Full wwPDB EM Validation Report ⓘ

Nov 17, 2026 – 07:35 PM JST

PDB ID	:	23KM / pdb_000023km
EMDB ID	:	EMD-69051
Title	:	LHCP-CP29 complex from Mesostigma viride.
Authors	:	Bai, T.Y.; Mao, Z.Y.; Qian, P.; Wang, Y.M.; Tian, L.R.
Deposited on	:	2026-02-09
Resolution	:	2.94 Å(reported)

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

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

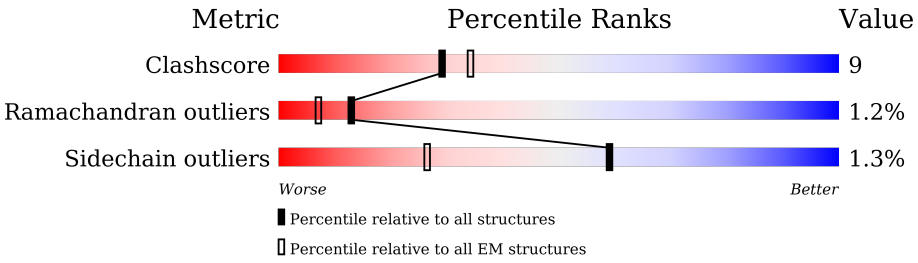
EMDB validation analysis	:	0.0.1.dev133
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.2
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.51

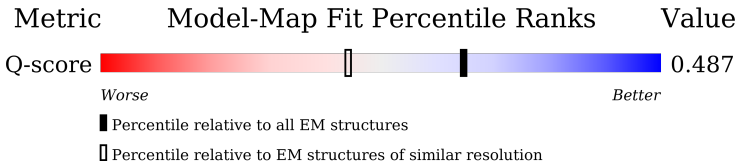
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.94 Å.

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





Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	13068 (2.44 - 3.44)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	1	262	69% 11% 17%
2	U	306	75% 21%
3	y	267	79% 7% 13%

2 Entry composition

There are 12 unique types of molecules in this entry. The entry contains 8414 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	1	218	1684	1083	275	316	10	0	0

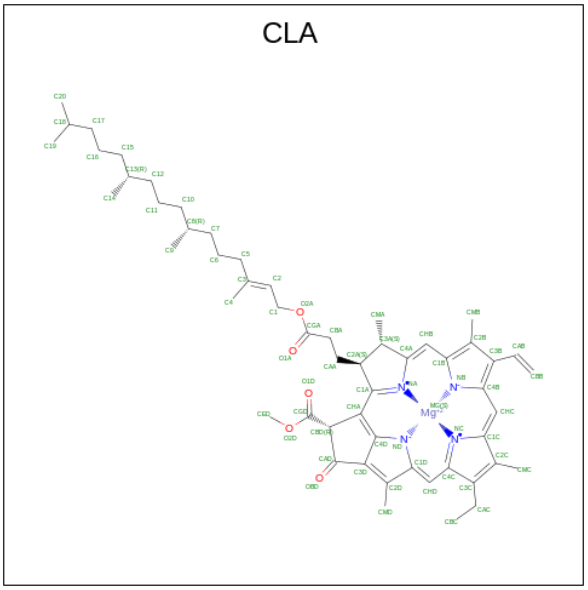
- Molecule 2 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	U	241	1833	1178	303	345	7	0	0

- Molecule 3 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	y	233	1776	1139	295	332	10	0	0

- Molecule 4 is CHLOROPHYLL A (CCD ID: CLA) (formula: $C_{55}H_{72}MgN_4O_5$).



Mol	Chain	Residues	Atoms					AltConf
4	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
4	1	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
4	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
4	1	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
4	1	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
4	1	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
4	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
4	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
4	1	1	Total	C	Mg	N	O	0
			53	43	1	4	5	
4	1	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
4	U	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			62	52	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
4	U	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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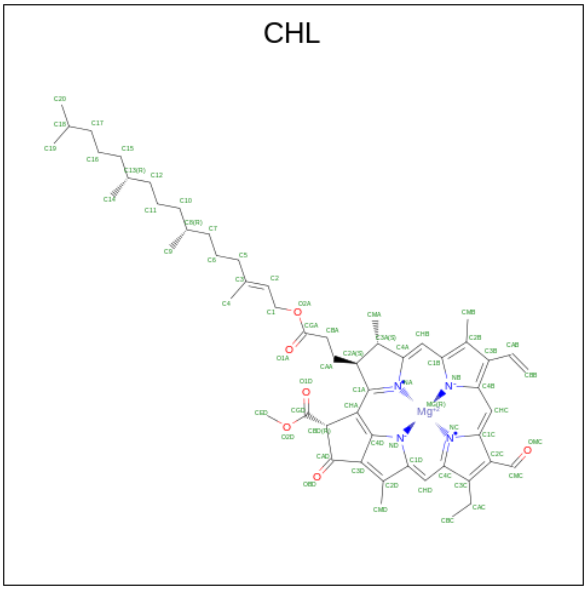
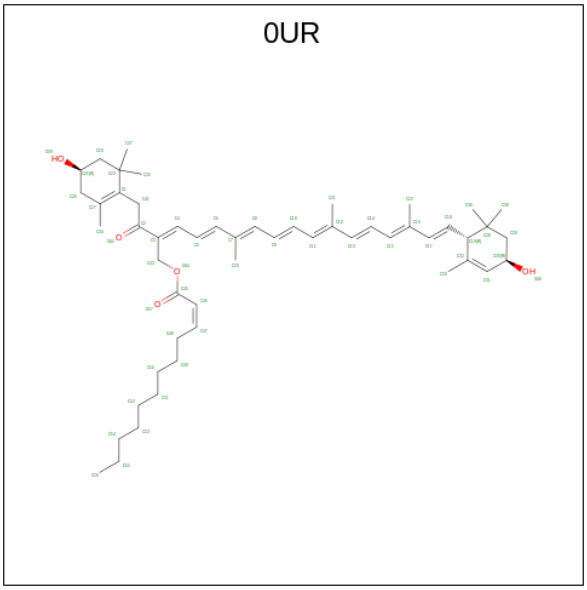
Mol	Chain	Residues	Atoms					AltConf
4	y	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
4	y	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			57	47	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			53	43	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
4	y	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
4	y	1	Total	C	Mg	N	O	0
			42	34	1	4	3	

- Molecule 5 is CHLOROPHYLL B (CCD ID: CHL) (formula: $C_{55}H_{70}MgN_4O_6$).



Mol	Chain	Residues	Atoms					AltConf
5	1	1	Total	C	Mg	N	O	0
			43	34	1	4	4	
5	U	1	Total	C	Mg	N	O	0
			59	48	1	4	6	
5	U	1	Total	C	Mg	N	O	0
			60	49	1	4	6	
5	U	1	Total	C	Mg	N	O	0
			61	50	1	4	6	
5	y	1	Total	C	Mg	N	O	0
			58	47	1	4	6	
5	y	1	Total	C	Mg	N	O	0
			46	35	1	4	6	

- Molecule 6 is Siphonein (CCD ID: 0UR) (formula: $C_{52}H_{76}O_5$).



Mol	Chain	Residues	Atoms			AltConf
6	1	1	Total	C	O	0
			48	43	5	
6	1	1	Total	C	O	0
			47	42	5	
6	1	1	Total	C	O	0
			50	45	5	
6	U	1	Total	C	O	0
			52	47	5	
6	y	1	Total	C	O	0
			49	44	5	
6	y	1	Total	C	O	0
			51	46	5	

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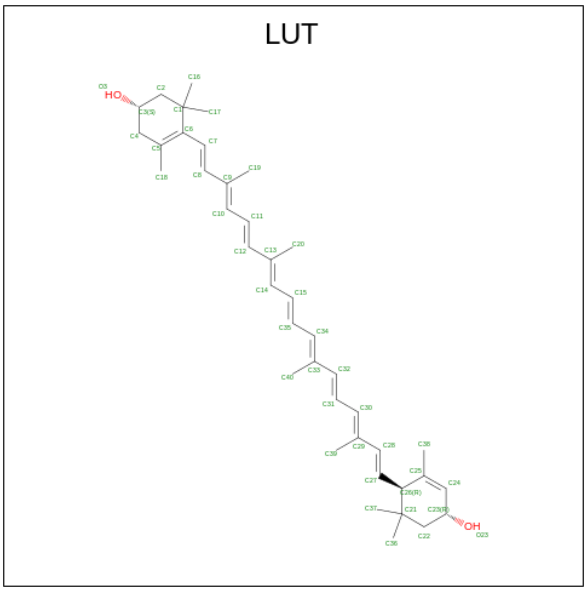
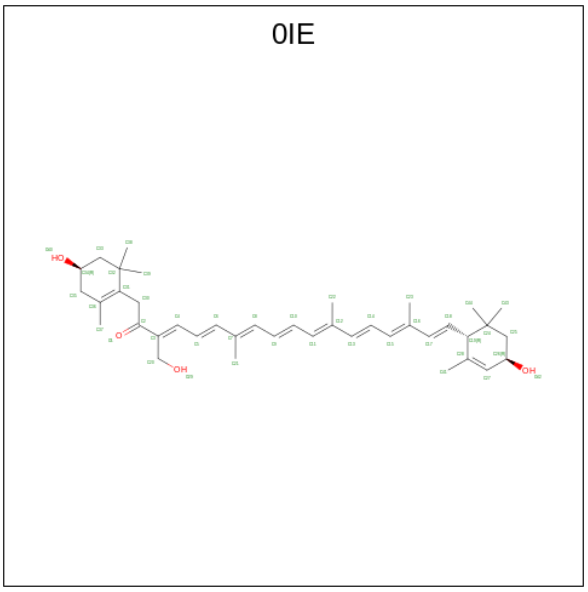
Mol	Chain	Residues	Atoms	AltConf
6	y	1	Total C O 57 52 5	0
6	y	1	Total C O 57 52 5	0

- Molecule 7 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3,3'-DIOL (CCD ID: LUT) (formula: $C_{40}H_{56}O_2$).



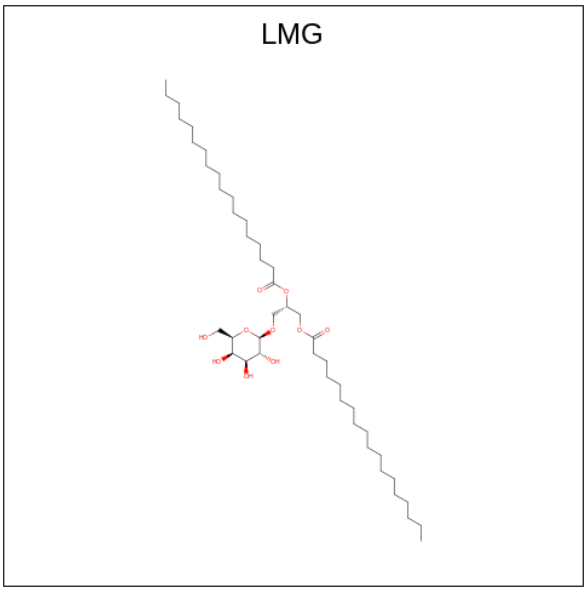
Mol	Chain	Residues	Atoms	AltConf
7	1	1	Total C O 42 40 2	0
7	U	1	Total C O 42 40 2	0
7	y	1	Total C O 42 40 2	0

- Molecule 8 is Siphonaxanthin (CCD ID: 0IE) (formula: $C_{40}H_{56}O_4$).



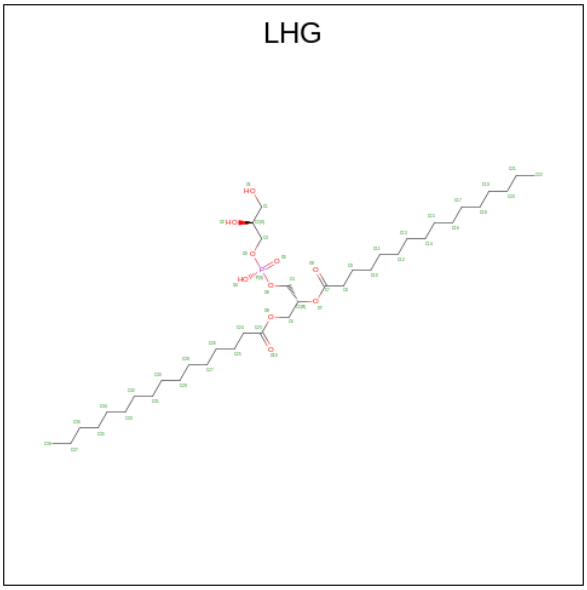
Mol	Chain	Residues	Atoms			AltConf
8	1	1	Total 44	C 40	O 4	0
8	y	1	Total 44	C 40	O 4	0
8	y	1	Total 44	C 40	O 4	0

- Molecule 9 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (CCD ID: LMG) (formula: $C_{45}H_{86}O_{10}$).



