2.18	0.44
12:Y:26:THR:HG23	13:Z:25:SER:HB3	2.00	0.44
1:A:321:PHE:CZ	21:B:303:PSC:H171	2.53	0.43
3:C:31:LEU:HA	3:C:31:LEU:HD23	1.89	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:C:302:DMU:H30	24:C:302:DMU:O1	2.18	0.43
4:D:88:PHE:CZ	13:M:19:LEU:HD21	2.53	0.43
4:D:98:TRP:CD2	24:M:101:DMU:H10	2.53	0.43
5:E:97:GLY:HA2	29:E:258:HOH:O	2.18	0.43
6:F:54:ASN:OD1	6:F:76:LYS:HD2	2.18	0.43
10:J:31:LEU:HD12	10:J:31:LEU:HA	1.82	0.43
2:O:121:TYR:O	2:O:138:VAL:HA	2.17	0.43
3:P:210:ILE:CD1	23:P:301:DCW:H52C	2.48	0.43
5:R:53:ARG:O	5:R:56:ARG:HB3	2.18	0.43
6:S:51:SER:HB2	6:S:91:LEU:HD11	2.00	0.43
23:C:301:DCW:H101	26:C:305:PEK:H371	2.01	0.43
8:H:9:LYS:HB2	8:H:9:LYS:HE2	1.86	0.43
27:T:102:CDL:H322	27:T:102:CDL:HA62	2.01	0.43
13:Z:35:TYR:HD2	13:Z:36:HIS:CE1	2.37	0.43
2:O:9:PHE:HB2	2:O:21:LEU:HD21	2.00	0.43
2:O:134:ARG:HB2	4:Q:110:THR:HG21	1.99	0.43
21:O:304:PSC:H073	5:R:11:PHE:CG	2.53	0.43
4:Q:122:ARG:HG2	4:Q:126:MET:HE3	2.00	0.43
2:B:78:LEU:HD12	2:B:78:LEU:HA	1.72	0.43
3:C:149:HIS:O	3:C:153:GLU:HG3	2.19	0.43
1:N:513:LEU:HD22	1:N:513:LEU:HA	1.81	0.43
2:O:74:ILE:O	2:O:78:LEU:HD22	2.19	0.43
7:T:48:ILE:HA	7:T:49:PRO:HD3	1.80	0.43
2:O:48:THR:HB	9:V:16:ARG:CZ	2.48	0.43
5:R:100:THR:HB	5:R:101:PRO:HD2	2.00	0.43
4:D:82:VAL:O	4:D:86:MET:HG3	2.18	0.43
4:D:126:MET:HA	9:I:68:ILE:HD13	2.01	0.43
3:P:210:ILE:HD13	23:P:301:DCW:C6	2.49	0.43
27:P:309:CDL:H431	29:W:206:HOH:O	2.19	0.43
1:A:282:PHE:HZ	27:T:102:CDL:H761	1.84	0.43
1:A:468:MET:HG3	29:A:849:HOH:O	2.18	0.43
17:A:605:HEA:HAD2	17:A:605:HEA:HHA	1.85	0.43
10:J:50:LEU:HD22	10:J:50:LEU:O	2.18	0.43
20:L:101:TGL:H231	20:L:101:TGL:H272	2.01	0.43
1:N:400:PHE:HB3	20:N:606:TGL:C28	2.49	0.43
2:O:1:FME:SD	2:O:133:LEU:HD11	2.58	0.43
4:Q:86:MET:O	11:X:25:CYS:HB2	2.18	0.43
27:T:102:CDL:H231	27:T:102:CDL:C54	2.40	0.43
1:A:426:PHE:HB3	1:A:427:PRO:HD3	2.01	0.43
17:N:604:HEA:H271	17:N:604:HEA:H212	1.84	0.43
21:O:304:PSC:O01	21:O:304:PSC:H212	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:P:309:CDL:H672	27:P:309:CDL:H641	1.87	0.43
4:Q:121:LYS:HG2	11:X:53:TRP:CD1	2.53	0.43
2:B:41:ILE:CD1	21:B:303:PSC:H342	2.45	0.43
2:B:200:CYS:SG	2:B:204:HIS:HA	2.58	0.43
3:C:55:TYR:CD1	27:C:309:CDL:H532	2.54	0.43
3:C:151:LEU:HB2	3:C:159:MET:HG3	2.01	0.43
4:D:69:ALA:O	5:E:109:VAL:HG12	2.18	0.43
2:O:1:FME:SD	2:O:133:LEU:HD13	2.59	0.43
3:P:51:MET:SD	27:P:309:CDL:H622	2.59	0.43
4:Q:101:HIS:HD2	4:Q:102:TYR:CD2	2.37	0.43
7:T:2:SER:O	26:T:101:PEK:H322	2.19	0.43
7:T:84:LYS:HD2	7:T:84:LYS:N	2.10	0.43
8:U:57:ARG:HA	8:U:60:TYR:CD2	2.53	0.43
1:A:98:ASN:HB2	1:A:163:ASN:HD21	1.84	0.42
1:A:431:LEU:HD21	1:A:450:TRP:HB2	2.01	0.42
7:G:34:ASN:O	7:G:37:LEU:HB3	2.18	0.42
1:A:1:FME:HE2	1:A:1:FME:HA	2.01	0.42
22:B:304:CHD:H213	22:B:304:CHD:H231	1.82	0.42
3:C:51:MET:SD	27:C:309:CDL:H622	2.59	0.42
20:D:201:TGL:HC22	20:D:201:TGL:HC51	1.82	0.42
18:N:608:PGV:H012	29:N:860:HOH:O	2.19	0.42
1:A:76:GLY:O	1:A:80:ASN:HB2	2.19	0.42
1:N:321:PHE:HB3	2:O:65:TRP:CE3	2.54	0.42
27:G:101:CDL:H571	27:G:101:CDL:H601	1.42	0.42
26:G:102:PEK:H132	3:P:247:VAL:HG11	2.00	0.42
23:P:301:DCW:C10	26:P:305:PEK:H371	2.50	0.42
1:A:52:GLN:O	1:A:56:VAL:HG23	2.20	0.42
18:A:607:PGV:H332	24:C:302:DMU:H24	2.01	0.42
2:B:7:LEU:HD11	20:B:302:TGL:H161	2.02	0.42
8:H:36:PHE:CD1	8:H:57:ARG:HB2	2.54	0.42
1:N:374:VAL:HA	1:N:377:PHE:CE1	2.55	0.42
1:N:399:LEU:HB2	1:N:494:TRP:CZ3	2.54	0.42
3:P:87:ILE:O	3:P:91:VAL:HG23	2.19	0.42
24:P:302:DMU:H26	24:P:302:DMU:H18	1.80	0.42
4:Q:126:MET:HA	9:V:68:ILE:HD13	2.01	0.42
7:T:31:CYS:SG	27:T:102:CDL:H552	2.60	0.42
2:B:134:ARG:HB2	4:D:110:THR:HG21	2.01	0.42
17:N:605:HEA:HAD2	17:N:605:HEA:HHA	1.82	0.42
8:U:36:PHE:CD1	8:U:57:ARG:HB2	2.55	0.42
12:Y:26:THR:HG23	13:Z:25:SER:HB2	2.02	0.42
1:A:242:GLU:HA	1:A:245:ILE:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:514:LYS:HE2	29:F:226:HOH:O	2.18	0.42
18:A:606:PGV:H152	18:A:606:PGV:H301	2.02	0.42
3:C:241:TYR:O	3:C:244:PHE:HB3	2.19	0.42
18:N:609:PGV:H321	26:P:305:PEK:C36	2.37	0.42
2:O:57:ASP:N	21:O:304:PSC:H201	2.23	0.42
7:G:5:LYS:CB	26:G:102:PEK:H362	2.34	0.42
26:G:102:PEK:H132	3:P:247:VAL:CG1	2.50	0.42
7:T:11:TPO:HG22	7:T:16:TRP:HE1	1.85	0.42
8:U:37:HIS:CD2	8:U:76:ARG:CZ	3.03	0.42
18:A:607:PGV:H182	3:C:28:THR:HG22	2.00	0.42
3:C:64:GLU:HA	3:C:68:GLN:HE21	1.84	0.42
20:L:101:TGL:HB31	20:L:101:TGL:HB61	1.92	0.42
24:P:302:DMU:H30	24:P:302:DMU:O1	2.19	0.42
23:P:301:DCW:H62C	18:P:307:PGV:H281	2.02	0.42
26:P:305:PEK:H71	26:P:305:PEK:C3	2.43	0.42
4:Q:20:ARG:HD2	4:Q:72:ASN:OD1	2.20	0.42
12:L:35:ALA:HB3	12:L:36:PRO:HD3	2.01	0.42
21:O:304:PSC:H073	5:R:11:PHE:CB	2.49	0.42
1:A:498:CYS:HA	1:A:499:PRO:HA	1.93	0.41
1:N:426:PHE:HB3	1:N:427:PRO:HD3	2.01	0.41
4:Q:34:SER:H	4:Q:37:GLN:HE21	1.68	0.41
4:Q:130:PRO:O	4:Q:136:ALA:HB2	2.20	0.41
6:S:92:VAL:O	6:S:92:VAL:HG23	2.19	0.41
1:A:158:ILE:HD13	23:C:301:DCW:H121	2.01	0.41
2:B:122:MET:SD	2:B:206:PHE:HB3	2.60	0.41
13:M:37:LEU:HD23	13:M:37:LEU:HA	1.81	0.41
1:N:261:TYR:CE2	1:N:337:ALA:HB3	2.55	0.41
1:N:422:ASN:HB3	20:O:303:TGL:H242	2.02	0.41
2:O:1:FME:CE	2:O:133:LEU:HD13	2.51	0.41
2:O:189:PRO:HD2	9:V:54:TYR:OH	2.20	0.41
2:O:224:ALA:O	2:O:227:LEU:CG	2.59	0.41
3:P:16:TRP:HA	3:P:16:TRP:CE3	2.55	0.41
3:P:168:THR:HG21	26:P:306:PEK:H12	2.00	0.41
9:V:37:PHE:HA	9:V:41:GLU:HB2	2.02	0.41
13:Z:28:LEU:HB2	13:Z:29:PRO:HD3	2.01	0.41
1:A:194:LEU:HD22	1:A:285:PHE:HE2	1.84	0.41
2:B:78:LEU:CD1	27:T:102:CDL:H351	2.50	0.41
3:C:187:THR:CB	7:G:68:THR:HG21	2.50	0.41
21:O:304:PSC:H12	21:O:304:PSC:H322	2.03	0.41
3:P:243:HIS:O	3:P:247:VAL:HG23	2.20	0.41
27:P:309:CDL:H371	27:P:309:CDL:H401	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:194:LEU:HD22	1:A:285:PHE:CE2	2.55	0.41
17:A:604:HEA:H122	17:A:604:HEA:HHC	2.03	0.41
18:A:606:PGV:H321	18:A:606:PGV:C15	2.50	0.41
27:C:309:CDL:H672	27:C:309:CDL:H641	1.90	0.41
1:N:171:MET:HG2	3:P:8:TYR:CE1	2.55	0.41
1:A:383:MET:O	1:A:387:PHE:CB	2.68	0.41
1:A:394:VAL:HG23	1:A:395:HIS:N	2.35	0.41
2:B:151:ARG:HD3	2:B:181:GLN:HE21	1.86	0.41
26:C:306:PEK:H371	27:G:101:CDL:H261	2.01	0.41
1:N:175:ALA:HB2	6:S:35:ALA:HB1	2.03	0.41
1:N:390:MET:O	1:N:394:VAL:HG13	2.21	0.41
2:O:128:LEU:HD11	2:O:134:ARG:HA	2.02	0.41
22:W:101:CHD:H112	22:W:101:CHD:H12A	1.83	0.41
2:B:116:LEU:HD12	2:B:117:SER:N	2.36	0.41
5:E:52:LEU:O	5:E:55:CYS:HB2	2.20	0.41
2:O:1:FME:HCN	2:O:193:TYR:HB2	2.03	0.41
1:N:377:PHE:CD1	17:N:605:HEA:HAD1	2.56	0.41
21:O:304:PSC:H073	5:R:11:PHE:HB3	2.03	0.41
1:A:377:PHE:HA	1:A:380:VAL:CG2	2.51	0.41
2:B:123:ILE:CG2	2:B:128:LEU:HD23	2.51	0.41
2:B:215:PRO:HD3	9:I:60:PHE:CD2	2.56	0.41
3:C:187:THR:HG22	26:C:305:PEK:H052	2.02	0.41
7:G:48:ILE:HA	7:G:49:PRO:HD3	1.86	0.41
27:G:101:CDL:H322	27:G:101:CDL:HA62	2.02	0.41
8:H:40:GLU:HG3	8:H:50:VAL:CG1	2.51	0.41
8:H:64:CYS:HA	8:H:65:PRO:HD3	1.97	0.41
2:O:75:LEU:HD12	2:O:75:LEU:HA	1.86	0.41
8:U:57:ARG:HH11	8:U:61:LYS:HE2	1.86	0.41
1:A:1:FME:HA	1:A:1:FME:CE	2.51	0.41
1:A:229:ILE:HD11	2:B:175:ILE:HD13	2.03	0.41
3:C:115:CYS:HB2	29:C:478:HOH:O	2.20	0.41
4:D:33:LEU:HD22	4:D:37:GLN:HB3	2.03	0.41
1:N:113:LEU:O	1:N:117:MET:HG2	2.20	0.41
1:N:169:ILE:HD11	1:N:189:MET:SD	2.61	0.41
1:N:172:LYS:HD2	1:N:181:THR:HG21	2.03	0.41
2:O:160:LEU:HD22	2:O:175:ILE:HG12	2.02	0.41
7:T:79:PRO:HD2	29:T:203:HOH:O	2.19	0.41
2:B:92:ASN:HA	2:B:93:PRO:HD2	1.93	0.40
20:D:201:TGL:HC61	29:D:364:HOH:O	2.20	0.40
3:P:129:VAL:N	3:P:130:PRO:CD	2.84	0.40
3:P:156:ARG:HG3	3:P:156:ARG:HH11	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:29:SER:HB2	3:C:42:LEU:HD13	2.02	0.40
23:C:301:DCW:H62C	18:C:307:PGV:H281	2.02	0.40
17:N:604:HEA:H122	17:N:604:HEA:HHC	2.03	0.40
3:P:230:ASN:HB2	29:S:217:HOH:O	2.21	0.40
27:P:309:CDL:HB21	27:P:309:CDL:CB3	2.51	0.40
10:W:21:HIS:O	10:W:22:LEU:HD23	2.21	0.40
18:A:607:PGV:H91	3:C:50:ASN:OD1	2.20	0.40
2:B:56:MET:HA	21:B:303:PSC:H201	2.04	0.40
3:C:51:MET:SD	27:C:309:CDL:C62	3.09	0.40
4:D:107:ILE:HD13	11:K:39:GLU:CB	2.51	0.40
4:Q:121:LYS:HG2	11:X:53:TRP:HD1	1.85	0.40
1:A:321:PHE:HB3	2:B:65:TRP:CE3	2.56	0.40
17:A:605:HEA:H11	17:A:605:HEA:HMB1	1.91	0.40
27:T:102:CDL:H251	27:T:102:CDL:H222	1.85	0.40
2:B:145:PRO:HA	2:B:214:VAL:O	2.21	0.40
21:B:303:PSC:O01	21:B:303:PSC:H212	2.21	0.40
7:G:6:GLY:O	26:G:102:PEK:H311	2.21	0.40
1:N:459:PHE:HB3	4:Q:92:THR:HG23	2.04	0.40
7:T:67:HIS:HD2	7:T:71:HIS:CD2	2.39	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	512/514 (100%)	493 (96%)	19 (4%)	0	100	100
1	N	512/514 (100%)	493 (96%)	19 (4%)	0	100	100
2	B	225/227 (99%)	209 (93%)	14 (6%)	2 (1%)	17	16
2	O	225/227 (99%)	206 (92%)	18 (8%)	1 (0%)	34	37
3	C	257/261 (98%)	251 (98%)	6 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	P	257/261 (98%)	251 (98%)	6 (2%)	0	100	100
4	D	142/147 (97%)	140 (99%)	2 (1%)	0	100	100
4	Q	142/147 (97%)	138 (97%)	4 (3%)	0	100	100
5	E	103/109 (94%)	101 (98%)	2 (2%)	0	100	100
5	R	103/109 (94%)	100 (97%)	3 (3%)	0	100	100
6	F	96/98 (98%)	87 (91%)	6 (6%)	3 (3%)	4	2
6	S	96/98 (98%)	87 (91%)	5 (5%)	4 (4%)	3	1
7	G	81/85 (95%)	64 (79%)	9 (11%)	8 (10%)	0	0
7	T	81/85 (95%)	65 (80%)	8 (10%)	8 (10%)	0	0
8	H	77/85 (91%)	70 (91%)	6 (8%)	1 (1%)	12	9
8	U	77/85 (91%)	70 (91%)	6 (8%)	1 (1%)	12	9
9	I	71/73 (97%)	67 (94%)	4 (6%)	0	100	100
9	V	71/73 (97%)	67 (94%)	4 (6%)	0	100	100
10	J	56/59 (95%)	55 (98%)	1 (2%)	0	100	100
10	W	56/59 (95%)	55 (98%)	1 (2%)	0	100	100
11	K	47/56 (84%)	46 (98%)	1 (2%)	0	100	100
11	X	47/56 (84%)	46 (98%)	1 (2%)	0	100	100
12	L	44/47 (94%)	43 (98%)	1 (2%)	0	100	100
12	Y	44/47 (94%)	43 (98%)	1 (2%)	0	100	100
13	M	41/46 (89%)	41 (100%)	0	0	100	100
13	Z	41/46 (89%)	41 (100%)	0	0	100	100
All	All	3504/3614 (97%)	3329 (95%)	147 (4%)	28 (1%)	19	19

All (28) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
7	G	4	ALA
7	G	7	ASP
7	G	8	HIS
7	G	39	SER
6	S	94	HIS
6	S	95	GLN
7	T	4	ALA
7	T	7	ASP
7	T	8	HIS

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Mol	Chain	Res	Type
7	T	39	SER
2	B	60	GLU
6	F	94	HIS
6	F	95	GLN
7	G	40	GLY
8	H	8	ILE
2	O	60	GLU
7	T	40	GLY
7	G	3	ALA
6	S	93	PRO
7	T	3	ALA
8	U	8	ILE
7	G	6	GLY
6	F	96	LEU
6	S	96	LEU
7	T	6	GLY
2	B	92	ASN
7	G	10	GLY
7	T	10	GLY

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	426/426 (100%)	416 (98%)	10 (2%)	50 63
1	N	426/426 (100%)	414 (97%)	12 (3%)	43 56
2	B	210/210 (100%)	201 (96%)	9 (4%)	29 36
2	O	210/210 (100%)	195 (93%)	15 (7%)	14 16
3	C	224/226 (99%)	217 (97%)	7 (3%)	40 51
3	P	224/226 (99%)	219 (98%)	5 (2%)	52 65
4	D	128/129 (99%)	127 (99%)	1 (1%)	81 90
4	Q	128/129 (99%)	127 (99%)	1 (1%)	81 90
5	E	92/95 (97%)	89 (97%)	3 (3%)	38 49

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
5	R	92/95 (97%)	88 (96%)	4 (4%)	29 36
6	F	81/81 (100%)	80 (99%)	1 (1%)	71 83
6	S	81/81 (100%)	78 (96%)	3 (4%)	34 43
7	G	67/68 (98%)	62 (92%)	5 (8%)	13 14
7	T	67/68 (98%)	61 (91%)	6 (9%)	9 9
8	H	71/75 (95%)	69 (97%)	2 (3%)	43 56
8	U	71/75 (95%)	68 (96%)	3 (4%)	30 38
9	I	57/57 (100%)	54 (95%)	3 (5%)	22 27
9	V	57/57 (100%)	56 (98%)	1 (2%)	59 72
10	J	49/50 (98%)	47 (96%)	2 (4%)	30 39
10	W	49/50 (98%)	48 (98%)	1 (2%)	55 69
11	K	39/46 (85%)	39 (100%)	0	100 100
11	X	39/46 (85%)	37 (95%)	2 (5%)	24 29
12	L	39/40 (98%)	38 (97%)	1 (3%)	46 58
12	Y	39/40 (98%)	39 (100%)	0	100 100
13	M	37/38 (97%)	29 (78%)	8 (22%)	1 1
13	Z	37/38 (97%)	33 (89%)	4 (11%)	6 6
All	All	3040/3082 (99%)	2931 (96%)	109 (4%)	35 45

All (109) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	38	ARG
1	A	109	PHE
1	A	115	SER
1	A	138	HIS
1	A	180	GLN
1	A	238	PHE
1	A	369	ASP
1	A	486	ASP
1	A	504	THR
1	A	513	LEU
2	B	33	LEU
2	B	60	GLU
2	B	66	THR
2	B	75	LEU

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Mol	Chain	Res	Type
2	B	78	LEU
2	B	91	ASN
2	B	115	ASP
2	B	167	SER
2	B	171	LYS
3	C	13	PRO
3	C	17	PRO
3	C	110	PRO
3	C	159	MET
3	C	179	SER
3	C	192	VAL
3	C	214	PHE
4	D	51	LEU
5	E	70	VAL
5	E	90	ARG
5	E	91	PRO
6	F	48	LEU
7	G	17	ARG
7	G	18	PHE
7	G	36	TRP
7	G	54	ARG
7	G	84	LYS
8	H	29	CYS
8	H	60	TYR
9	I	8	GLN
9	I	15	ARG
9	I	37	PHE
10	J	4	ARG
10	J	50	LEU
12	L	2	HIS
13	M	4	LYS
13	M	12	PRO
13	M	13	LYS
13	M	34	LEU
13	M	38	ASP
13	M	39	ASN
13	M	42	LYS
13	M	43	SER
1	N	38	ARG
1	N	96	ARG
1	N	109	PHE
1	N	115	SER

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Mol	Chain	Res	Type
1	N	138	HIS
1	N	180	GLN
1	N	238	PHE
1	N	241	PRO
1	N	338	MET
1	N	369	ASP
1	N	484	THR
1	N	513	LEU
2	O	3	TYR
2	O	16	ILE
2	O	32	PHE
2	O	33	LEU
2	O	54	SER
2	O	60	GLU
2	O	66	THR
2	O	68	LEU
2	O	75	LEU
2	O	78	LEU
2	O	91	ASN
2	O	94	SER
2	O	115	ASP
2	O	148	MET
2	O	167	SER
3	P	29	SER
3	P	33	MET
3	P	159	MET
3	P	214	PHE
3	P	230	ASN
4	Q	121	LYS
5	R	5	HIS
5	R	70	VAL
5	R	77	PRO
5	R	90	ARG
6	S	37	LYS
6	S	53	THR
6	S	54	ASN
7	T	18	PHE
7	T	33	LEU
7	T	38	HIS
7	T	43	GLU
7	T	54	ARG
7	T	84	LYS

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Mol	Chain	Res	Type
8	U	27	ARG
8	U	29	CYS
8	U	60	TYR
9	V	8	GLN
10	W	50	LEU
11	X	20	SER
11	X	54	ARG
13	Z	13	LYS
13	Z	34	LEU
13	Z	38	ASP
13	Z	42	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (43) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	178	GLN
1	A	180	GLN
1	A	512	ASN
2	B	52	HIS
2	B	181	GLN
2	B	195	GLN
3	C	3	HIS
3	C	68	GLN
3	C	70	HIS
3	C	149	HIS
4	D	37	GLN
4	D	143	ASN
5	E	78	HIS
5	E	94	ASN
7	G	66	ASN
7	G	71	HIS
9	I	8	GLN
10	J	29	ASN
11	K	35	GLN
1	N	151	HIS
1	N	178	GLN
1	N	180	GLN
1	N	413	HIS
1	N	512	ASN
2	O	10	GLN
2	O	22	HIS
2	O	52	HIS

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Mol	Chain	Res	Type
2	O	91	ASN
2	O	181	GLN
2	O	195	GLN
3	P	50	ASN
3	P	68	GLN
3	P	149	HIS
4	Q	37	GLN
4	Q	101	HIS
5	R	94	ASN
6	S	54	ASN
6	S	94	HIS
7	T	34	ASN
7	T	66	ASN
7	T	71	HIS
9	V	8	GLN
10	W	57	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

8 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
1	FME	N	1	1	8,9,10	0.83	0	7,9,11	1.16	1 (14%)
7	TPO	T	11	7	8,10,11	1.33	1 (12%)	10,14,16	1.06	0
9	SAC	V	1	9	7,8,9	2.93	2 (28%)	8,9,11	2.99	5 (62%)
7	TPO	G	11	7	8,10,11	1.71	1 (12%)	10,14,16	1.01	0
2	FME	B	1	2	8,9,10	0.95	0	7,9,11	1.70	2 (28%)
2	FME	O	1	2	8,9,10	0.64	0	7,9,11	1.80	2 (28%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	FME	A	1	1	8,9,10	0.74	0	7,9,11	1.49	1 (14%)
9	SAC	I	1	9	7,8,9	2.53	2 (28%)	8,9,11	2.94	4 (50%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	FME	N	1	1	-	4/7/9/11	-
7	TPO	T	11	7	-	5/9/11/13	-
9	SAC	V	1	9	-	3/7/8/10	-
7	TPO	G	11	7	-	4/9/11/13	-
2	FME	B	1	2	-	1/7/9/11	-
2	FME	O	1	2	-	1/7/9/11	-
1	FME	A	1	1	-	3/7/9/11	-
9	SAC	I	1	9	-	3/7/8/10	-

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	V	1	SAC	CA-N	5.31	1.53	1.46
9	V	1	SAC	OAC-C1A	5.19	1.35	1.23
9	I	1	SAC	OAC-C1A	5.13	1.34	1.23
9	I	1	SAC	CA-N	4.03	1.52	1.46
7	G	11	TPO	CB-CA	3.60	1.61	1.53
7	T	11	TPO	CB-CA	2.11	1.58	1.53

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	I	1	SAC	CA-N-C1A	-6.28	111.56	123.15
9	V	1	SAC	CA-N-C1A	-6.18	111.76	123.15
2	O	1	FME	C-CA-N	3.83	116.64	109.73
9	I	1	SAC	CB-CA-N	3.33	118.01	110.55
2	B	1	FME	C-CA-N	3.18	115.47	109.73
9	I	1	SAC	C-CA-N	-3.05	104.24	109.73
9	V	1	SAC	C-CA-N	-2.98	104.35	109.73
1	A	1	FME	CA-N-CN	-2.97	118.25	122.82
9	V	1	SAC	C2A-C1A-N	2.90	121.00	116.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	1	FME	CA-N-CN	-2.76	118.58	122.82
9	V	1	SAC	CB-CA-N	2.60	116.39	110.55
9	V	1	SAC	OAC-C1A-C2A	-2.51	117.40	122.06
2	O	1	FME	CA-N-CN	-2.37	119.18	122.82
1	N	1	FME	CA-N-CN	-2.21	119.43	122.82
9	I	1	SAC	C2A-C1A-N	2.03	119.53	116.10

There are no chirality outliers.

All (24) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	1	FME	O1-CN-N-CA
2	B	1	FME	O1-CN-N-CA
7	G	11	TPO	N-CA-CB-CG2
7	G	11	TPO	N-CA-CB-OG1
7	G	11	TPO	C-CA-CB-CG2
9	I	1	SAC	CB-CA-N-C1A
1	N	1	FME	O1-CN-N-CA
1	N	1	FME	N-CA-CB-CG
1	N	1	FME	C-CA-CB-CG
2	O	1	FME	O1-CN-N-CA
7	T	11	TPO	N-CA-CB-CG2
7	T	11	TPO	N-CA-CB-OG1
7	T	11	TPO	C-CA-CB-CG2
9	V	1	SAC	C2A-C1A-N-CA
9	V	1	SAC	OAC-C1A-N-CA
9	V	1	SAC	CB-CA-N-C1A
9	I	1	SAC	C2A-C1A-N-CA
9	I	1	SAC	OAC-C1A-N-CA
1	A	1	FME	N-CA-CB-CG
1	N	1	FME	CA-CB-CG-SD
1	A	1	FME	CA-CB-CG-SD
7	G	11	TPO	CB-OG1-P-O2P
7	T	11	TPO	CB-OG1-P-O3P
7	T	11	TPO	O-C-CA-CB

There are no ring outliers.

4 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	N	1	FME	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	T	11	TPO	1	0
2	O	1	FME	5	0
1	A	1	FME	4	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 56 ligands modelled in this entry, 8 are monoatomic and 2 are unknown - leaving 46 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
21	PSC	O	304	-	51,51,51	1.28	4 (7%)	57,59,59	1.05	3 (5%)
26	PEK	G	102	-	52,52,52	1.90	12 (23%)	55,57,57	1.28	5 (9%)
20	TGL	N	607	-	62,62,62	0.88	2 (3%)	65,65,65	1.38	9 (13%)
23	DCW	C	301	3	17,17,17	1.39	2 (11%)	21,21,21	1.05	2 (9%)
20	TGL	L	101	-	62,62,62	1.30	6 (9%)	65,65,65	1.81	12 (18%)
20	TGL	N	606	-	62,62,62	1.42	6 (9%)	65,65,65	1.77	14 (21%)
22	CHD	P	310	-	32,32,32	0.93	1 (3%)	51,51,51	3.56	27 (52%)
17	HEA	N	604	1	57,67,67	1.17	4 (7%)	61,103,103	1.57	11 (18%)
26	PEK	C	306	-	52,52,52	1.67	9 (17%)	55,57,57	1.11	5 (9%)
18	PGV	P	307	-	50,50,50	0.93	2 (4%)	53,56,56	0.87	2 (3%)
18	PGV	N	608	-	50,50,50	1.20	4 (8%)	53,56,56	1.02	4 (7%)
17	HEA	N	605	1	57,67,67	1.32	6 (10%)	61,103,103	1.60	13 (21%)
24	DMU	C	302	-	34,34,34	2.76	14 (41%)	45,45,45	4.06	18 (40%)
27	CDL	C	309	-	99,99,99	0.89	5 (5%)	105,111,111	0.99	7 (6%)
19	CUA	O	301	2	0,1,1	-	-	-		
22	CHD	W	101	-	32,32,32	1.16	2 (6%)	51,51,51	3.72	26 (50%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	CHD	O	302	-	32,32,32	0.76	0	51,51,51	1.89	14 (27%)
22	CHD	B	304	-	32,32,32	0.91	1 (3%)	51,51,51	1.88	12 (23%)
20	TGL	O	303	-	62,62,62	0.86	2 (3%)	65,65,65	1.54	10 (15%)
22	CHD	C	304	-	32,32,32	0.94	2 (6%)	51,51,51	1.98	13 (25%)
22	CHD	P	304	-	32,32,32	0.78	1 (3%)	51,51,51	1.90	13 (25%)
18	PGV	N	609	-	50,50,50	1.12	4 (8%)	53,56,56	1.12	5 (9%)
24	DMU	P	302	-	34,34,34	2.64	14 (41%)	45,45,45	4.14	18 (40%)
21	PSC	B	303	-	51,51,51	1.31	6 (11%)	57,59,59	1.03	1 (1%)
27	CDL	G	101	-	99,99,99	1.18	11 (11%)	105,111,111	0.97	9 (8%)
18	PGV	C	307	-	50,50,50	0.98	3 (6%)	53,56,56	0.99	5 (9%)
27	CDL	P	309	-	99,99,99	0.94	6 (6%)	105,111,111	1.01	6 (5%)
22	CHD	C	310	-	32,32,32	1.03	2 (6%)	51,51,51	3.50	27 (52%)
18	PGV	C	308	-	50,50,50	1.44	5 (10%)	53,56,56	0.87	1 (1%)
23	DCW	P	301	3	17,17,17	1.68	3 (17%)	21,21,21	0.89	1 (4%)
18	PGV	P	308	-	50,50,50	1.43	6 (12%)	53,56,56	0.89	2 (3%)
22	CHD	J	101	-	32,32,32	1.03	2 (6%)	51,51,51	3.68	25 (49%)
20	TGL	B	302	-	62,62,62	0.77	2 (3%)	65,65,65	1.60	12 (18%)
26	PEK	C	305	-	52,52,52	1.40	5 (9%)	55,57,57	1.04	2 (3%)
17	HEA	A	605	1	57,67,67	1.44	12 (21%)	61,103,103	1.63	11 (18%)
20	TGL	D	201	-	62,62,62	0.98	4 (6%)	65,65,65	1.42	11 (16%)
24	DMU	Z	101	-	34,34,34	3.06	10 (29%)	45,45,45	4.10	19 (42%)
26	PEK	P	305	-	52,52,52	1.49	7 (13%)	55,57,57	1.12	5 (9%)
27	CDL	T	102	-	99,99,99	1.16	10 (10%)	105,111,111	1.00	9 (8%)
26	PEK	P	306	-	52,52,52	1.63	10 (19%)	55,57,57	1.12	6 (10%)
19	CUA	B	301	2	0,1,1	-	-	-		
18	PGV	A	606	-	50,50,50	1.16	3 (6%)	53,56,56	1.05	4 (7%)
24	DMU	M	101	-	34,34,34	3.17	9 (26%)	45,45,45	4.18	19 (42%)
18	PGV	A	607	-	50,50,50	0.99	3 (6%)	53,56,56	1.07	3 (5%)
17	HEA	A	604	1	57,67,67	1.05	3 (5%)	61,103,103	1.50	12 (19%)
26	PEK	T	101	-	52,52,52	2.05	13 (25%)	55,57,57	1.29	6 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	PSC	O	304	-	-	39/55/55/55	-
26	PEK	G	102	-	-	29/56/56/56	-
20	TGL	N	607	-	-	16/65/65/65	-
23	DCW	C	301	3	-	3/8/24/24	0/2/2/2
22	CHD	P	310	-	5/5/12/12	8/9/74/74	0/4/4/4
20	TGL	L	101	-	-	15/65/65/65	-
20	TGL	N	606	-	-	17/65/65/65	-
17	HEA	N	604	1	-	8/32/76/76	-
26	PEK	C	306	-	-	17/56/56/56	-
18	PGV	P	307	-	-	14/55/55/55	-
18	PGV	N	608	-	-	33/55/55/55	-
17	HEA	N	605	1	-	6/32/76/76	-
24	DMU	C	302	-	6/6/10/10	9/19/59/59	0/2/2/2
27	CDL	C	309	-	-	71/110/110/110	-
22	CHD	W	101	-	5/5/12/12	8/9/74/74	0/4/4/4
22	CHD	O	302	-	-	3/9/74/74	0/4/4/4
22	CHD	B	304	-	-	2/9/74/74	0/4/4/4
20	TGL	O	303	-	-	13/65/65/65	-
22	CHD	C	304	-	-	2/9/74/74	0/4/4/4
22	CHD	P	304	-	-	2/9/74/74	0/4/4/4
18	PGV	N	609	-	-	12/55/55/55	-
24	DMU	P	302	-	6/6/10/10	9/19/59/59	0/2/2/2
21	PSC	B	303	-	-	40/55/55/55	-
27	CDL	G	101	-	-	63/110/110/110	-
18	PGV	C	307	-	-	15/55/55/55	-
27	CDL	P	309	-	-	70/110/110/110	-
22	CHD	C	310	-	5/5/12/12	8/9/74/74	0/4/4/4
18	PGV	C	308	-	-	34/55/55/55	-
23	DCW	P	301	3	-	2/8/24/24	0/2/2/2
18	PGV	P	308	-	-	34/55/55/55	-
22	CHD	J	101	-	5/5/12/12	8/9/74/74	0/4/4/4
20	TGL	B	302	-	-	13/65/65/65	-
26	PEK	C	305	-	-	25/56/56/56	-
17	HEA	A	605	1	-	5/32/76/76	-
24	DMU	Z	101	-	5/5/10/10	10/19/59/59	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	TGL	D	201	-	-	16/65/65/65	-
26	PEK	P	305	-	-	25/56/56/56	-
27	CDL	T	102	-	-	63/110/110/110	-
26	PEK	P	306	-	-	18/56/56/56	-
24	DMU	M	101	-	5/5/10/10	10/19/59/59	0/2/2/2
18	PGV	A	606	-	-	34/55/55/55	-
18	PGV	A	607	-	-	12/55/55/55	-
17	HEA	A	604	1	-	8/32/76/76	-
26	PEK	T	101	-	-	29/56/56/56	-

All (238) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	M	101	DMU	O7-C3	-7.43	1.24	1.43
24	M	101	DMU	O16-C6	-7.11	1.28	1.40
24	Z	101	DMU	O7-C3	-6.96	1.25	1.43
24	M	101	DMU	O1-C9	-6.77	1.27	1.44
24	M	101	DMU	O5-C4	-6.64	1.28	1.44
24	Z	101	DMU	O16-C18	-6.53	1.24	1.43
24	Z	101	DMU	O1-C9	-6.46	1.28	1.44
24	Z	101	DMU	O16-C6	-6.44	1.29	1.40
24	Z	101	DMU	O5-C4	-6.29	1.29	1.44
24	P	302	DMU	O16-C18	-6.28	1.25	1.43
24	C	302	DMU	O16-C6	-6.26	1.29	1.40
24	M	101	DMU	O16-C18	-6.23	1.25	1.43
24	C	302	DMU	O16-C18	-6.16	1.25	1.43
24	M	101	DMU	O7-C10	-5.98	1.24	1.41
24	Z	101	DMU	O7-C10	-5.95	1.25	1.41
24	P	302	DMU	O16-C6	-5.87	1.30	1.40
20	N	606	TGL	OG2-CB1	5.64	1.50	1.34
20	N	606	TGL	OG1-CA1	5.59	1.49	1.33
20	L	101	TGL	OG2-CB1	5.34	1.49	1.34
24	C	302	DMU	O1-C9	-5.29	1.31	1.44
24	M	101	DMU	O1-C10	-5.26	1.28	1.41
18	C	308	PGV	O01-C1	5.12	1.48	1.34
26	T	101	PEK	O03-C21	5.09	1.48	1.33
24	M	101	DMU	O5-C6	-4.95	1.29	1.41
18	P	308	PGV	O01-C1	4.92	1.48	1.34
26	G	102	PEK	C15-C14	4.85	1.59	1.31
24	Z	101	DMU	O1-C10	-4.84	1.29	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	C	302	DMU	O7-C3	-4.82	1.31	1.43
24	P	302	DMU	O7-C3	-4.80	1.31	1.43
24	P	302	DMU	O1-C9	-4.78	1.32	1.44
21	O	304	PSC	C10-C9	4.69	1.59	1.31
26	T	101	PEK	C15-C14	4.69	1.58	1.31
18	P	308	PGV	C12-C11	4.67	1.58	1.31
26	C	305	PEK	C15-C14	4.65	1.58	1.31
26	G	102	PEK	C03-C02	4.64	1.64	1.50
24	P	302	DMU	O5-C4	-4.60	1.33	1.44
18	C	308	PGV	C12-C11	4.60	1.58	1.31
21	B	303	PSC	C10-C9	4.58	1.58	1.31
26	P	306	PEK	C12-C11	4.58	1.58	1.31
26	T	101	PEK	C03-C02	4.57	1.64	1.50
24	C	302	DMU	O5-C4	-4.55	1.33	1.44
26	C	306	PEK	C12-C11	4.51	1.57	1.31
26	P	305	PEK	C12-C11	4.50	1.57	1.31
26	P	305	PEK	C15-C14	4.50	1.57	1.31
26	C	305	PEK	C12-C11	4.48	1.57	1.31
26	T	101	PEK	C01-C02	4.45	1.64	1.50
26	P	305	PEK	C6-C5	4.45	1.57	1.31
24	Z	101	DMU	O5-C6	-4.40	1.30	1.41
26	G	102	PEK	C6-C5	4.39	1.57	1.31
26	T	101	PEK	C6-C5	4.38	1.57	1.31
26	T	101	PEK	C12-C11	4.37	1.57	1.31
26	G	102	PEK	C01-C02	4.29	1.63	1.50
26	C	306	PEK	C6-C5	4.21	1.56	1.31
26	P	306	PEK	C6-C5	4.20	1.56	1.31
26	C	306	PEK	C9-C8	4.20	1.56	1.31
26	P	306	PEK	C9-C8	4.19	1.56	1.31
26	C	306	PEK	C15-C14	4.18	1.56	1.31
26	P	305	PEK	C9-C8	4.10	1.55	1.31
18	N	608	PGV	C12-C11	4.09	1.55	1.31
24	C	302	DMU	O5-C6	-4.07	1.31	1.41
18	A	606	PGV	C12-C11	4.07	1.55	1.31
26	G	102	PEK	C12-C11	4.03	1.55	1.31
23	P	301	DCW	C8-N2	-4.01	1.38	1.46
26	P	306	PEK	C15-C14	3.99	1.54	1.31
21	B	303	PSC	C13-C12	3.98	1.54	1.31
26	C	305	PEK	C6-C5	3.98	1.54	1.31
17	A	605	HEA	C3A-C2A	-3.98	1.34	1.40
24	C	302	DMU	O7-C10	-3.95	1.30	1.41
26	G	102	PEK	C9-C8	3.95	1.54	1.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	C	305	PEK	C9-C8	3.94	1.54	1.31
26	T	101	PEK	C9-C8	3.93	1.54	1.31
21	O	304	PSC	C13-C12	3.90	1.54	1.31
20	L	101	TGL	OG1-CA1	3.90	1.44	1.33
24	P	302	DMU	O5-C6	-3.82	1.32	1.41
22	W	101	CHD	C13-C17	3.80	1.62	1.55
18	A	607	PGV	C12-C11	3.72	1.53	1.31
17	N	605	HEA	C3A-C2A	-3.71	1.35	1.40
24	P	302	DMU	O7-C10	-3.69	1.31	1.41
24	P	302	DMU	C6-C1	3.66	1.63	1.52
17	N	604	HEA	C3A-CMA	-3.65	1.37	1.46
24	C	302	DMU	O1-C10	-3.64	1.32	1.41
18	P	307	PGV	C12-C11	3.64	1.52	1.31
18	N	609	PGV	C12-C11	3.61	1.52	1.31
27	T	102	CDL	OB6-CB5	3.56	1.44	1.34
26	G	102	PEK	P-O11	3.54	1.73	1.59
18	N	608	PGV	C03-C02	3.54	1.61	1.50
20	N	607	TGL	OG1-CA1	3.53	1.43	1.33
24	C	302	DMU	C3-C4	3.46	1.62	1.52
20	D	201	TGL	OG1-CA1	3.44	1.43	1.33
24	P	302	DMU	C3-C4	3.42	1.62	1.52
18	C	307	PGV	C12-C11	3.41	1.51	1.31
17	A	604	HEA	C3A-CMA	-3.40	1.38	1.46
27	G	101	CDL	C11-CA5	3.39	1.60	1.50
20	D	201	TGL	OG3-CC1	3.38	1.43	1.33
27	G	101	CDL	OB6-CB5	3.38	1.43	1.34
18	N	609	PGV	C2-C1	3.37	1.60	1.50
26	G	102	PEK	O03-C21	3.36	1.43	1.33
24	P	302	DMU	O1-C10	-3.32	1.33	1.41
20	L	101	TGL	CG1-CG2	3.30	1.60	1.50
26	T	101	PEK	O01-C1	3.29	1.43	1.34
26	T	101	PEK	C2-C1	3.26	1.60	1.50
24	C	302	DMU	C6-C1	3.24	1.61	1.52
27	T	102	CDL	CB6-CB4	3.23	1.60	1.50
26	T	101	PEK	P-O11	3.22	1.72	1.59
20	O	303	TGL	OG2-CB1	3.21	1.43	1.34
21	O	304	PSC	C2-C1	3.19	1.60	1.50
22	J	101	CHD	C13-C17	3.18	1.60	1.55
27	G	101	CDL	OA6-CA5	3.17	1.43	1.34
17	N	605	HEA	FE-ND	-3.15	1.81	1.96
27	P	309	CDL	CA6-CA4	3.14	1.60	1.50
20	N	606	TGL	CG1-CG2	3.11	1.60	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	A	605	HEA	C3C-CAC	3.10	1.54	1.47
17	A	605	HEA	C3A-CMA	-3.10	1.39	1.46
23	P	301	DCW	C1-N2	-3.09	1.29	1.35
18	A	606	PGV	O03-C19	3.07	1.42	1.33
26	P	305	PEK	C2-C1	3.03	1.59	1.50
20	N	606	TGL	CB2-CB1	3.02	1.59	1.50
27	T	102	CDL	C11-CA5	3.01	1.59	1.50
17	N	605	HEA	C3A-CMA	-3.01	1.39	1.46
18	C	308	PGV	C2-C1	2.97	1.59	1.50
22	C	310	CHD	C19-C10	-2.93	1.49	1.54
18	C	307	PGV	O03-C19	2.91	1.41	1.33
17	A	605	HEA	C16-C15	2.91	1.57	1.51
22	W	101	CHD	C20-C17	2.85	1.59	1.54
27	C	309	CDL	CA6-CA4	2.85	1.59	1.50
18	A	607	PGV	C2-C1	2.82	1.59	1.50
26	C	306	PEK	O03-C21	2.81	1.41	1.33
18	A	606	PGV	C03-C02	2.80	1.59	1.50
24	C	302	DMU	C7-C5	2.80	1.59	1.52
22	P	310	CHD	C19-C10	-2.78	1.49	1.54
26	C	306	PEK	P-O12	2.76	1.70	1.59
20	N	607	TGL	CA2-CA1	2.76	1.58	1.50
18	P	308	PGV	C2-C1	2.76	1.58	1.50
26	T	101	PEK	C22-C21	2.76	1.58	1.50
26	C	306	PEK	C03-C02	2.75	1.59	1.50
20	L	101	TGL	CB2-CB1	2.74	1.58	1.50
24	C	302	DMU	C8-C7	2.73	1.59	1.52
22	C	304	CHD	C10-C9	-2.73	1.51	1.56
17	N	604	HEA	C1D-C2D	2.72	1.49	1.44
18	N	609	PGV	C20-C19	2.72	1.58	1.50
17	A	605	HEA	CHC-C4B	2.70	1.41	1.35
26	P	306	PEK	O03-C21	2.68	1.41	1.33
20	L	101	TGL	CG3-CG2	2.65	1.58	1.50
26	P	306	PEK	C03-C02	2.65	1.58	1.50
18	N	609	PGV	C01-C02	2.65	1.58	1.50
27	G	101	CDL	C71-CB7	2.64	1.58	1.50
18	N	608	PGV	O03-C19	2.64	1.41	1.33
26	C	306	PEK	P-O11	2.63	1.69	1.59
23	C	301	DCW	C8-N2	-2.62	1.41	1.46
20	B	302	TGL	OG2-CB1	2.62	1.41	1.34
26	P	306	PEK	C01-C02	2.62	1.58	1.50
27	P	309	CDL	OA8-CA7	2.61	1.41	1.33
27	G	101	CDL	C51-CB5	2.59	1.58	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	P	309	CDL	CA3-CA4	2.59	1.58	1.50
20	D	201	TGL	CA2-CA1	2.58	1.58	1.50
24	P	302	DMU	C7-C5	2.58	1.58	1.52
26	P	305	PEK	O03-C01	-2.58	1.39	1.45
17	A	604	HEA	CHD-C1D	2.56	1.41	1.35
27	T	102	CDL	C71-CB7	2.55	1.58	1.50
27	G	101	CDL	CB6-CB4	2.54	1.58	1.50
26	C	306	PEK	C01-C02	2.52	1.58	1.50
27	T	102	CDL	OA6-CA5	2.51	1.41	1.34
27	P	309	CDL	C31-CA7	2.51	1.58	1.50
17	A	605	HEA	C4B-C3B	2.50	1.48	1.44
20	O	303	TGL	CG3-CG2	2.49	1.58	1.50
24	C	302	DMU	C8-C9	2.47	1.58	1.53
17	A	605	HEA	C4D-C3D	-2.46	1.40	1.45
22	C	304	CHD	C13-C12	-2.46	1.50	1.54
21	B	303	PSC	C2-C1	2.44	1.57	1.50
18	A	607	PGV	C03-C02	2.42	1.58	1.50
22	B	304	CHD	C13-C12	-2.42	1.50	1.54
20	D	201	TGL	CB2-CB1	2.40	1.57	1.50
27	T	102	CDL	CB2-C1	2.37	1.59	1.51
26	P	306	PEK	P-O12	2.37	1.68	1.59
21	O	304	PSC	P-O12	2.36	1.68	1.59
27	T	102	CDL	CB3-CB4	2.36	1.57	1.50
18	P	308	PGV	C03-C02	2.35	1.57	1.50
27	P	309	CDL	PA1-OA5	2.34	1.68	1.59
24	C	302	DMU	C10-C5	2.34	1.59	1.52
27	T	102	CDL	C31-CA7	2.33	1.57	1.50
18	C	308	PGV	C03-C02	2.33	1.57	1.50
18	C	308	PGV	C04-C05	2.32	1.59	1.51
24	P	302	DMU	C2-C1	2.31	1.58	1.52
18	C	307	PGV	O01-C1	2.31	1.40	1.34
24	P	302	DMU	C10-C5	2.31	1.59	1.52
18	P	307	PGV	C20-C19	2.31	1.57	1.50
21	B	303	PSC	P-O12	2.29	1.68	1.59
27	G	101	CDL	C31-CA7	2.28	1.57	1.50
26	G	102	PEK	O01-C1	2.28	1.40	1.34
26	G	102	PEK	C2-C1	2.28	1.57	1.50
18	P	308	PGV	C04-C05	2.28	1.59	1.51
18	N	608	PGV	O01-C1	2.27	1.40	1.34
27	T	102	CDL	C51-CB5	2.26	1.57	1.50
22	P	304	CHD	C8-C9	2.25	1.58	1.53
27	C	309	CDL	C31-CA7	2.25	1.57	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	J	101	CHD	C20-C17	2.25	1.58	1.54
24	Z	101	DMU	C8-C7	2.25	1.58	1.52
17	N	605	HEA	C4D-C3D	-2.24	1.41	1.45
24	Z	101	DMU	C8-C9	2.22	1.57	1.53
17	A	605	HEA	FE-NB	-2.21	1.86	1.96
20	N	606	TGL	CG3-CG2	2.20	1.57	1.50
26	G	102	PEK	P-O12	2.20	1.68	1.59
17	N	605	HEA	C17-C18	2.18	1.57	1.50
27	C	309	CDL	CA3-CA4	2.16	1.57	1.50
27	G	101	CDL	PB2-OB2	2.16	1.68	1.59
17	N	604	HEA	CHD-C1D	2.15	1.40	1.35
26	P	306	PEK	P-O11	2.15	1.68	1.59
17	A	605	HEA	C20-C19	2.15	1.55	1.51
20	B	302	TGL	CG3-CG2	2.14	1.57	1.50
20	L	101	TGL	CC2-CC1	2.14	1.57	1.50
27	G	101	CDL	CB3-CB4	2.12	1.57	1.50
17	A	605	HEA	FE-ND	-2.12	1.86	1.96
18	P	308	PGV	O03-C19	2.12	1.39	1.33
17	N	604	HEA	C3A-C2A	-2.10	1.37	1.40
22	C	310	CHD	C10-C9	-2.10	1.52	1.56
26	T	101	PEK	P-O12	2.09	1.67	1.59
27	C	309	CDL	PB2-OB2	2.09	1.67	1.59
23	C	301	DCW	C2-N1	-2.09	1.42	1.46
26	C	305	PEK	O03-C01	-2.08	1.40	1.45
23	P	301	DCW	C9-C8	-2.08	1.47	1.52
21	B	303	PSC	O01-C1	2.08	1.40	1.34
26	P	305	PEK	O01-C02	-2.08	1.41	1.46
27	P	309	CDL	PB2-OB2	2.07	1.67	1.59
20	N	606	TGL	CC2-CC1	2.07	1.56	1.50
27	C	309	CDL	CB2-C1	2.06	1.58	1.51
21	B	303	PSC	C01-C02	2.06	1.57	1.50
26	G	102	PEK	O03-C01	2.06	1.49	1.45
17	A	605	HEA	C3C-C2C	-2.05	1.37	1.40
27	T	102	CDL	PB2-OB2	2.05	1.67	1.59
26	T	101	PEK	O03-C01	2.04	1.49	1.45
24	P	302	DMU	C8-C7	2.03	1.57	1.52
27	G	101	CDL	CB2-C1	2.03	1.58	1.51
17	A	604	HEA	C17-C18	2.02	1.57	1.50
24	M	101	DMU	C8-C7	2.01	1.57	1.52
26	P	306	PEK	C05-C04	2.01	1.58	1.50
17	A	605	HEA	C18-C19	2.01	1.37	1.33
17	N	605	HEA	C3C-C2C	-2.00	1.37	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	G	101	CDL	OB8-CB7	2.00	1.39	1.33