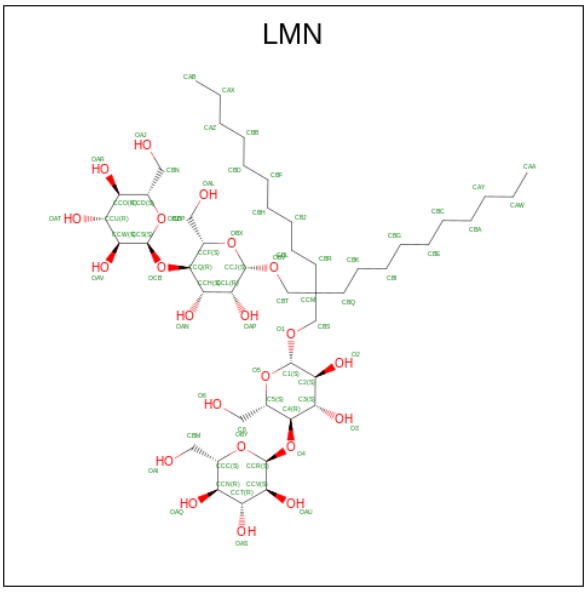
Mol	Chain	Residues	Atoms			AltConf
9	U	1	Total 37	C 27	O 10	0
9	U	1	Total 30	C 20	O 10	0

- Molecule 10 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: $C_{38}H_{75}O_{10}P$).



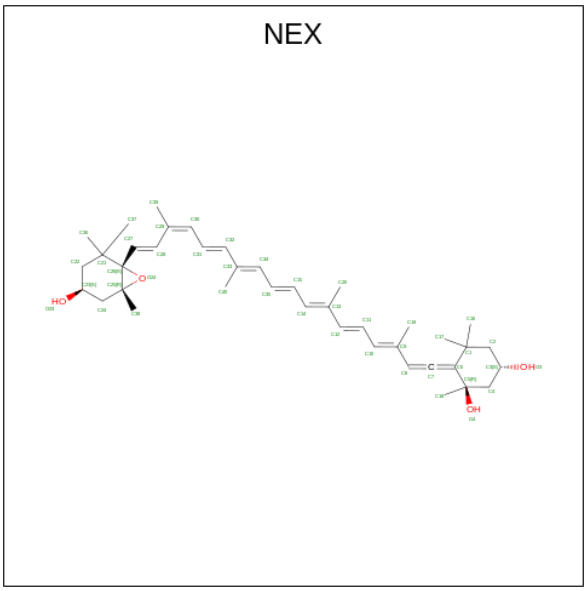
Mol	Chain	Residues	Atoms				AltConf
10	U	1	Total 27	C 16	O 10	P 1	0

- Molecule 11 is Lauryl Maltose Neopentyl Glycol (CCD ID: LMN) (formula: $C_{47}H_{88}O_{22}$).



Mol	Chain	Residues	Atoms	AltConf
11	U	1	Total C O 69 47 22	0
11	U	1	Total C O 69 47 22	0
11	y	1	Total C O 69 47 22	0
11	y	1	Total C O 65 43 22	0

- Molecule 12 is (1R,3R)-6-{(3E,5E,7E,9E,11E,13E,15E,17E)-18-[(1S,4R,6R)-4-HYDROXY-2,2,6-TRIMETHYL-7-OXABICYCLO[4.1.0]HEPT-1-YL]-3,7,12,16-TETRAMETHYLOCTADECA-1,3,5,7,9,11,13,15,17-NONAENYLIDENE}-1,5,5-TRIMETHYLCYCLOHEXANE-1,3-DIOL (CCD ID: NEX) (formula: $C_{40}H_{56}O_4$).

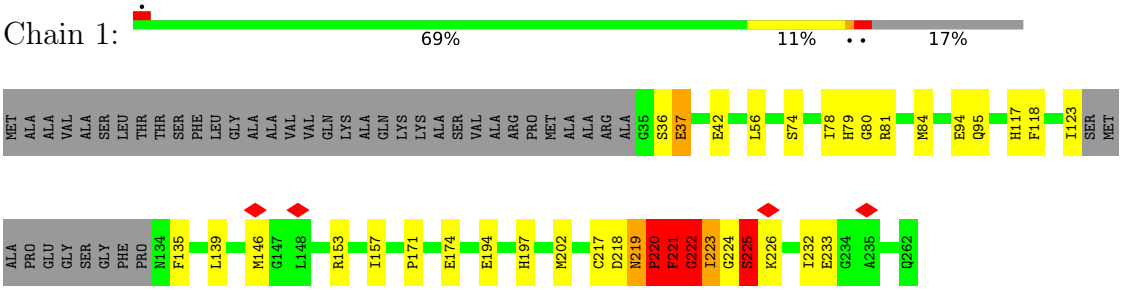


Mol	Chain	Residues	Atoms			AltConf
12	U	1	Total	C	O	0
			44	40	4	

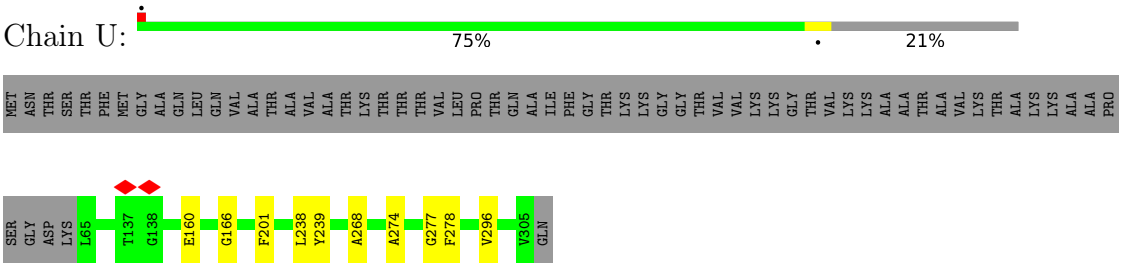
3 Residue-property plots (i)

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

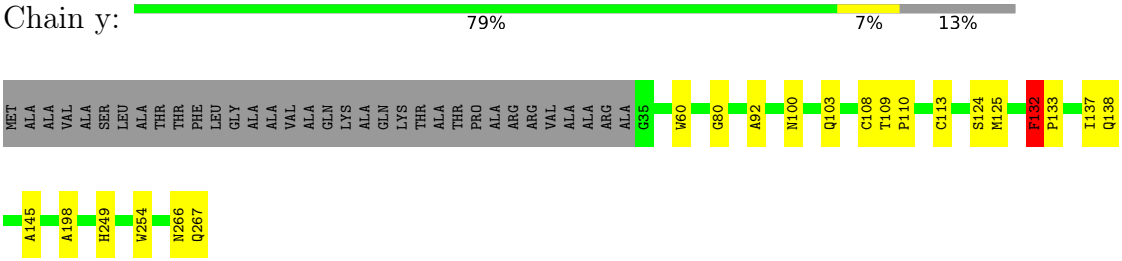
• Molecule 1: Chlorophyll a-b binding protein, chloroplastic



• Molecule 2: Chlorophyll a-b binding protein, chloroplastic



• Molecule 3: Chlorophyll a-b binding protein, chloroplastic



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	299782	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.728	Depositor
Minimum map value	-0.367	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.013	Depositor
Recommended contour level	0.05	Depositor
Map size (Å)	419.4304, 419.4304, 419.4304	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.8192, 0.8192, 0.8192	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: LMG, 0IE, LHG, LMN, 0UR, LUT, CLA, NEX, CHL

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	1	0.66	13/1735 (0.7%)	0.93	18/2362 (0.8%)
2	U	0.19	0/1876	0.30	0/2549
3	y	0.31	1/1832 (0.1%)	0.42	1/2498 (0.0%)
All	All	0.43	14/5443 (0.3%)	0.61	19/7409 (0.3%)

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	1	0	1

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	94	GLU	C-N	-8.35	1.22	1.33
1	1	223	ILE	C-O	-8.34	1.15	1.24
1	1	95	GLN	C-N	7.94	1.45	1.33
1	1	225	SER	C-N	7.77	1.44	1.33
1	1	219	ASN	C-O	-7.05	1.14	1.24
1	1	220	PRO	CA-CB	-6.92	1.44	1.53
1	1	221	PHE	CA-C	-6.74	1.43	1.52
1	1	226	LYS	C-N	-6.55	1.24	1.33
1	1	220	PRO	C-N	-5.44	1.26	1.33
1	1	218	ASP	C-N	5.37	1.41	1.33
1	1	223	ILE	CA-C	-5.21	1.47	1.52
1	1	221	PHE	C-O	-5.20	1.17	1.24
1	1	222	GLY	C-N	-5.13	1.27	1.33
3	y	137	ILE	C-N	5.08	1.40	1.33

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1	221	PHE	CA-CB-CG	17.86	131.66	113.80
1	1	219	ASN	CB-CA-C	-13.70	91.85	109.65
1	1	219	ASN	CA-C-N	10.18	132.56	119.84
1	1	219	ASN	C-N-CA	10.18	132.56	119.84
1	1	220	PRO	CA-N-CD	-9.36	98.89	112.00
1	1	220	PRO	CA-CB-CG	-8.73	87.91	104.50
1	1	220	PRO	CA-C-N	-7.89	106.47	121.54
1	1	220	PRO	C-N-CA	-7.89	106.47	121.54
1	1	219	ASN	CA-CB-CG	7.75	120.35	112.60
1	1	220	PRO	O-C-N	-7.70	112.25	122.64
1	1	221	PHE	CB-CA-C	-7.06	96.38	110.42
1	1	223	ILE	N-CA-C	-7.04	99.55	108.84
1	1	222	GLY	CA-C-N	-6.43	111.53	121.18
1	1	222	GLY	C-N-CA	-6.43	111.53	121.18
1	1	225	SER	O-C-N	6.02	130.60	122.59
3	y	137	ILE	O-C-N	5.94	128.05	121.94
1	1	94	GLU	O-C-N	-5.79	115.15	122.27
1	1	221	PHE	N-CA-CB	-5.68	100.89	110.49
1	1	220	PRO	N-CA-C	5.03	122.84	112.47

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1	220	PRO	Mainchain

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	1	1684	0	1585	28	0
2	U	1833	0	1825	8	0
3	y	1776	0	1667	16	0
4	1	436	0	326	26	0
4	U	642	0	619	31	0
4	y	637	0	570	32	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	1	43	0	29	1	0
5	U	180	0	166	3	0
5	y	104	0	82	5	0
6	1	145	0	0	1	0
6	U	52	0	0	0	0
6	y	214	0	0	4	0
7	1	42	0	56	4	0
7	U	42	0	56	4	0
7	y	42	0	56	5	0
8	1	44	0	0	0	0
8	y	88	0	0	2	0
9	U	67	0	74	4	0
10	U	27	0	24	0	0
11	U	138	0	176	3	0
11	y	134	0	165	6	0
12	U	44	0	56	0	0
All	All	8414	0	7532	149	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 9.

All (149) 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)
1:1:79:HIS:NE2	4:1:302:CLA:NB	2.30	0.78
1:1:220:PRO:O	1:1:222:GLY:N	2.17	0.77
4:U:414:CLA:H161	4:U:415:CLA:HBB1	1.68	0.76
4:1:303:CLA:HHD	4:1:303:CLA:HBC3	1.74	0.69
4:1:303:CLA:HHD	4:1:303:CLA:CBC	2.23	0.68
1:1:220:PRO:C	1:1:222:GLY:H	2.03	0.67
1:1:220:PRO:C	1:1:222:GLY:N	2.52	0.66
4:U:415:CLA:HHD	4:U:415:CLA:CBC	2.27	0.64
4:U:415:CLA:HBD	4:U:415:CLA:HBA2	1.79	0.63
4:y:308:CLA:HAA2	4:y:308:CLA:HBD	1.83	0.61
1:1:197:HIS:CE1	4:1:308:CLA:NA	2.69	0.60
1:1:42:GLU:HB3	6:1:316:0UR:C29	2.32	0.60
4:y:306:CLA:HAA2	4:y:306:CLA:HBD	1.84	0.59
1:1:222:GLY:O	1:1:223:ILE:C	2.42	0.58
4:U:415:CLA:H72	4:U:415:CLA:H41	1.85	0.57
1:1:56:LEU:HG	4:1:301:CLA:HMD3	1.86	0.57
4:y:316:CLA:HED1	7:y:320:LUT:H222	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:y:308:CLA:CMB	4:y:308:CLA:HBB1	2.35	0.56
4:y:304:CLA:HBB1	4:y:304:CLA:HHC	1.88	0.56
4:U:414:CLA:HBB1	4:U:414:CLA:HHC	1.88	0.55
11:U:422:LMN:HCW	11:U:422:LMN:HCH	1.88	0.55
3:y:80:GLY:HA3	3:y:198:ALA:HB1	1.88	0.55
4:1:307:CLA:HBB1	4:1:307:CLA:HHC	1.89	0.55
4:U:418:CLA:HMB1	4:U:418:CLA:HBB1	1.87	0.55
4:1:305:CLA:HHC	4:1:305:CLA:HBB1	1.89	0.54
3:y:133:PRO:HA	4:y:306:CLA:HBC3	1.88	0.54
4:U:408:CLA:HMB1	4:U:408:CLA:HBB1	1.89	0.54
5:1:310:CHL:HBB1	5:1:310:CHL:HHC	1.88	0.54
4:U:417:CLA:HBB1	4:U:417:CLA:HHC	1.88	0.54
5:y:307:CHL:HBB1	5:y:307:CHL:HMB3	1.89	0.54
4:y:316:CLA:HHC	4:y:316:CLA:HBB1	1.90	0.54
4:1:309:CLA:HBB1	4:1:309:CLA:HHC	1.90	0.54
4:U:407:CLA:HBB1	4:U:407:CLA:HHC	1.90	0.53
4:1:304:CLA:HHC	4:1:304:CLA:HBB1	1.90	0.53
5:y:315:CHL:HBB1	5:y:315:CHL:HHC	1.90	0.53
1:1:219:ASN:ND2	1:1:223:ILE:O	2.41	0.53
4:1:308:CLA:HBB1	4:1:308:CLA:HHC	1.91	0.53
4:1:306:CLA:HBB1	4:1:306:CLA:HHC	1.90	0.53
4:U:415:CLA:HBC1	11:y:301:LMN:HAAA	1.91	0.53
4:U:415:CLA:HHD	4:U:415:CLA:HBC2	1.90	0.53
4:y:310:CLA:HHC	4:y:310:CLA:HBB1	1.90	0.53
3:y:254:TRP:CZ3	5:y:315:CHL:HMA3	2.44	0.52
1:1:81:ARG:NH2	4:1:306:CLA:HMB3	2.24	0.52
3:y:92:ALA:HB2	7:y:320:LUT:H373	1.89	0.52
4:1:302:CLA:HBB1	4:1:302:CLA:HHC	1.90	0.52
4:y:313:CLA:HBB1	4:y:313:CLA:HHC	1.91	0.52
9:U:402:LMG:HC71	9:U:402:LMG:O2	2.10	0.52
4:U:411:CLA:HBB1	4:U:411:CLA:HHC	1.91	0.52
3:y:145:ALA:HB1	8:y:319:0IE:C9	2.40	0.52
4:y:314:CLA:HBB1	4:y:314:CLA:HHC	1.93	0.51
2:U:274:ALA:HA	4:U:416:CLA:HBB1	1.93	0.51
3:y:266:ASN:O	3:y:267:GLN:C	2.53	0.51
1:1:224:GLY:O	1:1:225:SER:C	2.54	0.51
7:U:419:LUT:C8	7:U:419:LUT:H171	2.41	0.51
7:y:320:LUT:C8	7:y:320:LUT:H161	2.40	0.51
1:1:118:PHE:CD2	4:1:303:CLA:HBC3	2.45	0.50
2:U:239:TYR:HB3	4:U:413:CLA:HED2	1.93	0.50
11:y:301:LMN:O2	11:y:301:LMN:CBS	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:y:308:CLA:HMB3	4:y:308:CLA:CBB	2.43	0.49
4:1:303:CLA:HHC	4:1:303:CLA:CBB	2.42	0.49
4:1:303:CLA:HHC	4:1:303:CLA:HBB1	1.93	0.49
7:1:313:LUT:H193	7:1:313:LUT:H171	1.94	0.49
4:U:414:CLA:H161	4:U:415:CLA:CBB	2.39	0.49
2:U:296:VAL:HG21	4:U:416:CLA:HAA1	1.95	0.49
6:y:317:0UR:O57	6:y:317:0UR:C48	2.54	0.49
9:U:402:LMG:O10	9:U:402:LMG:C32	2.61	0.48
1:1:232:ILE:HG22	1:1:233:GLU:N	2.28	0.48
4:y:308:CLA:CMB	4:y:308:CLA:CBB	2.86	0.48
5:y:307:CHL:C7	5:y:307:CHL:H41	2.43	0.48
4:y:312:CLA:HBB1	4:y:312:CLA:HMB3	1.94	0.48
1:1:221:PHE:O	1:1:223:ILE:N	2.47	0.48
7:1:313:LUT:H8	7:1:313:LUT:H181	1.94	0.48
4:y:311:CLA:HMB1	4:y:311:CLA:HBB1	1.95	0.48
1:1:194:GLU:OE1	4:1:306:CLA:C1B	2.57	0.48
11:y:301:LMN:HBS	11:y:301:LMN:HBJA	1.95	0.47
4:y:305:CLA:HMB1	4:y:305:CLA:HBB1	1.95	0.47
3:y:108:CYS:HA	3:y:113:CYS:HA	1.97	0.47
11:y:301:LMN:HBHA	4:y:312:CLA:CAB	2.45	0.47
4:y:309:CLA:HBB1	4:y:309:CLA:HMB1	1.96	0.47
1:1:80:GLY:HA2	1:1:202:MET:CG	2.45	0.47
3:y:133:PRO:HA	4:y:306:CLA:CBC	2.44	0.47
5:U:410:CHL:HBB1	5:U:410:CHL:HMB3	1.95	0.47
4:U:412:CLA:HBB1	4:U:412:CLA:HMB3	1.95	0.47
1:1:219:ASN:OD1	1:1:220:PRO:HB2	2.14	0.47
4:U:416:CLA:HMA1	7:U:419:LUT:H23	1.97	0.46
4:U:413:CLA:HBB1	4:U:413:CLA:HMB1	1.96	0.46
5:U:406:CHL:HMB1	5:U:406:CHL:HBB1	1.98	0.46
4:U:416:CLA:H92	4:U:416:CLA:H62	1.68	0.46
4:U:416:CLA:HED2	4:U:416:CLA:HBD	1.74	0.46
2:U:166:GLY:HA3	2:U:268:ALA:HB1	1.98	0.46
5:U:409:CHL:HMB1	5:U:409:CHL:HBB1	1.97	0.46
4:y:306:CLA:HMC1	4:y:306:CLA:HBC2	1.98	0.46
1:1:222:GLY:O	1:1:224:GLY:N	2.49	0.45
4:y:305:CLA:H43	4:y:306:CLA:CMD	2.46	0.45
3:y:249:HIS:CG	4:y:314:CLA:HAA2	2.51	0.45
9:U:402:LMG:C10	9:U:402:LMG:HC1	2.46	0.45
7:1:313:LUT:H181	7:1:313:LUT:C8	2.45	0.45
9:U:402:LMG:H132	9:U:402:LMG:O7	2.16	0.45
7:y:320:LUT:H15	7:y:320:LUT:H201	1.76	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:y:309:CLA:H91	4:y:309:CLA:C12	2.46	0.45
11:y:302:LMN:O5	11:y:302:LMN:CBT	2.65	0.45
3:y:124:SER:O	4:y:306:CLA:HMA3	2.16	0.45
2:U:160:GLU:HA	2:U:238:LEU:HD21	1.99	0.44
2:U:277:GLY:O	2:U:278:PHE:C	2.59	0.44
11:y:301:LMN:O2	11:y:301:LMN:HBSA	2.17	0.44
4:1:303:CLA:HBB1	4:1:303:CLA:CHC	2.47	0.44
1:1:79:HIS:NE2	4:1:302:CLA:C4B	2.81	0.44
11:U:404:LMN:HOAR	11:U:404:LMN:HCF	1.82	0.44
4:y:305:CLA:C4	4:y:306:CLA:HMD2	2.48	0.44
4:1:303:CLA:CBC	4:1:303:CLA:CHD	2.91	0.44
4:1:311:CLA:HBB1	4:1:311:CLA:HMB1	1.99	0.43
1:1:81:ARG:HG3	4:1:306:CLA:CBA	2.49	0.43
1:1:135:PHE:O	1:1:139:LEU:HB2	2.19	0.43
4:y:309:CLA:HHD	4:y:309:CLA:HBC3	2.00	0.43
3:y:109:THR:OG1	3:y:110:PRO:HD2	2.18	0.43
3:y:125:MET:O	4:y:306:CLA:NA	2.52	0.43
1:1:36:SER:O	1:1:37:GLU:C	2.61	0.43
4:U:415:CLA:HBA2	4:U:415:CLA:CBD	2.46	0.43
3:y:60:TRP:O	3:y:60:TRP:CE3	2.72	0.43
4:U:414:CLA:O1A	4:U:415:CLA:HMD3	2.19	0.42
5:y:315:CHL:HBC1	6:y:317:0UR:C48	2.49	0.42
4:U:405:CLA:HBB1	4:U:405:CLA:HMB1	2.00	0.42
3:y:125:MET:O	4:y:306:CLA:ND	2.52	0.42
4:y:305:CLA:H43	4:y:306:CLA:HMD2	2.02	0.42
3:y:132:PHE:O	4:y:306:CLA:CMC	2.68	0.42
2:U:201:PHE:CE1	4:U:418:CLA:HMB3	2.55	0.42
1:1:78:ILE:HG23	4:1:305:CLA:HMD1	2.00	0.42
1:1:171:PRO:HD2	4:1:306:CLA:OBD	2.20	0.41
1:1:197:HIS:NE2	4:1:308:CLA:NA	2.68	0.41
1:1:217:CYS:C	1:1:219:ASN:N	2.78	0.41
4:1:301:CLA:HBB1	4:1:301:CLA:HMB3	2.01	0.41
4:U:405:CLA:H203	4:U:405:CLA:H162	1.97	0.41
7:U:419:LUT:H8	7:U:419:LUT:C17	2.50	0.41
4:y:303:CLA:HBB1	4:y:303:CLA:HMB1	2.02	0.41
4:y:309:CLA:HMA1	8:y:319:0IE:C22	2.50	0.41
6:y:323:0UR:O40	6:y:323:0UR:C19	2.57	0.41
1:1:74:SER:O	1:1:78:ILE:HG22	2.21	0.41
7:1:313:LUT:H31	7:1:313:LUT:H391	1.86	0.41
4:U:411:CLA:H61	4:U:411:CLA:H41	1.97	0.41
4:y:309:CLA:HBA1	7:y:320:LUT:C10	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:419:LUT:H171	7:U:419:LUT:H8	2.03	0.41
1:1:81:ARG:NH2	1:1:84:MET:HG2	2.36	0.41
6:y:317:0UR:C41	6:y:317:0UR:O44	2.66	0.41
4:U:414:CLA:O1A	4:U:415:CLA:OBD	2.39	0.41
2:U:296:VAL:HG21	4:U:416:CLA:H2A	2.03	0.40
11:U:404:LMN:OCB	11:U:404:LMN:OAR	2.35	0.40
4:U:405:CLA:H111	4:U:405:CLA:H62	2.02	0.40
4:U:416:CLA:H121	4:U:416:CLA:H8	1.97	0.40
3:y:100:ASN:OD1	3:y:103:GLN:HB2	2.22	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 PDB entries followed by that with respect to all EM entries.

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	1	214/262 (82%)	189 (88%)	18 (8%)	7 (3%)	3 7
2	U	239/306 (78%)	230 (96%)	9 (4%)	0	100 100
3	y	231/267 (86%)	216 (94%)	14 (6%)	1 (0%)	30 54
All	All	684/835 (82%)	635 (93%)	41 (6%)	8 (1%)	13 27

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	1	220	PRO
1	1	37	GLU
1	1	222	GLY
1	1	174	GLU
1	1	225	SER
1	1	221	PHE
1	1	117	HIS
3	y	132	PHE

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 PDB entries followed by that with respect to all EM entries.

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	1	170/199 (85%)	165 (97%)	5 (3%)	37 62
2	U	190/238 (80%)	190 (100%)	0	100 100
3	y	174/194 (90%)	172 (99%)	2 (1%)	65 80
All	All	534/631 (85%)	527 (99%)	7 (1%)	59 77

All (7) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	1	123	ILE
1	1	146	MET
1	1	153	ARG
1	1	157	ILE
1	1	220	PRO
3	y	132	PHE
3	y	138	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	1	100	ASN
1	1	175	HIS
3	y	183	ASN
3	y	211	GLN
3	y	266	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