All (439) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	P	302	DMU	O16-C6-C1	11.21	125.81	108.30
24	C	302	DMU	O16-C6-C1	10.91	125.34	108.30
22	P	310	CHD	C17-C13-C14	10.80	110.98	100.09
22	J	101	CHD	C17-C13-C14	10.57	110.75	100.09
22	W	101	CHD	C17-C13-C14	10.50	110.68	100.09
22	C	310	CHD	C17-C13-C14	10.45	110.63	100.09
24	M	101	DMU	C10-C5-C7	10.16	131.17	110.00
24	Z	101	DMU	C10-C5-C7	9.99	130.80	110.00
22	P	310	CHD	C17-C13-C12	-9.80	108.72	117.67
22	P	310	CHD	C10-C9-C8	9.68	122.22	111.82
22	C	310	CHD	C10-C9-C8	9.63	122.16	111.82
24	P	302	DMU	C1-C2-C3	9.50	131.38	109.68
24	C	302	DMU	C1-C2-C3	9.34	131.01	109.68
22	C	310	CHD	C17-C13-C12	-9.23	109.24	117.67
24	P	302	DMU	O5-C4-C3	9.12	128.97	109.75
24	P	302	DMU	O1-C9-C11	8.60	127.82	106.44
22	J	101	CHD	C10-C9-C8	8.51	120.96	111.82
24	Z	101	DMU	C7-C8-C9	8.49	125.38	110.24
22	W	101	CHD	C13-C17-C20	8.49	129.63	119.50
24	M	101	DMU	C7-C8-C9	8.38	125.18	110.24
22	J	101	CHD	C13-C17-C20	8.27	129.37	119.50
24	C	302	DMU	O1-C9-C11	8.21	126.86	106.44
24	M	101	DMU	C8-C7-C5	-8.18	96.55	110.82
24	C	302	DMU	O5-C4-C3	8.09	126.82	109.75
22	W	101	CHD	C10-C9-C8	8.00	120.41	111.82
24	Z	101	DMU	C8-C7-C5	-7.98	96.89	110.82
24	M	101	DMU	O1-C9-C11	7.86	125.97	106.44
24	Z	101	DMU	O1-C9-C11	7.83	125.91	106.44
24	M	101	DMU	O5-C4-C3	7.44	125.43	109.75
24	Z	101	DMU	O5-C4-C3	7.40	125.35	109.75
24	Z	101	DMU	C6-O5-C4	6.99	127.41	113.69
24	P	302	DMU	O7-C3-C4	6.97	128.56	109.45
24	C	302	DMU	C6-O5-C4	6.96	127.36	113.69
22	P	310	CHD	C19-C10-C9	-6.93	101.63	111.18
22	W	101	CHD	C6-C5-C10	6.88	119.97	112.66
22	J	101	CHD	C6-C5-C10	6.88	119.96	112.66
22	C	310	CHD	C19-C10-C9	-6.87	101.72	111.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	M	101	DMU	C6-O5-C4	6.87	127.17	113.69
22	J	101	CHD	C11-C12-C13	6.68	118.10	111.24
24	M	101	DMU	O16-C6-C1	6.65	118.69	108.30
24	Z	101	DMU	O5-C4-C57	6.61	122.87	106.44
24	P	302	DMU	C18-O16-C6	6.57	124.74	113.84
24	M	101	DMU	C18-O16-C6	6.55	124.70	113.84
24	M	101	DMU	O1-C9-C8	6.51	121.52	109.69
24	M	101	DMU	O5-C4-C57	6.47	122.52	106.44
22	W	101	CHD	C11-C12-C13	6.43	117.85	111.24
24	Z	101	DMU	O1-C9-C8	6.40	121.32	109.69
24	C	302	DMU	C18-O16-C6	6.39	124.44	113.84
24	Z	101	DMU	O5-C6-O16	6.37	125.05	109.97
22	W	101	CHD	C9-C8-C7	6.33	119.45	111.88
24	M	101	DMU	O7-C3-C2	6.28	123.98	107.28
24	C	302	DMU	O7-C3-C4	6.26	126.60	109.45
22	C	310	CHD	C1-C10-C5	6.24	116.99	107.77
22	W	101	CHD	C5-C6-C7	6.22	121.32	114.46
24	Z	101	DMU	O16-C6-C1	6.21	118.00	108.30
24	P	302	DMU	C6-O5-C4	6.12	125.71	113.69
24	P	302	DMU	C8-C7-C5	6.02	121.33	110.82
22	C	304	CHD	C10-C9-C8	6.00	118.26	111.82
24	C	302	DMU	O7-C3-C2	6.00	123.23	107.28
22	J	101	CHD	C9-C8-C7	5.97	119.02	111.88
22	P	310	CHD	C1-C10-C5	5.94	116.56	107.77
24	P	302	DMU	O7-C3-C2	5.93	123.06	107.28
24	P	302	DMU	O1-C9-C8	5.89	120.39	109.69
24	M	101	DMU	O5-C6-O16	5.87	123.89	109.97
24	C	302	DMU	O1-C9-C8	5.87	120.36	109.69
22	J	101	CHD	C5-C6-C7	5.75	120.81	114.46
20	B	302	TGL	CG2-OG2-CB1	5.71	131.86	117.79
24	Z	101	DMU	O7-C3-C2	5.69	122.41	107.28
24	C	302	DMU	C8-C7-C5	5.68	120.74	110.82
24	P	302	DMU	O5-C6-C1	5.53	122.06	110.35
22	P	310	CHD	C9-C8-C7	5.53	118.49	111.88
22	C	310	CHD	C19-C10-C1	-5.53	99.35	108.26
24	M	101	DMU	C10-O7-C3	5.52	131.62	117.96
20	L	101	TGL	C12-C11-C10	-5.51	86.46	114.42
24	Z	101	DMU	C18-O16-C6	5.49	122.95	113.84
22	C	310	CHD	C9-C8-C7	5.48	118.43	111.88
22	B	304	CHD	C18-C13-C12	-5.48	103.49	109.07
22	P	310	CHD	C15-C14-C8	-5.47	110.69	118.33
24	Z	101	DMU	C6-C1-C2	5.45	121.34	110.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	W	101	CHD	C15-C14-C8	-5.41	110.77	118.33
24	C	302	DMU	O5-C6-C1	5.40	121.78	110.35
24	M	101	DMU	C6-C1-C2	5.31	121.05	110.00
20	N	606	TGL	C12-C11-C10	-5.27	87.67	114.42
22	J	101	CHD	C15-C14-C8	-5.27	110.97	118.33
22	C	310	CHD	C15-C14-C8	-5.23	111.03	118.33
24	C	302	DMU	O5-C4-C57	5.22	119.41	106.44
22	J	101	CHD	C6-C5-C4	5.20	117.18	111.19
22	W	101	CHD	C18-C13-C14	-5.11	103.21	111.21
22	W	101	CHD	C6-C5-C4	5.11	117.07	111.19
22	W	101	CHD	C17-C13-C12	-5.09	113.02	117.67
22	W	101	CHD	C4-C3-C2	5.06	116.59	110.55
22	P	304	CHD	C1-C10-C5	5.02	115.19	107.77
24	Z	101	DMU	C10-O7-C3	4.98	130.29	117.96
22	P	304	CHD	C10-C9-C8	4.98	117.17	111.82
22	P	310	CHD	C19-C10-C1	-4.96	100.27	108.26
22	J	101	CHD	C17-C13-C12	-4.85	113.24	117.67
22	J	101	CHD	C4-C3-C2	4.81	116.30	110.55
20	O	303	TGL	CG2-OG2-CB1	4.81	129.63	117.79
22	J	101	CHD	C18-C13-C14	-4.76	103.76	111.21
24	P	302	DMU	O5-C4-C57	4.70	118.13	106.44
22	O	302	CHD	C17-C13-C12	4.67	121.93	117.67
24	C	302	DMU	O7-C10-C5	4.66	120.18	108.10
20	N	606	TGL	CB9-CB8-CB7	-4.66	90.79	114.42
20	L	101	TGL	CB9-CB8-CB7	-4.60	91.07	114.42
24	C	302	DMU	C10-O1-C9	4.52	122.57	113.69
22	J	101	CHD	C1-C10-C5	4.52	114.45	107.77
20	O	303	TGL	CG1-OG1-CA1	-4.49	100.51	117.12
26	G	102	PEK	O03-C01-C02	4.40	121.23	108.43
20	B	302	TGL	CG1-OG1-CA1	-4.38	100.92	117.12
22	O	302	CHD	C18-C13-C12	-4.35	104.64	109.07
22	W	101	CHD	C2-C1-C10	4.32	120.19	112.78
24	P	302	DMU	C10-O1-C9	4.28	122.09	113.69
22	W	101	CHD	C1-C10-C5	4.21	113.99	107.77
22	C	304	CHD	C1-C10-C5	4.18	113.95	107.77
17	A	604	HEA	C27-C19-C18	-4.16	113.00	123.68
24	P	302	DMU	O7-C10-C5	4.14	118.84	108.10
17	N	604	HEA	C27-C19-C18	-4.12	113.10	123.68
24	P	302	DMU	O7-C10-O1	4.12	122.18	110.67
22	J	101	CHD	C2-C1-C10	4.11	119.83	112.78
22	P	304	CHD	C13-C17-C20	4.09	124.38	119.50
26	G	102	PEK	P-O11-C03	4.06	145.50	121.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	T	101	PEK	O03-C01-C02	4.05	120.22	108.43
20	L	101	TGL	C15-CC9-CC8	4.01	134.76	114.42
26	T	101	PEK	P-O11-C03	4.00	145.16	121.68
20	D	201	TGL	CG2-OG2-CB1	3.99	127.61	117.79
22	W	101	CHD	C14-C8-C7	3.94	117.03	111.81
22	B	304	CHD	C1-C2-C3	3.91	115.49	110.47
26	T	101	PEK	C02-O01-C1	3.90	127.40	117.79
20	N	606	TGL	C15-CC9-CC8	3.90	134.22	114.42
17	N	604	HEA	C20-C19-C18	3.89	129.00	121.12
24	C	302	DMU	O1-C10-C5	3.84	118.48	110.35
22	P	310	CHD	C6-C5-C4	-3.84	106.77	111.19
20	N	606	TGL	C16-C15-CC9	3.84	133.90	114.42
22	J	101	CHD	C14-C8-C7	3.83	116.88	111.81
20	L	101	TGL	C16-C15-CC9	3.80	133.71	114.42
17	N	605	HEA	CMC-C2C-C1C	-3.79	122.64	128.46
22	P	304	CHD	C15-C14-C8	-3.77	113.06	118.33
24	Z	101	DMU	O7-C3-C4	3.76	119.77	109.45
22	C	310	CHD	C6-C5-C4	-3.76	106.86	111.19
27	P	309	CDL	PA1-OA5-CA3	3.73	143.53	121.68
22	C	304	CHD	C15-C14-C8	-3.71	113.14	118.33
20	L	101	TGL	CG2-OG2-CB1	3.70	126.91	117.79
24	Z	101	DMU	O7-C10-O1	3.70	121.01	110.67
27	C	309	CDL	PA1-OA5-CA3	3.69	143.29	121.68
22	B	304	CHD	C18-C13-C14	3.67	116.96	111.21
22	P	304	CHD	C14-C8-C9	-3.67	104.67	109.71
22	C	304	CHD	C14-C8-C9	-3.64	104.71	109.71
22	B	304	CHD	C17-C13-C12	3.64	120.98	117.67
17	A	605	HEA	CMC-C2C-C1C	-3.64	122.88	128.46
24	P	302	DMU	O1-C10-C5	3.63	118.04	110.35
22	B	304	CHD	C15-C14-C8	-3.62	113.27	118.33
22	O	302	CHD	C15-C14-C8	-3.62	113.27	118.33
26	P	305	PEK	C3-C2-C1	-3.61	100.49	113.62
24	M	101	DMU	O7-C3-C4	3.60	119.32	109.45
18	N	609	PGV	O03-C01-C02	3.60	118.92	108.43
26	G	102	PEK	C02-O01-C1	3.60	126.65	117.79
17	A	605	HEA	C4B-NB-C1B	-3.59	101.37	105.07
17	A	605	HEA	C2B-C1B-NB	3.58	114.17	109.88
22	P	310	CHD	C4-C5-C10	3.56	116.44	112.66
22	B	304	CHD	C14-C8-C9	-3.56	104.83	109.71
22	O	302	CHD	C1-C2-C3	3.55	115.03	110.47
20	L	101	TGL	CC3-CC2-CC1	3.55	126.52	113.62
22	J	101	CHD	C19-C10-C5	-3.54	104.35	110.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	N	607	TGL	CG2-OG2-CB1	3.54	126.49	117.79
20	N	607	TGL	CG3-OG3-CC1	3.53	130.20	117.12
22	W	101	CHD	C19-C10-C5	-3.53	104.38	110.36
21	B	303	PSC	C01-O03-C19	-3.53	104.06	117.12
20	L	101	TGL	C11-C10-CB9	3.53	132.33	114.42
24	M	101	DMU	C10-O1-C9	3.52	120.61	113.69
24	P	302	DMU	C2-C3-C4	-3.52	102.86	110.93
22	C	304	CHD	C16-C17-C13	-3.50	100.12	103.55
24	C	302	DMU	O7-C10-O1	3.49	120.42	110.67
17	A	605	HEA	CMC-C2C-C3C	3.48	131.20	124.68
21	O	304	PSC	C01-O03-C19	-3.46	104.32	117.12
17	A	604	HEA	C20-C19-C18	3.46	128.11	121.12
20	N	606	TGL	CG2-OG2-CB1	3.45	126.30	117.79
17	A	604	HEA	CMC-C2C-C3C	3.41	131.06	124.68
22	C	304	CHD	C13-C17-C20	3.41	123.56	119.50
20	N	606	TGL	CC3-CC2-CC1	3.40	125.99	113.62
26	C	305	PEK	C3-C2-C1	-3.38	101.32	113.62
22	O	302	CHD	C5-C6-C7	3.38	118.19	114.46
22	C	310	CHD	C4-C5-C10	3.37	116.23	112.66
22	W	101	CHD	C16-C15-C14	3.35	111.77	105.13
24	M	101	DMU	O7-C10-O1	3.34	119.99	110.67
17	N	605	HEA	CHA-C4D-C3D	-3.33	119.95	124.84
20	D	201	TGL	CG1-OG1-CA1	-3.32	104.84	117.12
20	N	606	TGL	C11-C10-CB9	3.31	131.23	114.42
17	A	605	HEA	CMB-C2B-C3B	-3.31	124.03	130.34
24	M	101	DMU	O5-C6-C1	3.30	117.34	110.35
20	B	302	TGL	CG3-CG2-CG1	3.29	119.58	111.79
22	P	310	CHD	C14-C13-C12	3.27	110.44	107.40
20	L	101	TGL	CC4-CC3-CC2	3.27	124.93	113.19
24	C	302	DMU	C2-C3-C4	-3.26	103.45	110.93
22	C	310	CHD	C9-C10-C5	3.24	113.13	108.58
22	W	101	CHD	C13-C14-C8	3.24	118.87	114.74
22	C	304	CHD	C15-C14-C13	-3.22	100.39	103.55
22	P	310	CHD	C9-C10-C5	3.22	113.10	108.58
20	N	606	TGL	CC4-CC3-CC2	3.21	124.73	113.19
17	N	604	HEA	CMC-C2C-C3C	3.20	130.67	124.68
22	P	310	CHD	C1-C10-C9	3.19	116.37	111.35
18	C	307	PGV	O01-C1-C2	-3.18	104.64	111.50
22	O	302	CHD	C5-C4-C3	3.18	117.43	112.76
20	D	201	TGL	OG1-CG1-CG2	3.17	117.67	108.43
22	C	310	CHD	C11-C9-C10	3.17	117.00	113.73
22	C	304	CHD	C14-C13-C12	-3.17	104.45	107.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	P	304	CHD	C5-C6-C7	3.16	117.94	114.46
26	C	306	PEK	P-O12-C04	3.14	137.07	121.59
26	P	306	PEK	P-O12-C04	3.13	136.98	121.59
24	M	101	DMU	O7-C10-C5	3.13	116.20	108.10
22	B	304	CHD	C9-C11-C12	3.12	118.42	114.30
22	B	304	CHD	C5-C4-C3	3.11	117.33	112.76
24	Z	101	DMU	O5-C6-C1	3.11	116.94	110.35
22	C	310	CHD	C4-C3-C2	3.08	114.23	110.55
22	J	101	CHD	C1-C2-C3	3.08	114.42	110.47
22	J	101	CHD	C13-C14-C8	3.07	118.66	114.74
22	P	310	CHD	C4-C3-C2	3.06	114.21	110.55
24	Z	101	DMU	C10-O1-C9	3.05	119.67	113.69
22	C	310	CHD	C1-C10-C9	3.05	116.14	111.35
22	J	101	CHD	C16-C15-C14	3.04	111.17	105.13
26	C	306	PEK	P-O11-C03	3.04	139.48	121.68
20	O	303	TGL	CG3-CG2-CG1	3.02	118.94	111.79
20	D	201	TGL	OG2-CG2-CG1	3.02	119.32	108.40
17	N	604	HEA	C17-C18-C19	-3.02	120.40	127.66
22	O	302	CHD	C14-C8-C9	-3.01	105.59	109.71
22	J	101	CHD	C15-C16-C17	3.00	111.08	105.13
17	N	604	HEA	C3D-C4D-ND	2.99	113.25	110.36
17	N	605	HEA	C27-C19-C20	2.99	120.30	115.27
18	A	606	PGV	C02-O01-C1	2.97	125.10	117.79
22	P	310	CHD	O3-C3-C4	-2.97	103.94	109.85
22	O	302	CHD	C18-C13-C14	2.96	115.85	111.21
20	N	607	TGL	CG1-OG1-CA1	-2.96	106.16	117.12
18	A	607	PGV	O03-C01-C02	2.96	117.05	108.43
22	C	310	CHD	C15-C16-C17	2.95	110.98	105.13
17	N	605	HEA	CMC-C2C-C3C	2.94	130.18	124.68
22	J	101	CHD	C5-C4-C3	2.94	117.08	112.76
20	L	101	TGL	OG1-CG1-CG2	2.93	116.96	108.43
17	N	605	HEA	C2B-C1B-NB	2.92	113.38	109.88
22	P	310	CHD	C15-C16-C17	2.91	110.91	105.13
22	W	101	CHD	C1-C2-C3	2.90	114.19	110.47
26	C	306	PEK	C11-C10-C9	2.90	126.30	112.02
22	W	101	CHD	C11-C9-C10	2.89	116.71	113.73
22	W	101	CHD	C15-C16-C17	2.89	110.86	105.13
22	C	310	CHD	O3-C3-C4	-2.89	104.10	109.85
20	D	201	TGL	CG3-OG3-CC1	2.88	127.78	117.12
22	P	310	CHD	C5-C6-C7	2.88	117.63	114.46
22	P	310	CHD	C14-C8-C9	-2.86	105.78	109.71
22	O	302	CHD	C18-C13-C17	-2.86	106.74	111.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	A	605	HEA	CMB-C2B-C1B	2.85	129.38	125.04
20	N	607	TGL	CB3-CB2-CB1	2.85	123.98	113.62
26	P	306	PEK	C11-C10-C9	2.85	126.04	112.02
17	A	605	HEA	CHA-C4D-C3D	-2.84	120.66	124.84
26	P	306	PEK	P-O11-C03	2.84	138.32	121.68
17	A	605	HEA	C1D-ND-C4D	-2.83	102.15	105.07
20	N	606	TGL	C13-C12-C11	2.83	128.80	114.42
17	N	605	HEA	C3C-C4C-NC	2.82	112.86	109.21
20	D	201	TGL	CB3-CB2-CB1	2.81	123.84	113.62
17	N	605	HEA	C3D-C4D-ND	2.81	113.07	110.36
20	N	607	TGL	OG1-CG1-CG2	2.80	116.60	108.43
27	T	102	CDL	C22-C21-C20	2.78	128.55	114.42
22	B	304	CHD	C2-C1-C10	2.78	117.55	112.78
24	C	302	DMU	C10-O7-C3	2.77	124.83	117.96
22	W	101	CHD	C5-C4-C3	2.76	116.80	112.76
22	P	310	CHD	C16-C15-C14	2.75	110.58	105.13
22	P	304	CHD	C1-C2-C3	2.75	113.99	110.47
17	N	605	HEA	C4B-NB-C1B	-2.73	102.25	105.07
18	A	607	PGV	C01-O03-C19	-2.72	107.04	117.12
22	C	310	CHD	C16-C15-C14	2.72	110.52	105.13
22	P	310	CHD	C14-C8-C7	2.70	115.38	111.81
22	C	310	CHD	C11-C12-C13	2.70	114.01	111.24
22	J	101	CHD	C11-C9-C10	2.68	116.49	113.73
27	T	102	CDL	OB8-CB7-C71	-2.68	103.51	111.91
17	A	604	HEA	CMC-C2C-C1C	-2.67	124.35	128.46
27	G	101	CDL	C23-C22-C21	2.67	127.98	114.42
22	O	302	CHD	C2-C1-C10	2.65	117.33	112.78
24	P	302	DMU	C10-O7-C3	2.65	124.52	117.96
22	C	310	CHD	C14-C8-C7	2.65	115.31	111.81
18	P	307	PGV	O01-C1-C2	-2.63	105.83	111.50
18	N	608	PGV	O01-C02-C03	2.63	117.93	108.40
18	N	608	PGV	C02-O01-C1	2.62	124.24	117.79
20	D	201	TGL	OG2-CG2-CG3	2.61	117.85	108.40
27	G	101	CDL	C22-C21-C20	2.60	127.63	114.42
18	N	609	PGV	C01-O03-C19	-2.60	107.49	117.12
20	N	607	TGL	OG2-CG2-CG3	2.60	117.82	108.40
20	L	101	TGL	C20-CA9-CA8	2.60	127.61	114.42
18	A	606	PGV	C3-C2-C1	-2.59	104.21	113.62
27	P	309	CDL	OB6-CB5-C51	-2.58	105.94	111.50
17	A	604	HEA	C21-C20-C19	-2.57	104.53	112.98
22	P	310	CHD	C11-C9-C10	2.56	116.37	113.73
22	B	304	CHD	O3-C3-C4	-2.55	104.76	109.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	W	101	CHD	C9-C11-C12	2.55	117.67	114.30
22	C	310	CHD	C6-C5-C10	2.55	115.36	112.66
22	O	302	CHD	C9-C11-C12	2.55	117.66	114.30
22	C	310	CHD	C1-C2-C3	2.54	113.72	110.47
17	N	605	HEA	C1D-ND-C4D	-2.54	102.45	105.07
20	B	302	TGL	CA8-CA7-CA6	-2.53	101.56	114.42
22	C	304	CHD	C5-C6-C7	2.53	117.25	114.46
22	P	304	CHD	C13-C14-C8	-2.52	111.51	114.74
20	O	303	TGL	CA8-CA7-CA6	-2.52	101.61	114.42
22	C	310	CHD	C14-C8-C9	-2.52	106.25	109.71
22	P	310	CHD	C19-C10-C5	-2.52	106.09	110.36
20	O	303	TGL	CG3-OG3-CC1	2.51	126.43	117.12
22	J	101	CHD	C14-C8-C9	2.50	113.15	109.71
22	O	302	CHD	O3-C3-C4	-2.50	104.87	109.85
20	N	606	TGL	OG1-CG1-CG2	2.50	115.71	108.43
22	P	310	CHD	C1-C2-C3	2.50	113.67	110.47
23	C	301	DCW	C8-N2-C1	2.48	128.26	123.02
26	T	101	PEK	C03-C02-C01	2.48	117.64	111.79
20	L	101	TGL	C13-C12-C11	2.47	126.98	114.42
24	Z	101	DMU	O7-C10-C5	2.47	114.50	108.10
22	P	310	CHD	C13-C17-C20	2.47	122.44	119.50
22	P	304	CHD	C16-C17-C13	-2.47	101.13	103.55
27	T	102	CDL	C23-C22-C21	2.46	126.93	114.42
27	G	101	CDL	OB8-CB7-C71	-2.46	104.18	111.91
22	C	310	CHD	C5-C6-C7	2.46	117.17	114.46
20	O	303	TGL	CB7-CB6-CB5	-2.45	101.97	114.42
18	C	308	PGV	C02-O01-C1	-2.44	111.77	117.79
18	A	606	PGV	O01-C02-C03	2.44	117.24	108.40
26	P	306	PEK	C24-C23-C22	2.44	121.96	113.19
18	P	308	PGV	C02-O01-C1	-2.44	111.79	117.79
22	P	304	CHD	C14-C13-C12	-2.44	105.13	107.40
27	G	101	CDL	C20-C19-C18	2.44	126.80	114.42
17	N	605	HEA	CMB-C2B-C3B	-2.44	125.70	130.34
27	P	309	CDL	CB6-OB8-CB7	-2.43	108.12	117.12
27	T	102	CDL	C83-C82-C81	2.43	126.74	114.42
27	C	309	CDL	CB6-OB8-CB7	-2.43	108.14	117.12
18	N	608	PGV	C3-C2-C1	-2.42	104.81	113.62
17	N	604	HEA	CHA-C4D-C3D	-2.40	121.32	124.84
22	C	310	CHD	C14-C13-C12	2.39	109.63	107.40
17	N	604	HEA	CMB-C2B-C3B	-2.39	125.78	130.34
22	O	302	CHD	C1-C10-C5	2.39	111.30	107.77
26	P	305	PEK	C2-C3-C4	2.38	117.48	113.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	A	605	HEA	C3D-C4D-ND	2.37	112.65	110.36
27	C	309	CDL	OB6-CB5-C51	-2.35	106.43	111.50
20	L	101	TGL	CC7-CC6-CC5	2.35	126.36	114.42
20	B	302	TGL	CB7-CB6-CB5	-2.34	102.57	114.42
22	J	101	CHD	C19-C10-C1	-2.33	104.50	108.26
26	C	305	PEK	O03-C21-C22	-2.33	104.60	111.91
21	O	304	PSC	O01-C1-C2	-2.32	106.50	111.50
17	N	605	HEA	C26-C15-C16	2.32	119.18	115.27
27	T	102	CDL	C20-C19-C18	2.32	126.21	114.42
17	N	604	HEA	CHB-C1B-NB	2.31	126.94	124.43
17	A	604	HEA	C4D-CHA-C1A	2.30	125.59	122.56
22	C	304	CHD	C13-C14-C8	-2.30	111.80	114.74
20	B	302	TGL	CG3-OG3-CC1	2.30	125.63	117.12
17	A	604	HEA	C17-C18-C19	-2.29	122.14	127.66
27	P	309	CDL	OA8-CA6-CA4	2.29	115.09	108.43
20	N	606	TGL	C20-CA9-CA8	2.28	126.01	114.42
22	P	310	CHD	C18-C13-C14	-2.28	107.64	111.21
27	C	309	CDL	C52-C51-CB5	-2.28	105.34	113.62
27	T	102	CDL	C80-C79-C78	2.27	125.95	114.42
20	O	303	TGL	CB9-CB8-CB7	-2.27	102.91	114.42
20	B	302	TGL	CB9-CB8-CB7	-2.26	102.93	114.42
26	C	306	PEK	C24-C23-C22	2.26	121.32	113.19
22	C	310	CHD	C13-C17-C20	2.26	122.19	119.50
18	C	307	PGV	O03-C01-C02	2.26	115.01	108.43
17	A	605	HEA	C26-C15-C16	2.26	119.07	115.27
26	P	305	PEK	C02-O01-C1	-2.26	112.24	117.79
22	C	304	CHD	C17-C13-C14	2.25	102.37	100.09
27	T	102	CDL	C19-C18-C17	2.25	125.85	114.42
22	P	310	CHD	C5-C4-C3	2.25	116.06	112.76
27	G	101	CDL	C83-C82-C81	2.25	125.84	114.42
17	N	604	HEA	C21-C20-C19	-2.25	105.59	112.98
18	C	307	PGV	O01-C1-O02	2.24	129.12	123.70
17	N	605	HEA	C17-C18-C19	2.24	133.05	127.66
27	G	101	CDL	C80-C79-C78	2.24	125.79	114.42
20	B	302	TGL	C33-C19-C18	2.24	125.77	114.42
22	C	310	CHD	C19-C10-C5	-2.23	106.59	110.36
18	N	609	PGV	C4-C3-C2	2.22	121.17	113.19
26	P	305	PEK	C24-C23-C22	-2.21	105.23	113.19
22	W	101	CHD	C14-C8-C9	2.21	112.75	109.71
26	P	305	PEK	O03-C21-O04	2.21	129.16	123.59
20	N	606	TGL	C10-CB9-CB8	2.20	125.62	114.42
17	N	605	HEA	CHA-C4D-ND	2.20	126.83	124.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	G	102	PEK	C03-C02-C01	2.20	117.00	111.79
18	C	307	PGV	C3-C2-C1	-2.20	105.63	113.62
27	P	309	CDL	C52-C51-CB5	-2.20	105.64	113.62
27	G	101	CDL	C19-C18-C17	2.19	125.56	114.42
27	G	101	CDL	OB8-CB6-CB4	2.19	114.79	108.43
26	P	306	PEK	O03-C01-C02	2.18	114.77	108.43
17	A	604	HEA	CMB-C2B-C3B	-2.17	126.19	130.34
26	T	101	PEK	P-O12-C04	2.17	132.29	121.59
18	A	606	PGV	C4-C3-C2	-2.17	105.38	113.19
22	W	101	CHD	C19-C10-C1	-2.17	104.76	108.26
22	P	304	CHD	C6-C5-C10	2.17	114.96	112.66
20	B	302	TGL	OG2-CG2-CG3	2.17	116.25	108.40
26	P	306	PEK	C2-C3-C4	2.17	117.09	113.23
20	O	303	TGL	CA3-CA2-CA1	-2.16	105.76	113.62
21	O	304	PSC	C07-N-C06	-2.16	103.42	108.97
27	T	102	CDL	OB8-CB6-CB4	2.16	114.72	108.43
22	B	304	CHD	C1-C10-C5	2.16	110.96	107.77
23	C	301	DCW	C2-N1-C1	-2.15	118.48	123.02
18	P	308	PGV	O03-C01-C02	2.15	114.69	108.43
17	A	604	HEA	C27-C19-C20	2.14	118.88	115.27
22	W	101	CHD	C9-C10-C5	2.14	111.59	108.58
17	A	604	HEA	C4B-NB-C1B	-2.14	102.86	105.07
23	P	301	DCW	C8-N2-C1	2.13	127.53	123.02
20	B	302	TGL	OG3-CG3-CG2	2.13	114.63	108.43
27	C	309	CDL	OA8-CA6-CA4	2.12	114.62	108.43
17	A	604	HEA	C4A-CHB-C1B	2.12	125.36	122.56
26	C	306	PEK	O03-C01-C02	2.12	114.60	108.43
18	N	609	PGV	C3-C2-C1	-2.12	105.93	113.62
27	C	309	CDL	CA4-OA6-CA5	2.11	123.00	117.79
20	D	201	TGL	CB4-CB3-CB2	2.11	120.79	113.19
17	N	604	HEA	CMC-C2C-C1C	-2.11	125.22	128.46
20	N	607	TGL	CB4-CB3-CB2	2.10	120.74	113.19
20	O	303	TGL	C33-C19-C18	2.10	125.09	114.42
22	J	101	CHD	C9-C11-C12	2.10	117.07	114.30
20	N	607	TGL	CA5-CA4-CA3	-2.10	103.77	114.42
20	N	606	TGL	CC7-CC6-CC5	2.10	125.07	114.42
22	C	304	CHD	C1-C2-C3	2.09	113.16	110.47
18	N	609	PGV	C21-C20-C19	2.09	121.21	113.62
20	B	302	TGL	CA3-CA2-CA1	-2.08	106.04	113.62
18	C	307	PGV	C9-C10-C11	-2.08	100.51	112.43
20	D	201	TGL	C25-C24-C23	2.08	124.99	114.42
22	C	310	CHD	C5-C4-C3	2.08	115.81	112.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	D	201	TGL	C10-CB9-CB8	2.07	124.94	114.42
20	N	607	TGL	OG2-CG2-CG1	2.07	115.90	108.40
22	P	304	CHD	C15-C14-C13	-2.07	101.52	103.55
26	T	101	PEK	C2-C3-C4	2.07	116.92	113.23
27	T	102	CDL	C79-C78-C77	2.07	124.92	114.42
22	C	304	CHD	O12-C12-C13	-2.06	107.54	111.03
20	B	302	TGL	CB6-CB5-CB4	2.06	124.90	114.42
22	B	304	CHD	C5-C6-C7	2.06	116.73	114.46
18	N	608	PGV	C03-C02-C01	2.05	116.64	111.79
27	C	309	CDL	C79-C78-C77	2.05	124.84	114.42
17	A	605	HEA	C3B-C4B-NB	2.05	112.27	109.84
18	A	607	PGV	C4-C3-C2	2.04	120.54	113.19
22	O	302	CHD	C19-C10-C9	-2.04	108.37	111.18
22	P	304	CHD	C4-C5-C10	-2.04	110.49	112.66
20	D	201	TGL	CC3-CC2-CC1	-2.04	106.19	113.62
27	G	101	CDL	C79-C78-C77	2.04	124.80	114.42
26	G	102	PEK	P-O12-C04	2.04	131.63	121.59
20	N	606	TGL	OG2-CB1-OB1	2.03	128.62	123.70
18	P	307	PGV	C9-C10-C11	-2.02	100.87	112.43
20	O	303	TGL	OG2-CG2-CG3	2.01	115.70	108.40
27	P	309	CDL	C83-C82-C81	2.01	124.64	114.42
17	N	604	HEA	C16-C17-C18	2.01	118.50	111.88
22	P	310	CHD	C6-C5-C10	2.00	114.78	112.66
17	A	604	HEA	C16-C17-C18	2.00	118.46	111.88

All (42) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
22	C	310	CHD	C14
22	C	310	CHD	C12
22	C	310	CHD	C3
22	C	310	CHD	C8
22	C	310	CHD	C9
22	J	101	CHD	C14
22	J	101	CHD	C12
22	J	101	CHD	C17
22	J	101	CHD	C8
22	J	101	CHD	C9
22	P	310	CHD	C14
22	P	310	CHD	C12
22	P	310	CHD	C3
22	P	310	CHD	C8

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Mol	Chain	Res	Type	Atom
22	P	310	CHD	C9
22	W	101	CHD	C14
22	W	101	CHD	C12
22	W	101	CHD	C17
22	W	101	CHD	C8
22	W	101	CHD	C9
24	C	302	DMU	C10
24	C	302	DMU	C5
24	C	302	DMU	C9
24	C	302	DMU	C2
24	C	302	DMU	C4
24	C	302	DMU	C6
24	M	101	DMU	C9
24	M	101	DMU	C2
24	M	101	DMU	C5
24	M	101	DMU	C4
24	M	101	DMU	C6
24	P	302	DMU	C10
24	P	302	DMU	C5
24	P	302	DMU	C9
24	P	302	DMU	C2
24	P	302	DMU	C4
24	P	302	DMU	C6
24	Z	101	DMU	C9
24	Z	101	DMU	C2
24	Z	101	DMU	C5
24	Z	101	DMU	C4
24	Z	101	DMU	C6

All (878) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
18	A	606	PGV	C04-O12-P-O11
18	A	606	PGV	C04-O12-P-O13
18	A	606	PGV	C04-O12-P-O14
18	A	606	PGV	C02-C03-O11-P
18	A	606	PGV	C05-C04-O12-P
18	A	606	PGV	C04-C05-C06-O06
18	A	606	PGV	O02-C1-O01-C02
18	A	606	PGV	C20-C19-O03-C01
18	C	308	PGV	C04-O12-P-O11
18	C	308	PGV	C04-O12-P-O13

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Mol	Chain	Res	Type	Atoms
18	C	308	PGV	C04-O12-P-O14
18	N	608	PGV	C04-O12-P-O11
18	N	608	PGV	C04-O12-P-O13
18	N	608	PGV	C04-O12-P-O14
18	N	608	PGV	C02-C03-O11-P
18	N	608	PGV	C05-C04-O12-P
18	N	608	PGV	C04-C05-C06-O06
18	N	608	PGV	O02-C1-O01-C02
18	N	608	PGV	C20-C19-O03-C01
18	P	308	PGV	C04-O12-P-O11
18	P	308	PGV	C04-O12-P-O13
18	P	308	PGV	C04-O12-P-O14
21	B	303	PSC	C03-O11-P-O14
21	B	303	PSC	C04-O12-P-O14
21	B	303	PSC	O02-C1-O01-C02
21	O	304	PSC	C03-O11-P-O14
21	O	304	PSC	C04-O12-P-O14
22	J	101	CHD	C16-C17-C20-C21
22	J	101	CHD	C16-C17-C20-C22
22	W	101	CHD	C16-C17-C20-C21
22	W	101	CHD	C16-C17-C20-C22
23	C	301	DCW	O1-C1-N1-C2
23	C	301	DCW	N2-C1-N1-C2
23	P	301	DCW	N2-C1-N1-C2
24	M	101	DMU	O5-C6-O16-C18
24	Z	101	DMU	O5-C6-O16-C18
26	C	306	PEK	C04-O12-P-O13
26	C	306	PEK	C04-O12-P-O14
26	G	102	PEK	C03-O11-P-O14
26	G	102	PEK	O12-C04-C05-N
26	P	306	PEK	C03-O11-P-O13
26	P	306	PEK	C04-O12-P-O13
26	P	306	PEK	C04-O12-P-O14
26	T	101	PEK	C03-O11-P-O14
26	T	101	PEK	O12-C04-C05-N
27	C	309	CDL	CA2-OA2-PA1-OA3
27	C	309	CDL	CA2-OA2-PA1-OA4
27	C	309	CDL	CA4-CA3-OA5-PA1
27	C	309	CDL	C11-CA5-OA6-CA4
27	C	309	CDL	CB2-OB2-PB2-OB3
27	C	309	CDL	CB2-OB2-PB2-OB4
27	G	101	CDL	CB2-C1-CA2-OA2

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Mol	Chain	Res	Type	Atoms
27	G	101	CDL	CA2-OA2-PA1-OA3
27	G	101	CDL	C1-CB2-OB2-PB2
27	G	101	CDL	CB3-OB5-PB2-OB3
27	G	101	CDL	CB3-OB5-PB2-OB4
27	P	309	CDL	CA2-OA2-PA1-OA3
27	P	309	CDL	CA2-OA2-PA1-OA4
27	P	309	CDL	CA4-CA3-OA5-PA1
27	P	309	CDL	C11-CA5-OA6-CA4
27	P	309	CDL	CB2-OB2-PB2-OB3
27	P	309	CDL	CB2-OB2-PB2-OB4
27	T	102	CDL	CB2-C1-CA2-OA2
27	T	102	CDL	CA2-OA2-PA1-OA3
27	T	102	CDL	C1-CB2-OB2-PB2
27	T	102	CDL	CB3-OB5-PB2-OB3
27	T	102	CDL	CB3-OB5-PB2-OB4
18	A	606	PGV	O04-C19-O03-C01
18	N	608	PGV	O04-C19-O03-C01
20	D	201	TGL	OC1-CC1-OG3-CG3
20	N	607	TGL	OC1-CC1-OG3-CG3
23	P	301	DCW	O1-C1-N1-C2
20	B	302	TGL	OB1-CB1-OG2-CG2
20	O	303	TGL	OB1-CB1-OG2-CG2
21	O	304	PSC	O02-C1-O01-C02
27	G	101	CDL	C31-CA7-OA8-CA6
18	A	606	PGV	C2-C1-O01-C02
18	N	608	PGV	C2-C1-O01-C02
20	B	302	TGL	C16-C15-CC9-CC8
20	O	303	TGL	C16-C15-CC9-CC8
27	C	309	CDL	C40-C41-C42-C43
27	C	309	CDL	C60-C61-C62-C63
27	C	309	CDL	C80-C81-C82-C83
27	G	101	CDL	C20-C21-C22-C23
27	G	101	CDL	C57-C58-C59-C60
27	G	101	CDL	C77-C78-C79-C80
27	G	101	CDL	C80-C81-C82-C83
27	P	309	CDL	C40-C41-C42-C43
27	P	309	CDL	C60-C61-C62-C63
27	P	309	CDL	C80-C81-C82-C83
27	T	102	CDL	C17-C18-C19-C20
27	T	102	CDL	C20-C21-C22-C23
27	T	102	CDL	C57-C58-C59-C60
27	T	102	CDL	C80-C81-C82-C83

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Mol	Chain	Res	Type	Atoms
20	B	302	TGL	CA2-CA1-OG1-CG1
20	D	201	TGL	CC2-CC1-OG3-CG3
20	N	607	TGL	CC2-CC1-OG3-CG3
20	O	303	TGL	CA2-CA1-OG1-CG1
27	T	102	CDL	C31-CA7-OA8-CA6
27	C	309	CDL	C20-C21-C22-C23
27	C	309	CDL	C57-C58-C59-C60
27	C	309	CDL	C77-C78-C79-C80
27	G	101	CDL	C17-C18-C19-C20
27	G	101	CDL	C37-C38-C39-C40
27	G	101	CDL	C40-C41-C42-C43
27	P	309	CDL	C20-C21-C22-C23
27	P	309	CDL	C77-C78-C79-C80
27	T	102	CDL	C40-C41-C42-C43
27	T	102	CDL	C77-C78-C79-C80
20	L	101	TGL	C21-C20-CA9-CA8
20	N	606	TGL	C21-C20-CA9-CA8
27	G	101	CDL	C60-C61-C62-C63
27	P	309	CDL	C17-C18-C19-C20
27	T	102	CDL	C37-C38-C39-C40
27	T	102	CDL	C60-C61-C62-C63
27	C	309	CDL	OA7-CA5-OA6-CA4
27	P	309	CDL	OA7-CA5-OA6-CA4
20	B	302	TGL	OA1-CA1-OG1-CG1
20	O	303	TGL	OA1-CA1-OG1-CG1
27	G	101	CDL	OA9-CA7-OA8-CA6
27	T	102	CDL	OA9-CA7-OA8-CA6
27	C	309	CDL	C17-C18-C19-C20
27	C	309	CDL	C37-C38-C39-C40
27	P	309	CDL	C57-C58-C59-C60
20	N	607	TGL	C21-C20-CA9-CA8
27	P	309	CDL	C37-C38-C39-C40
27	G	101	CDL	O1-C1-CA2-OA2
27	T	102	CDL	O1-C1-CA2-OA2
20	D	201	TGL	C21-C20-CA9-CA8
20	L	101	TGL	OA1-CA1-OG1-CG1
20	N	606	TGL	OA1-CA1-OG1-CG1
24	C	302	DMU	O6-C11-C9-O1
20	B	302	TGL	CB2-CB1-OG2-CG2
20	O	303	TGL	CB2-CB1-OG2-CG2
20	B	302	TGL	C11-C10-CB9-CB8
20	L	101	TGL	C11-C10-CB9-CB8

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Mol	Chain	Res	Type	Atoms
20	N	606	TGL	C16-C15-CC9-CC8
20	B	302	TGL	C21-C20-CA9-CA8
20	D	201	TGL	C11-C10-CB9-CB8
20	D	201	TGL	C16-C15-CC9-CC8
20	L	101	TGL	C16-C15-CC9-CC8
20	N	606	TGL	C11-C10-CB9-CB8
20	N	607	TGL	C11-C10-CB9-CB8
20	N	607	TGL	C16-C15-CC9-CC8
20	O	303	TGL	C21-C20-CA9-CA8
20	O	303	TGL	C11-C10-CB9-CB8
24	P	302	DMU	O6-C11-C9-O1
24	Z	101	DMU	O6-C11-C9-C8
22	C	310	CHD	C17-C20-C22-C23
22	P	310	CHD	C17-C20-C22-C23
24	M	101	DMU	O6-C11-C9-C8
18	A	606	PGV	O12-C04-C05-C06
18	N	608	PGV	O12-C04-C05-C06
27	C	309	CDL	CA2-C1-CB2-OB2
27	P	309	CDL	CA2-C1-CB2-OB2
20	D	201	TGL	CA2-CA1-OG1-CG1
20	L	101	TGL	CA2-CA1-OG1-CG1
20	N	606	TGL	CA2-CA1-OG1-CG1
21	B	303	PSC	C20-C19-O03-C01
21	O	304	PSC	C20-C19-O03-C01
22	J	101	CHD	C13-C17-C20-C22
22	W	101	CHD	C13-C17-C20-C22
24	M	101	DMU	O5-C4-C57-O61
24	C	302	DMU	C3-C4-C57-O61
18	A	606	PGV	O12-C04-C05-O05
27	G	101	CDL	O1-C1-CB2-OB2
27	T	102	CDL	O1-C1-CB2-OB2
22	C	310	CHD	C21-C20-C22-C23
22	P	310	CHD	C21-C20-C22-C23
18	A	606	PGV	C19-C20-C21-C22
24	C	302	DMU	C1-C6-O16-C18
24	P	302	DMU	C1-C6-O16-C18
21	O	304	PSC	O04-C19-O03-C01
24	Z	101	DMU	O5-C4-C57-O61
21	B	303	PSC	C2-C1-O01-C02
18	N	608	PGV	C19-C20-C21-C22
21	O	304	PSC	C1-C2-C3-C4
26	C	305	PEK	C1-C2-C3-C4

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Mol	Chain	Res	Type	Atoms
21	B	303	PSC	O04-C19-O03-C01
22	J	101	CHD	C17-C20-C22-C23
22	W	101	CHD	C17-C20-C22-C23
24	P	302	DMU	C3-C4-C57-O61
20	L	101	TGL	CC3-CC4-CC5-CC6
20	N	607	TGL	CA2-CA1-OG1-CG1
22	J	101	CHD	C21-C20-C22-C23
22	W	101	CHD	C21-C20-C22-C23
21	B	303	PSC	C1-C2-C3-C4
18	P	308	PGV	O05-C05-C06-O06
26	P	305	PEK	C1-C2-C3-C4
21	B	303	PSC	C20-C21-C22-C23
20	N	606	TGL	CC3-CC4-CC5-CC6
21	O	304	PSC	C20-C21-C22-C23
26	G	102	PEK	C28-C29-C30-C31
26	T	101	PEK	C1-C2-C3-C4
26	T	101	PEK	C28-C29-C30-C31
17	N	604	HEA	C15-C16-C17-C18
20	N	606	TGL	CC2-CC3-CC4-CC5
18	C	308	PGV	O12-C04-C05-O05
18	N	608	PGV	O12-C04-C05-O05
18	P	308	PGV	O12-C04-C05-O05
27	C	309	CDL	O1-C1-CB2-OB2
27	P	309	CDL	O1-C1-CB2-OB2
22	J	101	CHD	C13-C17-C20-C21
22	W	101	CHD	C13-C17-C20-C21
20	N	607	TGL	OA1-CA1-OG1-CG1
27	C	309	CDL	CB7-C71-C72-C73
27	P	309	CDL	CB7-C71-C72-C73
20	L	101	TGL	CC2-CC3-CC4-CC5
20	D	201	TGL	OA1-CA1-OG1-CG1
26	P	305	PEK	O04-C21-O03-C01
21	O	304	PSC	C2-C1-O01-C02
21	B	303	PSC	C22-C23-C24-C25
27	G	101	CDL	C73-C74-C75-C76
27	T	102	CDL	C73-C74-C75-C76
26	C	306	PEK	C04-O12-P-O11
26	G	102	PEK	C03-O11-P-O12
26	P	306	PEK	C04-O12-P-O11
26	T	101	PEK	C03-O11-P-O12
27	C	309	CDL	CA2-OA2-PA1-OA5
27	C	309	CDL	CB2-OB2-PB2-OB5

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Mol	Chain	Res	Type	Atoms
27	G	101	CDL	CB3-OB5-PB2-OB2
27	P	309	CDL	CA2-OA2-PA1-OA5
27	P	309	CDL	CB2-OB2-PB2-OB5
27	T	102	CDL	CB3-OB5-PB2-OB2
26	G	102	PEK	C1-C2-C3-C4
26	C	305	PEK	C22-C21-O03-C01
26	P	305	PEK	C22-C21-O03-C01
27	T	102	CDL	CA5-C11-C12-C13
18	P	308	PGV	O12-C04-C05-C06
27	G	101	CDL	CA2-C1-CB2-OB2
27	T	102	CDL	CA2-C1-CB2-OB2
27	G	101	CDL	OA7-CA5-OA6-CA4
27	T	102	CDL	OA7-CA5-OA6-CA4
27	G	101	CDL	CA5-C11-C12-C13
18	C	308	PGV	C22-C23-C24-C25
27	G	101	CDL	C58-C59-C60-C61
18	C	308	PGV	C2-C1-O01-C02
18	P	308	PGV	C2-C1-O01-C02
27	G	101	CDL	C11-CA5-OA6-CA4
27	T	102	CDL	C11-CA5-OA6-CA4
18	C	308	PGV	C13-C14-C15-C16
27	C	309	CDL	C16-C17-C18-C19
27	T	102	CDL	C58-C59-C60-C61
18	A	607	PGV	C5-C6-C7-C8
18	N	609	PGV	C5-C6-C7-C8
18	P	308	PGV	C22-C23-C24-C25
21	B	303	PSC	C29-C30-C31-C32
26	C	306	PEK	C25-C26-C27-C28
27	P	309	CDL	C59-C60-C61-C62
18	C	308	PGV	O02-C1-O01-C02
18	P	308	PGV	O02-C1-O01-C02
18	N	608	PGV	C4-C5-C6-C7
18	P	308	PGV	C13-C14-C15-C16
26	P	306	PEK	C25-C26-C27-C28
27	C	309	CDL	C59-C60-C61-C62
27	G	101	CDL	C13-C14-C15-C16
27	P	309	CDL	C16-C17-C18-C19
21	B	303	PSC	C11-C12-C13-C14
21	O	304	PSC	C11-C12-C13-C14
21	O	304	PSC	C22-C23-C24-C25
21	O	304	PSC	C29-C30-C31-C32
24	M	101	DMU	C25-C28-C31-C34

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Mol	Chain	Res	Type	Atoms
27	T	102	CDL	C13-C14-C15-C16
18	A	606	PGV	C4-C5-C6-C7
24	Z	101	DMU	C25-C28-C31-C34
26	C	305	PEK	C31-C32-C33-C34
26	P	305	PEK	C31-C32-C33-C34
27	G	101	CDL	C72-C73-C74-C75
27	T	102	CDL	C56-C57-C58-C59
26	G	102	PEK	O03-C01-C02-O01
27	T	102	CDL	OB6-CB4-CB6-OB8
18	A	607	PGV	C27-C28-C29-C30
21	B	303	PSC	C2-C3-C4-C5
27	C	309	CDL	C55-C56-C57-C58
27	C	309	CDL	C74-C75-C76-C77
20	B	302	TGL	OC1-CC1-OG3-CG3
20	L	101	TGL	CB4-CB5-CB6-CB7
21	O	304	PSC	C2-C3-C4-C5
26	G	102	PEK	C27-C28-C29-C30
26	T	101	PEK	C27-C28-C29-C30
27	C	309	CDL	C51-C52-C53-C54
27	G	101	CDL	C56-C57-C58-C59
27	P	309	CDL	C51-C52-C53-C54
27	P	309	CDL	C55-C56-C57-C58
27	P	309	CDL	C74-C75-C76-C77
27	T	102	CDL	C72-C73-C74-C75
18	C	307	PGV	C7-C8-C9-C10
18	N	608	PGV	C22-C23-C24-C25
18	N	609	PGV	C27-C28-C29-C30
18	P	307	PGV	C7-C8-C9-C10
18	P	307	PGV	C24-C25-C26-C27
24	P	302	DMU	C25-C28-C31-C34
26	G	102	PEK	C29-C30-C31-C32
26	T	101	PEK	C29-C30-C31-C32
26	C	305	PEK	O04-C21-O03-C01
18	C	307	PGV	C24-C25-C26-C27
20	O	303	TGL	CB6-CB7-CB8-CB9
24	C	302	DMU	C25-C28-C31-C34
18	C	308	PGV	C04-C05-C06-O06
18	P	308	PGV	C04-C05-C06-O06
18	C	308	PGV	C24-C25-C26-C27
18	P	307	PGV	C23-C24-C25-C26
20	N	606	TGL	CB4-CB5-CB6-CB7
27	P	309	CDL	C72-C73-C74-C75

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Mol	Chain	Res	Type	Atoms
27	P	309	CDL	CA5-C11-C12-C13
18	A	606	PGV	C22-C23-C24-C25
18	A	606	PGV	C28-C29-C30-C31
18	C	307	PGV	C23-C24-C25-C26
18	C	308	PGV	C3-C4-C5-C6
18	N	608	PGV	C28-C29-C30-C31
18	P	308	PGV	C3-C4-C5-C6
18	P	308	PGV	C24-C25-C26-C27
27	C	309	CDL	C13-C14-C15-C16
27	C	309	CDL	C71-C72-C73-C74
27	P	309	CDL	C13-C14-C15-C16
26	C	305	PEK	C23-C24-C25-C26
27	C	309	CDL	C72-C73-C74-C75
27	P	309	CDL	C71-C72-C73-C74
18	P	307	PGV	C22-C23-C24-C25
27	C	309	CDL	C73-C74-C75-C76
27	P	309	CDL	C73-C74-C75-C76
27	C	309	CDL	CA5-C11-C12-C13
18	C	307	PGV	C22-C23-C24-C25
26	C	306	PEK	C16-C17-C18-C19
26	P	305	PEK	C23-C24-C25-C26
18	N	609	PGV	C6-C7-C8-C9
18	P	308	PGV	C27-C28-C29-C30
26	T	101	PEK	C25-C26-C27-C28
18	C	308	PGV	C27-C28-C29-C30
20	B	302	TGL	CB6-CB7-CB8-CB9
26	G	102	PEK	C16-C17-C18-C19
26	G	102	PEK	C25-C26-C27-C28
27	C	309	CDL	C36-C37-C38-C39
27	P	309	CDL	C36-C37-C38-C39
26	P	306	PEK	C31-C32-C33-C34
20	O	303	TGL	OC1-CC1-OG3-CG3
26	C	306	PEK	C31-C32-C33-C34
26	P	306	PEK	C16-C17-C18-C19
27	T	102	CDL	C79-C80-C81-C82
18	A	606	PGV	O05-C05-C06-O06
18	C	308	PGV	O05-C05-C06-O06
18	N	608	PGV	O05-C05-C06-O06
26	P	305	PEK	C27-C28-C29-C30
18	P	307	PGV	C11-C10-C9-C8
18	P	308	PGV	C1-C2-C3-C4
18	A	607	PGV	C7-C8-C9-C10

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Mol	Chain	Res	Type	Atoms
18	C	308	PGV	C28-C29-C30-C31
18	N	609	PGV	C7-C8-C9-C10
18	C	308	PGV	C1-C2-C3-C4
18	C	308	PGV	O12-C04-C05-C06
26	C	305	PEK	C27-C28-C29-C30
27	G	101	CDL	C82-C83-C84-C85
18	A	607	PGV	C6-C7-C8-C9
27	T	102	CDL	C43-C44-C45-C46
27	T	102	CDL	C82-C83-C84-C85
26	T	101	PEK	C16-C17-C18-C19
24	Z	101	DMU	C22-C25-C28-C31
26	P	305	PEK	C22-C23-C24-C25
27	G	101	CDL	C43-C44-C45-C46
27	G	101	CDL	C79-C80-C81-C82
27	P	309	CDL	C51-CB5-OB6-CB4
27	P	309	CDL	C18-C19-C20-C21
18	P	308	PGV	C28-C29-C30-C31
17	A	604	HEA	C21-C22-C23-C25
26	C	305	PEK	C25-C26-C27-C28
26	P	306	PEK	C29-C30-C31-C32
27	G	101	CDL	C21-C22-C23-C24
18	A	606	PGV	C24-C25-C26-C27
18	N	608	PGV	C24-C25-C26-C27
27	C	309	CDL	C18-C19-C20-C21
27	P	309	CDL	C75-C76-C77-C78
27	P	309	CDL	OB7-CB5-OB6-CB4
24	M	101	DMU	C22-C25-C28-C31
26	C	306	PEK	C29-C30-C31-C32
26	P	305	PEK	C25-C26-C27-C28
26	P	305	PEK	C32-C33-C34-C35
17	N	604	HEA	C21-C22-C23-C25
27	T	102	CDL	C21-C22-C23-C24
26	C	305	PEK	C22-C23-C24-C25
26	C	305	PEK	C32-C33-C34-C35
27	C	309	CDL	C75-C76-C77-C78
27	G	101	CDL	C33-C34-C35-C36
27	T	102	CDL	C33-C34-C35-C36
17	A	604	HEA	C15-C16-C17-C18
18	C	308	PGV	C25-C26-C27-C28
27	C	309	CDL	C32-C33-C34-C35
27	P	309	CDL	C32-C33-C34-C35
27	C	309	CDL	C51-CB5-OB6-CB4

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Mol	Chain	Res	Type	Atoms
18	P	308	PGV	C25-C26-C27-C28
24	P	302	DMU	O6-C11-C9-C8
26	P	305	PEK	C24-C25-C26-C27
26	T	101	PEK	O03-C01-C02-O01
27	G	101	CDL	OB6-CB4-CB6-OB8
26	C	305	PEK	C35-C36-C37-C38
21	B	303	PSC	C04-C05-N-C08
21	O	304	PSC	C04-C05-N-C08
18	C	308	PGV	C30-C31-C32-C33
18	P	308	PGV	C30-C31-C32-C33
26	C	305	PEK	C24-C25-C26-C27
26	T	101	PEK	C34-C35-C36-C37
18	C	307	PGV	C11-C10-C9-C8
18	C	308	PGV	C11-C10-C9-C8
18	P	308	PGV	C11-C10-C9-C8
26	P	305	PEK	C16-C17-C18-C19
27	C	309	CDL	C42-C43-C44-C45
26	G	102	PEK	C26-C27-C28-C29
26	G	102	PEK	C34-C35-C36-C37
27	P	309	CDL	C61-C62-C63-C64
26	C	305	PEK	C16-C17-C18-C19
20	L	101	TGL	OB1-CB1-OG2-CG2
20	N	606	TGL	OB1-CB1-OG2-CG2
27	C	309	CDL	OB7-CB5-OB6-CB4
26	T	101	PEK	C26-C27-C28-C29
20	O	303	TGL	CG2-CG3-OG3-CC1
21	B	303	PSC	C03-O11-P-O12
21	B	303	PSC	C04-O12-P-O11
21	O	304	PSC	C03-O11-P-O12
21	O	304	PSC	C04-O12-P-O11
27	G	101	CDL	CB2-OB2-PB2-OB5
27	T	102	CDL	CB2-OB2-PB2-OB5
27	C	309	CDL	C78-C79-C80-C81
27	P	309	CDL	C78-C79-C80-C81
27	T	102	CDL	CB7-C71-C72-C73
20	B	302	TGL	CC2-CC1-OG3-CG3
20	N	606	TGL	CC2-CC1-OG3-CG3
27	C	309	CDL	OB5-CB3-CB4-CB6
27	P	309	CDL	OB5-CB3-CB4-CB6
18	P	308	PGV	C14-C15-C16-C17
26	P	305	PEK	C35-C36-C37-C38
27	C	309	CDL	C61-C62-C63-C64

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Mol	Chain	Res	Type	Atoms
27	C	309	CDL	C34-C35-C36-C37
27	T	102	CDL	C53-C54-C55-C56
20	B	302	TGL	CG2-CG3-OG3-CC1
18	N	609	PGV	C23-C24-C25-C26
27	P	309	CDL	C42-C43-C44-C45
27	T	102	CDL	C71-C72-C73-C74
18	C	308	PGV	C12-C13-C14-C15
18	N	608	PGV	C12-C13-C14-C15
18	P	308	PGV	C12-C13-C14-C15
27	G	101	CDL	CB5-C51-C52-C53
27	P	309	CDL	C34-C35-C36-C37
27	T	102	CDL	C41-C42-C43-C44
21	B	303	PSC	C24-C25-C26-C27
21	O	304	PSC	C27-C28-C29-C30
27	G	101	CDL	C41-C42-C43-C44
18	C	308	PGV	C14-C15-C16-C17
26	P	305	PEK	C26-C27-C28-C29
27	G	101	CDL	C15-C16-C17-C18
27	G	101	CDL	C53-C54-C55-C56
27	T	102	CDL	C15-C16-C17-C18
27	G	101	CDL	C31-C32-C33-C34
27	T	102	CDL	C31-C32-C33-C34
21	O	304	PSC	C23-C24-C25-C26
26	G	102	PEK	O03-C01-C02-C03
26	T	101	PEK	O03-C01-C02-C03
27	C	309	CDL	CB3-CB4-CB6-OB8
27	C	309	CDL	C64-C65-C66-C67
27	P	309	CDL	C38-C39-C40-C41
27	P	309	CDL	CB3-CB4-CB6-OB8
27	P	309	CDL	C64-C65-C66-C67
27	T	102	CDL	CB3-CB4-CB6-OB8
27	C	309	CDL	C44-C45-C46-C47
24	Z	101	DMU	C3-C4-C57-O61
18	A	607	PGV	C30-C31-C32-C33
18	N	609	PGV	C30-C31-C32-C33
27	C	309	CDL	C11-C12-C13-C14
18	C	308	PGV	C31-C32-C33-C34
27	T	102	CDL	CB5-C51-C52-C53
27	P	309	CDL	C44-C45-C46-C47
21	B	303	PSC	C23-C24-C25-C26
27	G	101	CDL	C35-C36-C37-C38
27	G	101	CDL	C71-C72-C73-C74

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Mol	Chain	Res	Type	Atoms
18	A	606	PGV	C12-C13-C14-C15
21	B	303	PSC	C13-C14-C15-C16
21	O	304	PSC	C13-C14-C15-C16
17	A	604	HEA	C17-C18-C19-C27
27	T	102	CDL	C35-C36-C37-C38
18	N	608	PGV	C20-C21-C22-C23
27	P	309	CDL	C11-C12-C13-C14
27	G	101	CDL	CB7-C71-C72-C73
20	O	303	TGL	CC2-CC1-OG3-CG3
18	A	607	PGV	C23-C24-C25-C26
18	A	606	PGV	C03-C02-O01-C1
18	N	608	PGV	C03-C02-O01-C1
18	C	308	PGV	C5-C6-C7-C8
18	P	307	PGV	C15-C16-C17-C18
27	C	309	CDL	C38-C39-C40-C41
27	C	309	CDL	C63-C64-C65-C66
18	C	307	PGV	C15-C16-C17-C18
21	B	303	PSC	C27-C28-C29-C30
27	P	309	CDL	C63-C64-C65-C66
18	P	308	PGV	C31-C32-C33-C34
21	O	304	PSC	C24-C25-C26-C27
18	C	308	PGV	C20-C19-O03-C01
18	P	308	PGV	C20-C19-O03-C01
20	L	101	TGL	CC2-CC1-OG3-CG3
27	C	309	CDL	OA5-CA3-CA4-OA6
27	P	309	CDL	OA5-CA3-CA4-OA6
26	P	306	PEK	C21-C22-C23-C24
26	C	305	PEK	C26-C27-C28-C29
26	G	102	PEK	C30-C31-C32-C33
27	G	101	CDL	C14-C15-C16-C17
18	C	308	PGV	O04-C19-O03-C01
26	T	101	PEK	C30-C31-C32-C33
18	P	308	PGV	C5-C6-C7-C8
21	O	304	PSC	O03-C01-C02-O01
18	C	307	PGV	C13-C14-C15-C16
18	P	307	PGV	C13-C14-C15-C16
18	P	308	PGV	C4-C5-C6-C7
27	C	309	CDL	C84-C85-C86-C87
27	T	102	CDL	C14-C15-C16-C17
26	C	306	PEK	C17-C18-C19-C20
18	P	308	PGV	O04-C19-O03-C01
21	B	303	PSC	C3-C4-C5-C6

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Mol	Chain	Res	Type	Atoms
27	P	309	CDL	C84-C85-C86-C87
27	T	102	CDL	C44-C45-C46-C47
18	C	308	PGV	C4-C5-C6-C7
27	G	101	CDL	C44-C45-C46-C47
26	C	306	PEK	C21-C22-C23-C24
26	P	306	PEK	C32-C33-C34-C35
21	O	304	PSC	C3-C4-C5-C6
26	C	305	PEK	O12-C04-C05-N
26	P	305	PEK	O12-C04-C05-N
20	B	302	TGL	C12-C13-C14-C29
18	C	308	PGV	C23-C24-C25-C26
26	P	306	PEK	C17-C18-C19-C20
27	T	102	CDL	C19-C20-C21-C22
26	T	101	PEK	C22-C21-O03-C01
21	O	304	PSC	C14-C15-C16-C17
27	G	101	CDL	C19-C20-C21-C22
21	B	303	PSC	O03-C01-C02-C03
21	O	304	PSC	O03-C01-C02-C03
26	C	305	PEK	O03-C01-C02-C03
26	P	305	PEK	O03-C01-C02-C03
27	G	101	CDL	CA3-CA4-CA6-OA8
27	T	102	CDL	CA3-CA4-CA6-OA8
26	C	306	PEK	C32-C33-C34-C35
20	N	607	TGL	CA9-C20-C21-C22
27	C	309	CDL	C52-C53-C54-C55
18	C	308	PGV	C15-C16-C17-C18
18	P	308	PGV	C23-C24-C25-C26
21	B	303	PSC	C14-C15-C16-C17
26	C	305	PEK	C5-C6-C7-C8
26	C	305	PEK	C9-C10-C11-C12
26	C	306	PEK	C11-C12-C13-C14
26	G	102	PEK	C6-C7-C8-C9
26	P	305	PEK	C5-C6-C7-C8
26	P	305	PEK	C9-C10-C11-C12
26	P	306	PEK	C11-C12-C13-C14
26	T	101	PEK	C6-C7-C8-C9
18	A	606	PGV	C26-C27-C28-C29
18	N	608	PGV	C26-C27-C28-C29
18	N	609	PGV	C25-C26-C27-C28
20	D	201	TGL	CA9-C20-C21-C22
27	P	309	CDL	C43-C44-C45-C46
26	G	102	PEK	C22-C21-O03-C01

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Mol	Chain	Res	Type	Atoms
24	Z	101	DMU	O16-C18-C19-C22
26	P	305	PEK	C17-C18-C19-C20
27	C	309	CDL	C43-C44-C45-C46
26	G	102	PEK	C15-C16-C17-C18
17	N	604	HEA	C17-C18-C19-C27
18	A	606	PGV	C20-C21-C22-C23
20	N	606	TGL	CC7-CC8-CC9-C15
21	B	303	PSC	O03-C01-C02-O01
26	P	305	PEK	O03-C01-C02-O01
27	P	309	CDL	OB6-CB4-CB6-OB8
18	P	308	PGV	C15-C16-C17-C18
27	P	309	CDL	C39-C40-C41-C42
20	D	201	TGL	OB1-CB1-OG2-CG2
18	N	609	PGV	C26-C27-C28-C29
27	P	309	CDL	C52-C53-C54-C55
26	T	101	PEK	C02-C03-O11-P
26	G	102	PEK	O04-C21-O03-C01
26	T	101	PEK	O04-C21-O03-C01
20	L	101	TGL	CC7-CC8-CC9-C15
26	C	305	PEK	C17-C18-C19-C20
26	P	305	PEK	C29-C30-C31-C32
18	A	607	PGV	C25-C26-C27-C28
24	C	302	DMU	C28-C31-C34-C37
27	C	309	CDL	C39-C40-C41-C42
18	A	606	PGV	C01-C02-C03-O11
26	G	102	PEK	C01-C02-C03-O11
26	T	101	PEK	C01-C02-C03-O11
27	G	101	CDL	OA5-CA3-CA4-CA6
27	T	102	CDL	OA5-CA3-CA4-CA6
24	M	101	DMU	C3-C4-C57-O61
24	M	101	DMU	O16-C18-C19-C22
22	P	310	CHD	C16-C17-C20-C22
17	N	605	HEA	C2D-C3D-CAD-CBD
18	A	606	PGV	C5-C6-C7-C8
21	O	304	PSC	C03-C02-O01-C1
26	P	306	PEK	C30-C31-C32-C33
26	G	102	PEK	C21-C22-C23-C24
18	A	607	PGV	C26-C27-C28-C29
24	P	302	DMU	O5-C6-O16-C18
18	A	606	PGV	O03-C01-C02-C03
18	N	608	PGV	O03-C01-C02-C03
18	P	307	PGV	C02-C03-O11-P

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Mol	Chain	Res	Type	Atoms
26	G	102	PEK	C02-C03-O11-P
27	G	101	CDL	CB3-CB4-CB6-OB8
18	C	308	PGV	O01-C02-C03-O11
18	P	308	PGV	O01-C02-C03-O11
27	C	309	CDL	OB5-CB3-CB4-OB6
27	P	309	CDL	OB5-CB3-CB4-OB6
18	P	308	PGV	C26-C27-C28-C29
22	C	310	CHD	C13-C17-C20-C21
22	P	310	CHD	C13-C17-C20-C21
26	C	306	PEK	C30-C31-C32-C33
27	C	309	CDL	C24-C25-C26-C27
22	P	310	CHD	C13-C17-C20-C22
26	C	305	PEK	O03-C01-C02-O01
27	C	309	CDL	OB6-CB4-CB6-OB8
22	C	310	CHD	C16-C17-C20-C21
26	C	305	PEK	C29-C30-C31-C32
27	P	309	CDL	C24-C25-C26-C27
26	T	101	PEK	C15-C16-C17-C18
22	C	310	CHD	C13-C17-C20-C22
24	C	302	DMU	C22-C25-C28-C31
24	P	302	DMU	C28-C31-C34-C37
26	T	101	PEK	C21-C22-C23-C24
27	G	101	CDL	C24-C25-C26-C27
24	P	302	DMU	C22-C25-C28-C31
22	C	310	CHD	C16-C17-C20-C22
18	C	307	PGV	C02-C03-O11-P
27	G	101	CDL	CB4-CB3-OB5-PB2
27	T	102	CDL	CB4-CB3-OB5-PB2
22	P	310	CHD	C16-C17-C20-C21
27	T	102	CDL	C54-C55-C56-C57
21	B	303	PSC	C03-O11-P-O13
21	B	303	PSC	C04-O12-P-O13
21	B	303	PSC	C04-C05-N-C07
21	O	304	PSC	C03-O11-P-O13
21	O	304	PSC	C04-O12-P-O13
21	O	304	PSC	C04-C05-N-C07
26	C	306	PEK	C03-O11-P-O13
26	G	102	PEK	C03-O11-P-O13
26	P	306	PEK	C03-O11-P-O14
26	T	101	PEK	C03-O11-P-O13
27	G	101	CDL	CA7-C31-C32-C33
24	C	302	DMU	O5-C6-O16-C18

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Mol	Chain	Res	Type	Atoms
18	C	308	PGV	C01-C02-C03-O11
18	N	608	PGV	C01-C02-C03-O11
18	P	307	PGV	C1-C2-C3-C4
27	T	102	CDL	C24-C25-C26-C27
27	G	101	CDL	C22-C23-C24-C25
18	N	608	PGV	C5-C6-C7-C8
26	P	306	PEK	C35-C36-C37-C38
18	C	307	PGV	C1-C2-C3-C4
27	T	102	CDL	CA7-C31-C32-C33
26	G	102	PEK	C32-C33-C34-C35
27	T	102	CDL	C12-C13-C14-C15
21	O	304	PSC	C04-C05-N-C06
18	A	606	PGV	O03-C01-C02-O01
18	N	608	PGV	O03-C01-C02-O01
20	D	201	TGL	OG2-CG2-CG3-OG3
27	G	101	CDL	OA6-CA4-CA6-OA8
27	T	102	CDL	OA6-CA4-CA6-OA8
20	O	303	TGL	C12-C13-C14-C29
26	C	306	PEK	C35-C36-C37-C38
18	A	606	PGV	C21-C22-C23-C24
27	G	101	CDL	C54-C55-C56-C57
18	N	608	PGV	C21-C22-C23-C24
26	G	102	PEK	C31-C32-C33-C34
27	P	309	CDL	C23-C24-C25-C26
21	O	304	PSC	C31-C32-C33-C34
27	C	309	CDL	C23-C24-C25-C26
26	T	101	PEK	C31-C32-C33-C34
26	G	102	PEK	C2-C3-C4-C5
21	B	303	PSC	C04-C05-N-C06
27	T	102	CDL	C22-C23-C24-C25
18	C	307	PGV	O04-C19-O03-C01
26	T	101	PEK	C32-C33-C34-C35
21	B	303	PSC	C03-C02-O01-C1
18	P	308	PGV	C01-C02-C03-O11
18	C	308	PGV	C26-C27-C28-C29
20	L	101	TGL	CB5-CB6-CB7-CB8
27	G	101	CDL	C12-C13-C14-C15
18	A	606	PGV	C25-C26-C27-C28
18	C	307	PGV	C05-C04-O12-P
26	G	102	PEK	O01-C02-C03-O11
26	T	101	PEK	O01-C02-C03-O11
20	N	607	TGL	OB1-CB1-OG2-CG2

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Mol	Chain	Res	Type	Atoms
27	G	101	CDL	C64-C65-C66-C67
27	T	102	CDL	C64-C65-C66-C67
18	A	606	PGV	C03-O11-P-O12
18	N	608	PGV	C03-O11-P-O12
27	C	309	CDL	CA3-OA5-PA1-OA2
27	G	101	CDL	CA2-OA2-PA1-OA5
27	P	309	CDL	CA3-OA5-PA1-OA2
17	A	604	HEA	C21-C22-C23-C24
18	N	609	PGV	C9-C10-C11-C12
17	N	605	HEA	C4D-C3D-CAD-CBD
17	A	604	HEA	C12-C13-C14-C15
26	P	306	PEK	C34-C35-C36-C37
26	P	305	PEK	C30-C31-C32-C33
18	P	308	PGV	C02-C03-O11-P
27	C	309	CDL	C1-CA2-OA2-PA1
27	P	309	CDL	C1-CA2-OA2-PA1
27	G	101	CDL	C36-C37-C38-C39
18	A	607	PGV	C9-C10-C11-C12
26	C	305	PEK	C3-C4-C5-C6
27	T	102	CDL	C36-C37-C38-C39
26	P	305	PEK	C3-C4-C5-C6
20	N	606	TGL	CC5-CC6-CC7-CC8
22	O	302	CHD	C22-C23-C24-O25
21	B	303	PSC	C31-C32-C33-C34
18	C	308	PGV	C02-C03-O11-P
27	T	102	CDL	C11-C12-C13-C14
17	A	605	HEA	CAA-CBA-CGA-O1A
26	T	101	PEK	C2-C3-C4-C5
20	D	201	TGL	C21-C22-C23-C24
20	O	303	TGL	C13-C14-C29-C30
17	N	605	HEA	CAA-CBA-CGA-O1A
17	N	605	HEA	CAD-CBD-CGD-O2D
27	P	309	CDL	C15-C16-C17-C18
27	P	309	CDL	CA3-CA4-CA6-OA8
26	C	306	PEK	C34-C35-C36-C37
22	B	304	CHD	C22-C23-C24-O25
27	G	101	CDL	C11-C12-C13-C14
17	N	605	HEA	CAD-CBD-CGD-O1D
22	O	302	CHD	C22-C23-C24-O26
26	C	305	PEK	C30-C31-C32-C33
27	C	309	CDL	C76-C77-C78-C79
20	N	607	TGL	CG1-CG2-OG2-CB1

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Mol	Chain	Res	Type	Atoms
26	P	306	PEK	C3-C4-C5-C6
22	B	304	CHD	C22-C23-C24-O26
22	C	310	CHD	C22-C23-C24-O25
21	B	303	PSC	C4-C5-C6-C7
21	B	303	PSC	C9-C10-C11-C12
21	O	304	PSC	C9-C10-C11-C12
17	A	605	HEA	CAD-CBD-CGD-O1D
21	O	304	PSC	C4-C5-C6-C7
17	N	604	HEA	C21-C22-C23-C24
27	G	101	CDL	C38-C39-C40-C41
27	P	309	CDL	C76-C77-C78-C79
18	P	307	PGV	C05-C04-O12-P
23	C	301	DCW	C3-C2-N1-C1
22	O	302	CHD	C17-C20-C22-C23
17	A	605	HEA	CAA-CBA-CGA-O2A
22	P	310	CHD	C22-C23-C24-O25
18	P	307	PGV	C21-C22-C23-C24
17	N	605	HEA	CAA-CBA-CGA-O2A
22	C	310	CHD	C22-C23-C24-O26
22	P	310	CHD	C22-C23-C24-O26
18	P	308	PGV	C7-C8-C9-C10
27	C	309	CDL	C15-C16-C17-C18
18	P	308	PGV	O03-C01-C02-O01
26	C	306	PEK	C3-C4-C5-C6
17	N	604	HEA	C12-C13-C14-C15
27	G	101	CDL	C78-C79-C80-C81
17	A	605	HEA	CAD-CBD-CGD-O2D
26	C	305	PEK	C02-C03-O11-P
27	P	309	CDL	C22-C23-C24-C25
20	N	606	TGL	CB5-CB6-CB7-CB8
20	L	101	TGL	OG2-CB1-CB2-CB3
27	C	309	CDL	CA3-CA4-CA6-OA8
20	N	606	TGL	OG2-CB1-CB2-CB3
27	T	102	CDL	C38-C39-C40-C41
20	L	101	TGL	CC5-CC6-CC7-CC8
26	T	101	PEK	C33-C34-C35-C36
18	N	608	PGV	C25-C26-C27-C28
27	G	101	CDL	C52-C53-C54-C55
27	C	309	CDL	OA5-CA3-CA4-CA6
27	P	309	CDL	OA5-CA3-CA4-CA6
24	C	302	DMU	O6-C11-C9-C8
26	T	101	PEK	C3-C4-C5-C6

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Mol	Chain	Res	Type	Atoms
20	L	101	TGL	OG3-CC1-CC2-CC3
27	C	309	CDL	CB2-C1-CA2-OA2
27	C	309	CDL	C56-C57-C58-C59
18	C	308	PGV	O03-C01-C02-O01
20	N	607	TGL	OG2-CG2-CG3-OG3
18	P	307	PGV	C14-C15-C16-C17
21	O	304	PSC	O03-C19-C20-C21
27	C	309	CDL	C52-C51-CB5-OB6
18	C	307	PGV	C21-C22-C23-C24
18	P	307	PGV	C9-C10-C11-C12
21	O	304	PSC	C7-C8-C9-C10
26	G	102	PEK	C3-C4-C5-C6
21	B	303	PSC	O03-C19-C20-C21
27	T	102	CDL	CA2-OA2-PA1-OA5
18	A	606	PGV	O01-C1-C2-C3
18	N	608	PGV	O01-C1-C2-C3
20	N	607	TGL	C21-C22-C23-C24
17	N	604	HEA	CAA-CBA-CGA-O1A
20	N	606	TGL	OG3-CC1-CC2-CC3
26	P	305	PEK	O01-C1-C2-C3
27	P	309	CDL	C32-C31-CA7-OA8
18	C	307	PGV	C11-C12-C13-C14
18	P	307	PGV	C11-C12-C13-C14
21	B	303	PSC	C7-C8-C9-C10
17	A	604	HEA	CAA-CBA-CGA-O1A
27	C	309	CDL	C22-C23-C24-C25
22	J	101	CHD	C22-C23-C24-O25
27	C	309	CDL	C32-C31-CA7-OA8
27	P	309	CDL	C52-C51-CB5-OB6
20	N	606	TGL	OC1-CC1-OG3-CG3
24	Z	101	DMU	O6-C11-C9-O1
18	A	607	PGV	C11-C12-C13-C14
22	C	304	CHD	C22-C23-C24-O26
22	P	304	CHD	C22-C23-C24-O26
22	W	101	CHD	C22-C23-C24-O25
24	P	302	DMU	C31-C34-C37-C40
21	O	304	PSC	O01-C1-C2-C3
26	C	305	PEK	O01-C1-C2-C3
24	Z	101	DMU	C34-C37-C40-C43
20	N	607	TGL	OG2-CB1-CB2-CB3
18	N	609	PGV	C11-C12-C13-C14
22	C	304	CHD	C22-C23-C24-O25

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Mol	Chain	Res	Type	Atoms
22	J	101	CHD	C22-C23-C24-O26
18	A	606	PGV	C11-C10-C9-C8
21	B	303	PSC	C01-C02-C03-O11
21	O	304	PSC	C01-C02-C03-O11
22	P	304	CHD	C22-C23-C24-O25
20	D	201	TGL	OG2-CB1-CB2-CB3
18	C	308	PGV	C7-C8-C9-C10
27	P	309	CDL	C56-C57-C58-C59
18	C	307	PGV	C9-C10-C11-C12
21	B	303	PSC	C12-C13-C14-C15
26	G	102	PEK	C14-C15-C16-C17
24	M	101	DMU	C19-C22-C25-C28
17	N	604	HEA	CAA-CBA-CGA-O2A
22	W	101	CHD	C22-C23-C24-O26
18	A	606	PGV	C9-C10-C11-C12
21	O	304	PSC	C12-C13-C14-C15
21	B	303	PSC	O01-C1-C2-C3
27	T	102	CDL	C52-C53-C54-C55
20	N	607	TGL	OC1-CC1-CC2-CC3
21	B	303	PSC	O04-C19-C20-C21
27	T	102	CDL	C78-C79-C80-C81
27	C	309	CDL	C54-C55-C56-C57
17	A	604	HEA	CAA-CBA-CGA-O2A
27	T	102	CDL	C39-C40-C41-C42
27	P	309	CDL	C12-C11-CA5-OA6
26	P	305	PEK	C28-C29-C30-C31
18	A	606	PGV	O02-C1-C2-C3
21	O	304	PSC	O04-C19-C20-C21
26	P	305	PEK	O02-C1-C2-C3
21	B	303	PSC	C15-C16-C17-C18
21	B	303	PSC	O02-C1-C2-C3
20	N	606	TGL	CB2-CB1-OG2-CG2
20	D	201	TGL	OC1-CC1-CC2-CC3
26	C	305	PEK	O02-C1-C2-C3
27	C	309	CDL	C32-C31-CA7-OA9
27	P	309	CDL	C32-C31-CA7-OA9
26	P	306	PEK	C03-O11-P-O12
20	N	607	TGL	CB2-CB3-CB4-CB5
18	C	307	PGV	C14-C15-C16-C17
26	G	102	PEK	C33-C34-C35-C36
21	O	304	PSC	O02-C1-C2-C3
20	D	201	TGL	CB2-CB3-CB4-CB5

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Mol	Chain	Res	Type	Atoms
18	A	606	PGV	C03-O11-P-O13
18	A	607	PGV	C04-O12-P-O13
18	N	608	PGV	C03-O11-P-O13
18	N	609	PGV	C04-O12-P-O13
26	C	306	PEK	C03-O11-P-O14
24	M	101	DMU	O6-C11-C9-O1
27	C	309	CDL	C12-C11-CA5-OA6
18	N	608	PGV	C9-C10-C11-C12
27	P	309	CDL	C41-C42-C43-C44
20	D	201	TGL	CG1-CG2-OG2-CB1
21	B	303	PSC	C05-C04-O12-P
21	O	304	PSC	C05-C04-O12-P
18	N	608	PGV	O02-C1-C2-C3
26	T	101	PEK	C14-C15-C16-C17
27	C	309	CDL	C41-C42-C43-C44
18	A	607	PGV	O03-C19-C20-C21
17	A	605	HEA	C2D-C3D-CAD-CBD
17	N	604	HEA	CAD-CBD-CGD-O1D
20	B	302	TGL	C13-C14-C29-C30
24	M	101	DMU	C34-C37-C40-C43
24	C	302	DMU	C31-C34-C37-C40
24	Z	101	DMU	C19-C18-O16-C6
18	N	609	PGV	O03-C19-C20-C21
27	P	309	CDL	C54-C55-C56-C57
27	G	101	CDL	C39-C40-C41-C42
20	N	607	TGL	C12-C13-C14-C29
17	A	604	HEA	CAD-CBD-CGD-O1D
20	D	201	TGL	OG3-CC1-CC2-CC3

There are no ring outliers.

41 monomers are involved in 284 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
21	O	304	PSC	21	0
26	G	102	PEK	10	0
20	N	607	TGL	5	0
23	C	301	DCW	9	0
20	L	101	TGL	23	0
20	N	606	TGL	14	0
22	P	310	CHD	2	0
17	N	604	HEA	4	0
26	C	306	PEK	7	0

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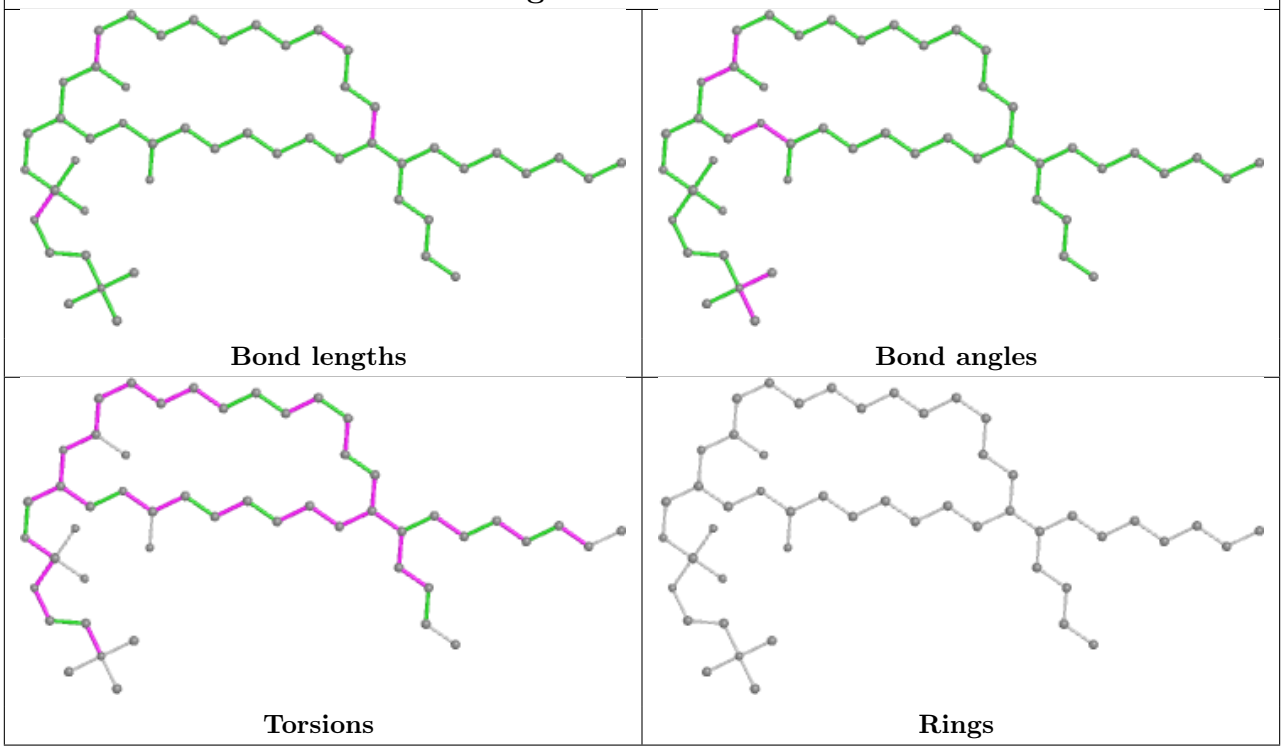
Mol	Chain	Res	Type	Clashes	Symm-Clashes
18	P	307	PGV	8	0
18	N	608	PGV	7	0
17	N	605	HEA	2	0
24	C	302	DMU	5	0
27	C	309	CDL	15	0
22	W	101	CHD	4	0
22	B	304	CHD	1	0
20	O	303	TGL	7	0
18	N	609	PGV	6	0
24	P	302	DMU	5	0
21	B	303	PSC	23	0
27	G	101	CDL	15	0
18	C	307	PGV	8	0
27	P	309	CDL	14	0
22	C	310	CHD	1	0
18	C	308	PGV	1	0
23	P	301	DCW	8	0
18	P	308	PGV	1	0
22	J	101	CHD	2	0
20	B	302	TGL	6	0
26	C	305	PEK	11	0
17	A	605	HEA	3	0
20	D	201	TGL	6	0
24	Z	101	DMU	1	0
26	P	305	PEK	11	0
27	T	102	CDL	21	0
26	P	306	PEK	6	0
18	A	606	PGV	8	0
24	M	101	DMU	1	0
18	A	607	PGV	8	0
17	A	604	HEA	2	0
26	T	101	PEK	8	0

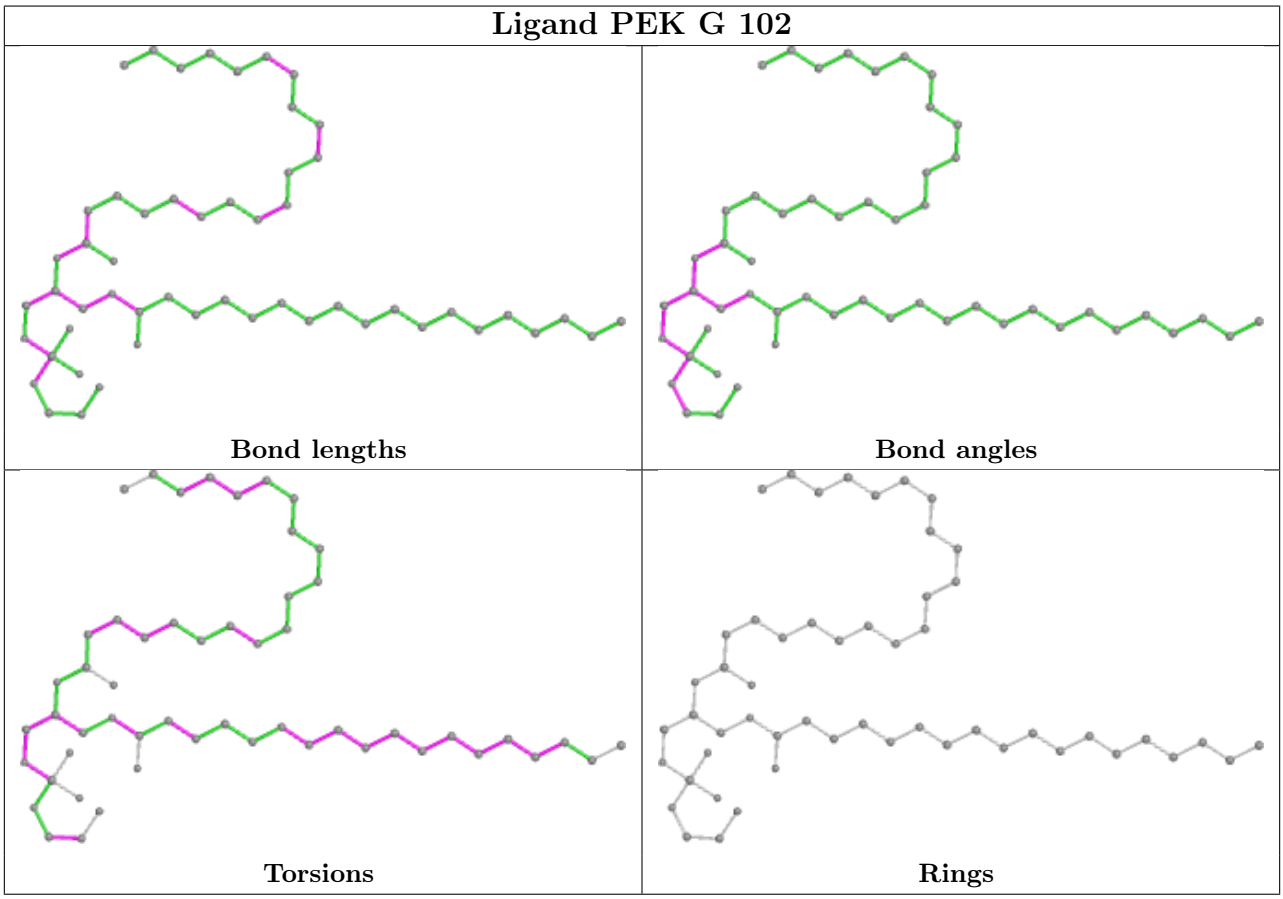
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier.