61 ligands 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	$\#\|Z\| > 2$
8	0IE	y	319	-	42,45,45	9.61	34 (80%)	49,63,63	3.62	25 (51%)
4	CLA	y	305	-	64,68,73	1.19	7 (10%)	77,107,113	1.08	6 (7%)
4	CLA	y	316	-	46,50,73	1.43	7 (15%)	55,85,113	1.16	4 (7%)
5	CHL	y	307	-	62,66,74	1.21	7 (11%)	70,104,114	1.08	5 (7%)
9	LMG	U	401	-	37,37,55	0.23	0	45,45,63	0.59	0
11	LMN	U	422	-	72,72,72	0.98	3 (4%)	96,98,98	1.52	13 (13%)
4	CLA	1	307	1	45,49,73	1.46	5 (11%)	54,84,113	1.25	5 (9%)
4	CLA	y	314	-	59,63,73	1.32	8 (13%)	71,101,113	1.03	6 (8%)
4	CLA	y	312	3	63,67,73	1.22	6 (9%)	75,105,113	1.01	5 (6%)
4	CLA	y	311	3	59,63,73	1.20	6 (10%)	71,101,113	1.04	4 (5%)
6	0UR	1	316	-	48,51,58	8.05	38 (79%)	56,70,77	3.06	27 (48%)
4	CLA	y	309	-	61,65,73	1.23	6 (9%)	73,103,113	0.94	3 (4%)
4	CLA	U	416	2	62,66,73	1.23	6 (9%)	74,104,113	1.07	4 (5%)
7	LUT	y	320	-	42,43,43	3.13	17 (40%)	51,60,60	2.32	16 (31%)
5	CHL	U	410	-	65,69,74	1.14	7 (10%)	74,108,114	0.97	3 (4%)
5	CHL	1	310	1	47,51,74	1.32	6 (12%)	52,86,114	1.14	4 (7%)
4	CLA	1	301	1	45,49,73	1.43	7 (15%)	54,84,113	1.11	3 (5%)
5	CHL	U	406	2	63,67,74	1.15	7 (11%)	71,105,114	0.97	4 (5%)
4	CLA	1	304	-	47,51,73	1.42	7 (14%)	56,86,113	1.16	6 (10%)
6	0UR	1	312	-	46,49,58	0.81	2 (4%)	54,68,77	1.81	12 (22%)
4	CLA	1	305	1	46,50,73	1.41	8 (17%)	55,85,113	1.15	4 (7%)
12	NEX	U	421	-	38,46,46	1.57	7 (18%)	50,70,70	1.52	9 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	CLA	1	311	1	46,50,73	1.40	7 (15%)	55,85,113	1.18	5 (9%)
4	CLA	1	306	1	46,50,73	1.44	7 (15%)	55,85,113	1.13	5 (9%)
4	CLA	U	405	2	69,73,73	1.19	7 (10%)	83,113,113	1.10	6 (7%)
4	CLA	U	408	-	59,63,73	1.25	6 (10%)	71,101,113	0.97	4 (5%)
4	CLA	y	306	3	47,51,73	4.25	30 (63%)	56,86,113	2.13	11 (19%)
6	0UR	U	420	-	50,53,58	10.30	38 (76%)	58,72,77	2.84	29 (50%)
4	CLA	1	309	1	57,61,73	1.28	7 (12%)	68,98,113	1.06	4 (5%)
4	CLA	y	308	-	59,63,73	4.37	32 (54%)	71,101,113	1.79	11 (15%)
5	CHL	U	409	-	64,68,74	1.15	6 (9%)	72,106,114	0.97	5 (6%)
7	LUT	1	313	-	42,43,43	1.96	12 (28%)	51,60,60	2.90	17 (33%)
9	LMG	U	402	-	30,30,55	0.31	0	38,38,63	0.87	1 (2%)
11	LMN	U	404	-	72,72,72	0.22	0	96,98,98	0.59	2 (2%)
4	CLA	1	302	1	46,50,73	1.40	7 (15%)	55,85,113	1.17	5 (9%)
5	CHL	y	315	3	50,54,74	1.37	7 (14%)	56,90,114	1.16	4 (7%)
8	0IE	y	321	-	42,45,45	10.20	35 (83%)	49,63,63	3.18	23 (46%)
4	CLA	1	308	1	49,53,73	1.39	8 (16%)	59,89,113	1.20	6 (10%)
11	LMN	y	302	-	68,68,72	0.22	0	92,94,98	0.52	0
6	0UR	y	318	-	49,52,58	13.22	41 (83%)	57,71,77	3.66	29 (50%)
6	0UR	y	322	-	55,58,58	9.78	41 (74%)	63,77,77	3.13	27 (42%)
4	CLA	U	418	2	56,60,73	1.30	6 (10%)	67,97,113	1.01	4 (5%)
4	CLA	U	417	2	64,68,73	1.22	7 (10%)	77,107,113	1.07	5 (6%)
4	CLA	U	415	2	59,63,73	4.53	35 (59%)	71,101,113	2.40	21 (29%)
4	CLA	U	414	10	66,70,73	1.20	8 (12%)	79,109,113	1.03	4 (5%)
4	CLA	U	413	2	59,63,73	1.23	6 (10%)	71,101,113	0.99	4 (5%)
4	CLA	y	310	3	57,61,73	1.24	6 (10%)	68,98,113	1.11	6 (8%)
4	CLA	y	303	3	69,73,73	1.19	8 (11%)	83,113,113	0.95	5 (6%)
6	0UR	y	317	-	47,50,58	10.82	35 (74%)	55,69,77	3.13	28 (50%)
10	LHG	U	403	4	26,26,48	0.36	0	29,32,54	0.46	0
11	LMN	y	301	-	72,72,72	0.20	0	96,98,98	0.46	0
6	0UR	1	315	-	45,48,58	0.77	2 (4%)	54,67,77	1.97	13 (24%)
4	CLA	1	303	-	49,53,73	3.99	23 (46%)	59,89,113	2.84	26 (44%)
8	0IE	1	314	-	42,45,45	0.70	0	49,63,63	1.52	6 (12%)
7	LUT	U	419	-	42,43,43	1.67	8 (19%)	51,60,60	1.58	12 (23%)
4	CLA	U	411	-	59,63,73	1.27	7 (11%)	71,101,113	1.29	5 (7%)
4	CLA	U	412	2	69,73,73	1.18	6 (8%)	83,113,113	0.97	4 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	CLA	y	304	3	54,58,73	1.31	7 (12%)	65,95,113	1.11	5 (7%)
6	0UR	y	323	-	55,58,58	9.03	45 (81%)	63,77,77	2.92	21 (33%)
4	CLA	y	313	3	47,51,73	1.40	8 (17%)	56,86,113	1.21	6 (10%)
4	CLA	U	407	2	64,68,73	1.26	8 (12%)	77,107,113	1.00	4 (5%)

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
8	0IE	y	319	-	-	10/33/72/72	0/2/2/2
4	CLA	y	305	-	-	9/33/109/115	-
4	CLA	y	316	-	-	1/12/88/115	-
5	CHL	y	307	-	-	6/32/108/117	-
9	LMG	U	401	-	-	3/32/52/70	0/1/1/1
11	LMN	U	422	-	-	38/50/130/130	0/4/4/4
4	CLA	1	307	1	-	4/10/86/115	-
4	CLA	y	314	-	-	1/27/103/115	-
4	CLA	y	312	3	-	2/32/108/115	-
4	CLA	y	311	3	-	4/27/103/115	-
6	0UR	1	316	-	-	13/40/79/86	0/2/2/2
4	CLA	y	309	-	-	3/30/106/115	-
4	CLA	U	416	2	-	20/31/107/115	-
7	LUT	y	320	-	-	13/29/67/67	0/2/2/2
5	CHL	U	410	-	-	9/35/111/117	-
5	CHL	1	310	1	-	1/14/90/117	-
4	CLA	1	301	1	-	0/10/86/115	-
5	CHL	U	406	2	-	1/33/109/117	-
4	CLA	1	304	-	-	1/13/89/115	-
6	0UR	1	312	-	-	10/38/77/86	0/2/2/2
4	CLA	1	305	1	-	0/12/88/115	-
12	NEX	U	421	-	-	6/27/83/83	0/3/3/3
4	CLA	1	311	1	-	1/12/88/115	-
4	CLA	1	306	1	-	1/12/88/115	-
4	CLA	U	405	2	-	11/39/115/115	-
4	CLA	U	408	-	-	4/27/103/115	-
4	CLA	y	306	3	-	4/13/89/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	0UR	U	420	-	-	11/42/81/86	0/2/2/2
4	CLA	1	309	1	-	3/25/101/115	-
4	CLA	y	308	-	-	7/27/103/115	-
5	CHL	U	409	-	-	5/34/110/117	-
7	LUT	1	313	-	-	19/29/67/67	0/2/2/2
9	LMG	U	402	-	-	5/25/45/70	0/1/1/1
11	LMN	U	404	-	-	19/50/130/130	0/4/4/4
4	CLA	1	302	1	-	0/12/88/115	-
5	CHL	y	315	3	-	3/17/93/117	-
8	0IE	y	321	-	-	6/33/72/72	0/2/2/2
4	CLA	1	308	1	-	2/15/91/115	-
11	LMN	y	302	-	-	19/46/126/130	0/4/4/4
6	0UR	y	318	-	-	8/41/80/86	0/2/2/2
6	0UR	y	322	-	-	18/47/86/86	0/2/2/2
4	CLA	U	418	2	-	1/24/100/115	-
4	CLA	U	417	2	-	4/33/109/115	-
4	CLA	U	415	2	-	12/27/103/115	-
4	CLA	U	414	10	-	7/36/112/115	-
4	CLA	U	413	2	-	1/27/103/115	-
4	CLA	y	310	3	-	3/25/101/115	-
4	CLA	y	303	3	-	2/39/115/115	-
6	0UR	y	317	-	-	10/39/78/86	0/2/2/2
10	LHG	U	403	4	-	10/31/31/53	-
11	LMN	y	301	-	-	14/50/130/130	0/4/4/4
6	0UR	1	315	-	-	9/36/75/86	0/2/2/2
4	CLA	1	303	-	-	11/15/91/115	-
8	0IE	1	314	-	-	10/33/72/72	0/2/2/2
7	LUT	U	419	-	-	2/29/67/67	0/2/2/2
4	CLA	U	411	-	-	5/27/103/115	-
4	CLA	U	412	2	-	1/39/115/115	-
4	CLA	y	304	3	-	2/21/97/115	-
6	0UR	y	323	-	-	18/47/86/86	0/2/2/2
4	CLA	y	313	3	-	3/13/89/115	-
4	CLA	U	407	2	-	8/33/109/115	-