The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

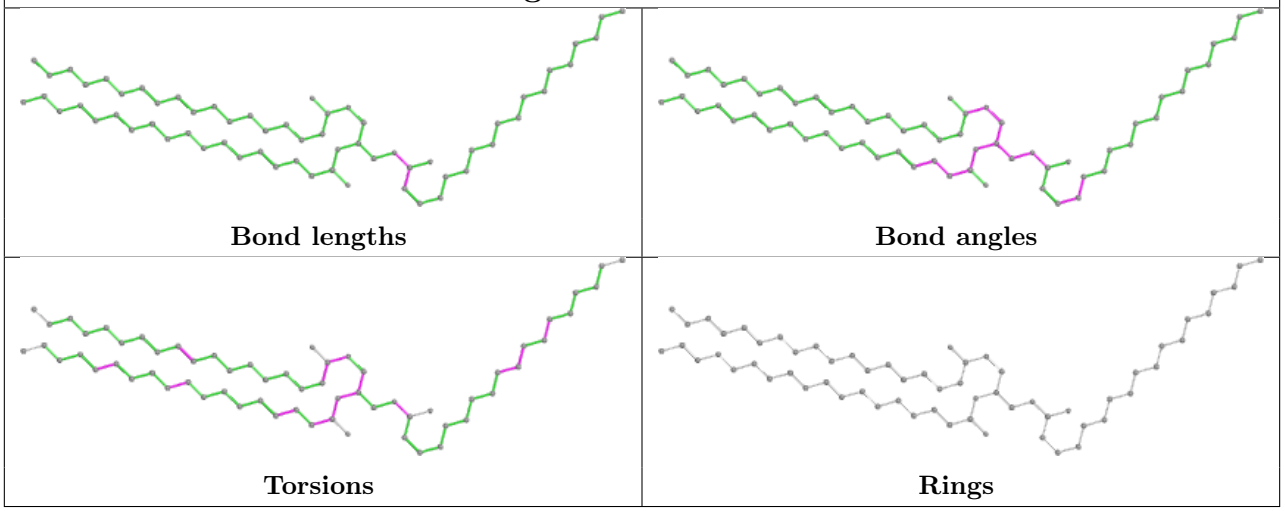
Ligand PSC O 304



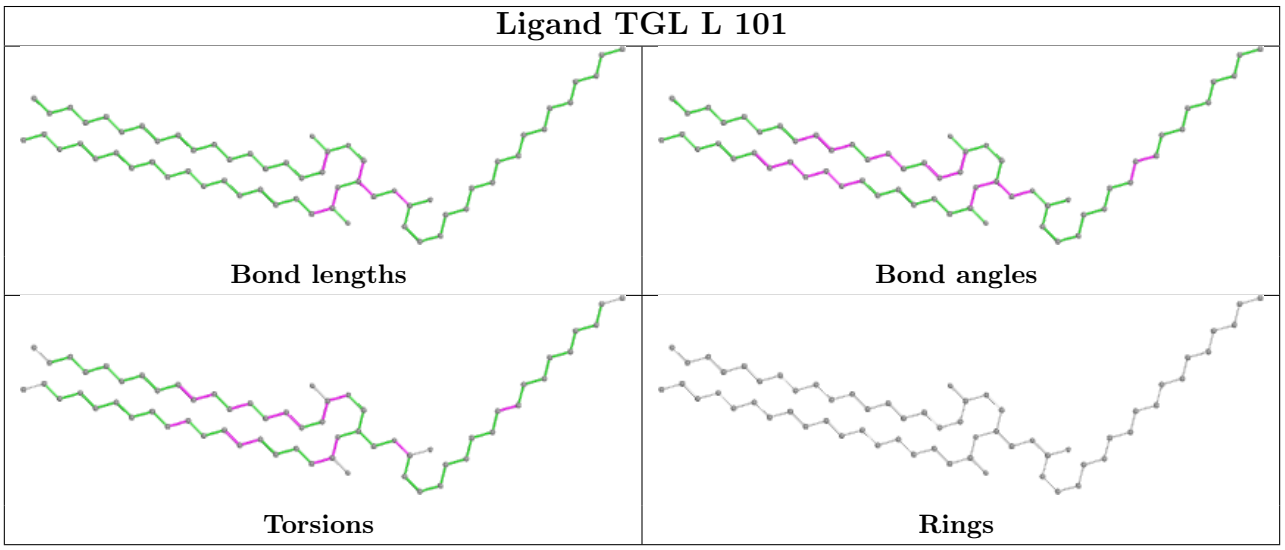
Ligand PEK G 102



Ligand TGL N 607



Ligand TGL L 101



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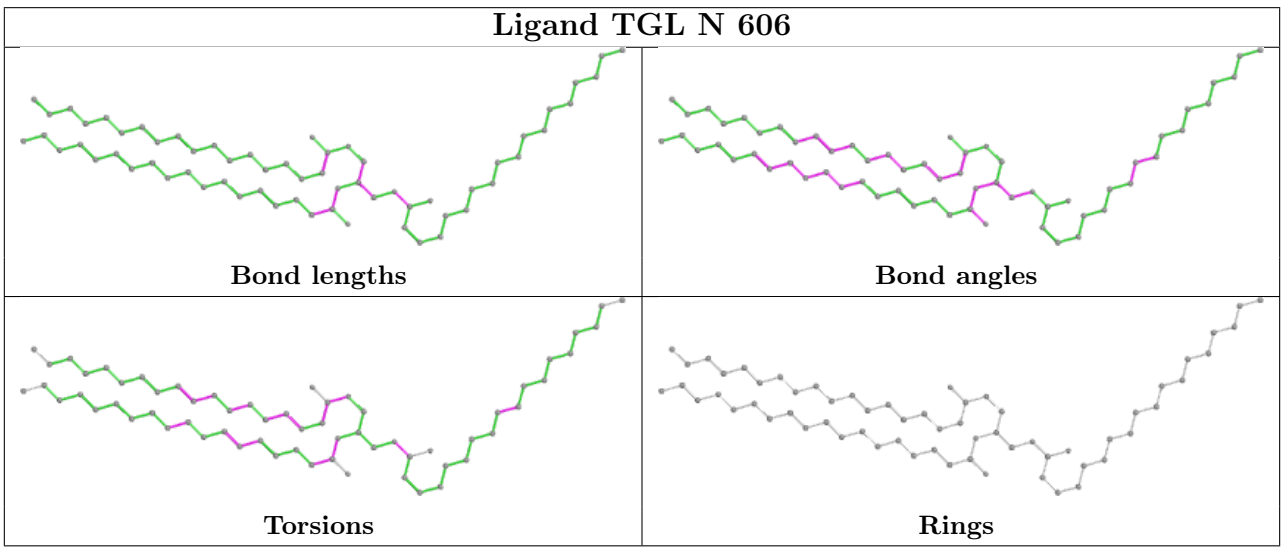
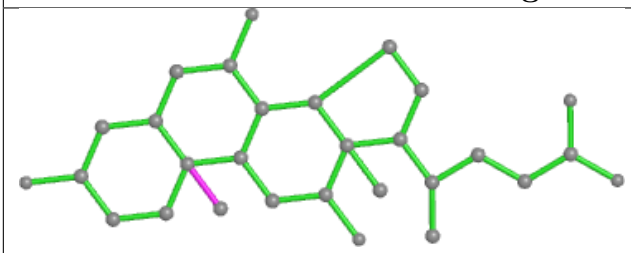
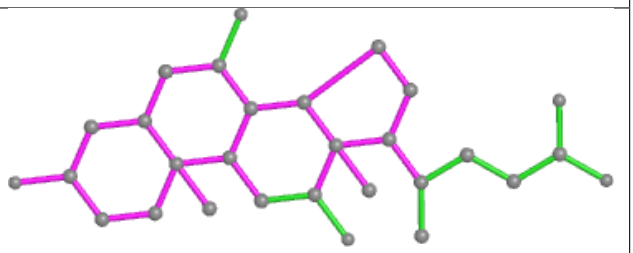


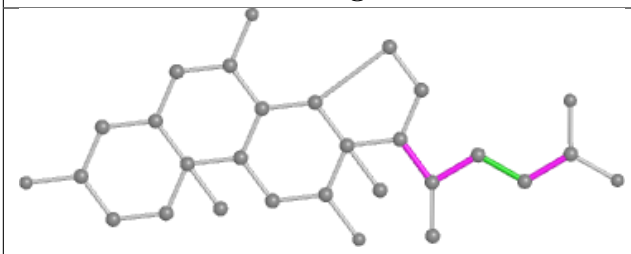
Ligand CHD P 310



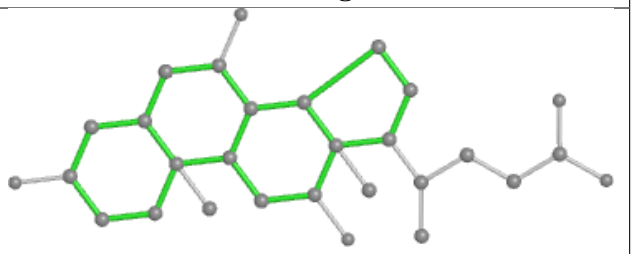
Bond lengths



Bond angles

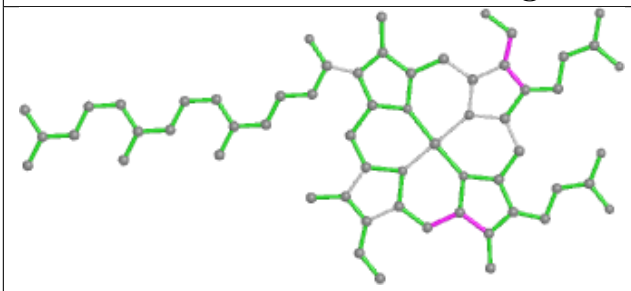


Torsions

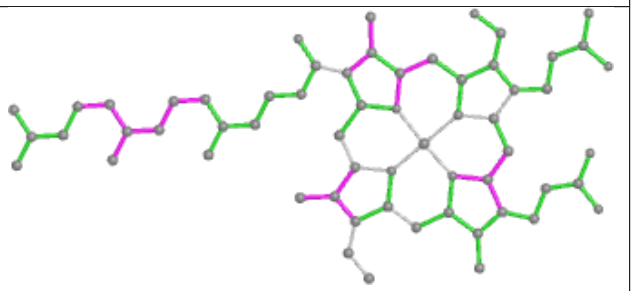


Rings

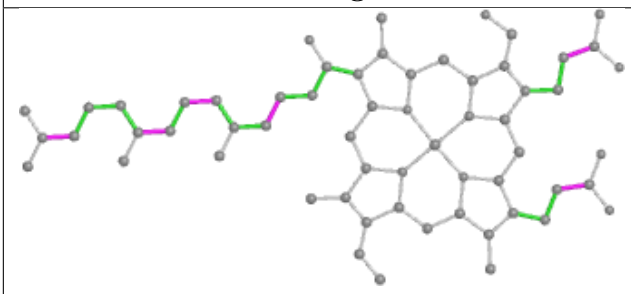
Ligand HEA N 604



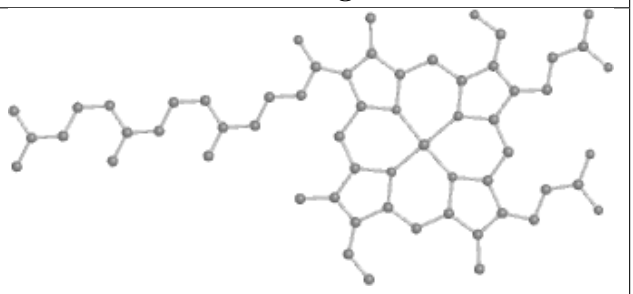
Bond lengths



Bond angles

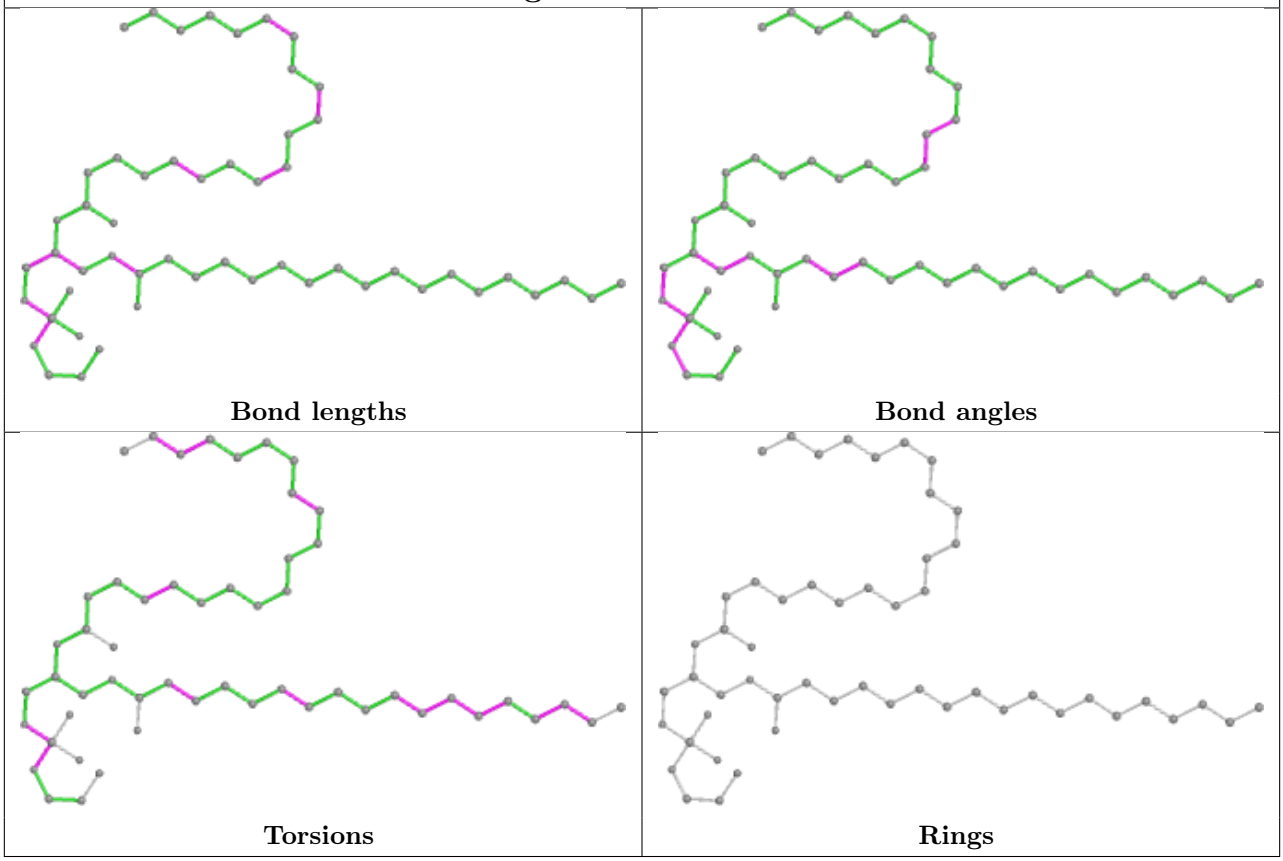


Torsions

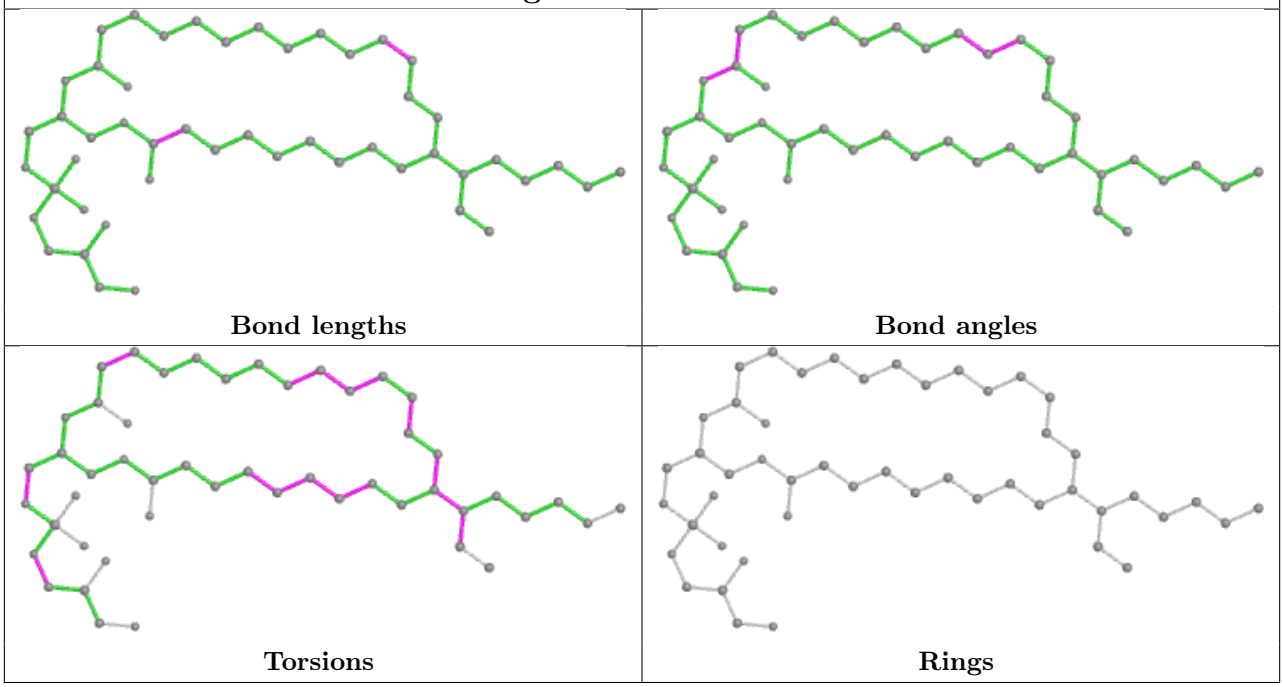


Rings

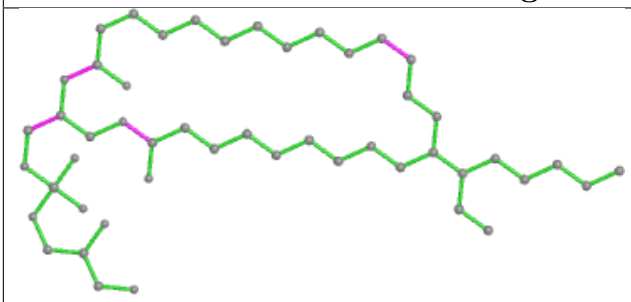
Ligand PEK C 306



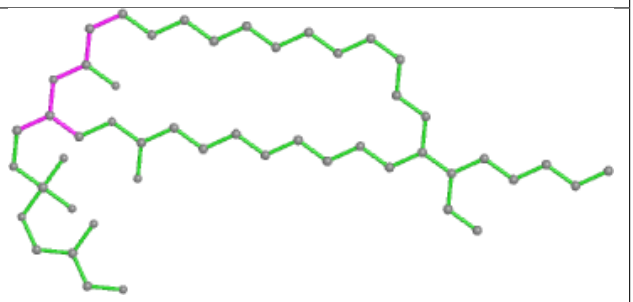
Ligand PGV P 307



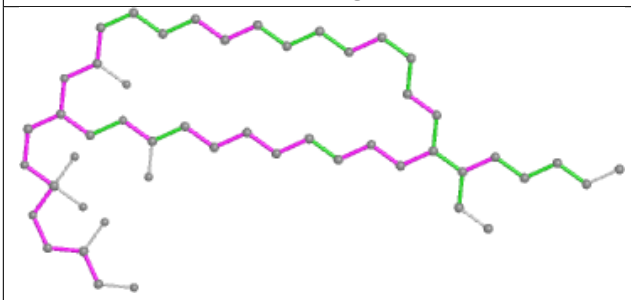
Ligand PGV N 608



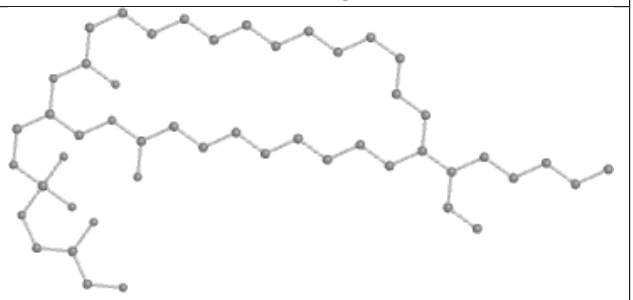
Bond lengths



Bond angles

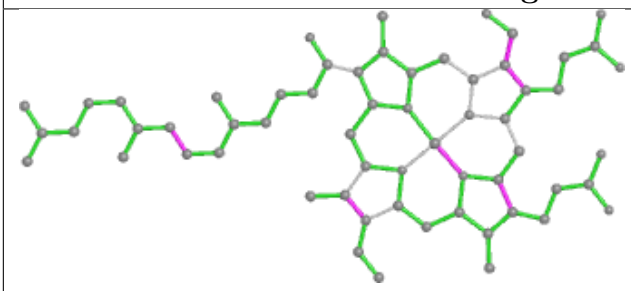


Torsions

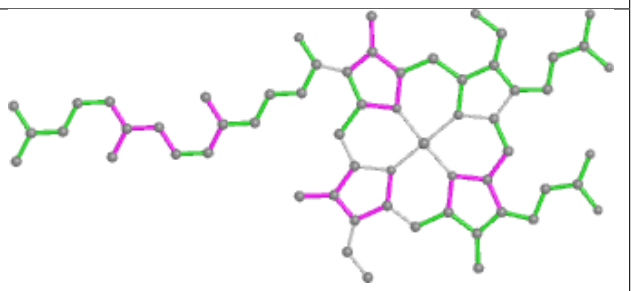


Rings

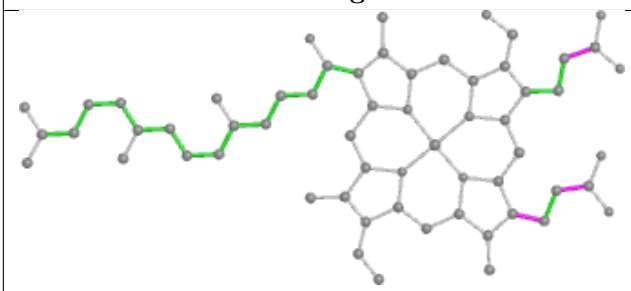
Ligand HEA N 605



Bond lengths



Bond angles



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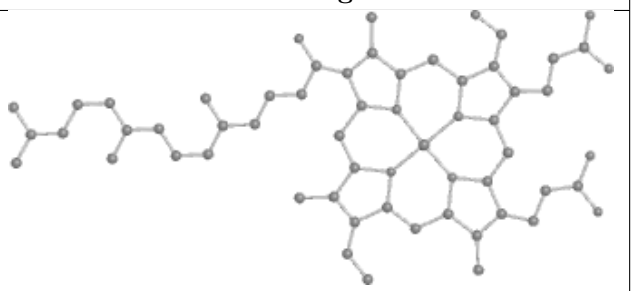
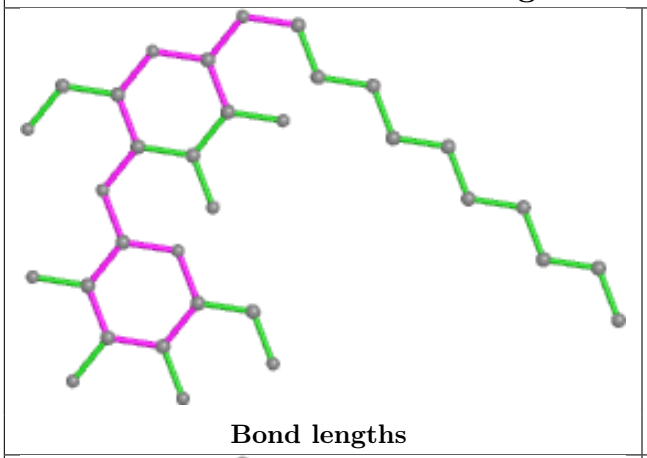
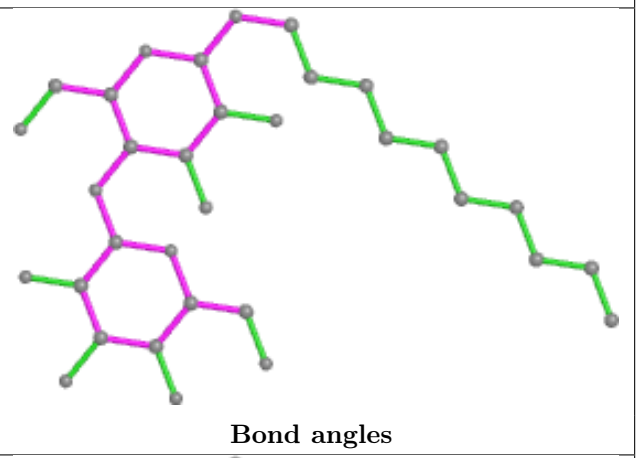


Rings

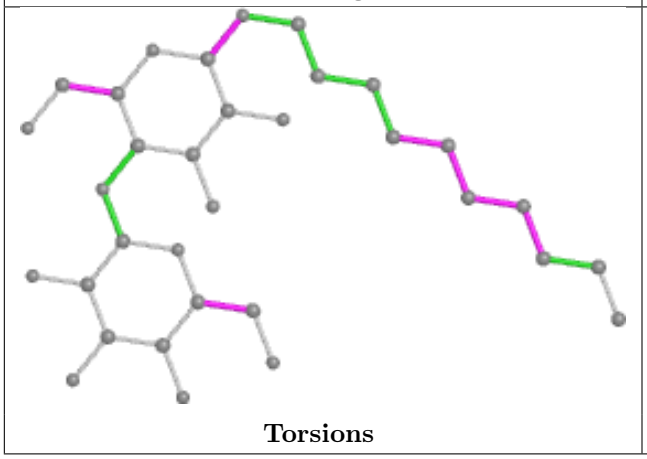
Ligand DMU C 302



Bond lengths



Bond angles



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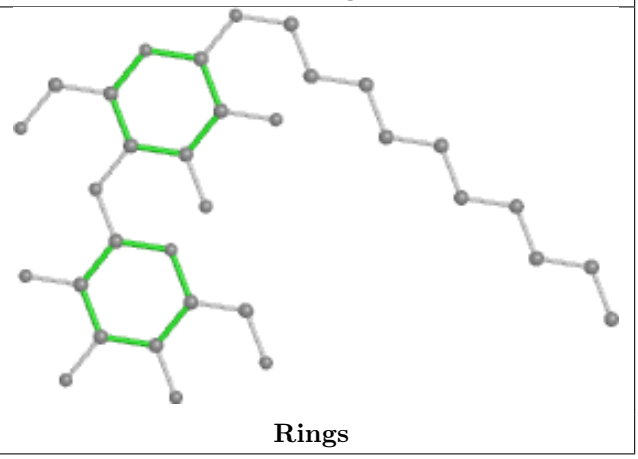
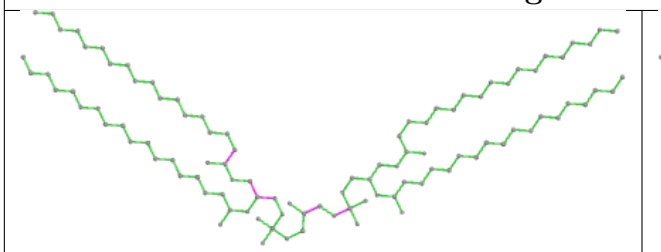


Rings

Ligand CDL C 309



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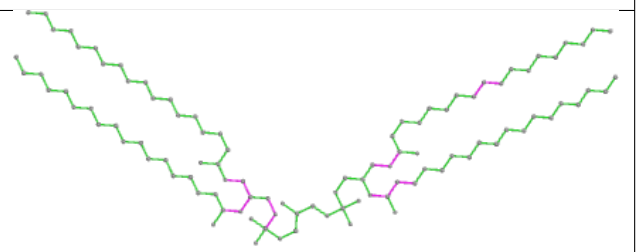
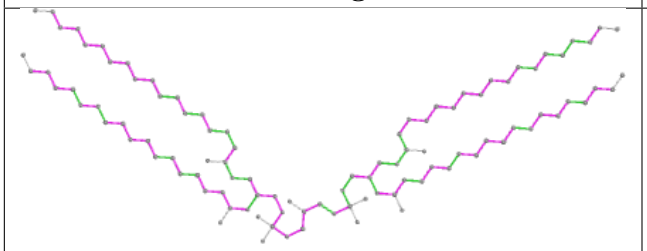
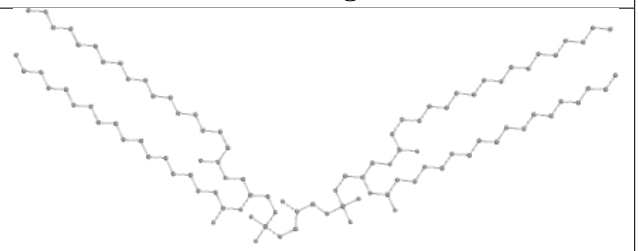


Bond angles

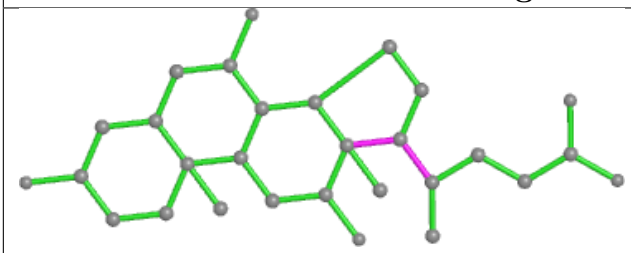


Torsions

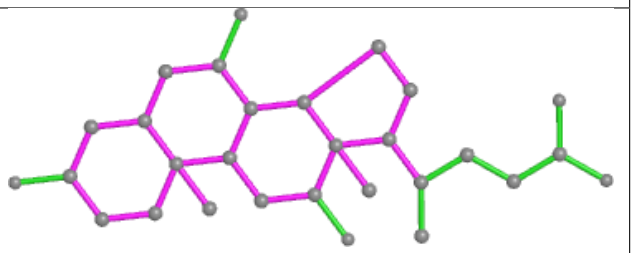


Rings

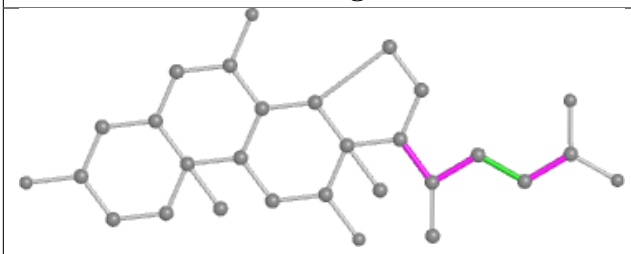
Ligand CHD W 101



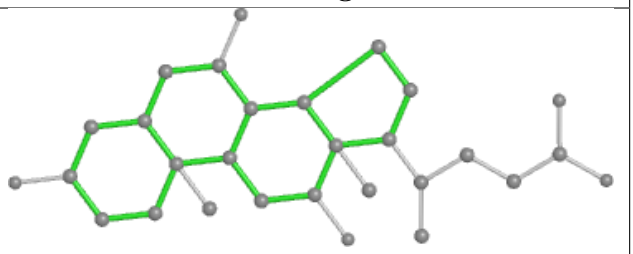
Bond lengths



Bond angles

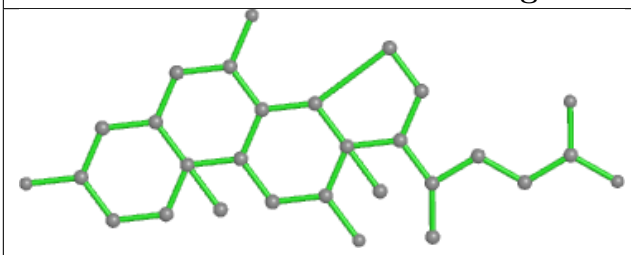


Torsions



Rings

Ligand CHD O 302



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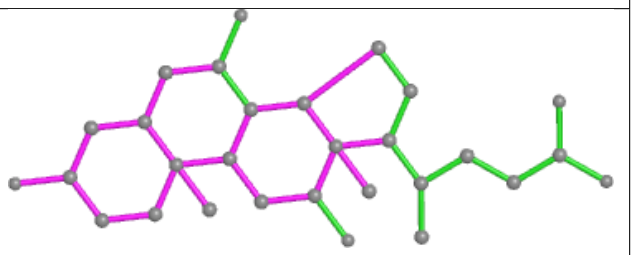
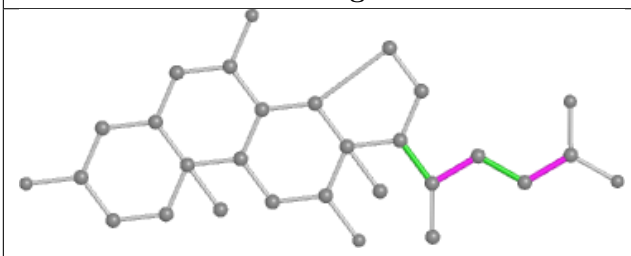
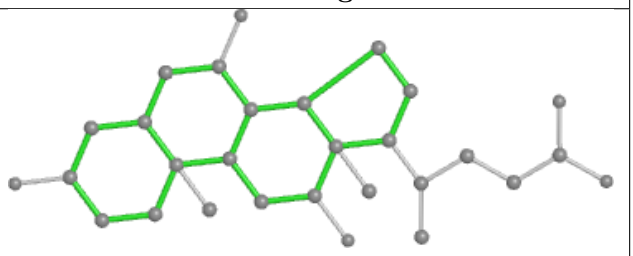


Bond angles

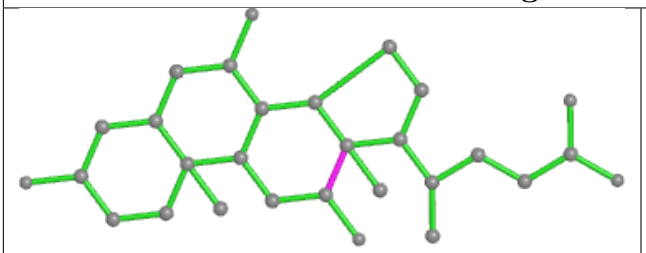


Torsions

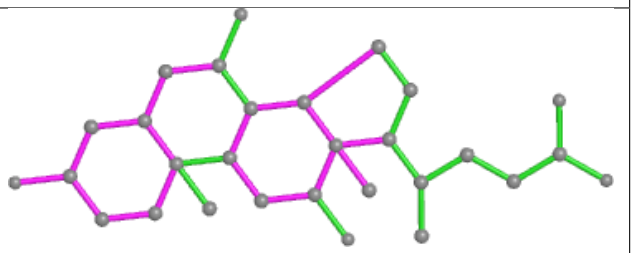


Rings

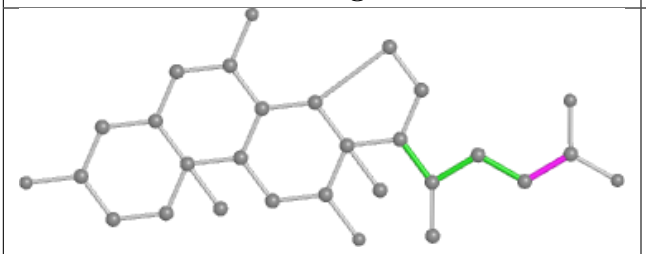
Ligand CHD B 304



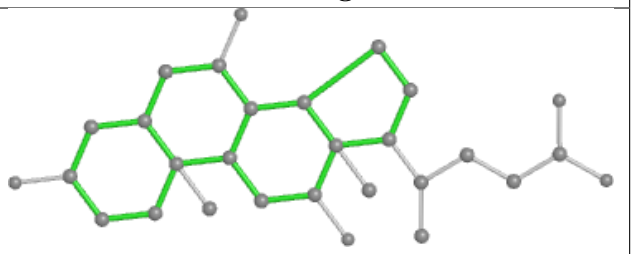
Bond lengths



Bond angles

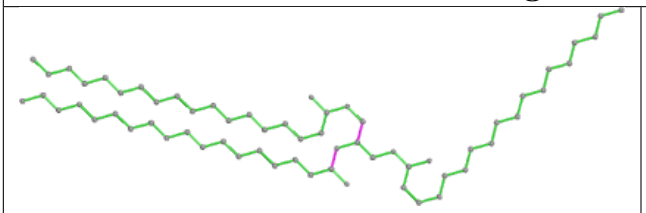


Torsions

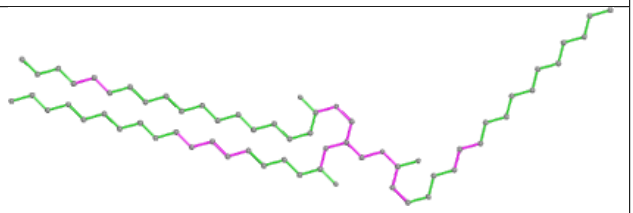


Rings

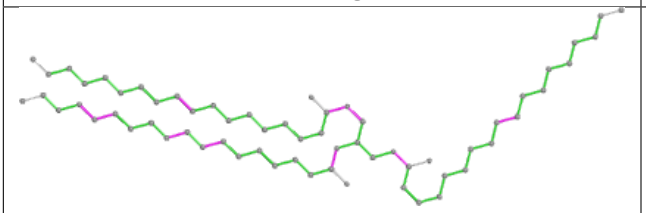
Ligand TGL O 303



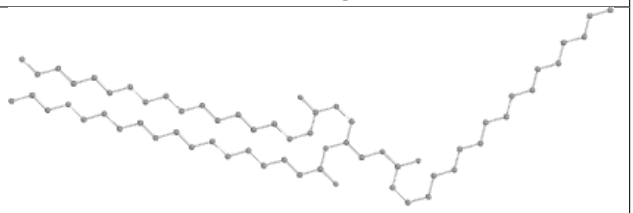
Bond lengths



Bond angles

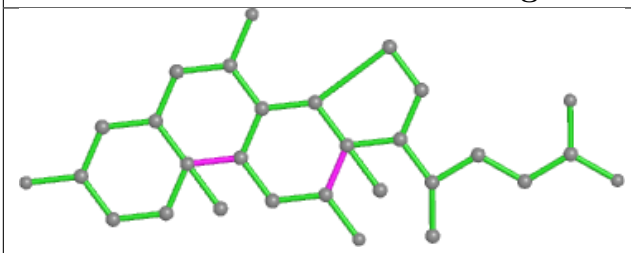


Torsions

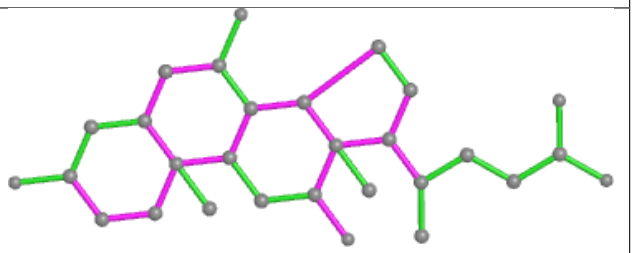


Rings

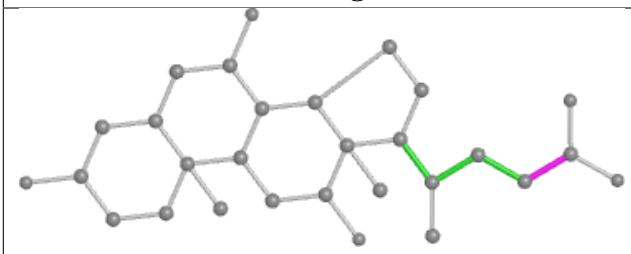
Ligand CHD C 304



Bond lengths



Bond angles



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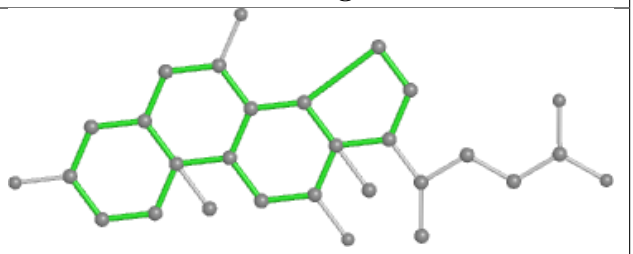
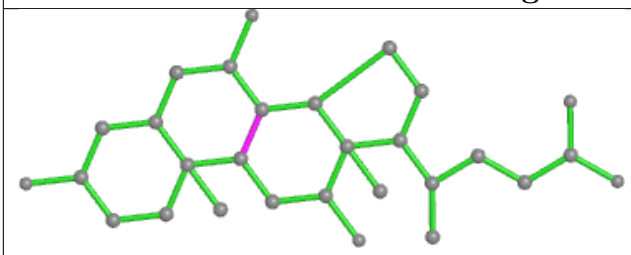
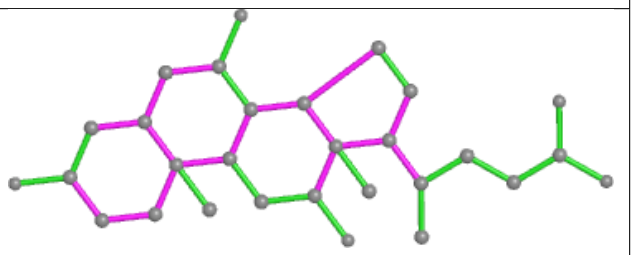