All (717) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	y	318	0UR	C43-C3	-39.95	0.96	1.50
6	y	318	0UR	C29-C28	-29.75	1.17	1.54
8	y	319	0IE	C25-C24	-28.15	1.19	1.54
6	U	420	0UR	C43-C3	-27.11	1.13	1.50
6	y	322	0UR	C29-C28	-26.49	1.21	1.54
6	U	420	0UR	C29-C28	-26.02	1.22	1.54
6	y	318	0UR	C30-C31	-23.93	1.16	1.50
6	y	317	0UR	C29-C28	-23.92	1.24	1.54
8	y	321	0IE	C20-C3	-22.08	1.10	1.51
6	y	317	0UR	C43-C3	-21.85	1.20	1.50
6	y	323	0UR	C29-C28	-21.76	1.27	1.54
6	y	318	0UR	C29-C30	-21.72	1.16	1.53
6	1	316	0UR	C29-C28	-21.37	1.27	1.54
6	y	317	0UR	C37-C23	-20.73	1.13	1.53
8	y	321	0IE	C35-C36	-20.68	1.19	1.51
6	y	318	0UR	C35-C23	-20.25	1.13	1.53
8	y	319	0IE	C26-C27	-20.01	1.21	1.50
6	y	322	0UR	C29-C30	-19.42	1.20	1.53
6	y	317	0UR	C24-C25	-19.11	1.24	1.52
6	y	322	0UR	C43-C3	-19.10	1.24	1.50
6	y	317	0UR	C35-C23	-18.99	1.16	1.53
6	y	323	0UR	C33-C32	-18.78	1.15	1.50
6	U	420	0UR	C30-C31	-18.65	1.23	1.50
6	y	318	0UR	C37-C23	-18.62	1.17	1.53
8	y	321	0IE	C38-C32	-18.48	1.17	1.53
6	y	317	0UR	C26-C27	-18.38	1.22	1.51
6	U	420	0UR	C34-C27	-18.34	1.20	1.50
6	U	420	0UR	C29-C30	-17.53	1.23	1.53
6	y	322	0UR	C33-C32	-17.51	1.18	1.50
8	y	319	0IE	C27-C28	-17.32	1.11	1.33
8	y	321	0IE	C21-C7	-17.22	1.15	1.50
6	y	318	0UR	C26-C27	-17.09	1.24	1.51
6	y	318	0UR	C36-C28	-16.98	1.16	1.53
6	y	318	0UR	C24-C25	-16.84	1.28	1.52
6	1	316	0UR	C43-C3	-16.74	1.27	1.50
8	y	319	0IE	C41-C28	-16.74	1.19	1.50
6	y	318	0UR	O44-C43	-16.68	1.07	1.44
8	y	319	0IE	C25-C26	-16.62	1.25	1.53
4	U	415	CLA	MG-NB	-16.62	1.72	2.05
6	y	318	0UR	O42-C2	-16.58	0.89	1.23
6	y	318	0UR	O40-C30	-16.50	1.12	1.43
6	y	323	0UR	C35-C23	-16.33	1.21	1.53
6	y	318	0UR	C38-C28	-16.31	1.18	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	y	322	0UR	C30-C31	-16.15	1.27	1.50
6	y	318	0UR	C22-C16	-16.12	1.17	1.50
6	y	323	0UR	C31-C32	-16.09	1.13	1.33
6	y	317	0UR	C20-C7	-16.08	1.17	1.50
8	y	321	0IE	C33-C34	-16.04	1.29	1.52
6	y	317	0UR	C34-C27	-15.97	1.24	1.50
8	y	321	0IE	C39-C32	-15.88	1.22	1.53
6	y	322	0UR	C34-C27	-15.81	1.25	1.50
6	y	317	0UR	C29-C30	-15.78	1.26	1.53
6	y	317	0UR	C26-C25	-15.30	1.25	1.52
8	y	321	0IE	C25-C24	-15.29	1.35	1.54
6	y	318	0UR	C20-C7	-15.28	1.19	1.50
6	y	323	0UR	C24-C25	-15.26	1.30	1.52
6	y	318	0UR	C33-C32	-15.22	1.22	1.50
6	y	323	0UR	C37-C23	-15.22	1.23	1.53
6	y	317	0UR	C36-C28	-15.20	1.20	1.53
6	y	322	0UR	C26-C25	-15.13	1.25	1.52
6	y	322	0UR	C26-C27	-14.94	1.27	1.51
8	y	319	0IE	C44-C24	-14.94	1.21	1.53
6	U	420	0UR	O44-C43	-14.82	1.11	1.44
6	y	323	0UR	C22-C16	-14.49	1.20	1.50
6	y	323	0UR	C36-C28	-14.27	1.22	1.53
6	U	420	0UR	C37-C23	-14.18	1.25	1.53
6	y	318	0UR	C21-C12	-14.09	1.21	1.50
6	y	318	0UR	C31-C32	-14.09	1.15	1.33
6	U	420	0UR	O40-C30	-14.00	1.17	1.43
6	y	322	0UR	C35-C23	-13.62	1.27	1.53
6	y	322	0UR	C37-C23	-13.55	1.27	1.53
6	y	317	0UR	C33-C32	-13.49	1.25	1.50
6	y	317	0UR	O42-C2	-13.48	0.95	1.23
6	U	420	0UR	C36-C28	-13.46	1.24	1.53
6	1	316	0UR	C26-C27	-13.46	1.30	1.51
6	U	420	0UR	C38-C28	-13.44	1.24	1.53
8	y	319	0IE	O42-C26	-13.41	1.18	1.43
6	y	322	0UR	C21-C12	-13.38	1.23	1.50
8	y	321	0IE	C35-C34	-13.32	1.28	1.52
6	y	322	0UR	C22-C16	-13.28	1.23	1.50
8	y	321	0IE	C33-C32	-13.20	1.13	1.54
6	y	317	0UR	O44-C43	-13.19	1.14	1.44
8	y	319	0IE	C23-C16	-13.14	1.23	1.50
6	y	322	0UR	C24-C25	-13.14	1.33	1.52
8	y	319	0IE	C22-C12	-13.12	1.23	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	y	322	0UR	C27-C1	-13.11	1.15	1.34
6	y	322	0UR	C31-C32	-13.10	1.16	1.33
6	y	323	0UR	C43-C3	-13.00	1.32	1.50
6	y	323	0UR	C29-C30	-12.99	1.31	1.53
6	y	318	0UR	C23-C1	-12.96	1.25	1.53
6	y	322	0UR	O42-C2	-12.92	0.97	1.23
6	U	420	0UR	C21-C12	-12.83	1.24	1.50
6	U	420	0UR	C31-C32	-12.73	1.17	1.33
6	1	316	0UR	C38-C28	-12.70	1.26	1.53
6	1	316	0UR	C23-C1	-12.66	1.26	1.53
6	y	323	0UR	C34-C27	-12.59	1.30	1.50
8	y	321	0IE	O29-C20	-12.57	0.98	1.41
8	y	321	0IE	C26-C27	-12.39	1.32	1.50
6	U	420	0UR	C35-C23	-12.39	1.29	1.53
6	y	323	0UR	C26-C27	-12.35	1.31	1.51
6	1	316	0UR	C36-C28	-12.32	1.26	1.53
6	1	316	0UR	C35-C23	-12.31	1.29	1.53
6	U	420	0UR	C24-C25	-12.30	1.34	1.52
6	y	318	0UR	C26-C25	-12.25	1.30	1.52
6	U	420	0UR	C22-C16	-12.13	1.25	1.50
6	1	316	0UR	C31-C32	-12.12	1.18	1.33
6	U	420	0UR	C26-C27	-12.06	1.32	1.51
8	y	321	0IE	C37-C36	-11.99	1.31	1.50
6	y	322	0UR	C20-C7	-11.98	1.26	1.50
6	U	420	0UR	O42-C2	-11.89	0.99	1.23
6	y	317	0UR	C24-C23	-11.77	1.17	1.54
6	1	316	0UR	C37-C23	-11.51	1.31	1.53
4	y	308	CLA	MG-ND	-11.49	1.83	2.05
6	y	323	0UR	C21-C12	-11.48	1.27	1.50
8	y	321	0IE	C22-C12	-11.46	1.27	1.50
6	y	317	0UR	C21-C12	-11.40	1.27	1.50
8	y	321	0IE	O1-C2	-11.31	1.00	1.23
6	y	323	0UR	C26-C25	-11.30	1.32	1.52
8	y	321	0IE	C23-C16	-11.26	1.27	1.50
6	y	317	0UR	C22-C16	-11.07	1.28	1.50
6	y	318	0UR	C34-C27	-11.05	1.32	1.50
6	y	323	0UR	O42-C2	-11.03	1.00	1.23
4	y	306	CLA	MG-NB	-10.87	1.84	2.05
6	U	420	0UR	C11-C12	-10.81	1.21	1.35
6	1	316	0UR	C26-C25	-10.76	1.33	1.52
6	1	316	0UR	C20-C7	-10.76	1.28	1.50
6	1	316	0UR	C33-C32	-10.65	1.30	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	U	420	0UR	C20-C7	-10.60	1.29	1.50
6	y	317	0UR	C30-C31	-10.54	1.35	1.50
6	1	316	0UR	C29-C30	-10.54	1.35	1.53
4	1	303	CLA	C1D-C2D	-10.53	1.24	1.45
6	y	322	0UR	C38-C28	-10.52	1.30	1.53
6	y	323	0UR	C27-C1	-10.43	1.19	1.34
6	y	322	0UR	O40-C30	-10.41	1.24	1.43
8	y	321	0IE	C32-C31	-10.29	1.31	1.53
6	y	323	0UR	C38-C28	-10.28	1.31	1.53
6	y	318	0UR	C24-C23	-10.26	1.22	1.54
4	1	303	CLA	CHD-C1D	-10.21	1.18	1.38
8	y	319	0IE	C20-C3	-10.16	1.32	1.51
6	y	322	0UR	O44-C43	-10.13	1.21	1.44
8	y	321	0IE	O40-C34	-10.10	1.13	1.43
6	y	322	0UR	C36-C28	-10.03	1.31	1.53
4	y	308	CLA	C1C-C2C	-10.02	1.25	1.44
6	y	323	0UR	O40-C30	-10.02	1.24	1.43
6	1	316	0UR	C24-C25	-9.87	1.38	1.52
4	U	415	CLA	C1B-NB	-9.86	1.25	1.37
6	U	420	0UR	C33-C32	-9.80	1.32	1.50
6	y	318	0UR	C6-C7	-9.80	1.24	1.45
8	y	319	0IE	C37-C36	-9.78	1.34	1.50
6	1	316	0UR	C30-C31	-9.73	1.36	1.50
8	y	319	0IE	C35-C36	-9.69	1.36	1.51
8	y	321	0IE	C44-C24	-9.53	1.32	1.53
8	y	319	0IE	C11-C12	-9.51	1.23	1.35
6	1	316	0UR	C34-C27	-9.47	1.35	1.50
6	y	323	0UR	C24-C23	-9.46	1.25	1.54
6	y	323	0UR	C20-C7	-9.45	1.31	1.50
6	y	318	0UR	C27-C1	-9.33	1.21	1.34
6	y	317	0UR	C38-C28	-9.29	1.33	1.53
8	y	321	0IE	C27-C28	-9.11	1.21	1.33
6	1	316	0UR	O44-C43	-9.09	1.24	1.44
4	y	306	CLA	C4C-C3C	-9.08	1.29	1.45
4	y	308	CLA	C1B-NB	-8.96	1.26	1.37
6	y	317	0UR	C31-C32	-8.95	1.21	1.33
6	U	420	0UR	C26-C25	-8.83	1.36	1.52
4	y	308	CLA	C4C-C3C	-8.82	1.29	1.45
6	y	322	0UR	O57-C45	-8.80	1.03	1.21
6	y	318	0UR	O44-C45	-8.80	1.13	1.34
6	y	323	0UR	C23-C1	-8.60	1.35	1.53
6	y	322	0UR	O44-C45	-8.59	1.14	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	U	415	CLA	C1D-ND	-8.57	1.27	1.37
4	U	415	CLA	C1D-C2D	-8.54	1.28	1.45
6	y	317	0UR	C23-C1	-8.53	1.35	1.53
6	1	316	0UR	C28-C19	-8.48	1.32	1.56
8	y	321	0IE	C43-C24	-8.45	1.35	1.53
8	y	319	0IE	C19-C18	-8.40	1.38	1.50
6	y	317	0UR	O40-C30	-8.34	1.27	1.43
6	y	323	0UR	C30-C31	-8.25	1.38	1.50
4	y	308	CLA	C1D-C2D	-8.20	1.29	1.45
4	1	303	CLA	MG-ND	-8.08	1.89	2.05
6	y	323	0UR	C46-C45	-8.07	1.29	1.48
4	1	303	CLA	C4D-ND	-8.04	1.26	1.37
4	y	306	CLA	C4D-ND	-7.98	1.26	1.37
4	U	415	CLA	C1C-C2C	-7.96	1.29	1.44
4	y	308	CLA	MG-NB	-7.91	1.90	2.05
4	1	303	CLA	C1D-ND	-7.81	1.28	1.37
6	y	322	0UR	C11-C12	-7.79	1.25	1.35
8	y	321	0IE	C41-C28	-7.69	1.36	1.50
6	1	316	0UR	C24-C23	-7.68	1.30	1.54
8	y	319	0IE	C38-C32	-7.62	1.38	1.53
8	y	321	0IE	C36-C31	-7.59	1.23	1.34
8	y	319	0IE	C15-C16	-7.56	1.25	1.35
6	y	318	0UR	C41-C2	-7.55	1.21	1.51
6	y	318	0UR	C28-C19	-7.53	1.35	1.56
6	y	317	0UR	C8-C7	-7.53	1.25	1.35
6	U	420	0UR	C24-C23	-7.52	1.31	1.54
8	y	319	0IE	C43-C24	-7.50	1.37	1.53
6	y	323	0UR	O44-C43	-7.46	1.27	1.44
8	y	319	0IE	C21-C7	-7.46	1.35	1.50
6	U	420	0UR	O57-C45	-7.46	1.06	1.21
4	y	306	CLA	C1C-C2C	-7.44	1.30	1.44
8	y	321	0IE	C8-C7	-7.31	1.26	1.35
4	y	308	CLA	C3D-C4D	-7.30	1.27	1.44
6	y	318	0UR	C46-C45	-7.28	1.31	1.48
6	U	420	0UR	C27-C1	-7.25	1.23	1.34
6	y	317	0UR	C27-C1	-7.24	1.23	1.34
4	y	308	CLA	C1C-NC	-7.24	1.27	1.37
6	y	322	0UR	C15-C16	-7.17	1.26	1.35
6	y	317	0UR	O39-C25	-7.16	1.22	1.43
6	y	323	0UR	O57-C45	-7.13	1.06	1.21
4	y	306	CLA	C1D-C2D	-7.12	1.31	1.45
8	y	319	0IE	C8-C7	-7.12	1.26	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	U	415	CLA	C4C-C3C	-7.11	1.32	1.45
6	U	420	0UR	C28-C19	-7.01	1.36	1.56
4	y	308	CLA	C4D-ND	-7.01	1.28	1.37
4	U	415	CLA	CHD-C1D	-6.97	1.24	1.38
6	y	323	0UR	C15-C16	-6.94	1.26	1.35
6	y	317	0UR	C46-C45	-6.93	1.32	1.48
6	U	420	0UR	O39-C25	-6.93	1.22	1.43
4	U	415	CLA	C3D-C4D	-6.90	1.28	1.44
4	1	303	CLA	C1C-NC	-6.84	1.27	1.37
6	1	316	0UR	C21-C12	-6.83	1.36	1.50
6	y	322	0UR	C24-C23	-6.79	1.33	1.54
7	y	320	LUT	C32-C33	-6.76	1.31	1.45
4	y	308	CLA	C1D-ND	-6.74	1.29	1.37
6	y	318	0UR	C8-C7	-6.74	1.26	1.35
4	U	415	CLA	C4D-ND	-6.73	1.28	1.37
4	1	303	CLA	C1B-NB	-6.72	1.29	1.37
6	1	316	0UR	O44-C45	-6.70	1.18	1.34
4	y	306	CLA	C1B-NB	-6.70	1.29	1.37
4	1	303	CLA	C4C-C3C	-6.69	1.33	1.45
6	y	323	0UR	O39-C25	-6.68	1.23	1.43
6	1	316	0UR	C22-C16	-6.65	1.37	1.50
6	y	318	0UR	C11-C12	-6.64	1.27	1.35
4	y	308	CLA	C1B-C2B	-6.62	1.27	1.43
6	y	318	0UR	O57-C45	-6.59	1.08	1.21
6	y	317	0UR	O57-C45	-6.56	1.08	1.21
4	y	306	CLA	C1C-NC	-6.47	1.28	1.37
4	y	306	CLA	C3D-C4D	-6.44	1.29	1.44
7	y	320	LUT	C8-C9	-6.44	1.32	1.45
8	y	321	0IE	C24-C19	-6.43	1.38	1.56
6	y	322	0UR	C17-C16	-6.42	1.32	1.45
4	y	306	CLA	MG-ND	-6.41	1.93	2.05
8	y	319	0IE	C33-C32	-6.37	1.34	1.54
6	y	323	0UR	C19-C18	-6.36	1.41	1.50
8	y	321	0IE	O42-C26	-6.35	1.31	1.43
7	y	320	LUT	C12-C13	-6.27	1.32	1.45
6	y	322	0UR	C41-C2	-6.23	1.26	1.51
6	U	420	0UR	C41-C2	-6.20	1.26	1.51
8	y	319	0IE	C33-C34	-6.19	1.43	1.52
6	1	316	0UR	O42-C2	-6.16	1.10	1.23
7	y	320	LUT	C19-C9	-6.14	1.38	1.50
6	y	323	0UR	C17-C16	-6.12	1.32	1.45
4	1	303	CLA	C1C-C2C	-6.11	1.32	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	y	321	0IE	C30-C2	-6.10	1.26	1.51
4	1	303	CLA	CHD-C4C	-6.06	1.25	1.39
7	y	320	LUT	C20-C13	-6.03	1.38	1.50
4	U	415	CLA	C1B-C2B	-5.96	1.29	1.43
6	U	420	0UR	O44-C45	-5.96	1.20	1.34
7	y	320	LUT	C28-C29	-5.95	1.33	1.45
6	y	322	0UR	C23-C1	-5.91	1.41	1.53
6	y	323	0UR	O44-C45	-5.85	1.20	1.34
8	y	319	0IE	O1-C2	-5.82	1.11	1.23
7	y	320	LUT	C40-C33	-5.74	1.39	1.50
4	y	306	CLA	C3D-C2D	-5.70	1.23	1.39
8	y	319	0IE	C14-C15	-5.63	1.26	1.43
6	1	316	0UR	C6-C7	-5.62	1.33	1.45
6	y	323	0UR	C28-C19	-5.60	1.40	1.56
6	y	317	0UR	C28-C19	-5.58	1.40	1.56
8	y	321	0IE	C17-C16	-5.48	1.34	1.45
4	U	415	CLA	C1C-NC	-5.38	1.29	1.37
6	y	322	0UR	C8-C7	-5.37	1.28	1.35
4	y	308	CLA	MG-NA	-5.28	1.93	2.06
8	y	319	0IE	C13-C12	-5.27	1.34	1.45
6	U	420	0UR	C13-C12	-5.26	1.34	1.45
4	y	308	CLA	O2D-CGD	-5.21	1.20	1.33
7	1	313	LUT	C10-C9	5.20	1.42	1.35
6	y	317	0UR	C6-C7	-5.16	1.34	1.45
8	y	321	0IE	C25-C26	-5.13	1.44	1.53
7	1	313	LUT	C34-C33	5.09	1.42	1.35
4	U	415	CLA	O2D-CGD	-5.09	1.20	1.33
8	y	319	0IE	C9-C10	-5.02	1.22	1.36
4	y	308	CLA	CHC-C1C	-4.97	1.28	1.38
4	y	306	CLA	C1B-C2B	-4.94	1.31	1.43
6	y	322	0UR	C6-C7	-4.93	1.35	1.45
4	y	306	CLA	CHB-C4A	-4.93	1.26	1.37
4	y	308	CLA	CAB-C3B	-4.93	1.34	1.47
4	U	415	CLA	MG-NC	-4.89	1.94	2.06
7	y	320	LUT	C39-C29	-4.86	1.40	1.50
6	U	420	0UR	C6-C7	-4.81	1.35	1.45
8	y	319	0IE	C35-C34	-4.78	1.43	1.52
4	U	415	CLA	C3D-C2D	-4.74	1.26	1.39
8	y	321	0IE	C13-C12	-4.72	1.35	1.45
4	1	306	CLA	C4C-C3C	-4.72	1.36	1.45
4	y	308	CLA	C3C-C2C	-4.72	1.26	1.36
4	U	415	CLA	C3B-C2B	-4.70	1.25	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	y	319	0IE	C36-C31	-4.64	1.27	1.34
4	y	308	CLA	C3B-C2B	-4.63	1.25	1.41
4	U	415	CLA	CHB-C4A	-4.61	1.26	1.37
6	y	322	0UR	O39-C25	-4.61	1.29	1.43
8	y	319	0IE	C6-C7	-4.58	1.36	1.45
4	U	411	CLA	C4C-C3C	-4.58	1.37	1.45
4	U	412	CLA	C4C-C3C	-4.56	1.37	1.45
4	y	303	CLA	C4C-C3C	-4.56	1.37	1.45
4	y	306	CLA	CHD-C4C	-4.54	1.28	1.39
4	1	301	CLA	C4C-C3C	-4.52	1.37	1.45
4	U	413	CLA	C4C-C3C	-4.49	1.37	1.45
4	U	405	CLA	C4C-C3C	-4.49	1.37	1.45
4	y	313	CLA	C4C-C3C	-4.49	1.37	1.45
4	y	304	CLA	C4C-C3C	-4.48	1.37	1.45
6	y	323	0UR	C13-C12	-4.47	1.36	1.45
4	y	306	CLA	CAB-C3B	-4.46	1.35	1.47
4	y	312	CLA	C1C-C2C	-4.45	1.35	1.44
4	1	308	CLA	C4C-C3C	-4.44	1.37	1.45
5	y	307	CHL	C4C-C3C	-4.43	1.37	1.45
4	y	314	CLA	C4C-C3C	-4.43	1.37	1.45
4	U	407	CLA	C4C-C3C	-4.40	1.37	1.45
4	U	407	CLA	C1C-C2C	-4.40	1.36	1.44
4	U	408	CLA	C4C-C3C	-4.40	1.37	1.45
4	U	416	CLA	C4C-C3C	-4.39	1.37	1.45
4	y	311	CLA	C4C-C3C	-4.39	1.37	1.45
4	U	416	CLA	C1C-C2C	-4.39	1.36	1.44
4	1	304	CLA	C4C-C3C	-4.38	1.37	1.45
4	U	414	CLA	C4C-C3C	-4.38	1.37	1.45
4	1	303	CLA	C1B-C2B	-4.38	1.33	1.43
4	U	418	CLA	C1C-C2C	-4.37	1.36	1.44
5	y	315	CHL	C4C-C3C	-4.37	1.37	1.45
4	U	405	CLA	C1C-C2C	-4.37	1.36	1.44
6	y	323	0UR	C41-C2	-4.36	1.33	1.51
4	y	312	CLA	C4C-C3C	-4.36	1.37	1.45
4	y	305	CLA	C4C-C3C	-4.35	1.37	1.45
4	U	415	CLA	O1A-CGA	-4.35	1.09	1.22
4	U	408	CLA	C1C-C2C	-4.35	1.36	1.44
4	1	311	CLA	C4C-C3C	-4.34	1.37	1.45
4	1	303	CLA	C3D-C2D	-4.34	1.27	1.39
4	U	415	CLA	CAB-C3B	-4.34	1.35	1.47
4	y	316	CLA	C4C-C3C	-4.34	1.37	1.45
4	y	305	CLA	C1C-C2C	-4.32	1.36	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	U	417	CLA	C4C-C3C	-4.31	1.37	1.45
8	y	319	0IE	C24-C19	-4.31	1.44	1.56
4	1	309	CLA	C4C-C3C	-4.31	1.37	1.45
4	y	303	CLA	C1C-C2C	-4.30	1.36	1.44
4	y	313	CLA	C1C-C2C	-4.30	1.36	1.44
4	y	309	CLA	C1C-C2C	-4.30	1.36	1.44
4	1	307	CLA	C4C-C3C	-4.29	1.37	1.45
4	U	412	CLA	C1C-C2C	-4.29	1.36	1.44
4	1	302	CLA	C4C-C3C	-4.26	1.37	1.45
4	y	309	CLA	C4C-C3C	-4.25	1.37	1.45
4	1	305	CLA	C4C-C3C	-4.25	1.37	1.45
4	1	307	CLA	C1C-C2C	-4.24	1.36	1.44
4	U	414	CLA	C1C-C2C	-4.24	1.36	1.44
4	y	316	CLA	C1C-C2C	-4.24	1.36	1.44
4	1	302	CLA	C1C-C2C	-4.22	1.36	1.44
8	y	319	0IE	O40-C34	-4.21	1.30	1.43
4	U	417	CLA	C1C-C2C	-4.21	1.36	1.44
4	U	418	CLA	C4C-C3C	-4.21	1.37	1.45
4	y	314	CLA	C1C-C2C	-4.20	1.36	1.44
8	y	319	0IE	C17-C16	-4.20	1.36	1.45
4	U	411	CLA	C1C-C2C	-4.20	1.36	1.44
4	y	304	CLA	C1C-C2C	-4.19	1.36	1.44
5	1	310	CHL	C4C-C3C	-4.17	1.37	1.45
4	y	308	CLA	CAA-C2A	-4.17	1.46	1.54
4	1	308	CLA	C1C-C2C	-4.17	1.36	1.44
6	y	322	0UR	C13-C12	-4.16	1.37	1.45
5	U	406	CHL	C4C-C3C	-4.15	1.37	1.45
4	U	415	CLA	CAA-C2A	-4.14	1.46	1.54
4	1	304	CLA	C1C-C2C	-4.14	1.36	1.44
6	y	317	0UR	C13-C12	-4.14	1.37	1.45
4	y	310	CLA	C4C-C3C	-4.14	1.37	1.45
4	1	309	CLA	C1C-C2C	-4.14	1.36	1.44
4	U	413	CLA	C1C-C2C	-4.14	1.36	1.44
4	1	301	CLA	C1C-C2C	-4.13	1.36	1.44
5	U	409	CHL	C4C-C3C	-4.13	1.37	1.45
4	y	306	CLA	CHC-C4B	-4.12	1.30	1.39
4	y	308	CLA	CHC-C4B	-4.11	1.30	1.39
6	y	318	0UR	C19-C18	4.11	1.56	1.50
4	1	305	CLA	C1C-C2C	-4.10	1.36	1.44
7	1	313	LUT	C20-C13	-4.09	1.42	1.50
4	y	306	CLA	CHD-C1D	-4.08	1.30	1.38
4	U	415	CLA	C3C-C2C	-4.07	1.28	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	1	311	CLA	C1C-C2C	-4.07	1.36	1.44
6	y	323	0UR	C50-C49	-4.06	1.28	1.51
4	y	308	CLA	CHD-C1D	-4.06	1.30	1.38
4	y	311	CLA	C1C-C2C	-4.06	1.36	1.44
4	1	306	CLA	C1C-C2C	-4.06	1.36	1.44
6	1	316	0UR	C41-C2	-4.05	1.34	1.51
4	y	310	CLA	C1C-C2C	-4.04	1.36	1.44
6	1	316	0UR	C27-C1	-4.03	1.28	1.34
4	U	415	CLA	CMA-C3A	-4.01	1.44	1.53
5	y	315	CHL	MG-NA	3.99	2.15	2.06
6	1	316	0UR	O57-C45	-3.99	1.13	1.21
4	y	306	CLA	C1D-ND	-3.98	1.32	1.37
5	U	410	CHL	C4C-C3C	-3.97	1.38	1.45
8	y	321	0IE	C19-C18	-3.96	1.44	1.50
4	U	415	CLA	CBA-CGA	-3.95	1.39	1.50
11	U	422	LMN	C3-C2	-3.95	1.42	1.52
6	y	323	0UR	C51-C50	-3.91	1.29	1.51
12	U	421	NEX	C30-C29	3.91	1.41	1.35
4	y	308	CLA	C2A-C1A	-3.90	1.43	1.52
4	y	308	CLA	O1A-CGA	-3.90	1.11	1.22
4	y	308	CLA	CHD-C4C	-3.88	1.30	1.39
4	1	303	CLA	C3D-C4D	-3.88	1.35	1.44
7	U	419	LUT	C14-C13	3.88	1.40	1.35
7	1	313	LUT	C14-C13	3.87	1.40	1.35
4	U	407	CLA	MG-NA	3.84	2.15	2.06
4	1	311	CLA	MG-NA	3.84	2.15	2.06
4	U	415	CLA	CHD-C4C	-3.84	1.30	1.39
4	U	417	CLA	MG-NA	3.83	2.15	2.06
7	U	419	LUT	C10-C9	3.83	1.40	1.35
5	y	307	CHL	MG-NA	3.82	2.15	2.06
4	U	415	CLA	MG-NA	-3.81	1.97	2.06
7	U	419	LUT	C30-C29	3.81	1.40	1.35
6	y	323	0UR	C46-C47	-3.78	1.22	1.32
4	1	307	CLA	MG-NA	3.75	2.15	2.06
4	U	415	CLA	C2A-C1A	-3.74	1.43	1.52
4	y	303	CLA	MG-NA	3.73	2.15	2.06
4	y	314	CLA	MG-NA	3.72	2.15	2.06
4	y	306	CLA	C3B-C2B	-3.72	1.28	1.41
6	y	317	0UR	C15-C16	-3.72	1.30	1.35
4	U	418	CLA	MG-NA	3.71	2.15	2.06
4	U	405	CLA	MG-NA	3.71	2.15	2.06
4	y	306	CLA	C3C-C2C	-3.70	1.28	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	U	422	LMN	O5-C5	-3.69	1.35	1.44
7	U	419	LUT	C34-C33	3.67	1.40	1.35
4	y	306	CLA	CHC-C1C	-3.63	1.31	1.38
4	1	309	CLA	MG-NA	3.63	2.14	2.06
4	U	414	CLA	MG-NA	3.63	2.14	2.06
4	1	305	CLA	MG-NA	3.62	2.14	2.06
4	1	304	CLA	MG-NA	3.61	2.14	2.06
7	y	320	LUT	C1-C6	-3.61	1.48	1.53
6	y	323	0UR	C11-C12	-3.59	1.31	1.35
4	U	411	CLA	MG-NA	3.59	2.14	2.06
4	1	306	CLA	MG-NA	3.58	2.14	2.06
4	y	308	CLA	C3B-C4B	-3.57	1.34	1.42
6	y	323	0UR	C48-C47	-3.56	1.30	1.50
6	y	318	0UR	C14-C15	-3.56	1.32	1.43
6	y	323	0UR	C52-C51	-3.56	1.31	1.51
4	U	415	CLA	CHC-C4B	-3.56	1.31	1.39
7	y	320	LUT	C21-C26	-3.56	1.46	1.56
4	U	408	CLA	MG-NA	3.55	2.14	2.06
5	U	410	CHL	MG-NA	3.55	2.14	2.06
4	1	303	CLA	C3C-C2C	-3.55	1.29	1.36
4	1	303	CLA	CAB-C3B	-3.55	1.37	1.47
5	U	409	CHL	MG-NA	3.54	2.14	2.06
4	y	309	CLA	MG-NA	3.53	2.14	2.06
4	y	308	CLA	CMA-C3A	-3.53	1.45	1.53
4	1	302	CLA	MG-NA	3.50	2.14	2.06
4	U	412	CLA	MG-NA	3.50	2.14	2.06
4	1	308	CLA	MG-NA	3.50	2.14	2.06
8	y	319	0IE	C17-C18	-3.48	1.24	1.32
7	1	313	LUT	C12-C13	-3.48	1.38	1.45
12	U	421	NEX	C34-C33	3.47	1.40	1.35
4	y	312	CLA	MG-NA	3.43	2.14	2.06
5	U	406	CHL	MG-NA	3.40	2.14	2.06
4	U	416	CLA	MG-NA	3.39	2.14	2.06
12	U	421	NEX	C14-C13	3.37	1.40	1.35
4	y	316	CLA	MG-NA	3.36	2.14	2.06
4	y	308	CLA	CHB-C4A	-3.36	1.29	1.37
4	y	306	CLA	C3D-CAD	-3.35	1.33	1.45
4	y	306	CLA	O2D-CGD	-3.35	1.25	1.33
6	U	420	0UR	C46-C45	-3.34	1.40	1.48
4	U	413	CLA	MG-NA	3.34	2.14	2.06
7	y	320	LUT	C22-C21	-3.31	1.50	1.54
5	1	310	CHL	MG-NA	3.29	2.14	2.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	U	419	LUT	C8-C9	-3.29	1.38	1.45
4	y	310	CLA	MG-NA	3.29	2.14	2.06
6	y	323	0UR	C54-C53	-3.26	1.33	1.51
4	y	313	CLA	MG-NA	3.25	2.14	2.06
4	y	305	CLA	MG-NA	3.25	2.14	2.06
4	1	303	CLA	C3B-C4B	-3.24	1.35	1.42
4	y	304	CLA	MG-NA	3.24	2.14	2.06
4	1	301	CLA	MG-NA	3.24	2.14	2.06
4	U	415	CLA	C4B-NB	-3.23	1.33	1.37
7	y	320	LUT	C11-C10	-3.23	1.33	1.43
8	y	321	0IE	C4-C3	3.18	1.45	1.36
4	U	415	CLA	C3B-C4B	-3.18	1.35	1.42
4	1	303	CLA	C3B-C2B	-3.15	1.30	1.41
4	1	303	CLA	MG-NB	-3.14	1.99	2.05