Rings

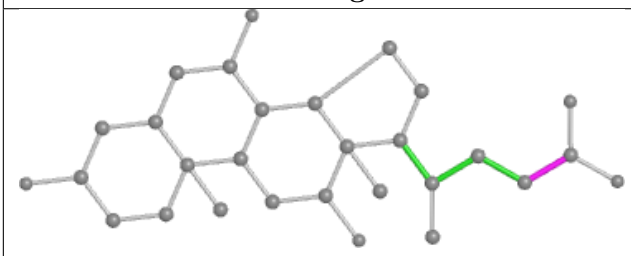
Ligand CHD P 304



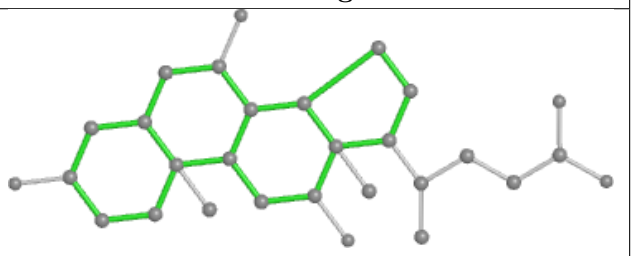
Bond lengths



Bond angles

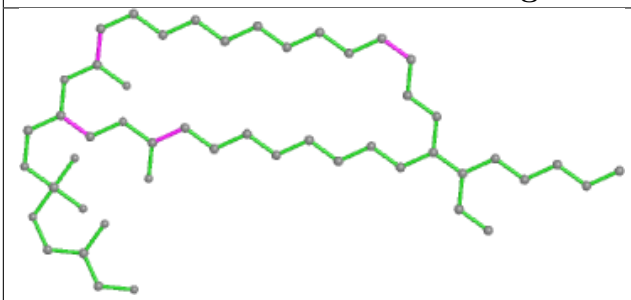


Torsions

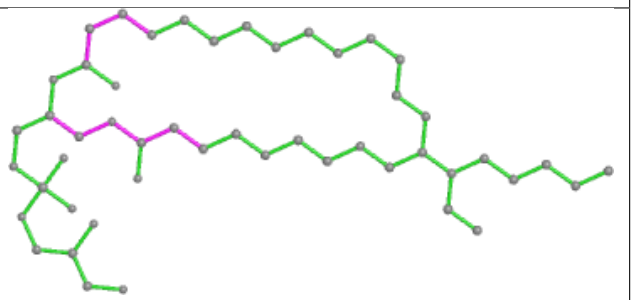


Rings

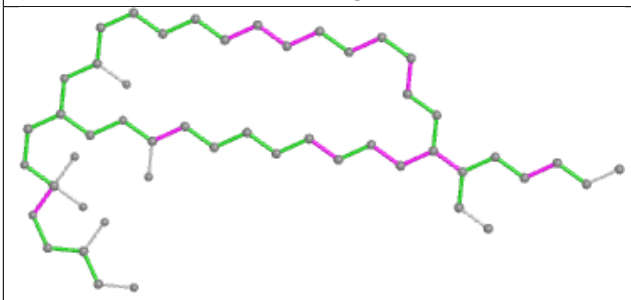
Ligand PGV N 609



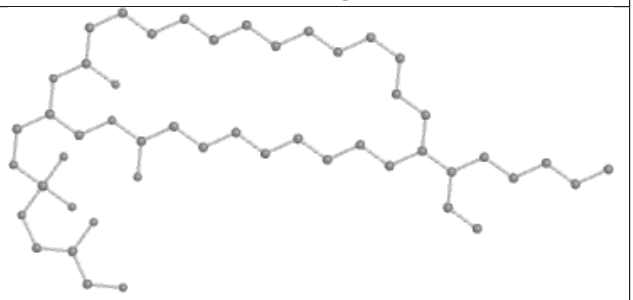
Bond lengths



Bond angles

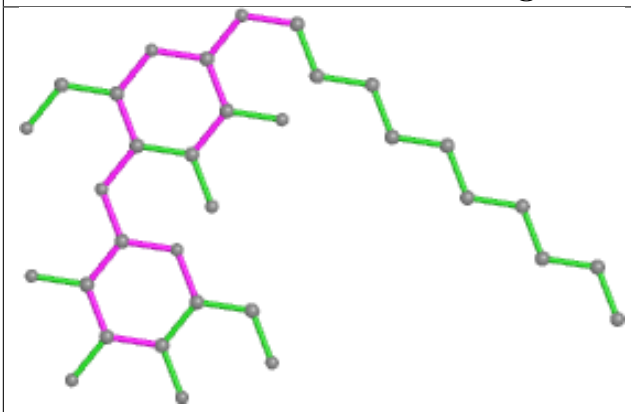


Torsions

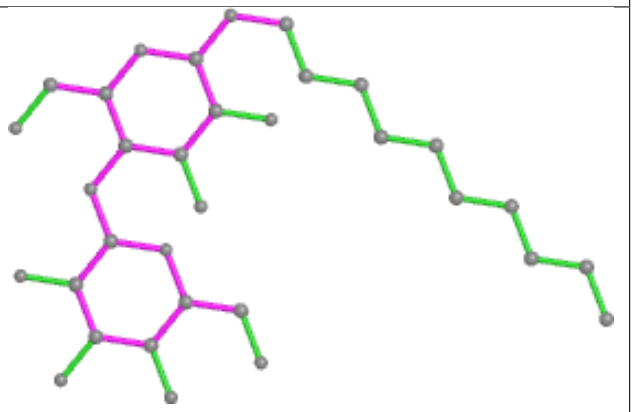


Rings

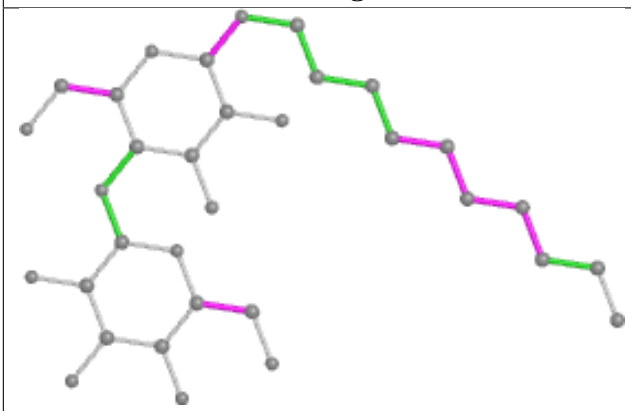
Ligand DMU P 302



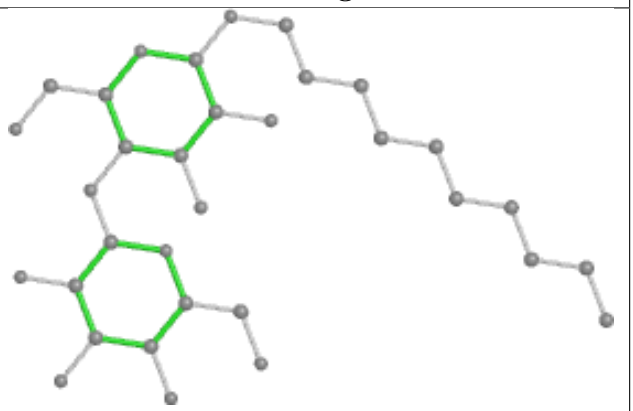
Bond lengths



Bond angles

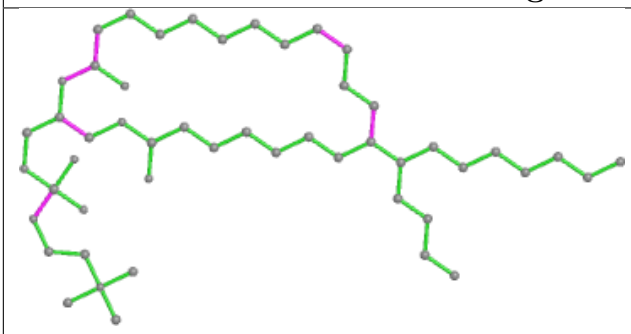


Torsions

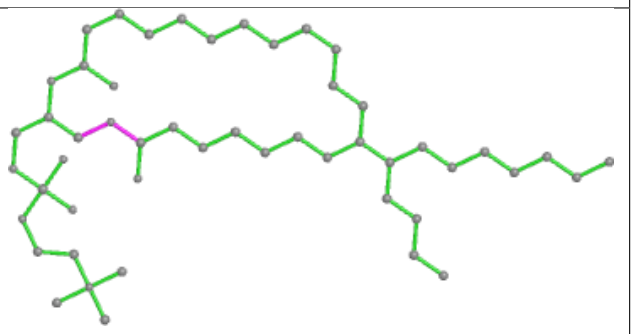


Rings

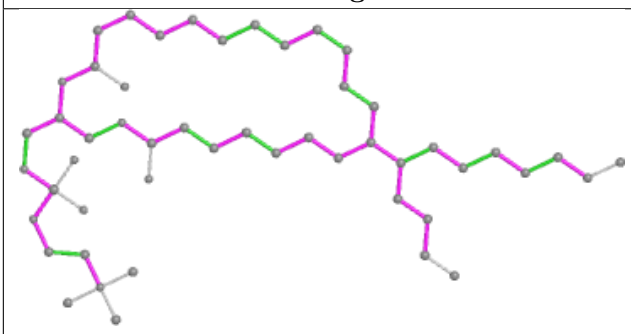
Ligand PSC B 303



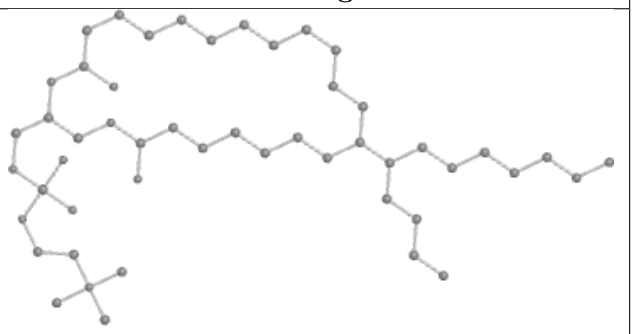
Bond lengths



Bond angles

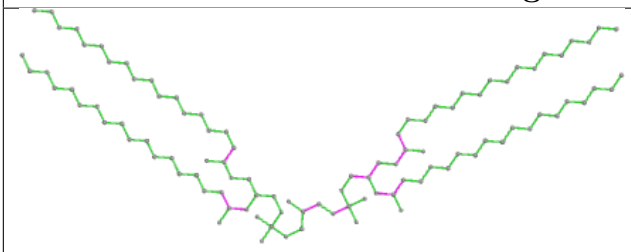


Torsions

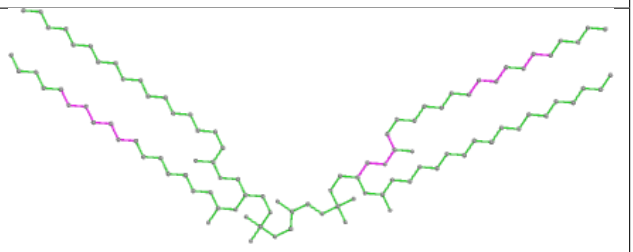


Rings

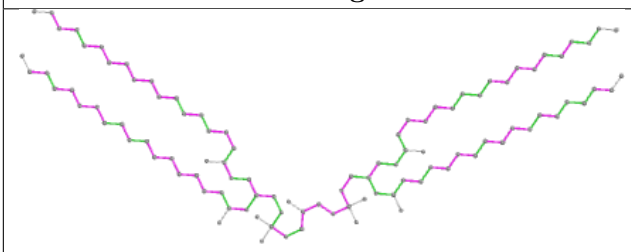
Ligand CDL G 101



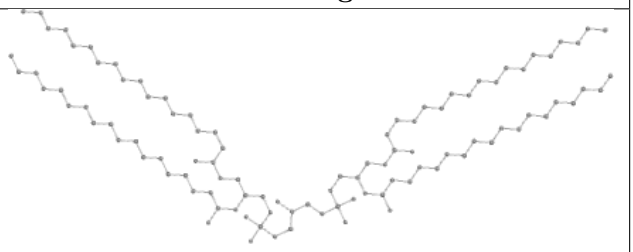
Bond lengths



Bond angles

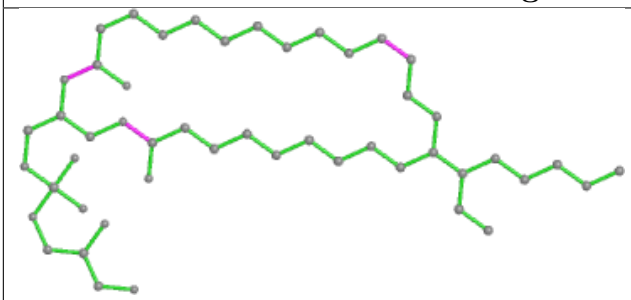


Torsions

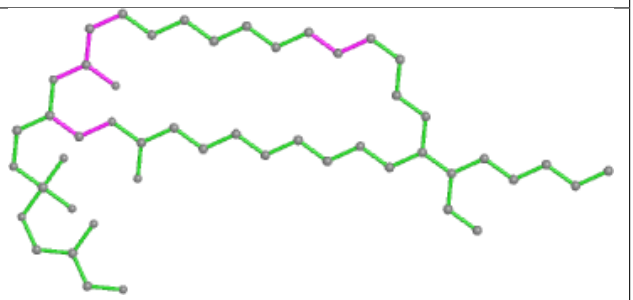


Rings

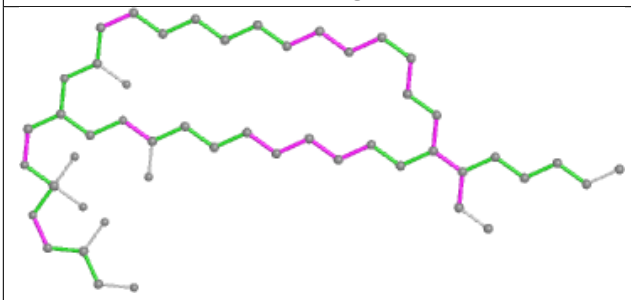
Ligand PGV C 307



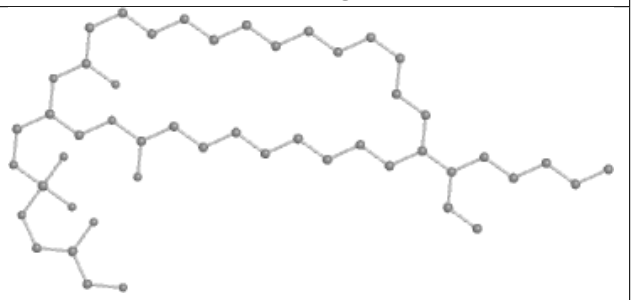
Bond lengths



Bond angles

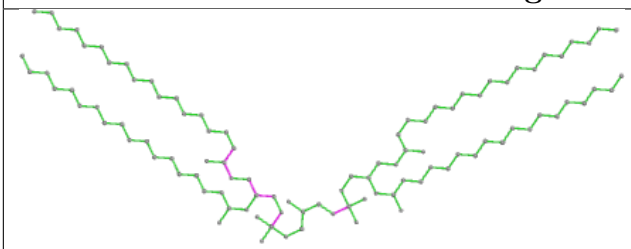


Torsions

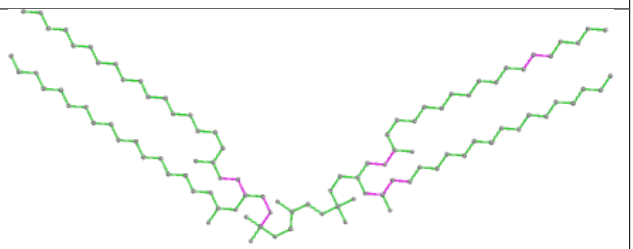


Rings

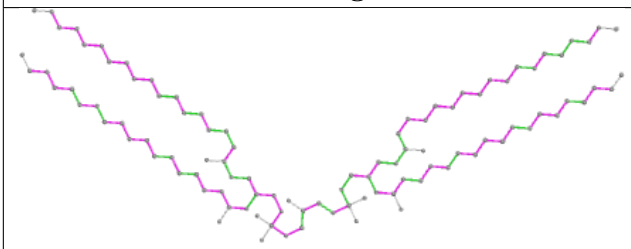
Ligand CDL P 309



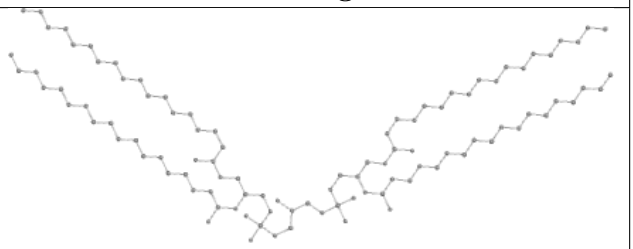
Bond lengths



Bond angles

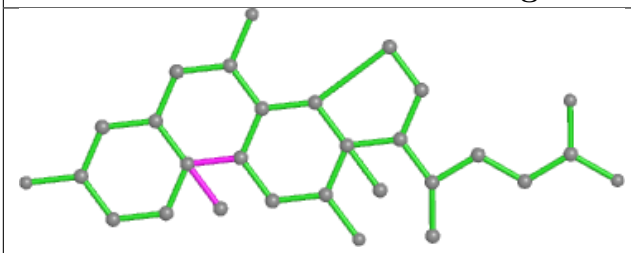


Torsions

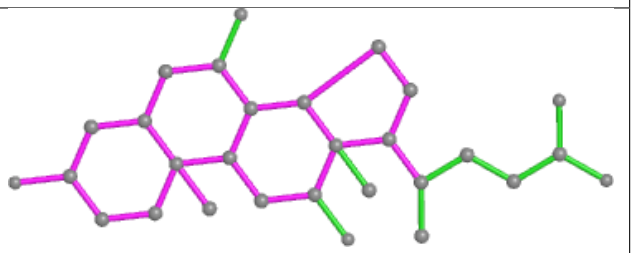


Rings

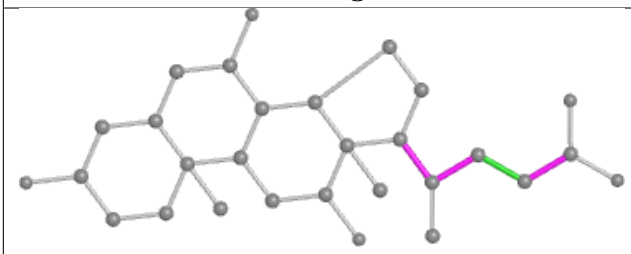
Ligand CHD C 310



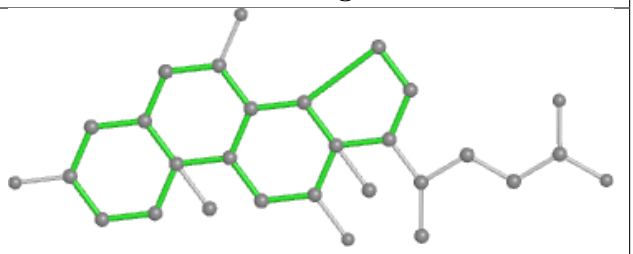
Bond lengths



Bond angles

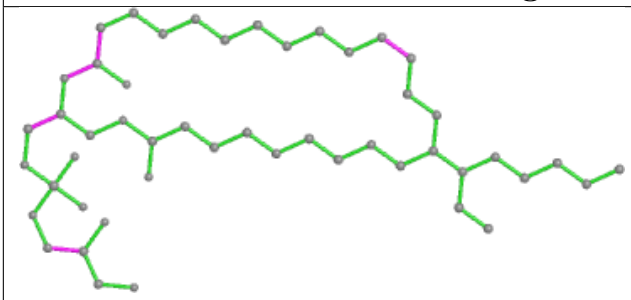


Torsions

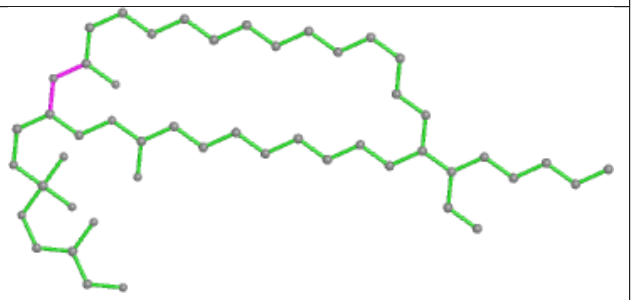


Rings

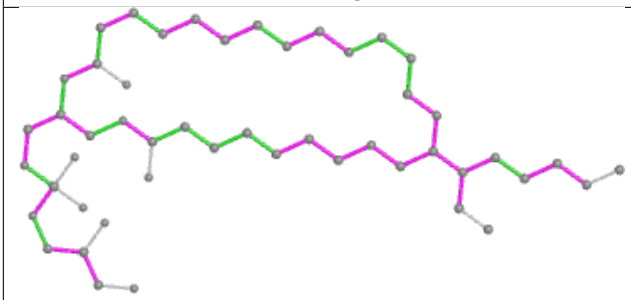
Ligand PGV C 308



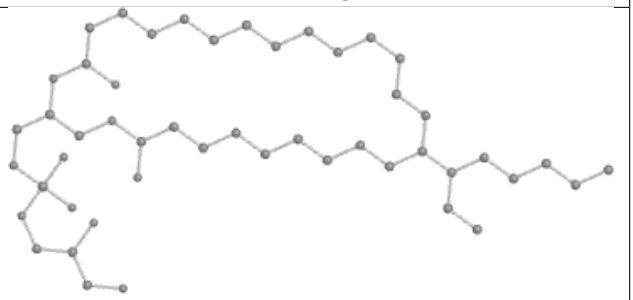
Bond lengths



Bond angles

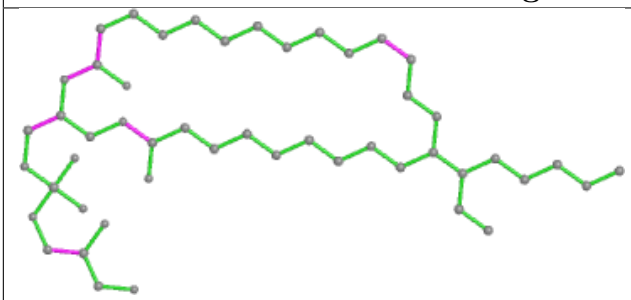


Torsions

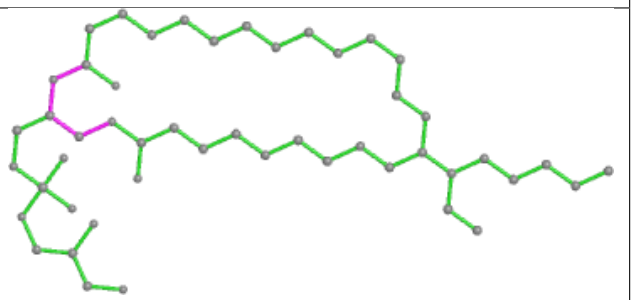


Rings

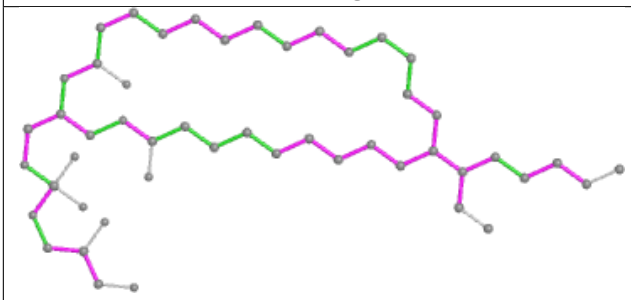
Ligand PGV P 308



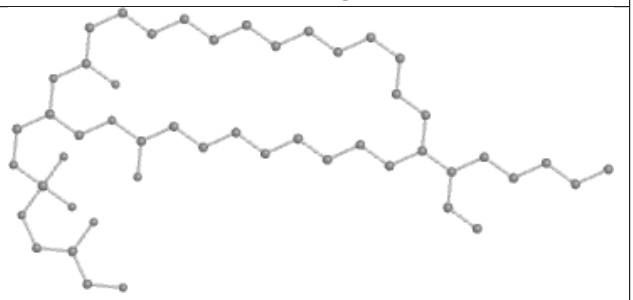
Bond lengths



Bond angles

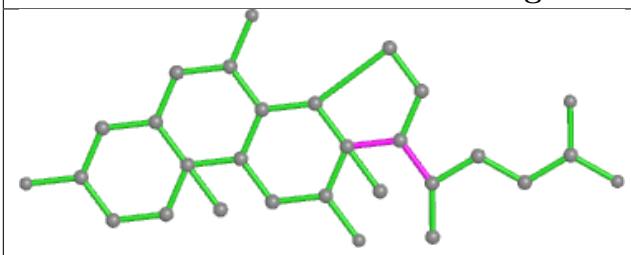


Torsions

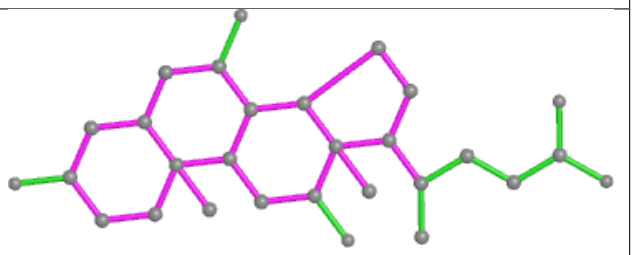


Rings

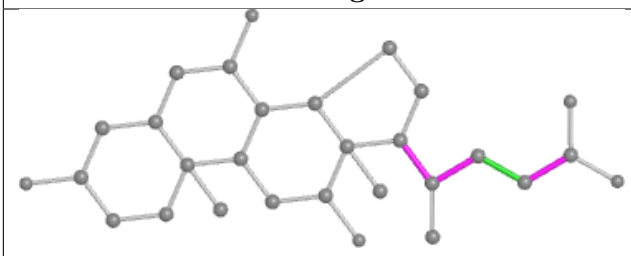
Ligand CHD J 101



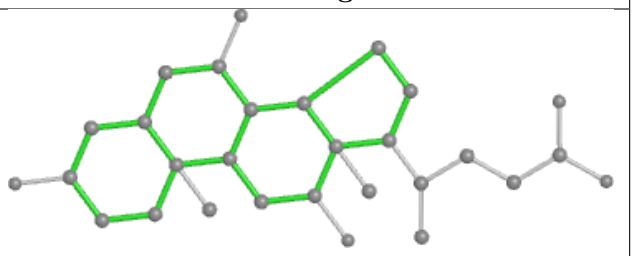
Bond lengths



Bond angles

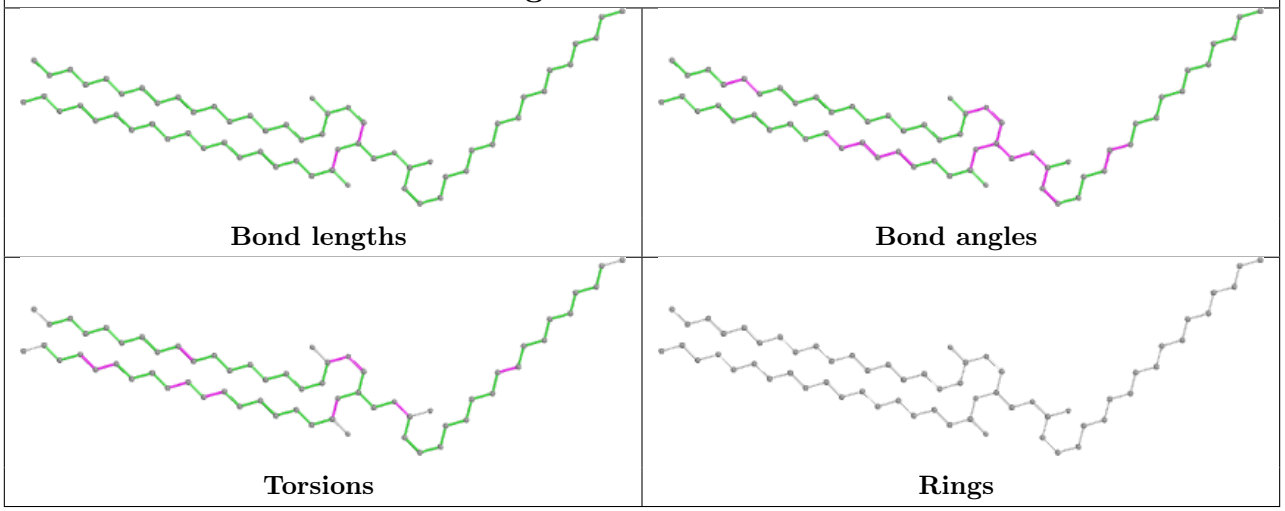


Torsions

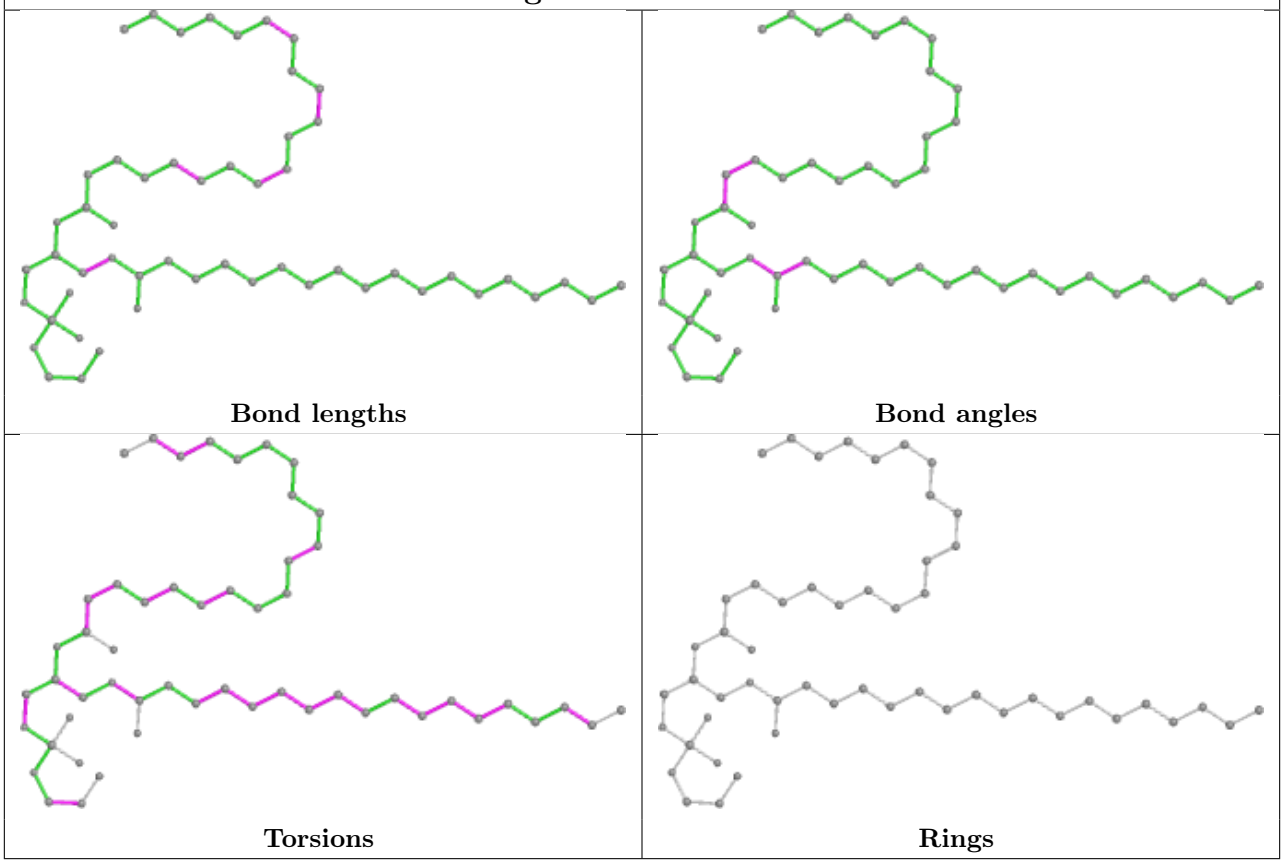


Rings

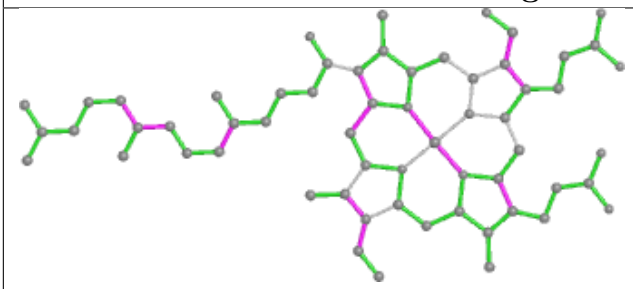
Ligand TGL B 302



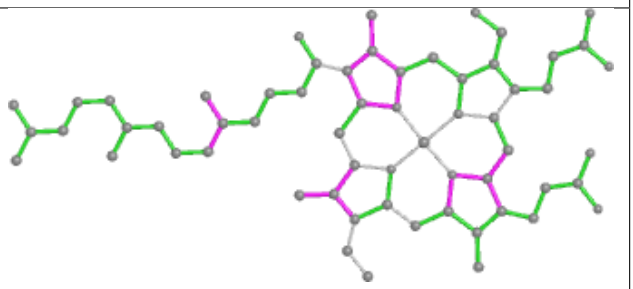
Ligand PEK C 305



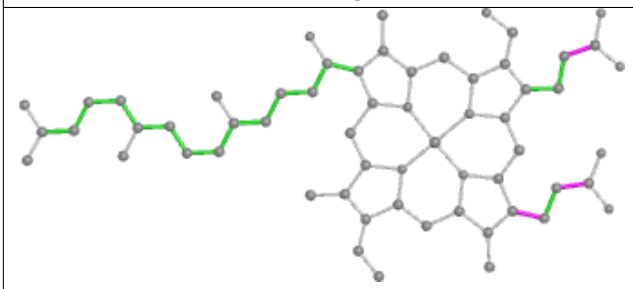
Ligand HEA A 605



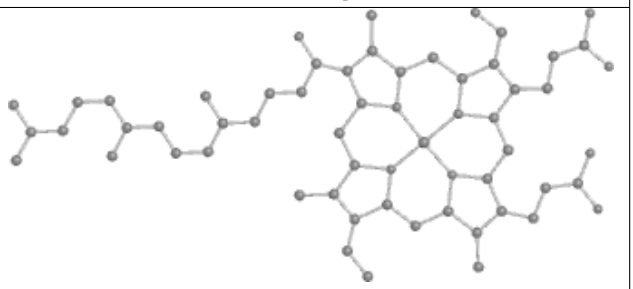
Bond lengths



Bond angles

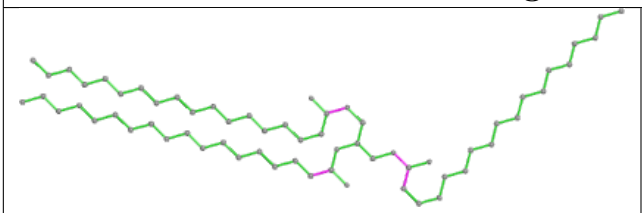


Torsions

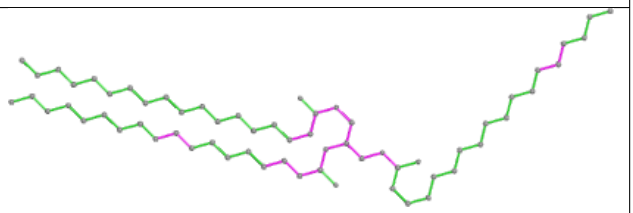


Rings

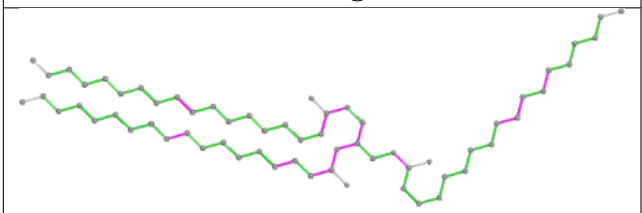
Ligand TGL D 201



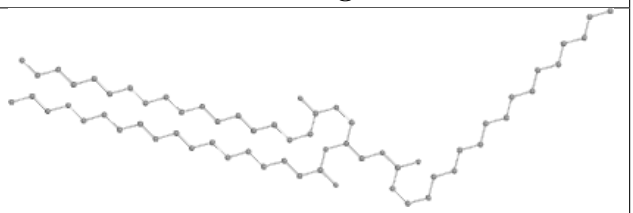
Bond lengths



Bond angles

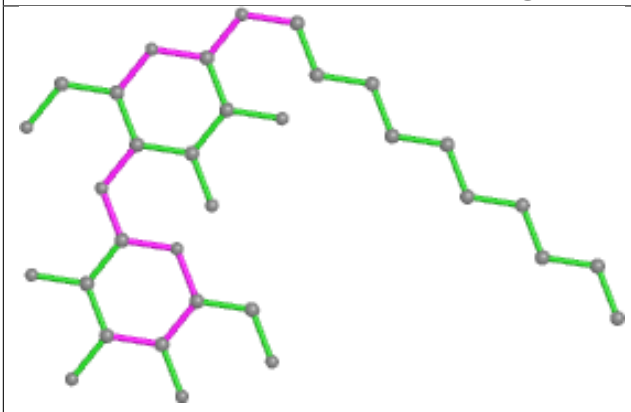


Torsions

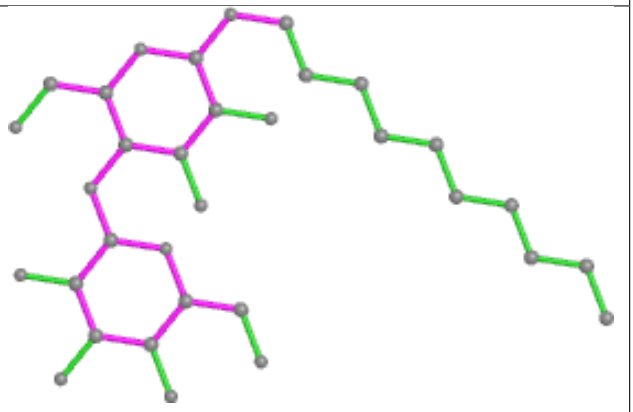


Rings

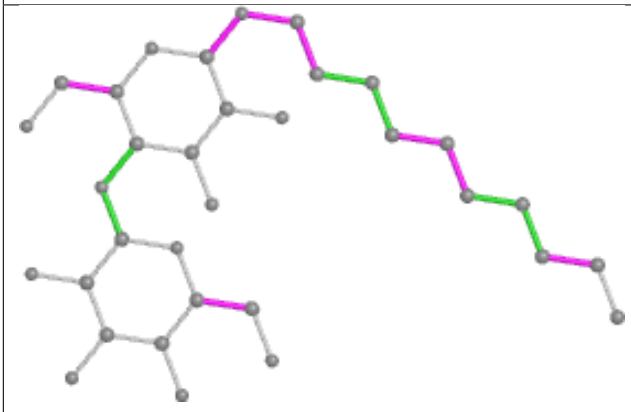
Ligand DMU Z 101



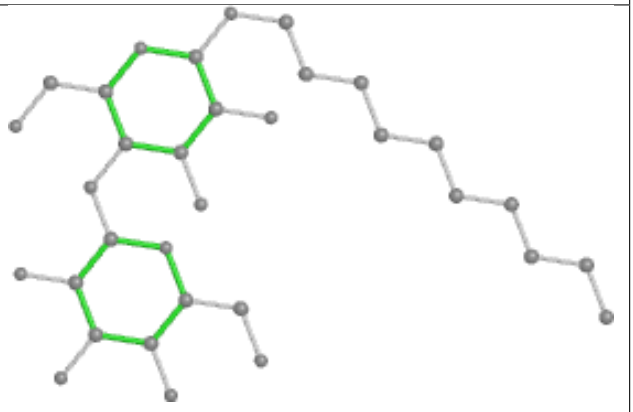
Bond lengths



Bond angles

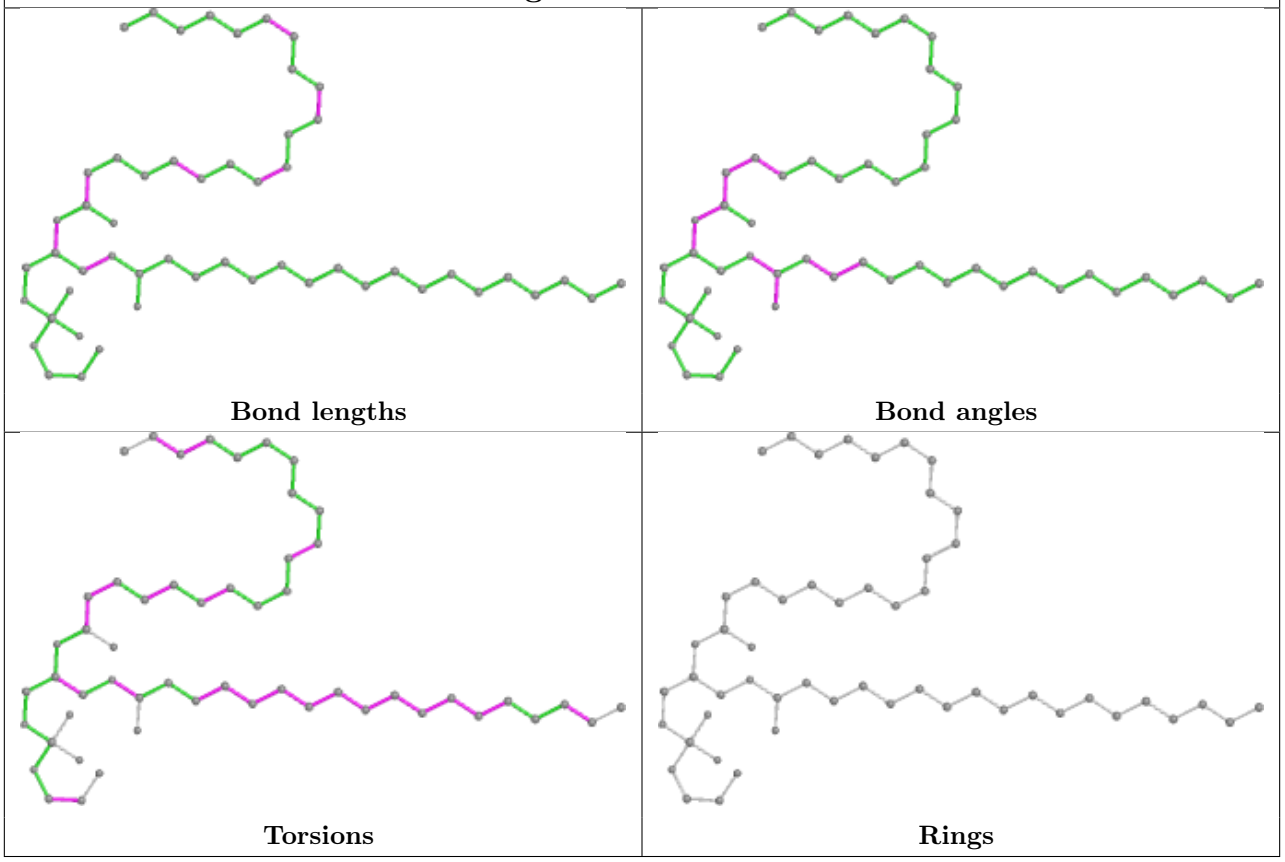


Torsions

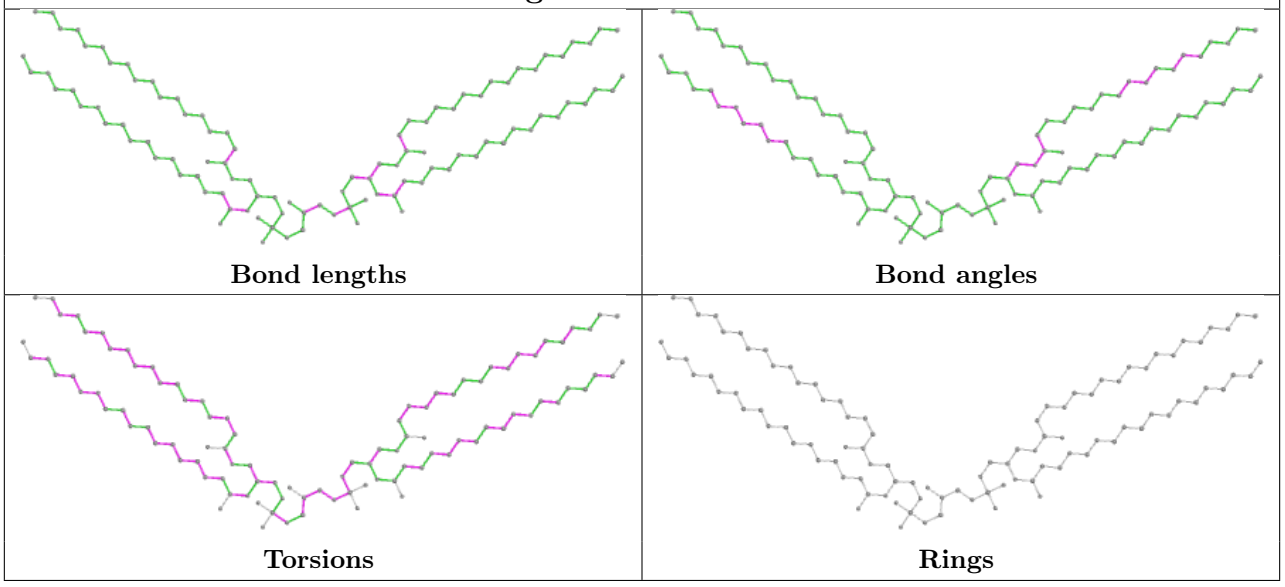


Rings

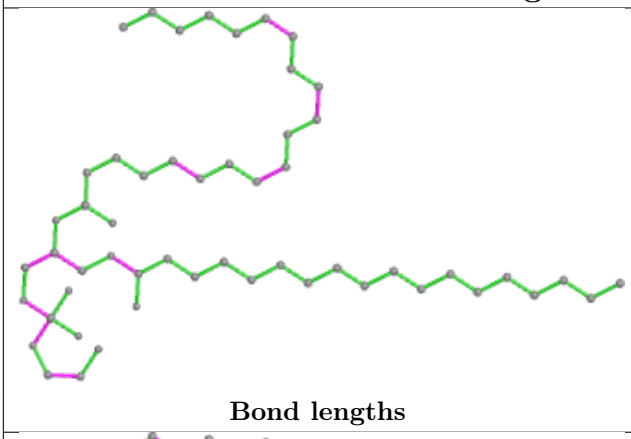
Ligand PEK P 305



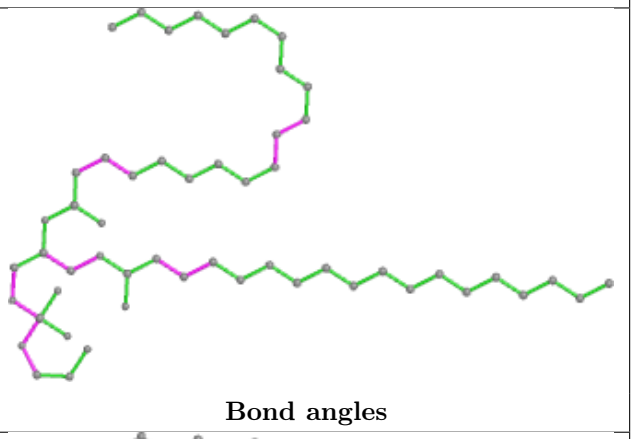
Ligand CDL T 102



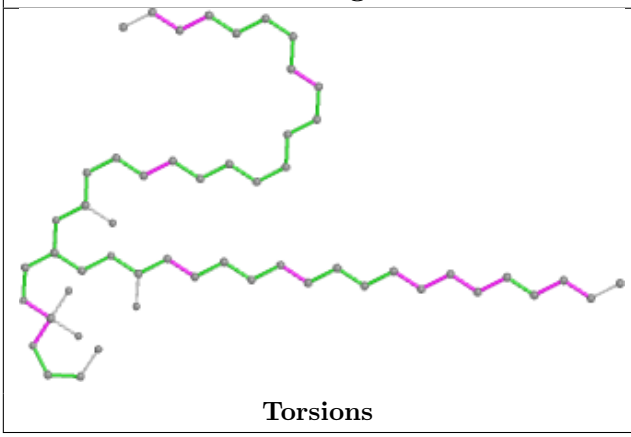
Ligand PEK P 306



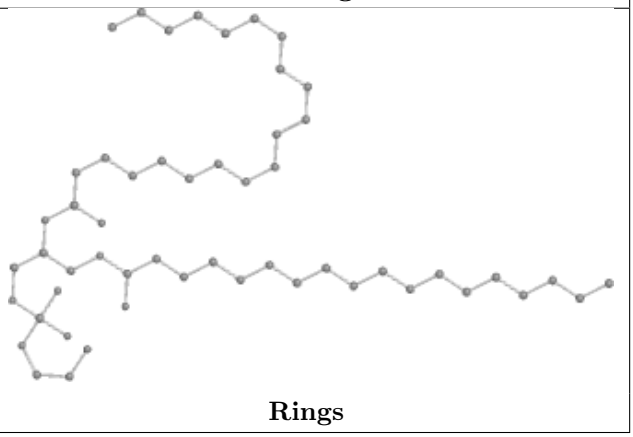
Bond lengths



Bond angles

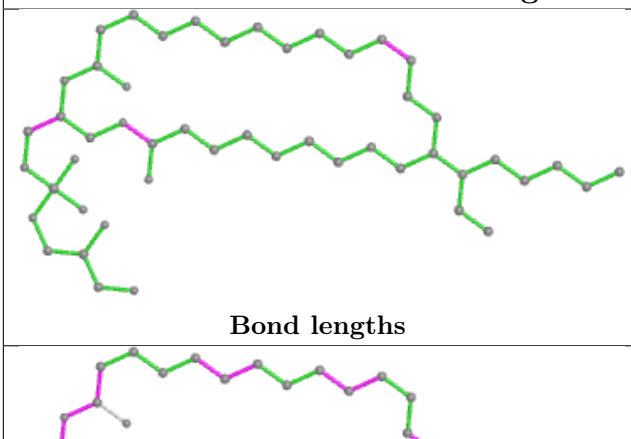


Torsions

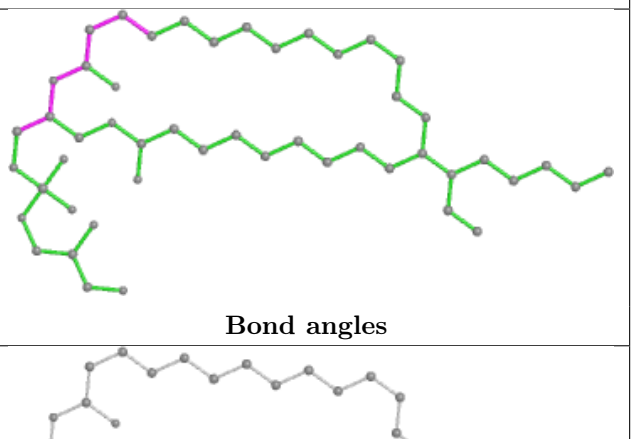


Rings

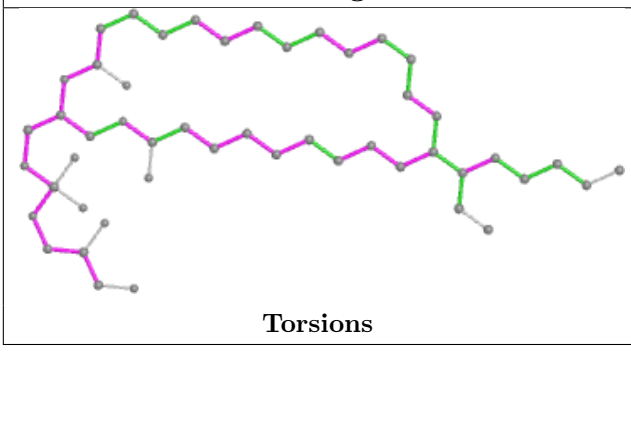
Ligand PGV A 606



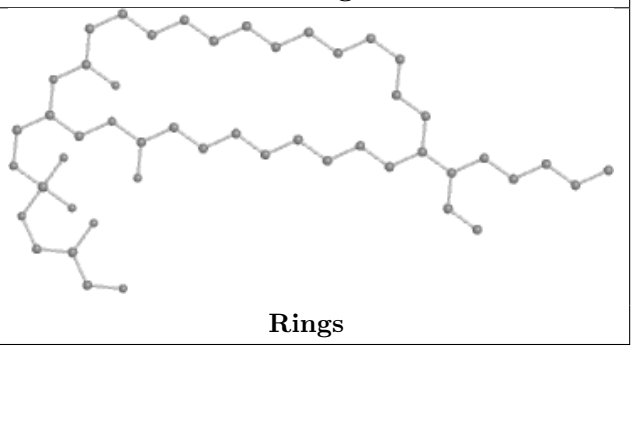
Bond lengths



Bond angles

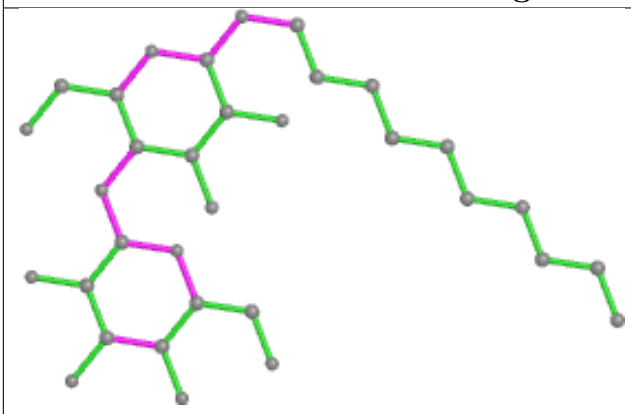


Torsions

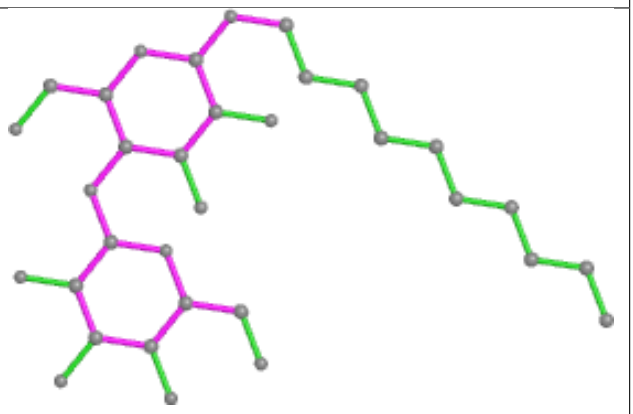


Rings

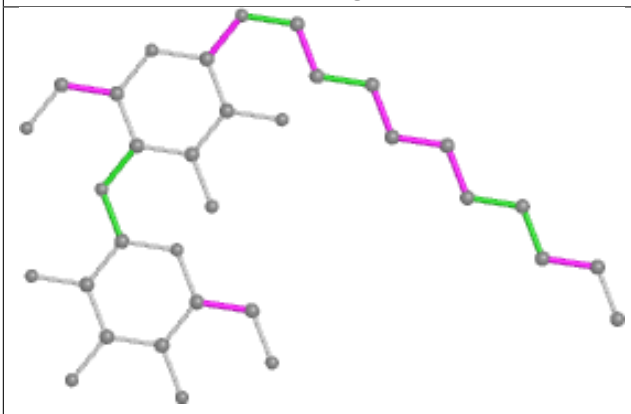
Ligand DMU M 101



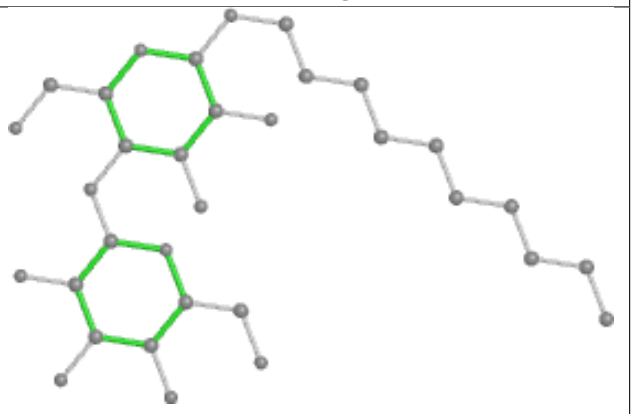
Bond lengths



Bond angles

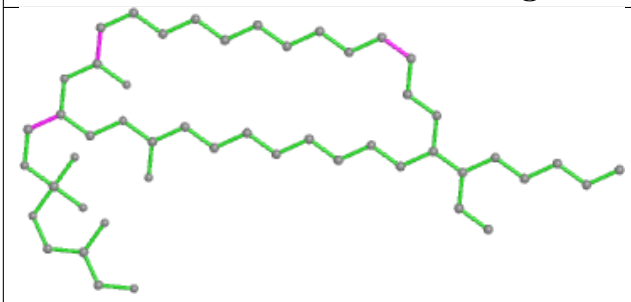


Torsions

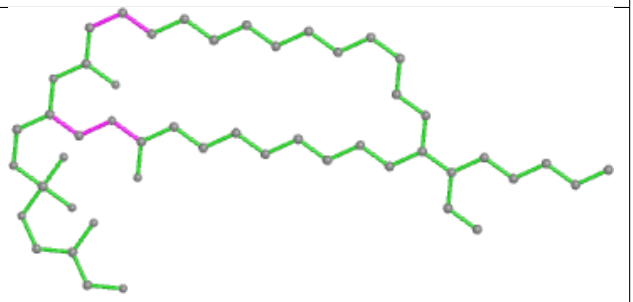


Rings

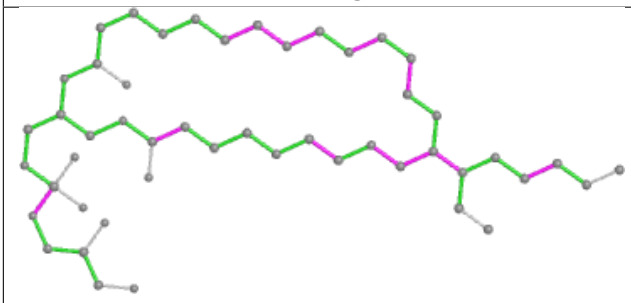
Ligand PGV A 607



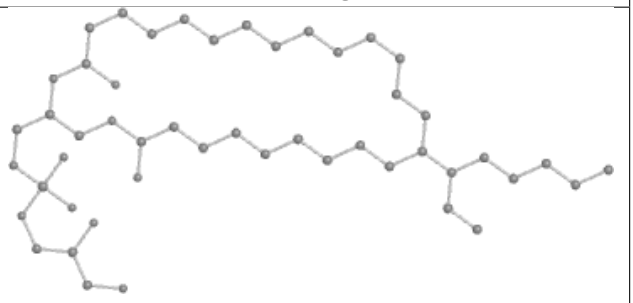
Bond lengths



Bond angles

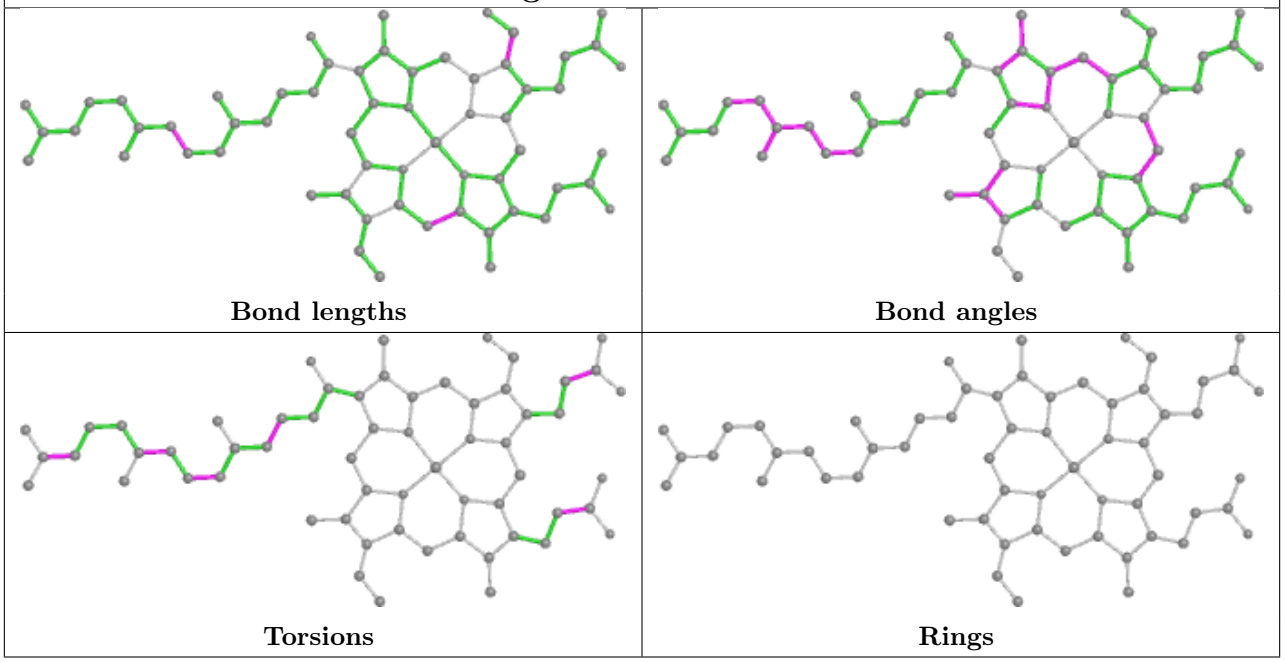


Torsions

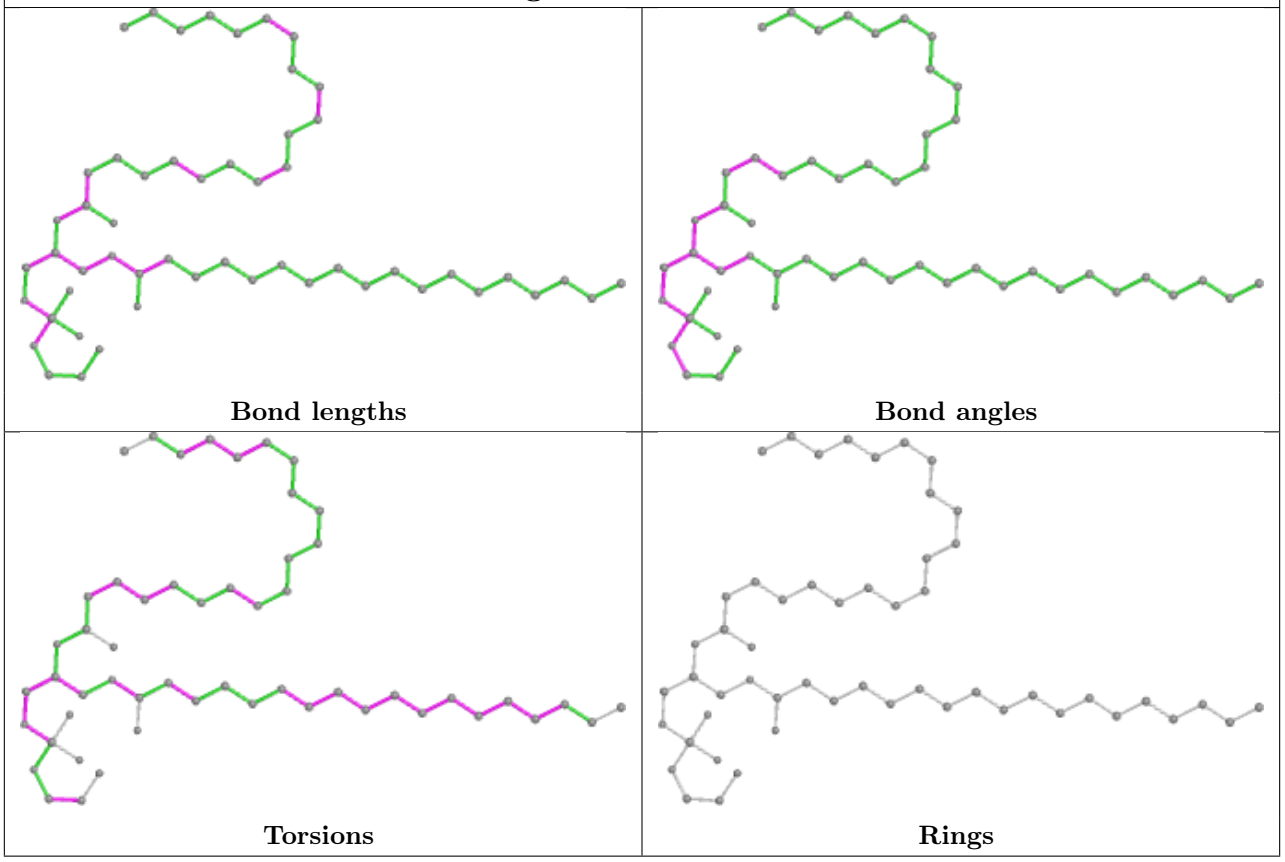


Rings

Ligand HEA A 604



Ligand PEK T 101



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A	513/514 (99%)	-0.14	1 (0%) 95 94	16, 25, 36, 67	0
1	N	513/514 (99%)	-0.22	2 (0%) 92 91	20, 32, 45, 70	0
2	B	226/227 (99%)	-0.57	1 (0%) 92 91	16, 31, 65, 95	0
2	O	226/227 (99%)	-0.48	3 (1%) 77 75	27, 41, 71, 96	0
3	C	259/261 (99%)	-0.59	0 100 100	20, 30, 50, 83	0
3	P	259/261 (99%)	-0.60	1 (0%) 92 91	23, 33, 56, 89	0
4	D	144/147 (97%)	-0.46	5 (3%) 44 42	24, 36, 63, 90	0
4	Q	144/147 (97%)	0.73	17 (11%) 4 4	35, 53, 78, 108	0
5	E	105/109 (96%)	-0.15	2 (1%) 66 65	26, 36, 68, 109	0
5	R	105/109 (96%)	0.33	6 (5%) 23 22	32, 45, 70, 111	0
6	F	98/98 (100%)	0.16	8 (8%) 11 10	22, 37, 100, 118	0
6	S	98/98 (100%)	0.42	9 (9%) 9 7	26, 43, 103, 115	0
7	G	83/85 (97%)	0.64	16 (19%) 1 1	23, 39, 103, 112	0
7	T	83/85 (97%)	0.71	17 (20%) 1 1	26, 45, 103, 113	0
8	H	79/85 (92%)	0.11	9 (11%) 5 4	25, 41, 99, 105	0
8	U	79/85 (92%)	0.62	13 (16%) 1 1	32, 48, 99, 109	0
9	I	72/73 (98%)	0.10	1 (1%) 75 73	27, 45, 74, 83	0
9	V	72/73 (98%)	0.43	7 (9%) 7 6	34, 56, 80, 97	0
10	J	58/59 (98%)	0.09	6 (10%) 6 5	27, 41, 79, 106	0
10	W	58/59 (98%)	0.34	4 (6%) 16 15	34, 49, 87, 110	0
11	K	49/56 (87%)	-0.33	0 100 100	29, 41, 57, 74	0
11	X	49/56 (87%)	0.60	5 (10%) 6 6	44, 56, 74, 88	0
12	L	46/47 (97%)	-0.49	0 100 100	21, 32, 55, 92	0
12	Y	46/47 (97%)	-0.34	2 (4%) 35 33	34, 43, 69, 98	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	M	43/46 (93%)	-0.19	3 (6%) 16 15	23, 32, 97, 108	0
13	Z	43/46 (93%)	0.28	7 (16%) 1 1	39, 47, 101, 112	0
All	All	3550/3614 (98%)	-0.11	145 (4%) 37 35	16, 35, 74, 118	0

All (145) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	Q	5	VAL	18.0
4	Q	6	VAL	15.0
6	S	97	ALA	14.6
6	S	96	LEU	14.5
4	Q	8	SER	10.8
6	F	98	HIS	10.1
6	F	97	ALA	8.9
4	Q	7	LYS	8.7
6	F	96	LEU	8.7
6	S	94	HIS	8.4
13	Z	43	SER	8.4
5	R	5	HIS	8.4
6	S	2	SER	8.3
6	F	1	ALA	8.2
8	U	8	ILE	8.1
8	U	7	LYS	8.1
6	F	95	GLN	7.7
6	F	2	SER	7.2
10	W	58	LYS	7.2
4	Q	35	ALA	7.1
7	T	2	SER	6.9
7	T	3	ALA	6.8
5	E	5	HIS	6.7
6	S	98	HIS	6.6
7	G	1	ALA	6.5
4	Q	4	SER	6.5
9	V	2	THR	6.3
7	T	42	ARG	6.2
6	S	1	ALA	6.1
10	J	58	LYS	6.1
7	G	40	GLY	6.1
7	G	42	ARG	6.0
8	H	45	ALA	5.8
7	T	39	SER	5.8

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Mol	Chain	Res	Type	RSRZ
7	G	2	SER	5.7
7	G	5	LYS	5.6
8	H	44	THR	5.5
7	T	36	TRP	5.4
8	U	44	THR	5.4
7	T	5	LYS	5.2
8	H	46	LYS	5.1
5	R	109	VAL	4.9
7	T	4	ALA	4.8
8	H	7	LYS	4.8
7	G	4	ALA	4.7
7	G	9	GLY	4.7
4	Q	147	LYS	4.6
8	U	9	LYS	4.6
9	I	37	PHE	4.6
3	P	3	HIS	4.6
2	O	113	TYR	4.6
8	H	47	GLY	4.5
7	G	3	ALA	4.5
8	U	45	ALA	4.4
7	T	8	HIS	4.4
7	G	8	HIS	4.4
6	S	93	PRO	4.2
7	T	84	LYS	4.2
13	Z	39	ASN	4.2
6	F	94	HIS	4.1
11	X	6	ALA	4.1
6	S	95	GLN	4.0
10	J	1	PHE	4.0
7	T	41	HIS	4.0
2	O	227	LEU	3.9
4	Q	39	ALA	3.9
13	M	40	TYR	3.9
13	Z	41	LYS	3.9
8	U	47	GLY	3.9
13	Z	37	LEU	3.9
9	V	3	ALA	3.8
11	X	13	TYR	3.8
13	Z	40	TYR	3.6
4	Q	51	LEU	3.6
10	W	48	TYR	3.5
7	T	40	GLY	3.4

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Mol	Chain	Res	Type	RSRZ
8	H	48	GLY	3.4
7	T	1	ALA	3.3
1	N	513	LEU	3.3
8	H	43	MET	3.2
7	G	41	HIS	3.1
13	M	43	SER	3.1
10	J	52	TRP	3.1
10	J	57	HIS	3.0
12	Y	47	LYS	3.0
5	R	79	LYS	3.0
9	V	36	LYS	2.9
10	W	52	TRP	2.9
4	D	5	VAL	2.9
7	T	9	GLY	2.9
8	U	48	GLY	2.8
7	G	6	GLY	2.8
4	Q	62	LEU	2.8
4	Q	142	LYS	2.8
6	F	3	GLY	2.7
9	V	25	PHE	2.7
7	G	84	LYS	2.7
8	U	50	VAL	2.7
4	D	6	VAL	2.7
2	O	226	MET	2.7
4	Q	58	GLU	2.6
7	T	7	ASP	2.6
2	B	59	GLN	2.6
5	R	52	LEU	2.6
9	V	37	PHE	2.6
7	G	36	TRP	2.6
10	J	2	GLU	2.6
11	X	9	PHE	2.5
8	U	85	ILE	2.5
10	W	4	ARG	2.5
8	H	8	ILE	2.5
4	Q	102	TYR	2.5
6	S	3	GLY	2.5
8	U	43	MET	2.4
12	Y	20	ARG	2.4
7	G	43	GLU	2.3
8	U	51	SER	2.3
7	T	10	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
9	V	34	PHE	2.3
7	G	7	ASP	2.3
4	D	147	LYS	2.3
1	N	48	LEU	2.3
13	M	39	ASN	2.3
5	R	96	LEU	2.2
4	Q	55	GLU	2.2
4	D	7	LYS	2.2
4	Q	136	ALA	2.2
4	Q	48	TRP	2.2
5	E	109	VAL	2.1
4	D	8	SER	2.1
11	X	7	PRO	2.1
13	Z	42	LYS	2.1
5	R	16	VAL	2.1
11	X	34	THR	2.1
7	G	45	PRO	2.1
8	U	10	ASN	2.1
1	A	241	PRO	2.1
7	T	6	GLY	2.0
8	U	49	ASP	2.0
4	Q	73	ARG	2.0
13	Z	35	TYR	2.0
9	V	4	LEU	2.0
8	H	49	ASP	2.0
10	J	4	ARG	2.0
7	T	38	HIS	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
7	TPO	T	11	11/12	0.48	0.29	87,93,112,113	0
9	SAC	V	1	9/10	0.49	0.64	101,107,109,110	0
7	TPO	G	11	11/12	0.55	0.32	89,96,117,119	0
9	SAC	I	1	9/10	0.80	0.27	89,93,96,97	0
1	FME	A	1	10/11	0.87	0.14	50,60,76,86	0
1	FME	N	1	10/11	0.92	0.21	57,61,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	FME	B	1	10/11	0.95	0.13	25,33,44,53	0
2	FME	O	1	10/11	0.95	0.14	40,42,47,54	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
26	PEK	T	101	53/53	0.47	0.46	50,90,115,120	0
26	PEK	G	102	53/53	0.54	0.41	50,89,115,120	0
26	PEK	C	306	53/53	0.55	0.30	46,91,115,120	0
21	PSC	B	303	52/52	0.57	0.35	47,90,120,120	0
27	CDL	T	102	100/100	0.62	0.35	47,86,112,120	0
21	PSC	O	304	52/52	0.64	0.39	48,88,120,120	0
27	CDL	G	101	100/100	0.64	0.34	55,88,111,120	0
24	DMU	P	302	33/33	0.64	0.41	91,116,120,120	0
24	DMU	C	302	33/33	0.65	0.41	88,116,120,120	0
26	PEK	P	306	53/53	0.66	0.35	40,89,110,114	0
25	UNX	P	303	1/1	0.67	0.26	50,50,50,50	0
20	TGL	N	606	63/63	0.68	0.34	39,68,86,88	0
18	PGV	P	308	51/51	0.68	0.39	66,90,112,116	0
18	PGV	C	308	51/51	0.69	0.39	61,87,113,116	0
20	TGL	N	607	63/63	0.73	0.22	48,69,85,92	0
27	CDL	P	309	100/100	0.74	0.39	37,90,108,118	0
20	TGL	D	201	63/63	0.74	0.25	45,70,82,87	0
27	CDL	C	309	100/100	0.75	0.36	43,92,103,109	0
25	UNX	C	303	1/1	0.75	0.39	45,45,45,45	0
18	PGV	A	606	51/51	0.75	0.30	32,75,113,120	0
22	CHD	W	101	29/29	0.75	0.34	89,100,103,108	0
20	TGL	O	303	63/63	0.76	0.26	46,70,91,96	0
20	TGL	L	101	63/63	0.76	0.29	36,67,81,84	0
16	NA	A	603	1/1	0.78	0.20	44,44,44,44	0
18	PGV	N	608	51/51	0.79	0.36	38,80,114,119	0
22	CHD	J	101	29/29	0.81	0.37	91,99,104,107	0

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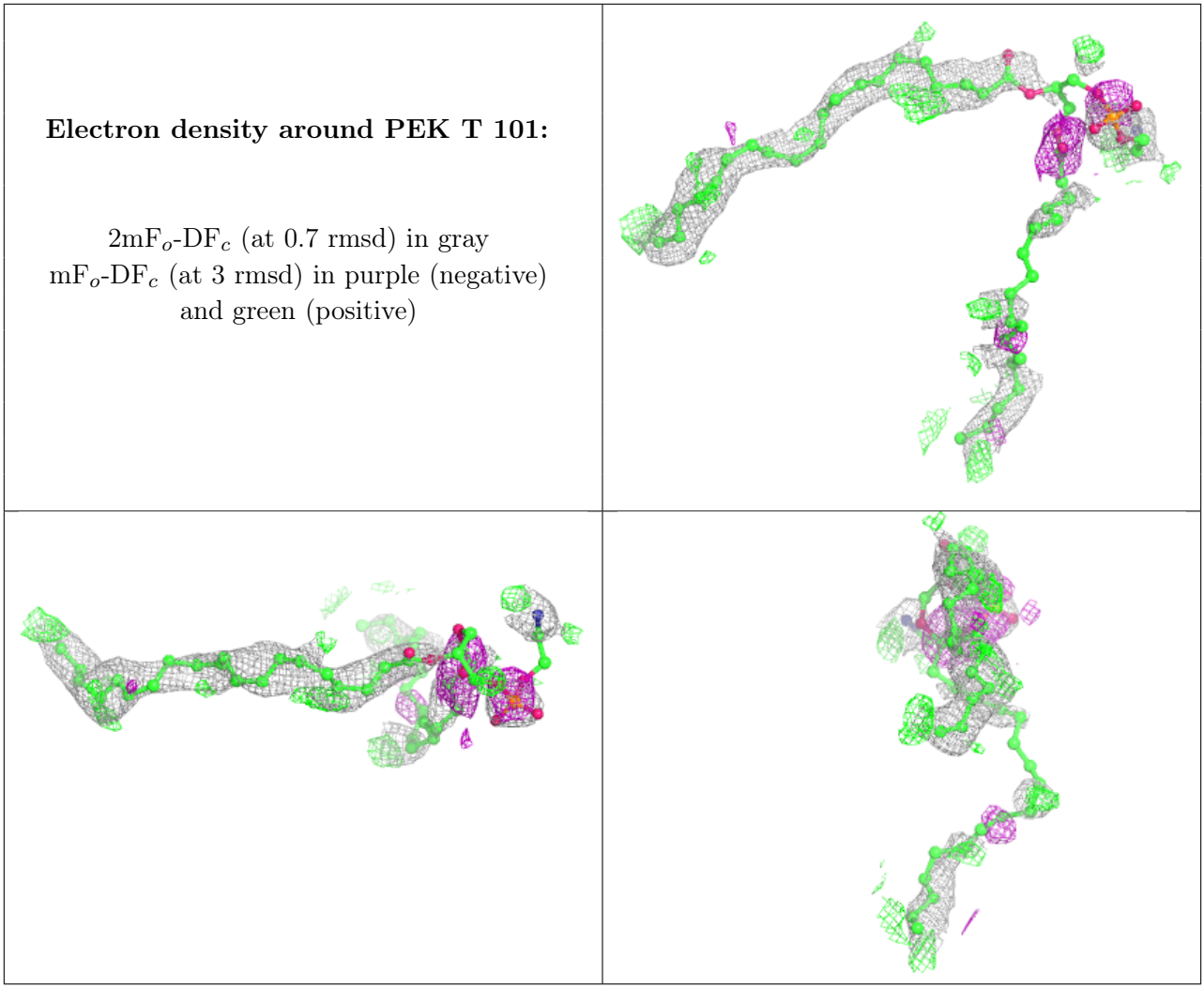
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
16	NA	N	603	1/1	0.81	0.19	50,50,50,50	0
20	TGL	B	302	63/63	0.82	0.22	41,67,89,94	0
24	DMU	Z	101	33/33	0.82	0.33	50,72,86,92	0
22	CHD	C	310	29/29	0.84	0.26	75,92,97,101	0
22	CHD	P	310	29/29	0.85	0.24	78,91,94,99	0
24	DMU	M	101	33/33	0.85	0.20	45,63,80,87	0
23	DCW	C	301	16/16	0.90	0.17	46,50,53,54	0
23	DCW	P	301	16/16	0.93	0.15	52,59,70,70	0
15	MG	N	602	1/1	0.94	0.16	35,35,35,35	0
26	PEK	P	305	53/53	0.94	0.14	24,46,73,77	0
26	PEK	C	305	53/53	0.95	0.13	17,43,71,73	0
15	MG	A	602	1/1	0.95	0.17	23,23,23,23	0
22	CHD	P	304	29/29	0.96	0.12	25,32,40,46	0
18	PGV	P	307	51/51	0.96	0.13	23,36,68,73	0
18	PGV	C	307	51/51	0.96	0.12	22,33,65,72	0
22	CHD	C	304	29/29	0.97	0.12	25,31,37,39	0
18	PGV	A	607	51/51	0.97	0.15	22,41,66,76	0
18	PGV	N	609	51/51	0.97	0.14	25,43,64,77	0
22	CHD	O	302	29/29	0.97	0.10	17,29,37,40	0
22	CHD	B	304	29/29	0.97	0.08	20,27,34,38	0
17	HEA	N	604	60/60	0.98	0.17	20,32,50,55	0
19	CUA	O	301	2/2	0.98	0.10	36,36,36,36	0
17	HEA	N	605	60/60	0.98	0.17	16,27,34,36	0
17	HEA	A	605	60/60	0.98	0.16	10,24,31,33	0
19	CUA	B	301	2/2	0.99	0.14	24,24,24,27	0
17	HEA	A	604	60/60	0.99	0.17	16,25,49,54	0
14	CU	A	601	1/1	0.99	0.12	23,23,23,23	0
14	CU	N	601	1/1	0.99	0.15	28,28,28,28	0
28	ZN	F	101	1/1	0.99	0.09	32,32,32,32	0
28	ZN	S	101	1/1	0.99	0.06	34,34,34,34	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

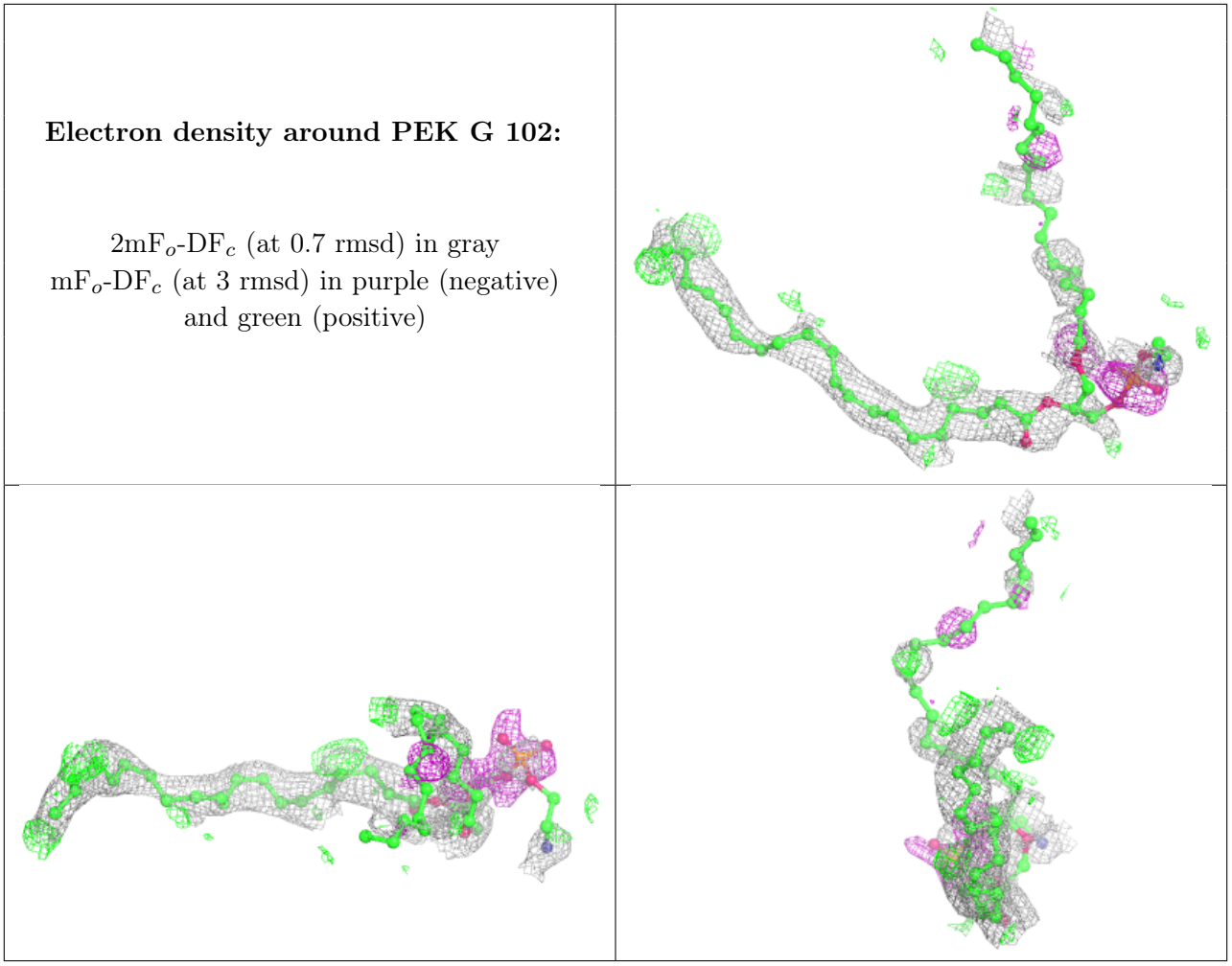
Electron density around PEK T 101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



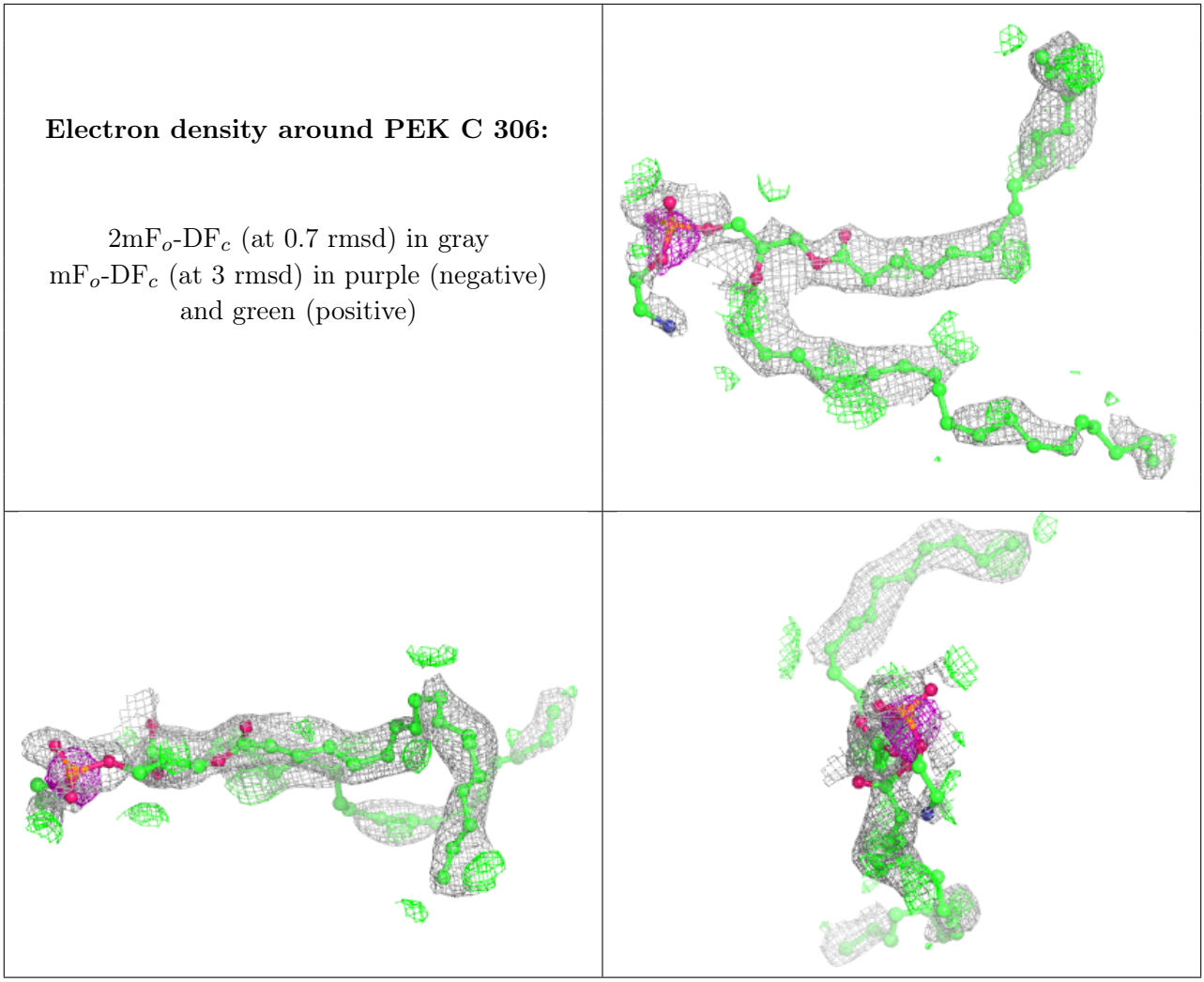
Electron density around PEK G 102:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



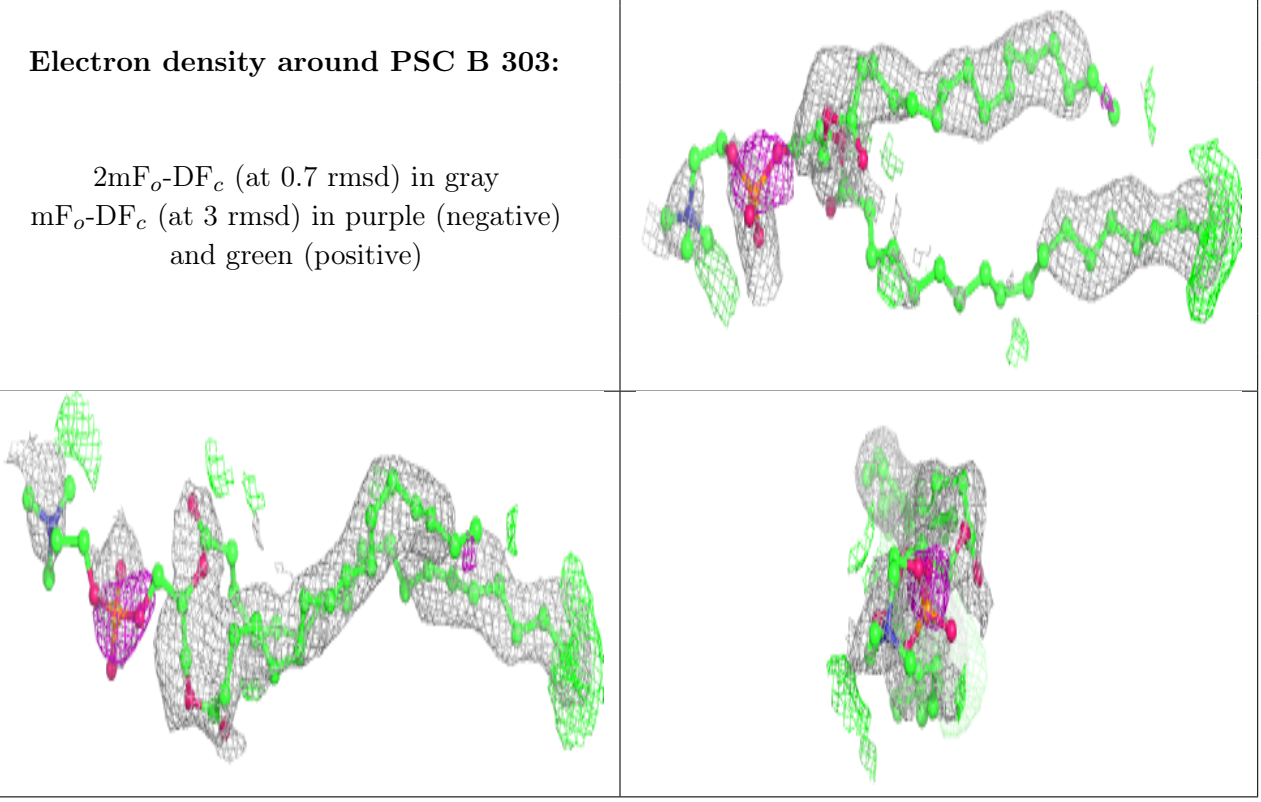
Electron density around PEK C 306:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



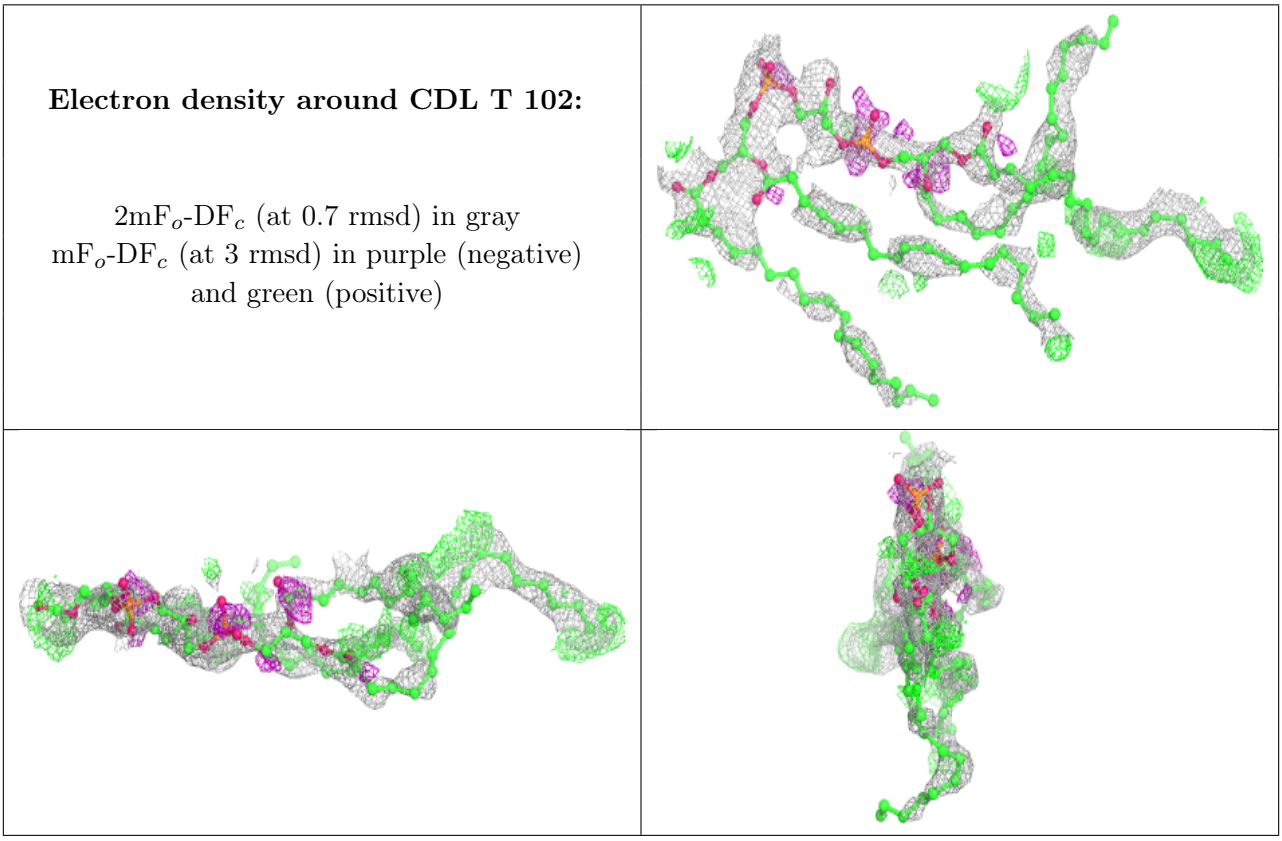
Electron density around PSC B 303:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



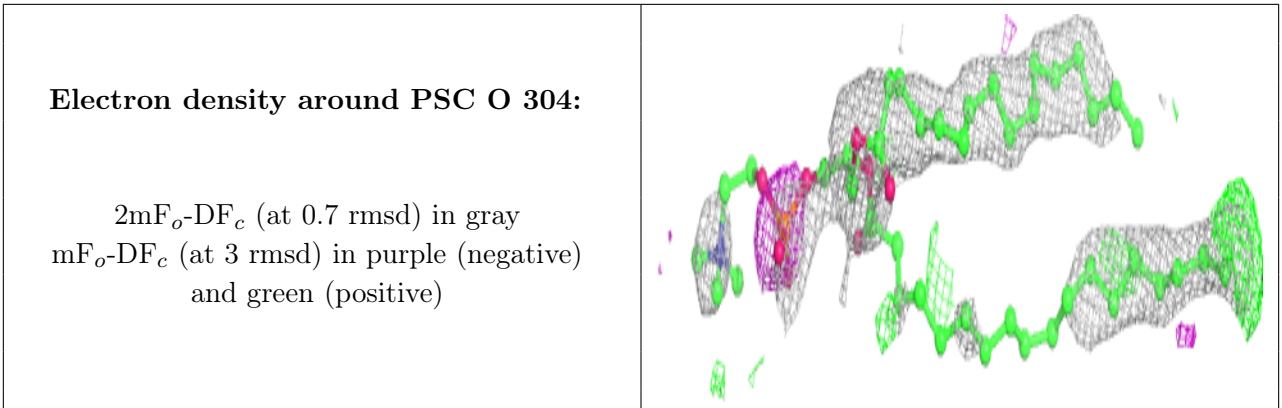
Electron density around CDL T 102:

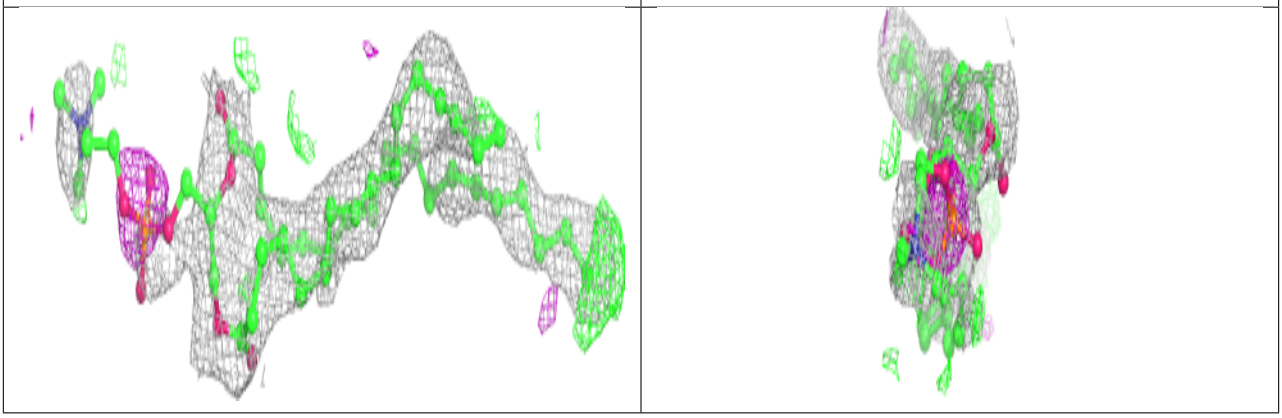
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around PSC O 304:

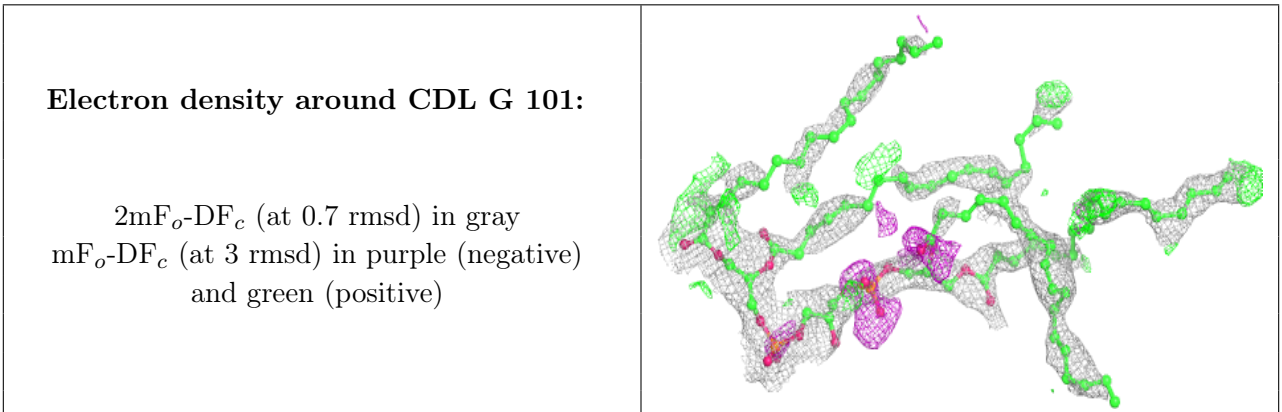
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

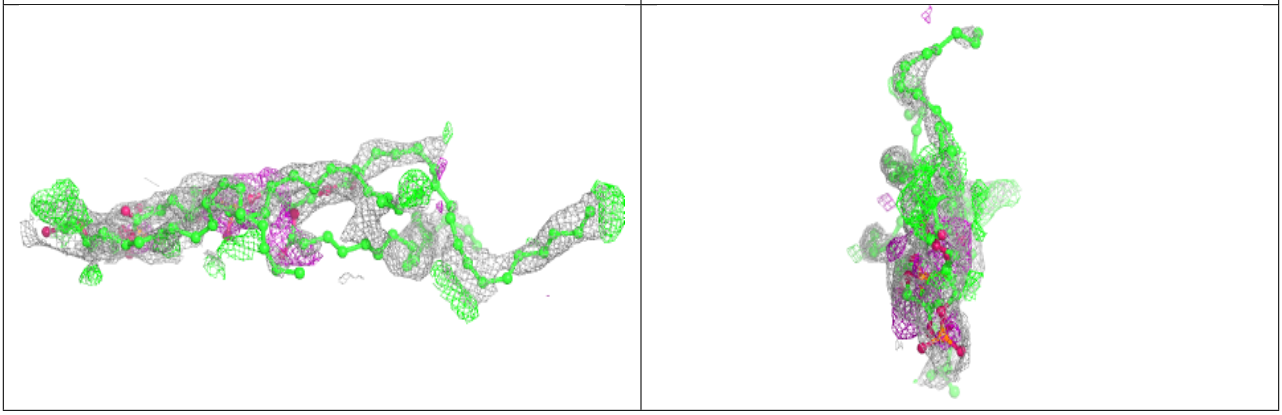




Electron density around CDL G 101:

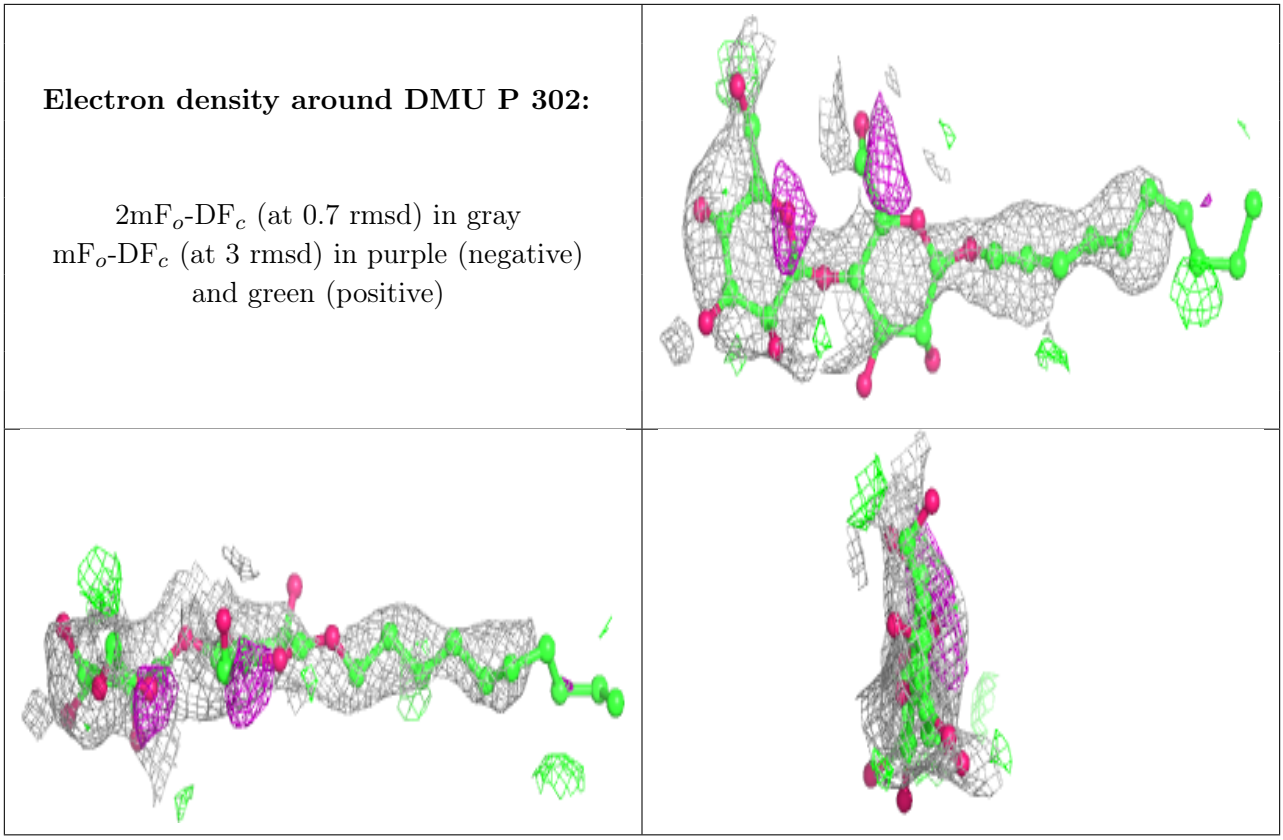
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





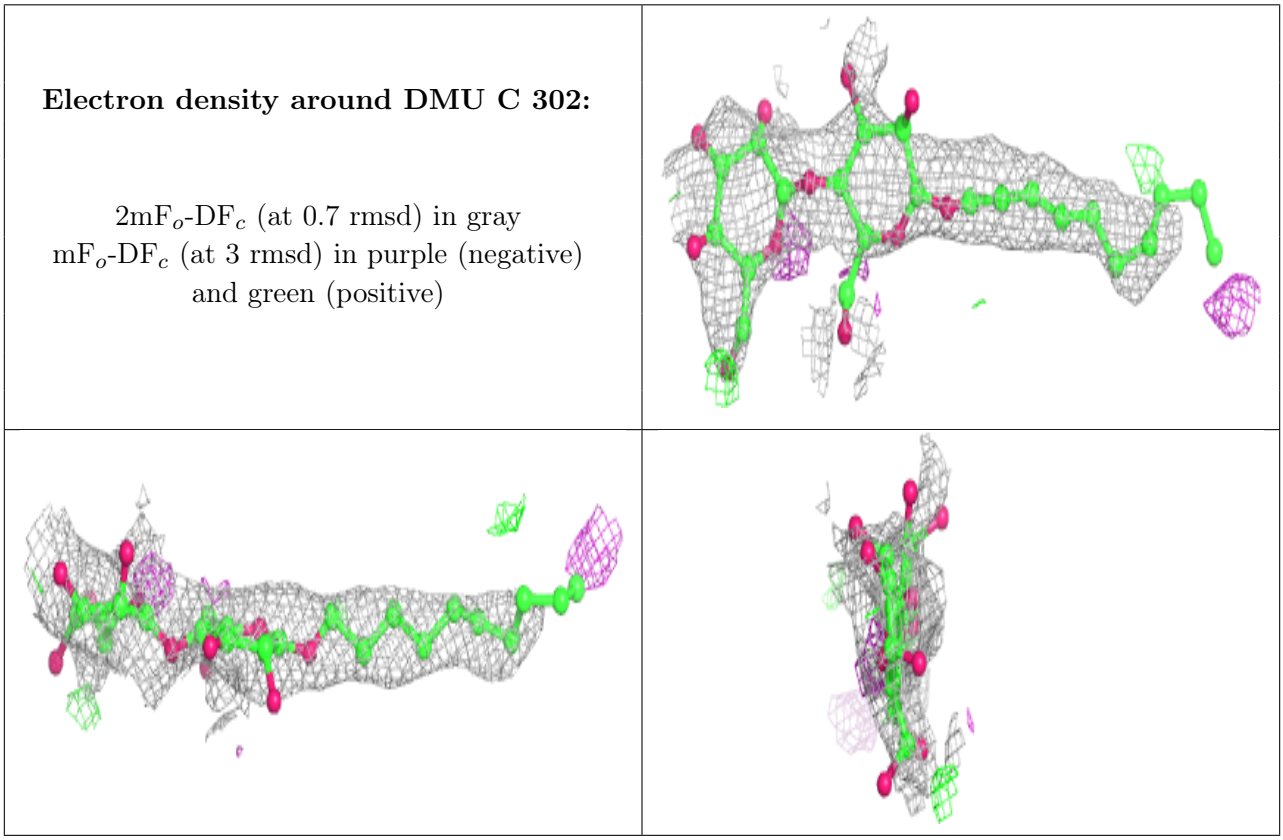
Electron density around DMU P 302:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



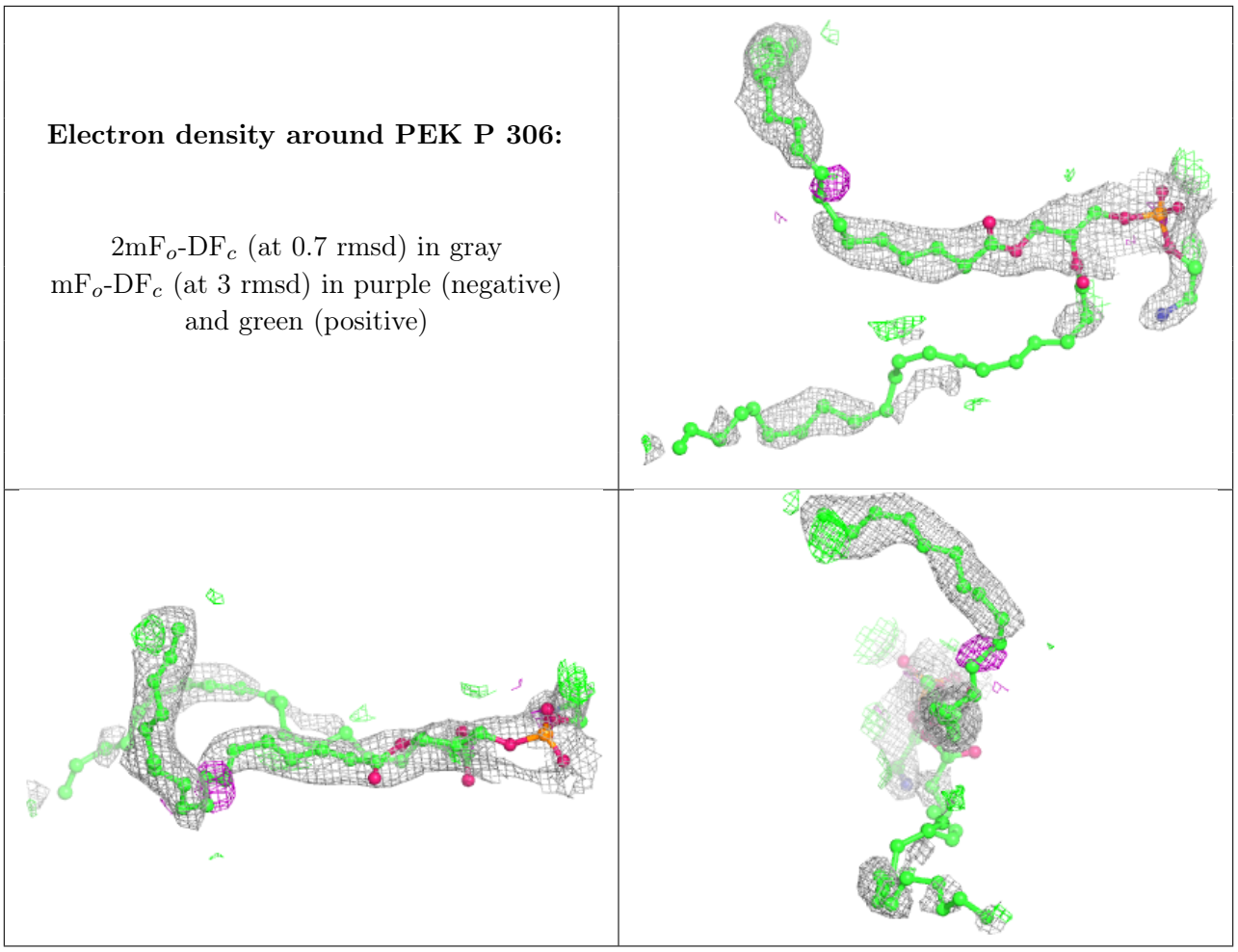
Electron density around DMU C 302:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



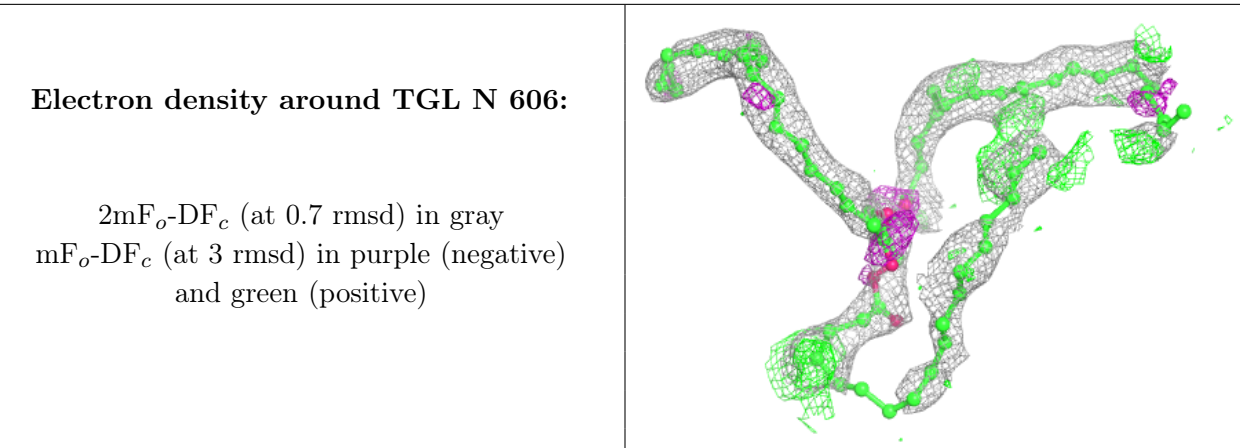
Electron density around PEK P 306:

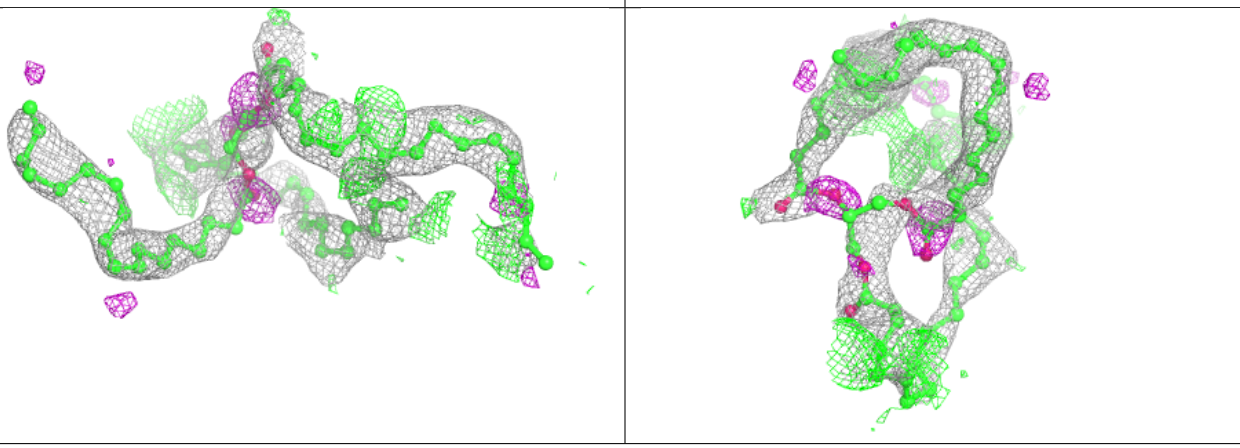
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around TGL N 606:

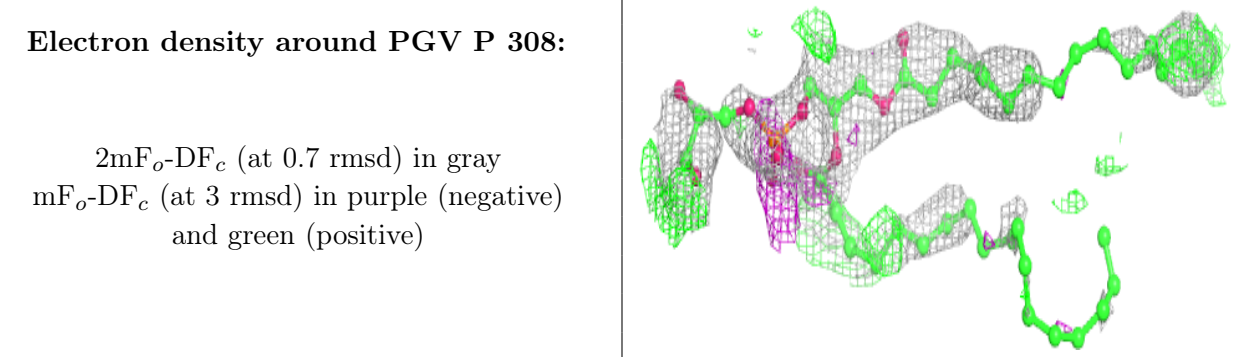
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

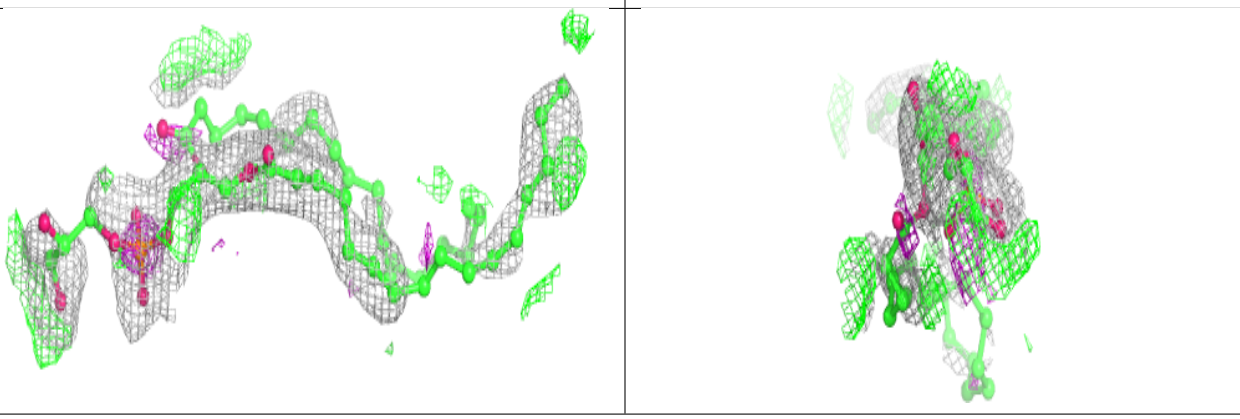




Electron density around PGV P 308:

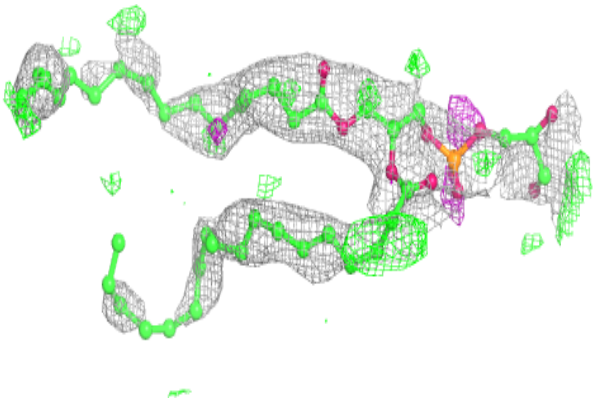
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

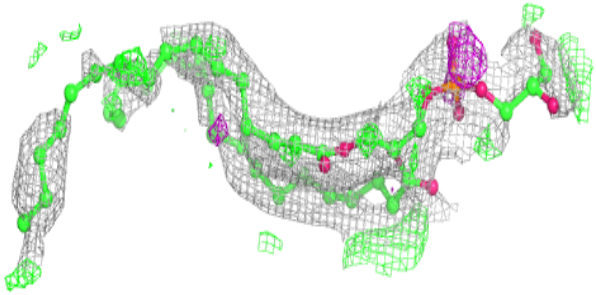


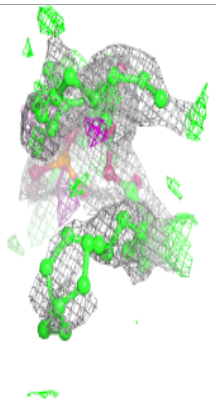


Electron density around PGV C 308:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

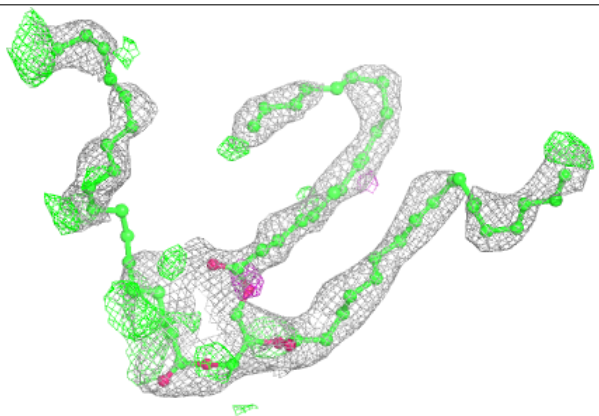


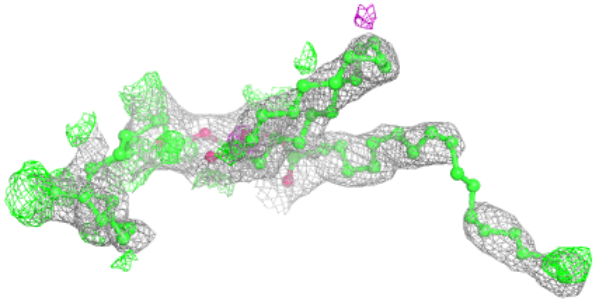


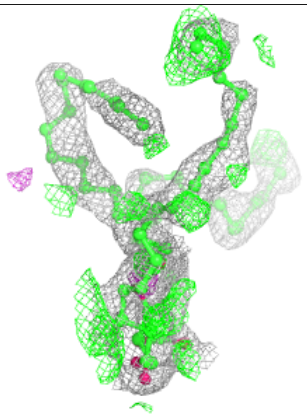


Electron density around TGL N 607:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

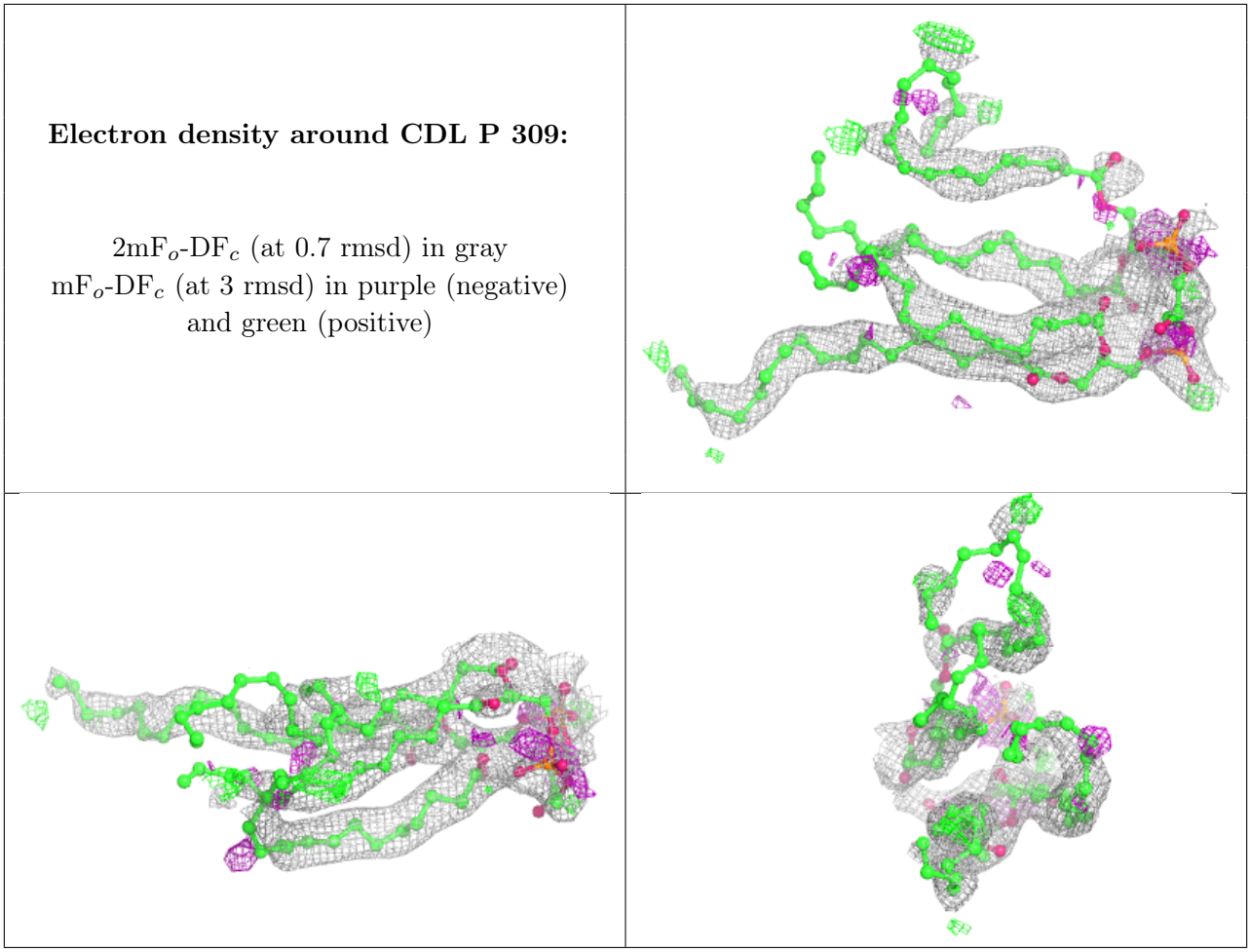






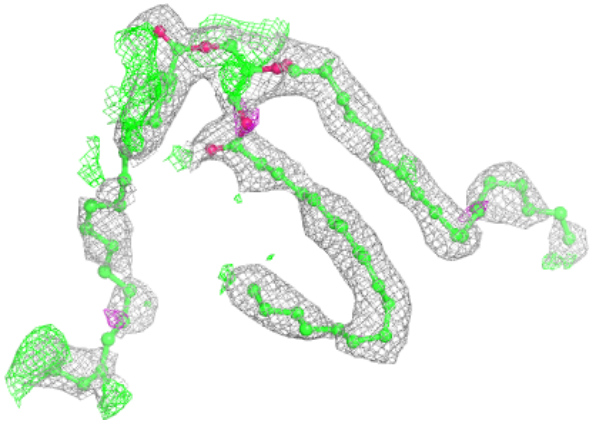
Electron density around CDL P 309:

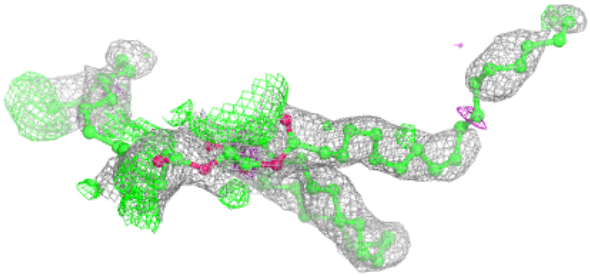
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

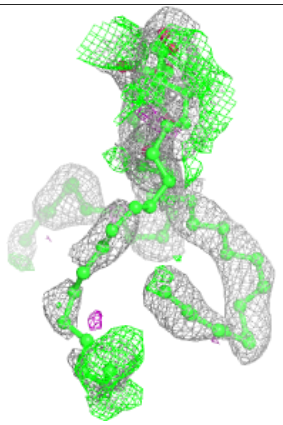


Electron density around TGL D 201:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

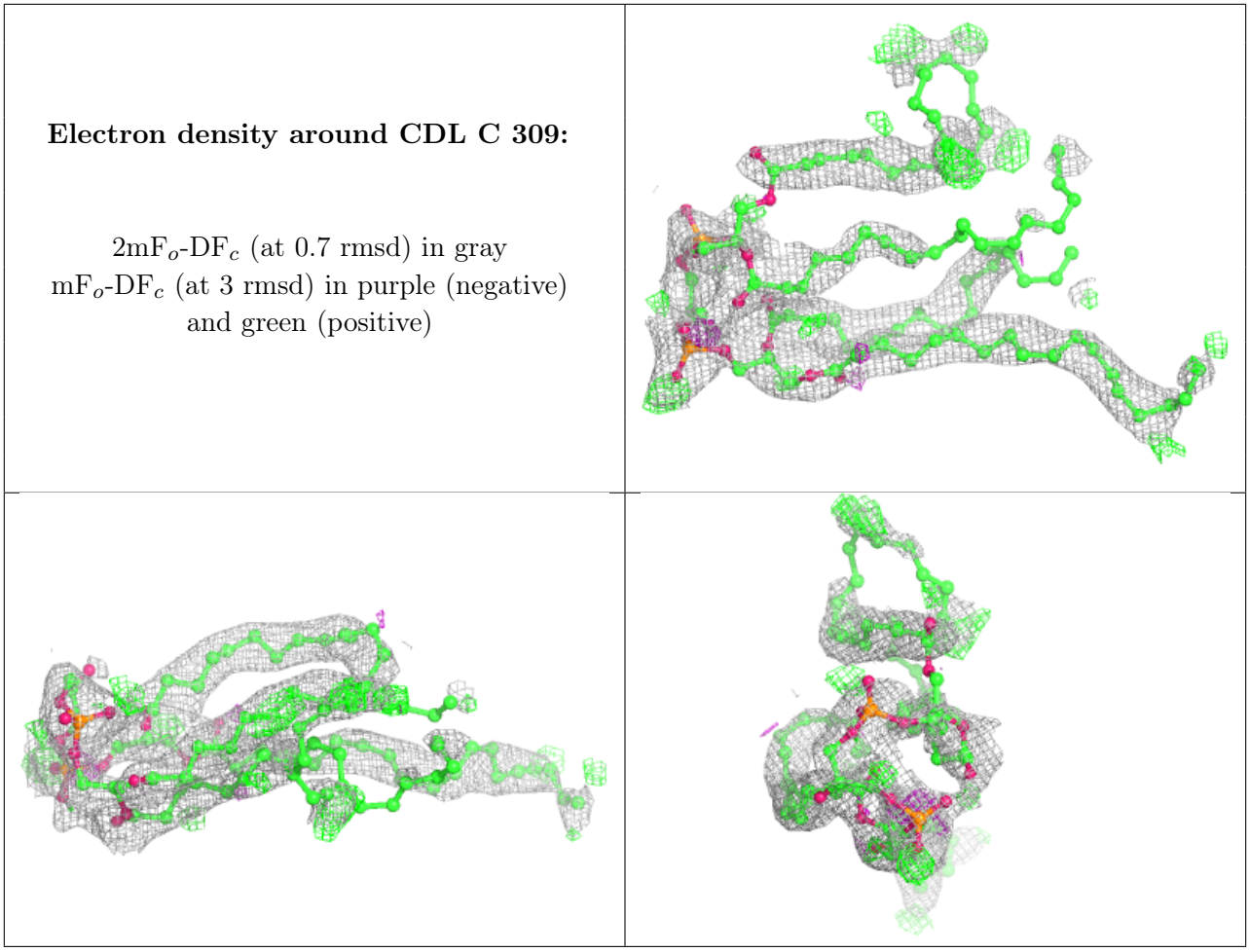






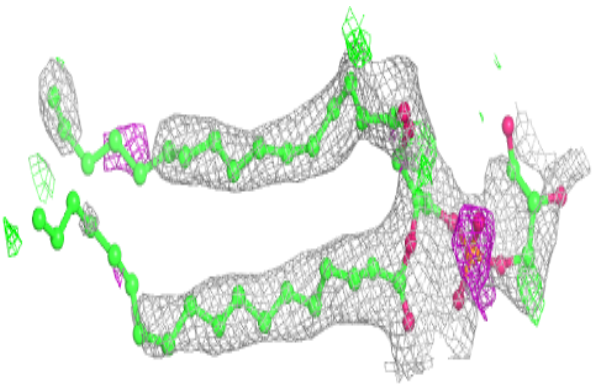
Electron density around CDL C 309:

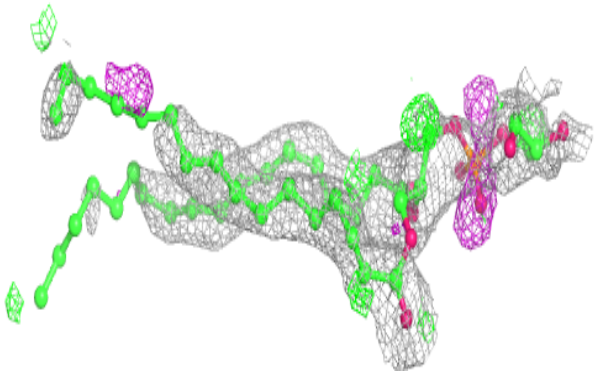
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

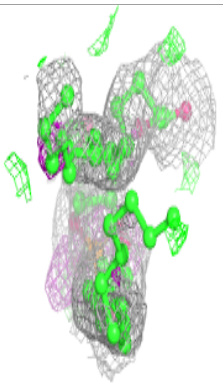


Electron density around PGV A 606:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

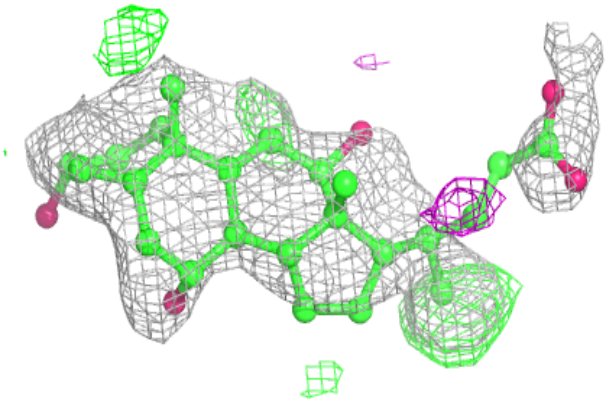


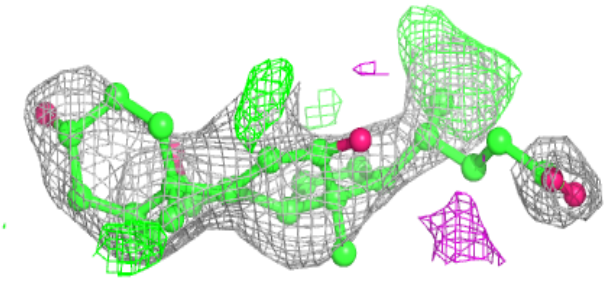


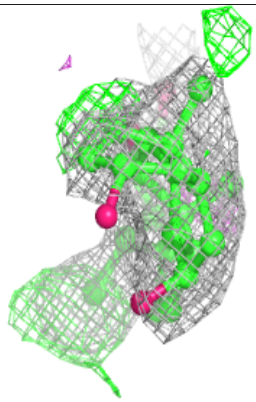


Electron density around CHD W 101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

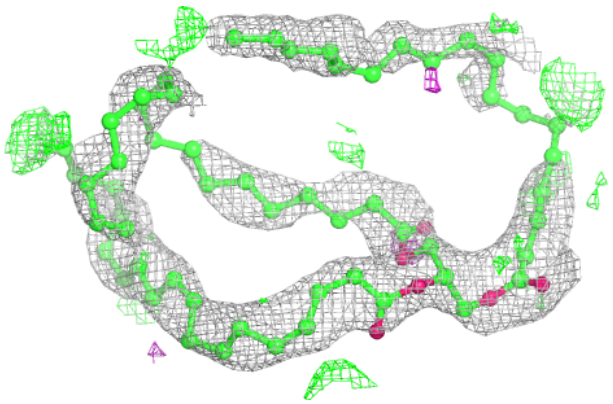


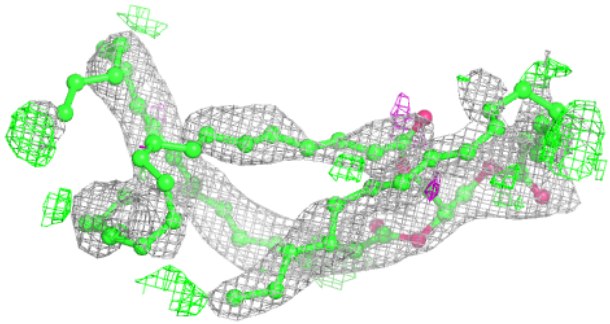


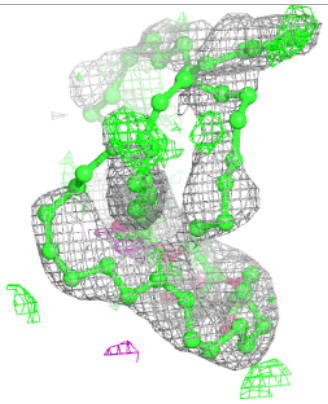


Electron density around TGL O 303:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

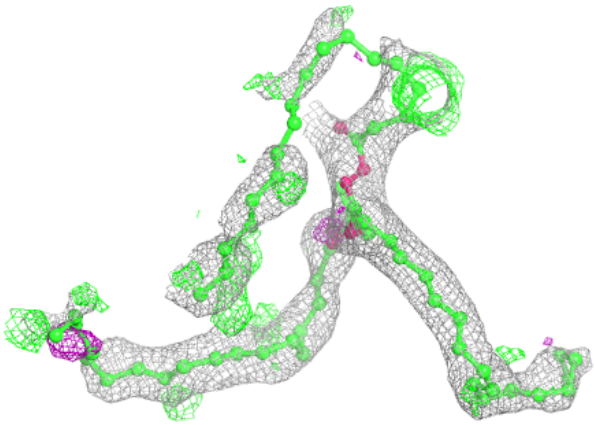


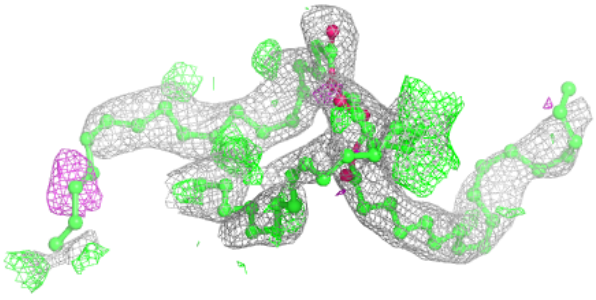


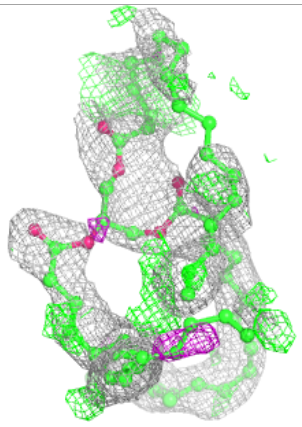


Electron density around TGL L 101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

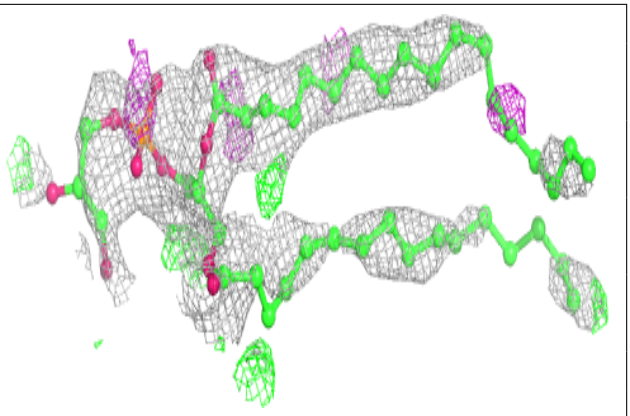


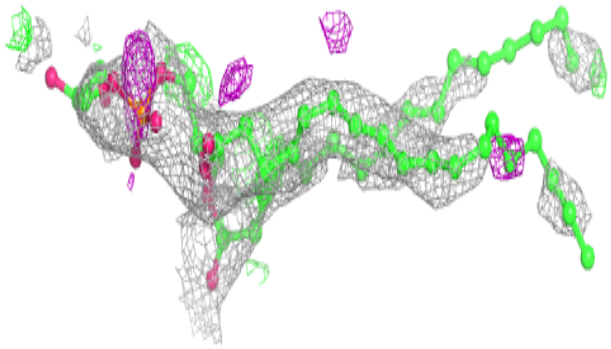


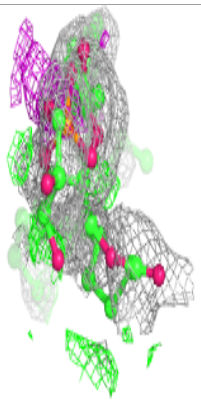


Electron density around PGV N 608:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

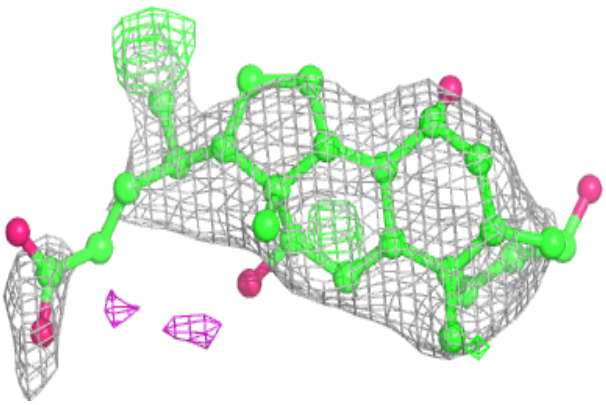


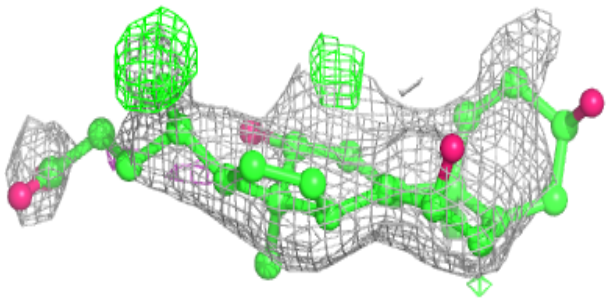


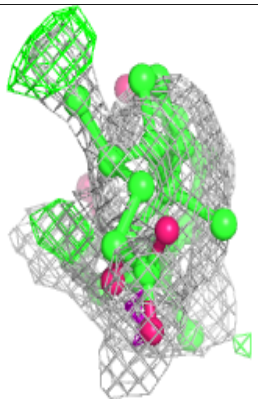


Electron density around CHD J 101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