7	y	320	LUT	C24-C25	-3.14	1.29	1.33
4	y	306	CLA	C1A-CHA	-3.14	1.30	1.43
4	y	308	CLA	C3D-C2D	-3.10	1.30	1.39
4	y	308	CLA	C1A-CHA	-3.06	1.30	1.43
6	y	318	0UR	C17-C16	-3.06	1.39	1.45
5	y	307	CHL	C2C-C1C	-3.06	1.38	1.44
4	y	306	CLA	C3B-C4B	-3.06	1.35	1.42
6	y	323	0UR	C53-C52	-3.05	1.34	1.51
6	y	322	0UR	C17-C18	-3.04	1.25	1.32
12	U	421	NEX	C10-C9	3.03	1.39	1.35
6	y	322	0UR	C10-C11	-3.01	1.34	1.43
6	1	316	0UR	C4-C3	-3.01	1.27	1.36
6	y	322	0UR	C19-C18	-3.00	1.45	1.50
5	1	310	CHL	C2C-C1C	-2.99	1.38	1.44
4	y	311	CLA	MG-NA	2.99	2.13	2.06
6	U	420	0UR	C15-C16	-2.99	1.31	1.35
6	1	316	0UR	C17-C16	-2.98	1.39	1.45
5	U	410	CHL	C2C-C1C	-2.93	1.39	1.44
6	1	312	0UR	C29-C28	-2.93	1.51	1.54
5	y	315	CHL	C2C-C1C	-2.91	1.39	1.44
4	1	303	CLA	CHC-C4B	-2.90	1.32	1.39
8	y	319	0IE	O29-C20	-2.89	1.31	1.41
4	U	415	CLA	O2A-CGA	-2.89	1.24	1.33
5	U	406	CHL	C2C-C1C	-2.89	1.39	1.44
5	U	409	CHL	C2C-C1C	-2.89	1.39	1.44
6	y	323	0UR	C8-C7	-2.86	1.32	1.35
6	y	318	0UR	C48-C47	-2.86	1.34	1.50
4	1	303	CLA	MG-NC	-2.85	1.99	2.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	y	323	0UR	C17-C18	-2.84	1.25	1.32
7	U	419	LUT	C32-C33	-2.84	1.39	1.45
6	1	316	0UR	O39-C25	-2.83	1.34	1.43
4	U	415	CLA	C1A-CHA	-2.83	1.31	1.43
6	y	318	0UR	O39-C25	-2.82	1.35	1.43
7	y	320	LUT	C23-C24	-2.78	1.46	1.50
7	U	419	LUT	C28-C29	-2.76	1.40	1.45
6	y	317	0UR	C48-C47	-2.73	1.38	1.49
4	U	415	CLA	CHC-C1C	-2.73	1.33	1.38
4	y	308	CLA	CBA-CGA	-2.72	1.42	1.50
7	1	313	LUT	C39-C29	-2.71	1.45	1.50
6	1	316	0UR	C13-C12	-2.70	1.40	1.45
7	U	419	LUT	C12-C13	-2.70	1.40	1.45
4	1	307	CLA	C3D-C4D	-2.70	1.38	1.44
6	U	420	0UR	C8-C7	-2.69	1.32	1.35
5	U	406	CHL	C3D-C4D	-2.68	1.38	1.44
4	1	309	CLA	C3D-C4D	-2.64	1.38	1.44
4	y	306	CLA	CMA-C3A	-2.64	1.47	1.53
6	y	322	0UR	C28-C19	-2.62	1.49	1.56
4	U	415	CLA	MG-ND	-2.62	2.00	2.05
4	y	314	CLA	MG-NC	2.62	2.12	2.06
4	U	415	CLA	OBD-CAD	-2.60	1.18	1.22
6	y	323	0UR	C49-C48	-2.60	1.41	1.52
4	y	310	CLA	C3D-C4D	-2.60	1.38	1.44
4	U	408	CLA	C3D-C4D	-2.60	1.38	1.44
4	y	308	CLA	O1D-CGD	-2.59	1.14	1.21
5	y	315	CHL	C3D-C4D	-2.59	1.38	1.44
6	y	322	0UR	C14-C15	-2.57	1.35	1.43
6	y	317	0UR	C41-C2	-2.57	1.40	1.51
4	U	412	CLA	C3D-C4D	-2.56	1.38	1.44
4	1	304	CLA	C3D-C4D	-2.56	1.38	1.44
4	y	303	CLA	C3D-C4D	-2.55	1.38	1.44
4	U	413	CLA	C3D-C4D	-2.54	1.38	1.44
4	1	303	CLA	MG-NA	-2.54	2.00	2.06
6	1	316	0UR	C48-C47	-2.54	1.39	1.51
4	U	407	CLA	C3D-C4D	-2.54	1.38	1.44
4	y	305	CLA	C3D-C4D	-2.53	1.38	1.44
8	y	321	0IE	C11-C12	-2.53	1.32	1.35
4	U	416	CLA	C3D-C4D	-2.53	1.38	1.44
4	y	312	CLA	C3D-C4D	-2.53	1.38	1.44
4	y	316	CLA	C3D-C4D	-2.53	1.38	1.44
5	U	409	CHL	C3D-C4D	-2.52	1.38	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1	310	CHL	C3D-C4D	-2.52	1.38	1.44
4	y	304	CLA	C3D-C4D	-2.51	1.38	1.44
4	U	417	CLA	C3D-C4D	-2.51	1.38	1.44
4	y	313	CLA	C3D-C4D	-2.51	1.38	1.44
4	1	301	CLA	C3D-C4D	-2.51	1.38	1.44
4	U	411	CLA	C3D-C4D	-2.50	1.38	1.44
6	U	420	0UR	C23-C1	-2.49	1.48	1.53
4	1	303	CLA	CHC-C1C	-2.49	1.33	1.38
4	y	309	CLA	C3D-C4D	-2.49	1.38	1.44
6	y	318	0UR	C14-C13	-2.49	1.28	1.34
4	U	418	CLA	C3D-C4D	-2.48	1.38	1.44
6	1	316	0UR	C17-C18	-2.47	1.26	1.32
12	U	421	NEX	C32-C33	-2.47	1.40	1.45
4	1	308	CLA	C3D-C4D	-2.47	1.38	1.44
4	y	314	CLA	C3D-C4D	-2.45	1.38	1.44
4	y	306	CLA	C2A-C1A	-2.45	1.46	1.52
4	y	306	CLA	MG-NA	-2.45	2.00	2.06
6	y	322	0UR	C46-C45	-2.44	1.42	1.48
6	y	318	0UR	C13-C12	-2.44	1.40	1.45
6	1	315	0UR	C17-C18	-2.43	1.26	1.32
4	y	308	CLA	C4B-NB	-2.43	1.34	1.37
4	1	304	CLA	C1B-C2B	-2.43	1.37	1.43
5	y	307	CHL	C3D-C4D	-2.43	1.38	1.44
6	U	420	0UR	C17-C18	-2.42	1.26	1.32
4	1	306	CLA	C3D-C4D	-2.42	1.38	1.44
6	1	316	0UR	C19-C18	-2.42	1.46	1.50
6	y	318	0UR	C17-C18	-2.41	1.26	1.32
5	U	410	CHL	C3D-C4D	-2.41	1.38	1.44
4	1	305	CLA	C3D-C4D	-2.40	1.38	1.44
4	U	405	CLA	C3D-C4D	-2.40	1.38	1.44
6	y	317	0UR	C17-C16	-2.40	1.40	1.45
4	1	301	CLA	C1D-C2D	-2.39	1.40	1.45
4	y	306	CLA	C4B-NB	-2.39	1.34	1.37
6	y	317	0UR	C17-C18	-2.39	1.26	1.32
4	y	311	CLA	C3D-C4D	-2.39	1.38	1.44
12	U	421	NEX	C12-C13	-2.38	1.40	1.45
8	y	321	0IE	C6-C7	-2.38	1.40	1.45
6	y	318	0UR	C15-C16	-2.37	1.32	1.35
7	1	313	LUT	C11-C12	2.37	1.40	1.34
4	y	310	CLA	C1B-C2B	-2.37	1.37	1.43
6	y	318	0UR	C49-C48	-2.37	1.34	1.51
4	1	308	CLA	C1B-C2B	-2.36	1.37	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	y	304	CLA	C1B-C2B	-2.36	1.37	1.43
4	y	314	CLA	MG-NB	2.36	2.10	2.05
7	y	320	LUT	C31-C30	-2.36	1.36	1.43
4	U	414	CLA	C3D-C4D	-2.35	1.38	1.44
7	1	313	LUT	C40-C33	-2.35	1.46	1.50
7	1	313	LUT	C30-C29	2.35	1.38	1.35
8	y	321	0IE	C5-C4	2.35	1.50	1.43
4	1	306	CLA	C1B-C2B	-2.35	1.37	1.43
4	y	316	CLA	C1B-C2B	-2.34	1.37	1.43
4	y	306	CLA	CAA-C2A	-2.34	1.49	1.54
6	1	316	0UR	C15-C16	-2.34	1.32	1.35
5	U	410	CHL	MG-NC	2.33	2.11	2.06
4	U	415	CLA	C3D-CAD	-2.33	1.37	1.45
4	U	414	CLA	C1B-C2B	-2.33	1.37	1.43
4	1	311	CLA	C3D-C4D	-2.32	1.38	1.44
8	y	319	0IE	C39-C32	-2.32	1.49	1.53
4	U	407	CLA	C1D-C2D	-2.32	1.40	1.45
4	U	414	CLA	C1D-C2D	-2.31	1.40	1.45
5	U	410	CHL	C1D-C2D	-2.31	1.40	1.45
4	y	306	CLA	CHB-C1B	-2.31	1.34	1.39
4	U	417	CLA	C1D-C2D	-2.30	1.40	1.45
4	U	411	CLA	C1B-C2B	-2.29	1.37	1.43
4	y	314	CLA	C1D-C2D	-2.29	1.40	1.45
4	y	308	CLA	CBD-CGD	-2.29	1.45	1.52
12	U	421	NEX	C28-C29	-2.28	1.41	1.45
4	1	306	CLA	C1D-C2D	-2.28	1.40	1.45
4	y	303	CLA	C1B-C2B	-2.27	1.37	1.43
4	U	416	CLA	C1D-C2D	-2.27	1.40	1.45
4	U	408	CLA	C1B-C2B	-2.27	1.37	1.43
4	1	307	CLA	C1B-C2B	-2.27	1.37	1.43
4	y	314	CLA	C1B-C2B	-2.26	1.37	1.43
11	U	422	LMN	CBQ-CBK	-2.26	1.44	1.52
4	y	313	CLA	C1B-C2B	-2.26	1.37	1.43
4	y	304	CLA	C1D-C2D	-2.26	1.40	1.45
4	U	418	CLA	C1D-C2D	-2.25	1.40	1.45
6	1	316	0UR	C11-C12	-2.25	1.32	1.35
4	1	305	CLA	C1B-C2B	-2.25	1.38	1.43
4	U	407	CLA	C1B-C2B	-2.25	1.38	1.43
4	U	417	CLA	C1B-C2B	-2.25	1.38	1.43
4	U	416	CLA	C1B-C2B	-2.24	1.38	1.43
4	U	413	CLA	C1D-C2D	-2.24	1.40	1.45
4	1	309	CLA	C1B-C2B	-2.24	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	1	312	0UR	C17-C18	-2.24	1.27	1.32
5	U	409	CHL	C1D-C2D	-2.23	1.40	1.45
6	U	420	0UR	C48-C47	-2.23	1.37	1.50
4	y	305	CLA	C1D-C2D	-2.23	1.40	1.45
4	U	418	CLA	MG-NC	2.22	2.11	2.06
4	1	305	CLA	C1D-C2D	-2.22	1.41	1.45
7	1	313	LUT	C31-C30	-2.22	1.36	1.43
4	1	302	CLA	C1B-C2B	-2.21	1.38	1.43
4	1	302	CLA	C3D-C4D	-2.21	1.39	1.44
4	U	405	CLA	C1D-C2D	-2.21	1.41	1.45
5	y	307	CHL	C1D-C2D	-2.21	1.41	1.45
6	y	323	0UR	C6-C7	-2.20	1.41	1.45
5	1	310	CHL	C1B-C2B	-2.20	1.38	1.43
4	U	417	CLA	MG-NC	2.20	2.11	2.06
5	U	410	CHL	C1B-C2B	-2.19	1.38	1.43
4	y	312	CLA	C1D-C2D	-2.19	1.41	1.45
4	U	412	CLA	C1D-C2D	-2.19	1.41	1.45
5	y	315	CHL	C1B-C2B	-2.19	1.38	1.43
7	y	320	LUT	C22-C23	-2.19	1.49	1.53
5	y	315	CHL	C1D-C2D	-2.17	1.41	1.45
4	U	407	CLA	C1B-NB	-2.17	1.35	1.37
4	y	305	CLA	C1B-C2B	-2.17	1.38	1.43
5	U	406	CHL	C1B-C2B	-2.17	1.38	1.43
4	y	303	CLA	C1B-NB	-2.17	1.35	1.37
4	y	303	CLA	C1D-C2D	-2.16	1.41	1.45
4	y	312	CLA	C1B-C2B	-2.16	1.38	1.43
4	1	302	CLA	C1D-C2D	-2.16	1.41	1.45
4	U	407	CLA	MG-NC	2.15	2.11	2.06
7	y	320	LUT	C35-C34	-2.15	1.36	1.43
4	U	408	CLA	C1D-C2D	-2.15	1.41	1.45
4	1	306	CLA	CHB-C1B	2.15	1.44	1.39
4	U	412	CLA	C1B-C2B	-2.15	1.38	1.43
5	y	315	CHL	MG-NC	2.15	2.11	2.06
4	U	405	CLA	C1B-C2B	-2.15	1.38	1.43
4	y	310	CLA	CHB-C1B	2.14	1.44	1.39
5	U	409	CHL	C1B-C2B	-2.14	1.38	1.43
5	y	307	CHL	C1B-C2B	-2.14	1.38	1.43
4	1	308	CLA	C1D-C2D	-2.13	1.41	1.45
4	1	311	CLA	C1D-C2D	-2.13	1.41	1.45
4	U	405	CLA	MG-NC	2.13	2.11	2.06
4	y	313	CLA	CHB-C1B	2.12	1.44	1.39
6	y	322	0UR	C46-C47	-2.12	1.26	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	y	313	CLA	C1D-C2D	-2.12	1.41	1.45
4	1	305	CLA	CHB-C1B	2.12	1.44	1.39
4	1	304	CLA	CHB-C1B	2.12	1.44	1.39
4	y	316	CLA	C1D-C2D	-2.12	1.41	1.45
5	U	406	CHL	C1D-C2D	-2.11	1.41	1.45
4	U	411	CLA	C1D-C2D	-2.11	1.41	1.45
5	y	307	CHL	MG-NC	2.11	2.11	2.06
5	1	310	CHL	C1D-C2D	-2.11	1.41	1.45
4	y	303	CLA	CHB-C1B	2.11	1.44	1.39
4	y	309	CLA	MG-NC	2.11	2.11	2.06
4	y	311	CLA	C1D-C2D	-2.10	1.41	1.45
4	1	309	CLA	C1B-NB	-2.10	1.35	1.37
7	1	313	LUT	C32-C33	-2.10	1.41	1.45
4	1	303	CLA	C3D-CAD	-2.10	1.38	1.45
4	y	316	CLA	CHB-C1B	2.09	1.44	1.39
6	1	316	0UR	C8-C7	-2.09	1.33	1.35
4	1	301	CLA	C1B-C2B	-2.09	1.38	1.43
4	1	308	CLA	MG-NC	2.09	2.11	2.06
8	y	321	0IE	C9-C8	-2.09	1.37	1.43
5	U	406	CHL	CHB-C1B	2.07	1.44	1.39
6	U	420	0UR	C14-C13	-2.07	1.29	1.34
4	U	414	CLA	CHB-C1B	2.07	1.44	1.39
4	1	304	CLA	C1D-C2D	-2.07	1.41	1.45
4	y	311	CLA	C1B-C2B	-2.06	1.38	1.43
4	y	305	CLA	CHB-C1B	2.06	1.44	1.39
4	1	308	CLA	CHB-C1B	2.06	1.44	1.39
4	U	411	CLA	CHB-C1B	2.06	1.44	1.39
4	1	301	CLA	CHB-C1B	2.05	1.44	1.39
4	U	415	CLA	C6-C5	-2.05	1.44	1.52
4	y	309	CLA	C1B-C2B	-2.05	1.38	1.43
4	y	304	CLA	CHB-C1B	2.05	1.44	1.39
4	1	311	CLA	CHB-C1B	2.05	1.44	1.39
6	y	322	0UR	C53-C52	-2.04	1.40	1.51
6	U	420	0UR	C17-C16	-2.03	1.41	1.45
4	1	302	CLA	CHB-C1B	2.03	1.44	1.39
4	U	413	CLA	C1B-C2B	-2.03	1.38	1.43
4	1	309	CLA	C1D-C2D	-2.02	1.41	1.45
7	1	313	LUT	C8-C7	2.02	1.39	1.33
4	1	305	CLA	MG-NC	2.01	2.11	2.06
4	U	414	CLA	MG-NC	2.01	2.11	2.06
6	1	315	0UR	C29-C28	-2.01	1.52	1.54
4	1	311	CLA	MG-NC	2.01	2.11	2.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	y	313	CLA	C1B-NB	-2.01	1.35	1.37
6	1	316	0UR	C46-C45	-2.00	1.43	1.48