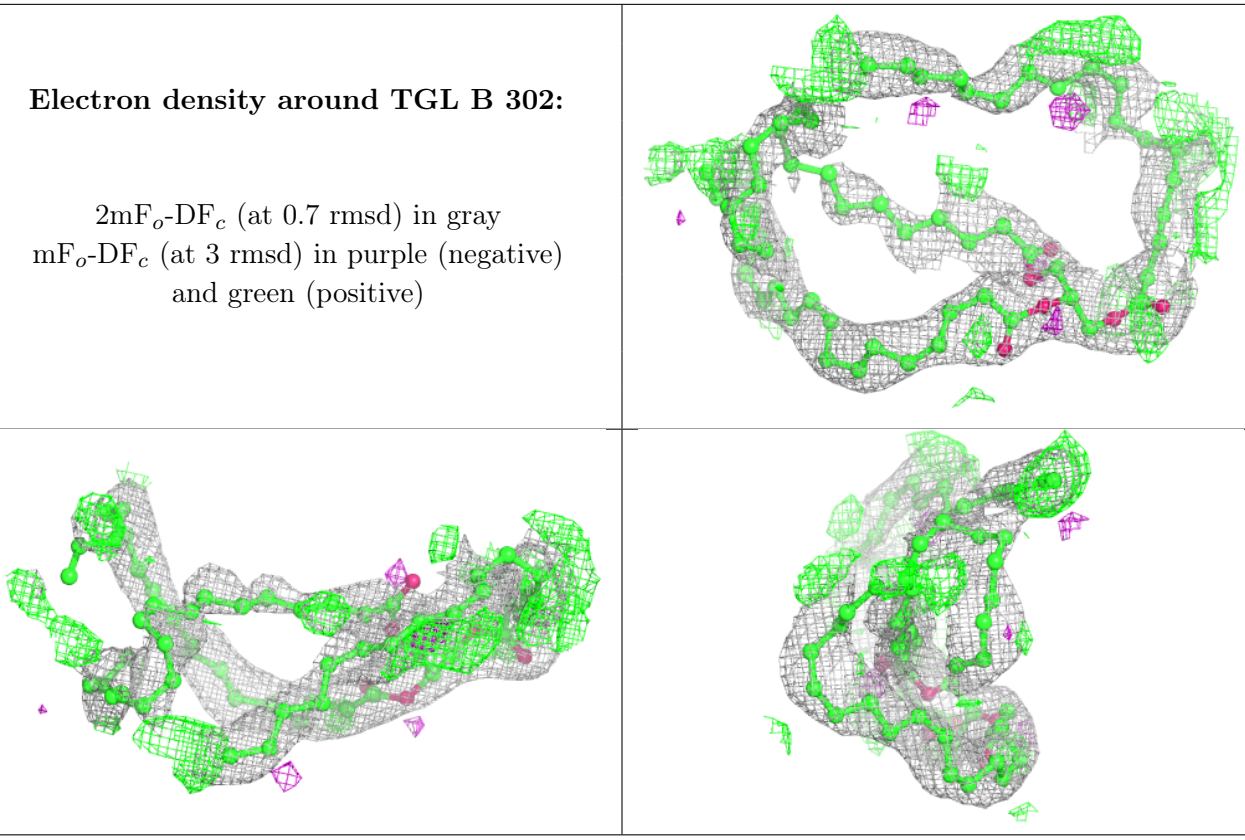






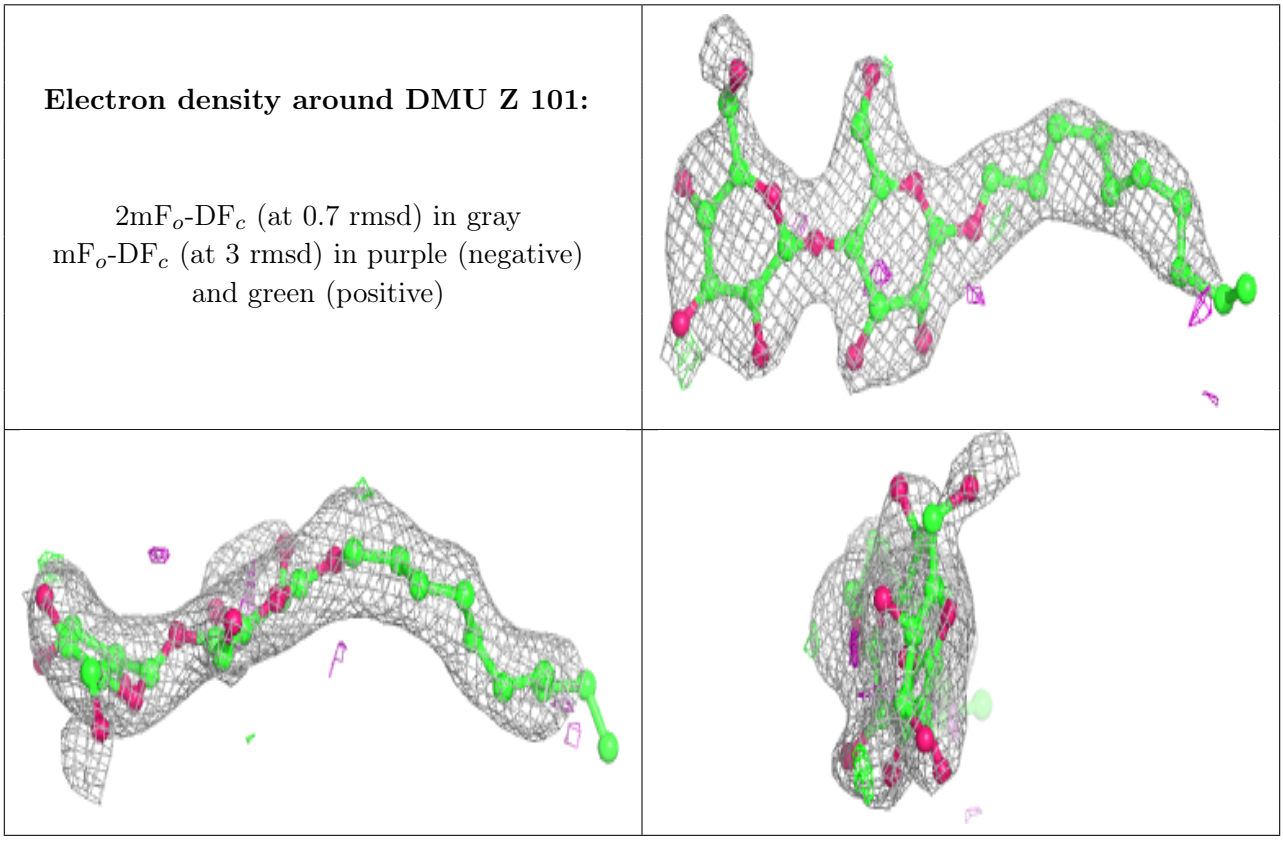
Electron density around TGL B 302:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



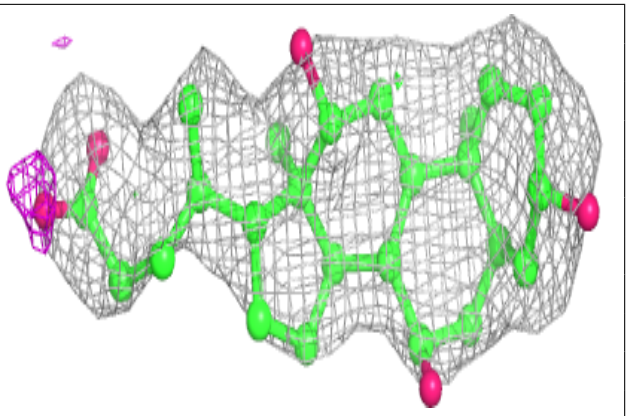
Electron density around DMU Z 101:

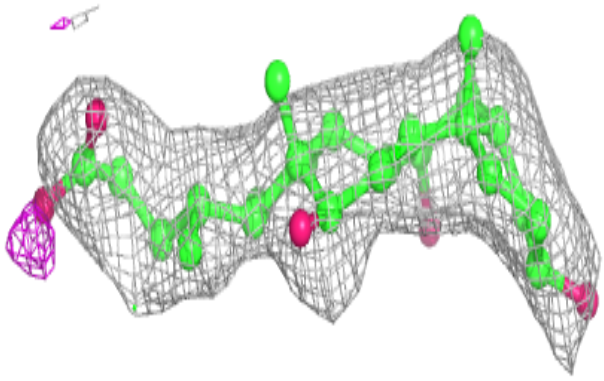
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

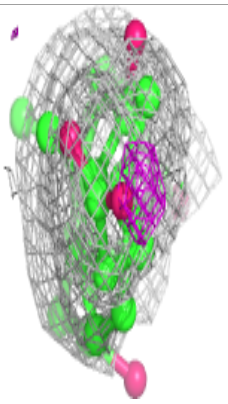


Electron density around CHD C 310:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

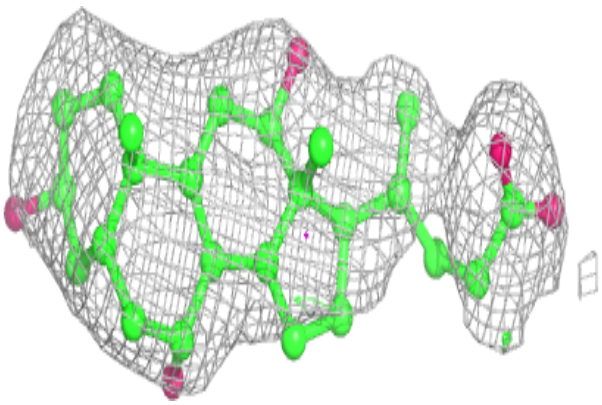


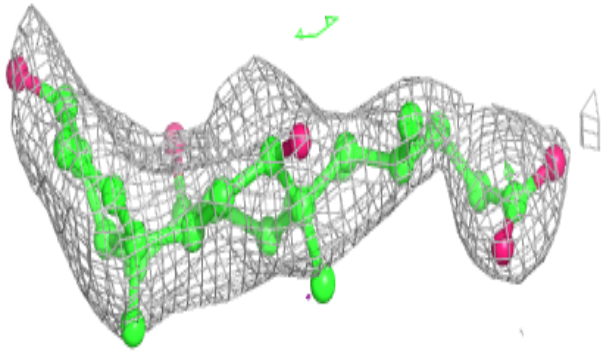


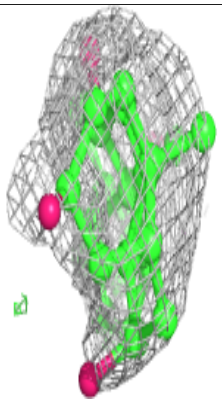


Electron density around CHD P 310:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

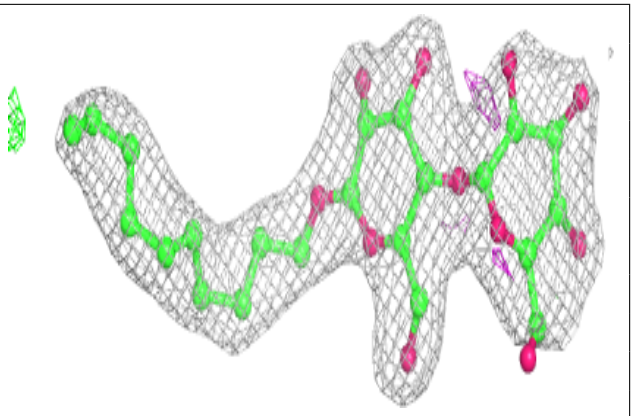


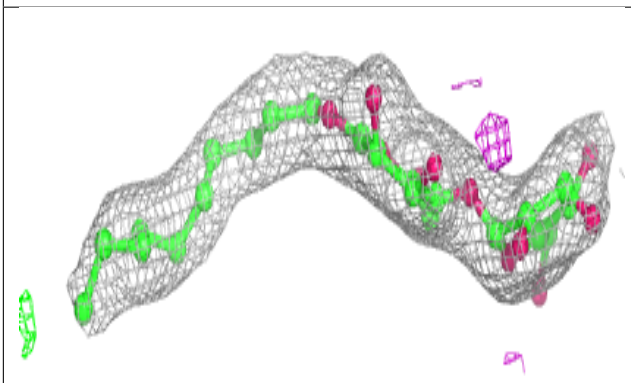


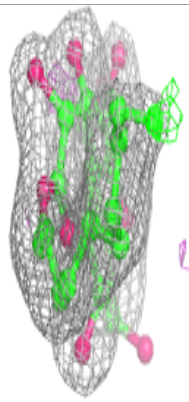


Electron density around DMU M 101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

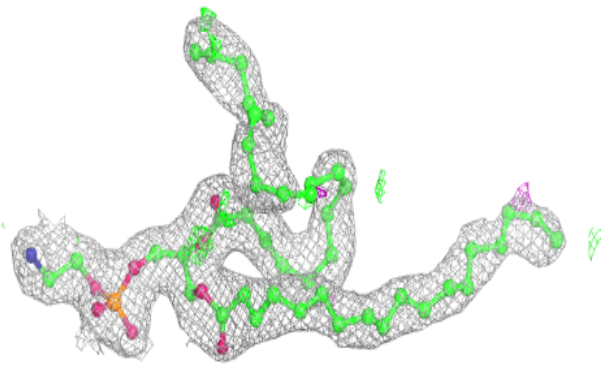


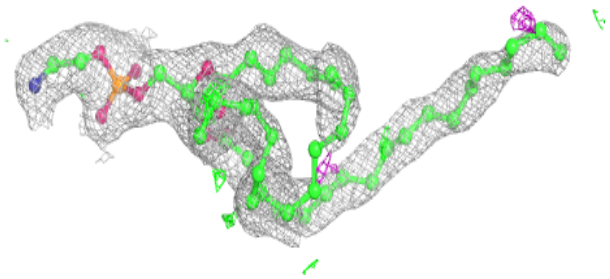


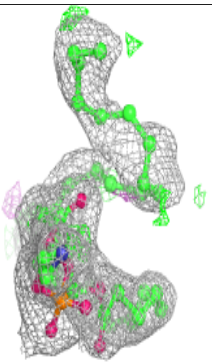


Electron density around PEK P 305:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

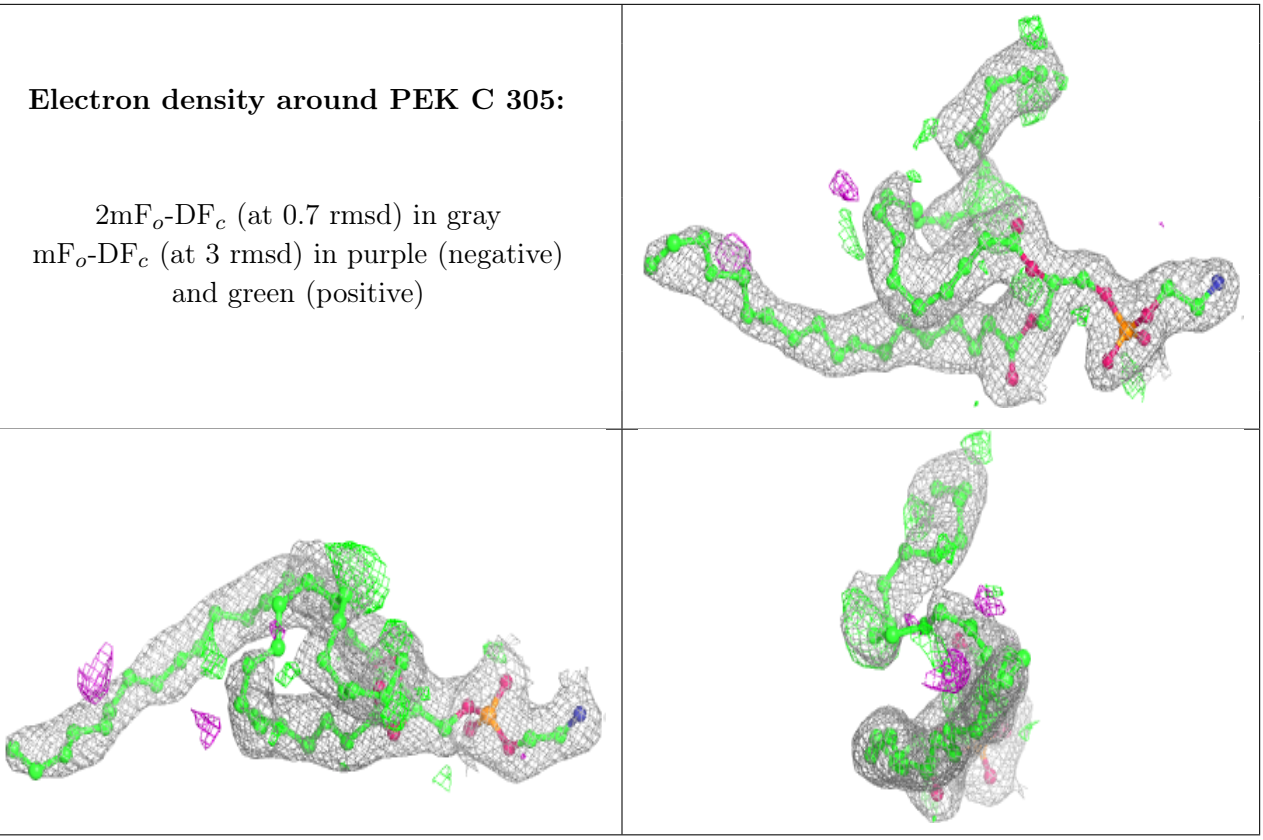






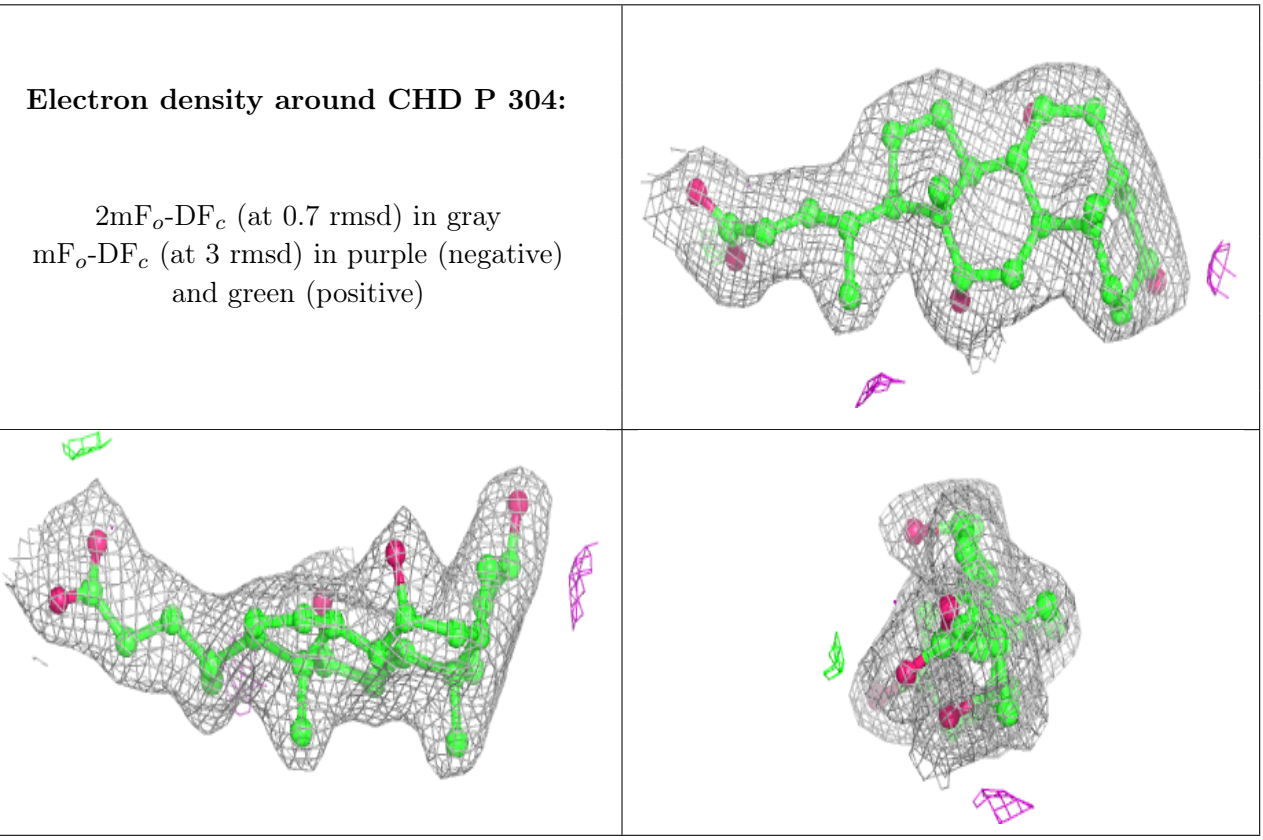
Electron density around PEK C 305:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



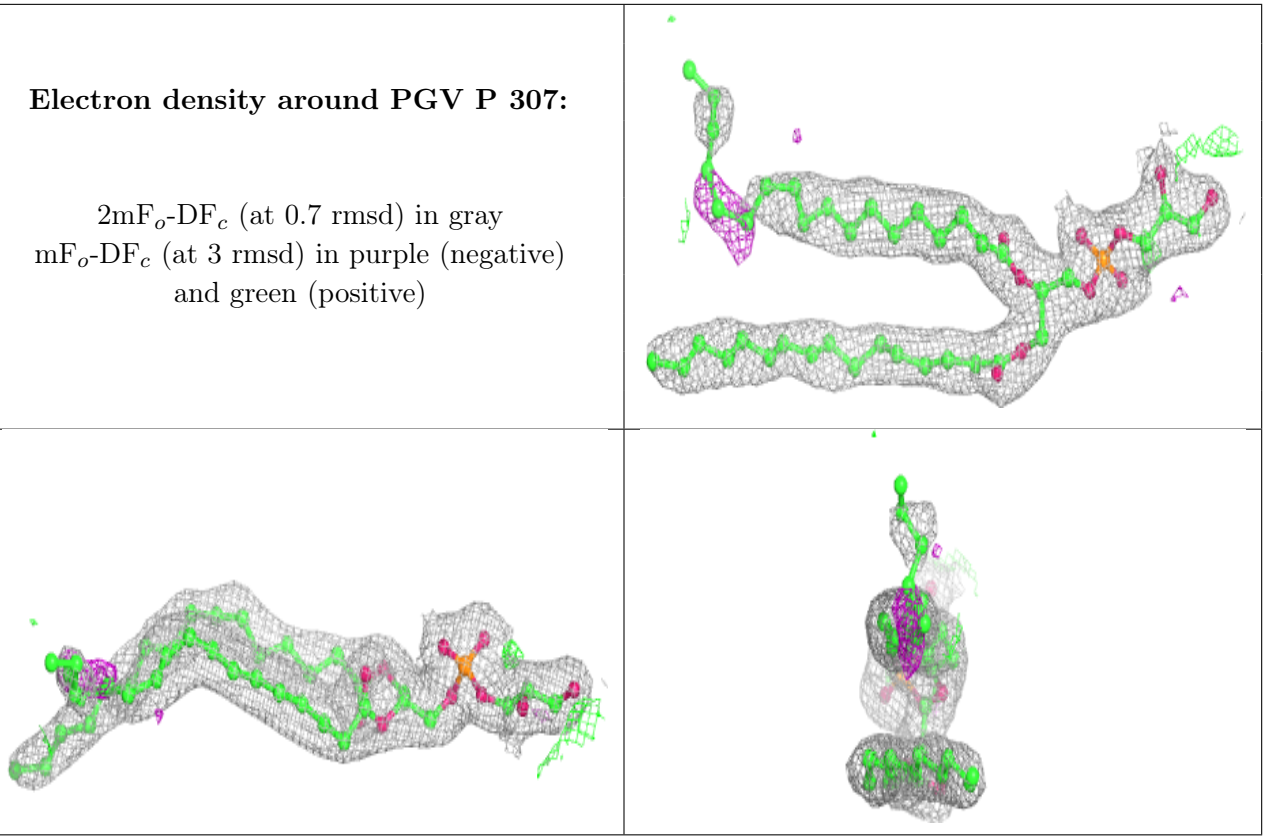
Electron density around CHD P 304:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



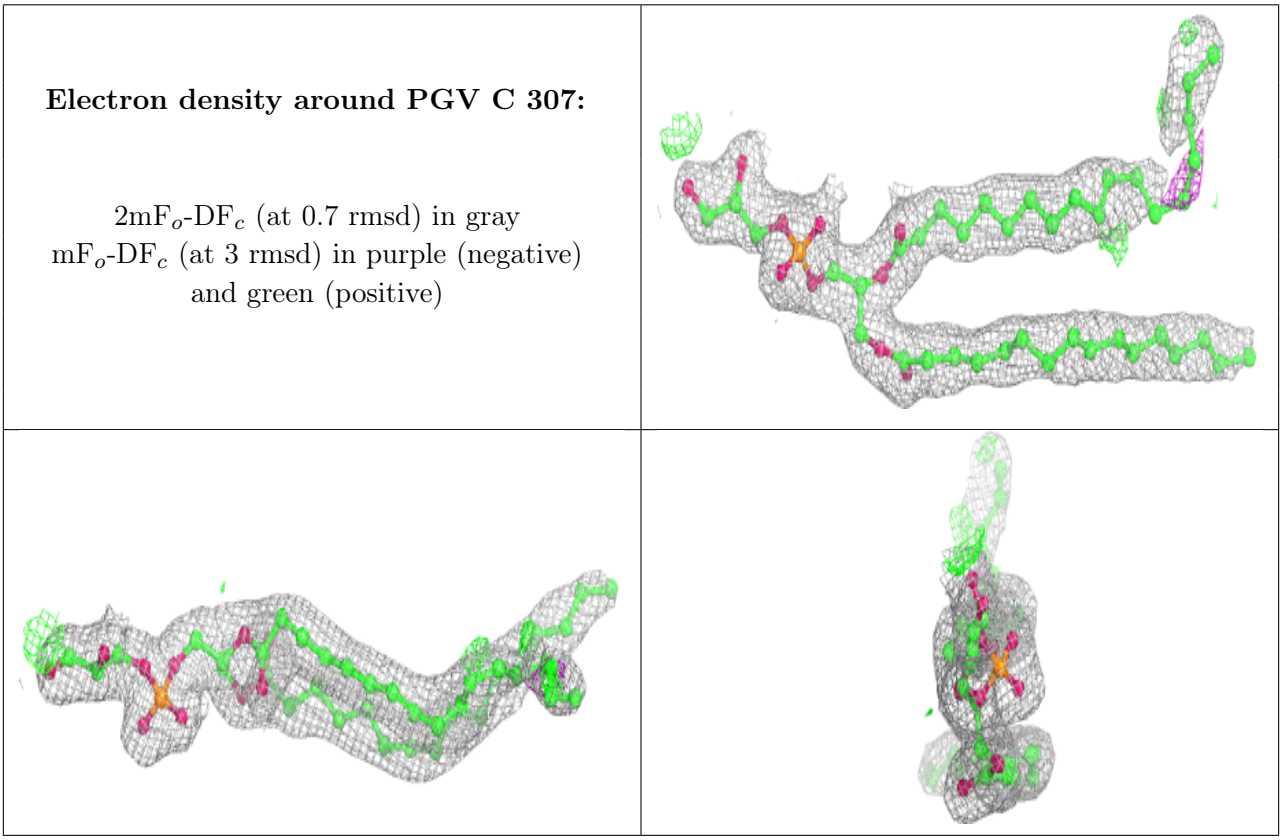
Electron density around PGV P 307:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



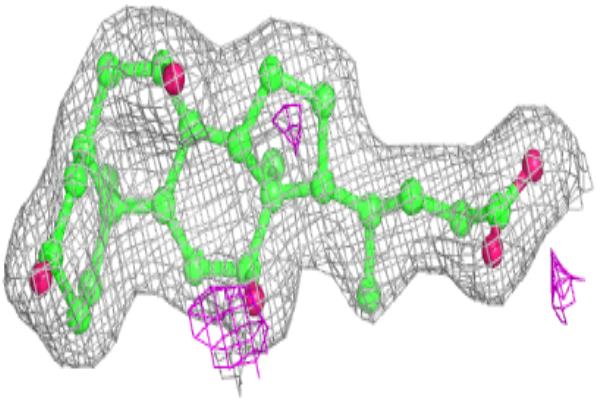
Electron density around PGV C 307:

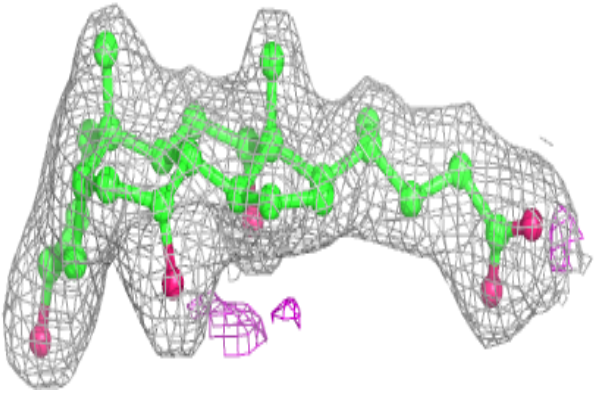
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

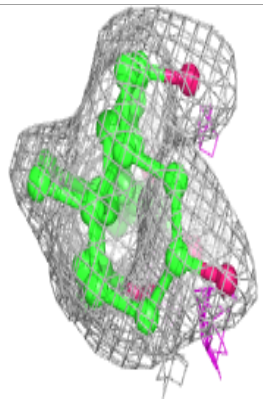


Electron density around CHD C 304:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

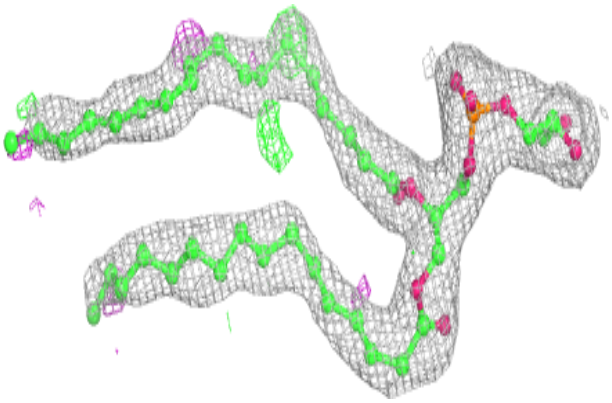


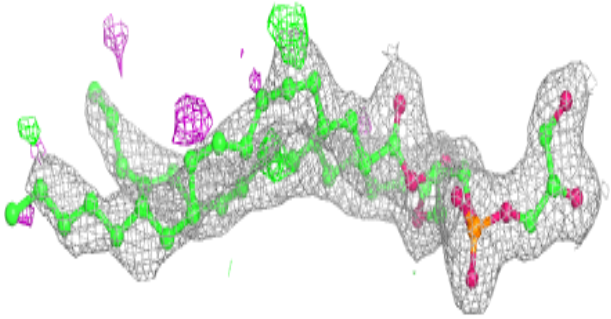


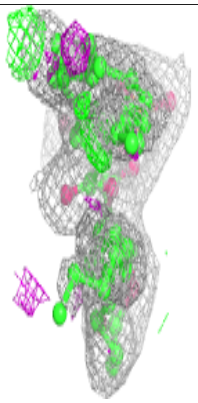


Electron density around PGV A 607:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

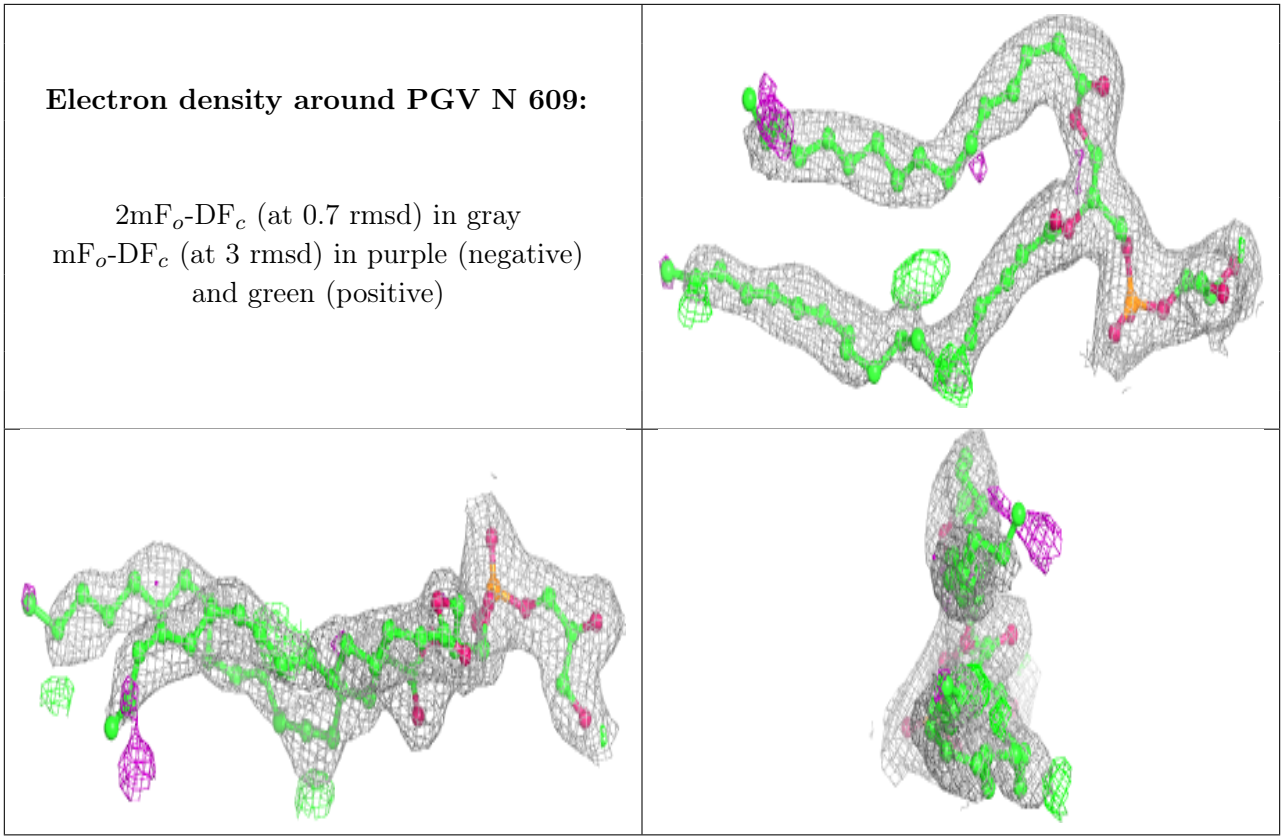






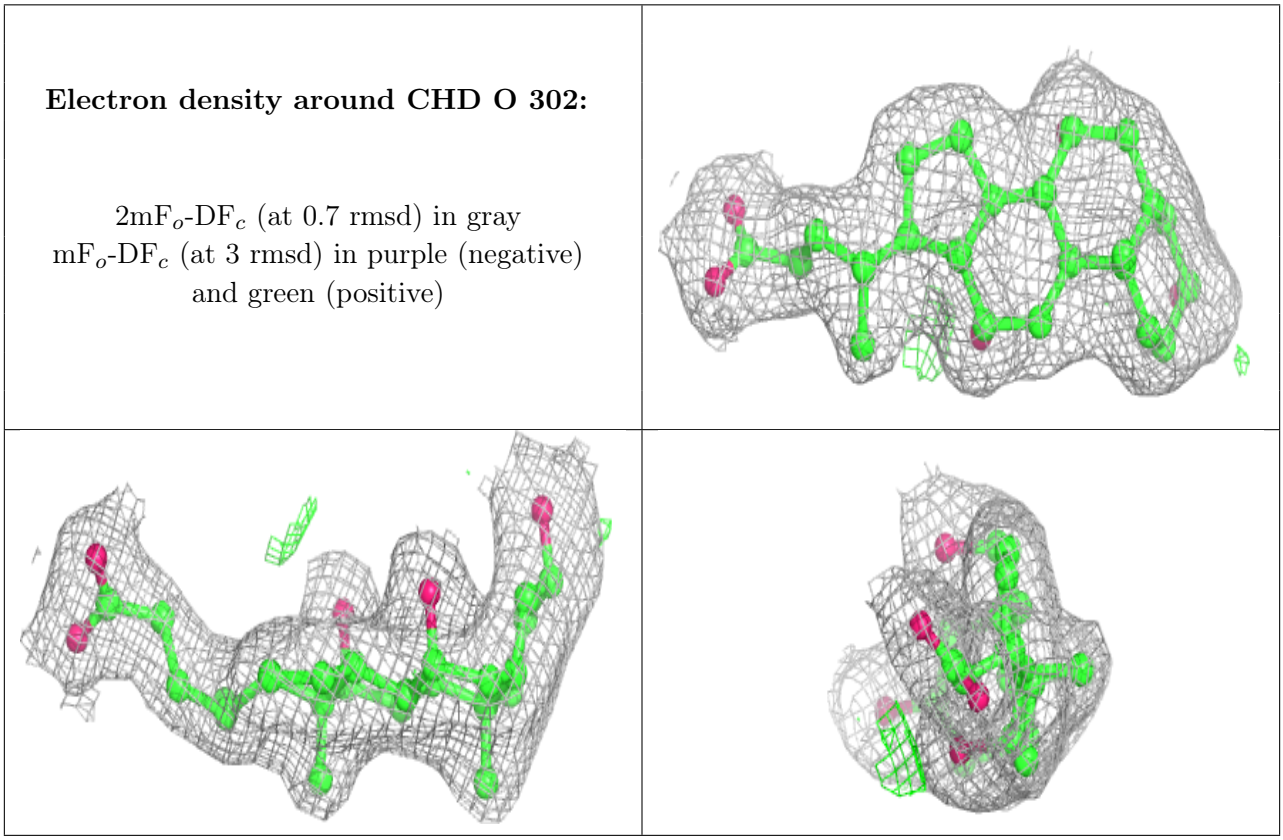
Electron density around PGV N 609:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



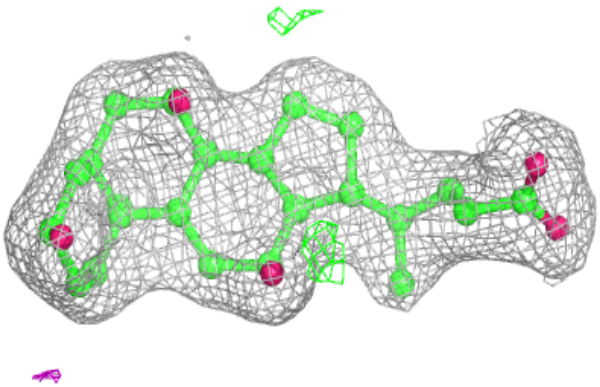
Electron density around CHD O 302:

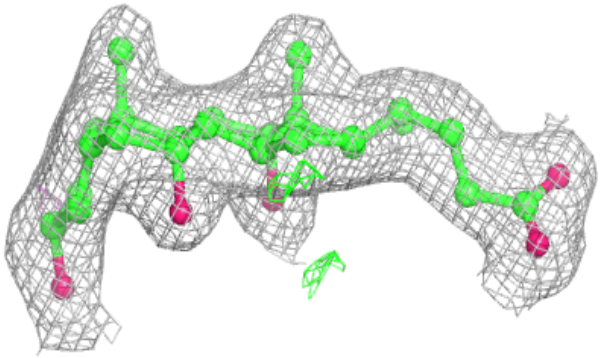
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

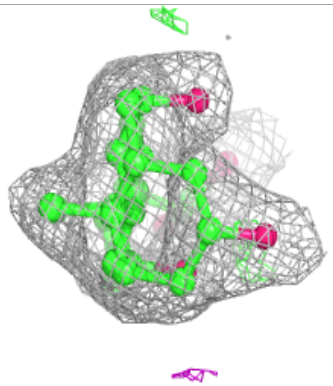


Electron density around CHD B 304:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

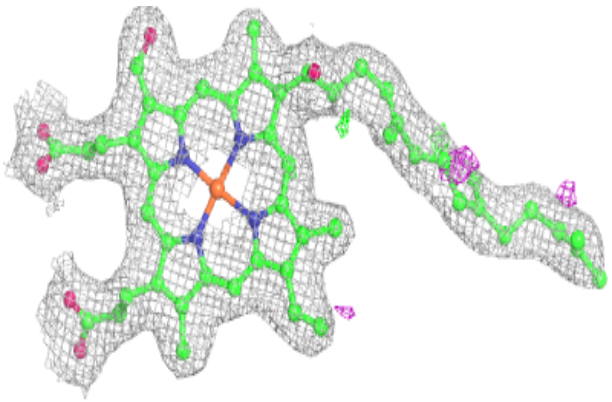


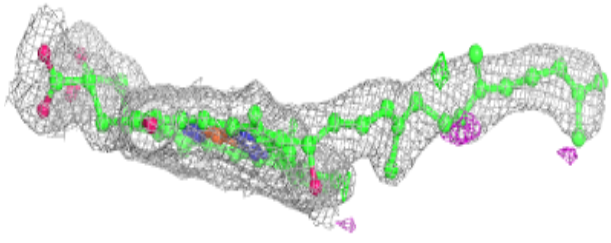




Electron density around HEA N 604:

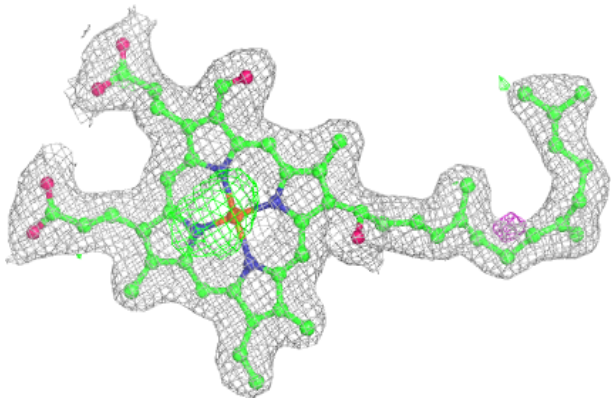
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

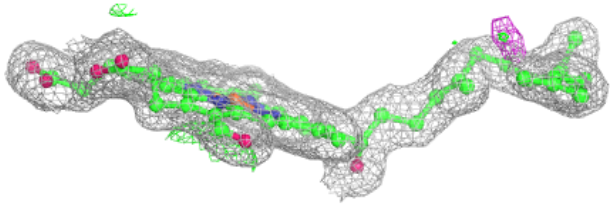


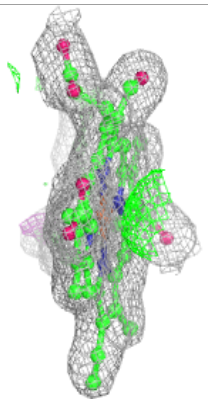


Electron density around HEA N 605:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

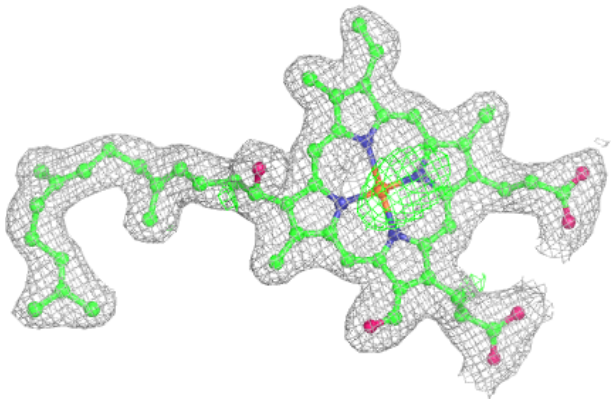


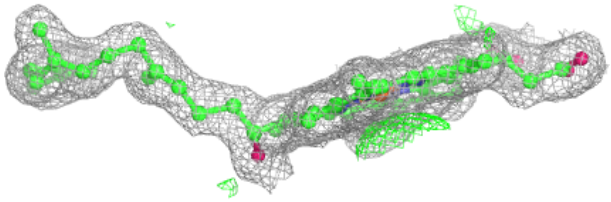


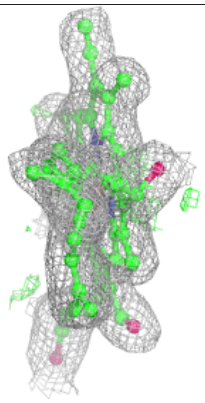


Electron density around HEA A 605:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

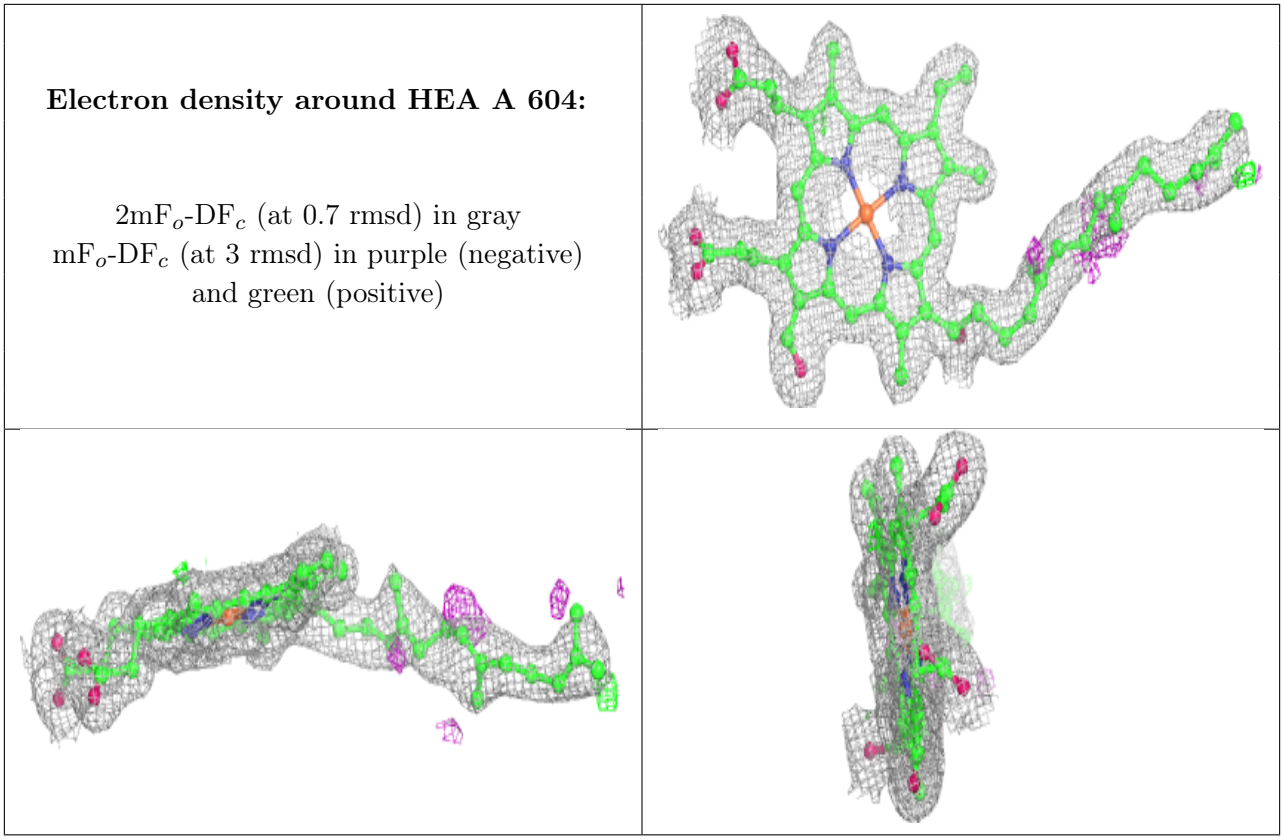






Electron density around HEA A 604:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.