All (541) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	y	318	0UR	O42-C2-C41	-13.05	101.69	120.58
6	U	420	0UR	O42-C2-C41	-10.86	104.86	120.58
8	y	319	0IE	C43-C24-C19	10.23	125.05	109.55
6	y	317	0UR	O42-C2-C41	-9.14	107.35	120.58
6	y	323	0UR	C38-C28-C19	8.97	123.13	109.55
6	y	322	0UR	C5-C4-C3	8.63	137.38	127.00
11	U	422	LMN	CBR-CCM-CBS	-8.57	89.10	109.40
6	y	318	0UR	C5-C4-C3	8.56	137.30	127.00
6	y	323	0UR	O42-C2-C41	-8.34	108.51	120.58
6	1	316	0UR	C28-C19-C18	-8.19	102.35	112.70
6	y	322	0UR	C38-C28-C19	8.18	121.93	109.55
6	y	317	0UR	C43-C3-C4	-8.15	115.17	125.02
8	y	319	0IE	C44-C24-C43	-8.10	95.95	107.89
4	U	415	CLA	CAC-C3C-C4C	7.99	135.18	124.81
4	y	306	CLA	CGD-CBD-CAD	-7.89	85.19	110.73
6	y	323	0UR	C36-C28-C38	-7.82	96.37	107.89
6	1	315	0UR	C4-C3-C2	-7.79	113.40	120.08
4	1	303	CLA	C4D-C3D-CAD	-7.52	99.23	108.10
8	y	321	0IE	C5-C4-C3	7.47	135.99	127.00
6	y	318	0UR	O44-C43-C3	-7.35	89.45	109.11
6	y	323	0UR	C33-C32-C31	-7.34	107.87	123.56
8	y	321	0IE	O1-C2-C30	-7.28	110.05	120.58
4	y	308	CLA	CGD-CBD-CAD	-7.25	87.26	110.73
8	y	319	0IE	C41-C28-C27	-7.24	108.07	123.56
8	y	319	0IE	O42-C26-C27	-7.20	94.24	110.53
6	y	317	0UR	C38-C28-C19	7.12	120.32	109.55
8	y	321	0IE	O40-C34-C35	-7.07	94.52	109.68
6	1	316	0UR	C36-C28-C38	-7.05	97.50	107.89
6	y	317	0UR	O39-C25-C26	-6.95	94.77	109.68
6	1	316	0UR	C34-C27-C26	-6.83	101.70	114.36
7	1	313	LUT	C12-C13-C14	6.72	129.26	118.94
8	y	319	0IE	C17-C16-C15	-6.71	108.64	118.94
8	1	314	0IE	C4-C3-C2	-6.65	114.38	120.08
6	y	322	0UR	O42-C2-C41	-6.62	111.00	120.58
7	1	313	LUT	C8-C9-C10	6.58	129.04	118.94
4	U	415	CLA	CGD-CBD-CAD	-6.54	89.54	110.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	U	422	LMN	O2-C2-C3	-6.54	95.22	110.35
7	y	320	LUT	C1-C6-C5	-6.49	113.47	122.61
4	y	306	CLA	C4D-CHA-C1A	6.40	129.04	121.25
6	1	312	0UR	C4-C3-C2	-6.37	114.61	120.08
8	y	321	0IE	C38-C32-C31	6.20	118.57	109.71
6	1	316	0UR	C24-C25-C26	-6.19	101.83	110.30
4	U	415	CLA	C4D-CHA-C1A	6.16	128.75	121.25
6	y	318	0UR	C34-C27-C26	-6.11	103.04	114.36
6	y	322	0UR	C4-C3-C2	-6.09	114.85	120.08
7	1	313	LUT	C28-C29-C30	6.09	128.28	118.94
8	y	321	0IE	C43-C24-C19	6.05	118.71	109.55
6	U	420	0UR	C38-C28-C19	6.04	118.70	109.55
6	y	318	0UR	C38-C28-C19	6.00	118.64	109.55
4	U	411	CLA	C1-O2A-CGA	5.95	132.07	116.44
8	y	321	0IE	O40-C34-C33	-5.93	98.02	109.80
6	y	323	0UR	C36-C28-C29	-5.92	98.22	109.44
6	y	317	0UR	O42-C2-C3	-5.89	109.89	120.66
6	y	318	0UR	C43-C3-C4	-5.71	118.12	125.02
4	1	303	CLA	CAC-C3C-C4C	5.71	132.22	124.81
8	y	319	0IE	C14-C15-C16	5.70	135.44	127.31
7	1	313	LUT	C35-C15-C14	5.69	135.14	123.47
8	y	321	0IE	O42-C26-C27	-5.69	97.67	110.53
6	1	316	0UR	O42-C2-C3	-5.66	110.32	120.66
6	1	315	0UR	C28-C19-C18	-5.61	105.60	112.70
7	1	313	LUT	C39-C29-C30	-5.61	115.06	122.92
6	1	316	0UR	C36-C28-C29	-5.60	98.82	109.44
4	1	303	CLA	C2D-C1D-ND	5.60	114.23	110.10
4	1	303	CLA	CGD-CBD-CAD	-5.60	92.61	110.73
6	y	322	0UR	C22-C16-C15	5.54	130.69	122.92
8	y	319	0IE	C10-C11-C12	-5.50	119.46	127.31
4	y	308	CLA	C4D-CHA-C1A	5.47	127.91	121.25
7	1	313	LUT	C32-C33-C34	5.47	127.33	118.94
4	1	303	CLA	C2B-C1B-NB	-5.43	106.59	110.23
6	y	323	0UR	O40-C30-C29	-5.43	97.02	110.74
6	y	322	0UR	O40-C30-C29	-5.42	97.04	110.74
6	y	322	0UR	C24-C25-C26	-5.38	102.94	110.30
6	U	420	0UR	C5-C4-C3	5.33	133.41	127.00
8	y	319	0IE	C39-C32-C31	5.33	117.32	109.71
4	U	415	CLA	C1C-C2C-C3C	5.30	112.53	106.96
4	U	415	CLA	CAA-C2A-C3A	-5.28	98.32	112.78
6	1	316	0UR	C38-C28-C19	5.26	117.51	109.55
7	1	313	LUT	C19-C9-C10	-5.23	115.60	122.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	y	322	0UR	O42-C2-C3	-5.21	111.14	120.66
6	1	312	0UR	C28-C19-C18	-5.20	106.12	112.70
6	y	323	0UR	O39-C25-C26	-5.19	98.54	109.68
6	y	322	0UR	C36-C28-C29	-5.17	99.65	109.44
6	y	318	0UR	C9-C8-C7	5.12	134.62	127.31
4	1	303	CLA	CHB-C1B-NB	-5.11	118.85	124.26
6	y	318	0UR	O40-C30-C29	-5.10	97.85	110.74
8	y	321	0IE	O29-C20-C3	-5.09	97.74	111.03
6	y	318	0UR	C33-C32-C31	-5.05	112.75	123.56
4	y	308	CLA	CAA-C2A-C3A	-5.01	99.05	112.78
7	1	313	LUT	C15-C35-C34	5.00	133.72	123.47
7	1	313	LUT	C20-C13-C14	-5.00	115.92	122.92
7	U	419	LUT	C39-C29-C28	4.93	125.84	118.08
6	U	420	0UR	O39-C25-C26	-4.91	99.15	109.68
6	y	318	0UR	C14-C15-C16	4.91	134.31	127.31
12	U	421	NEX	C35-C15-C14	4.89	133.48	123.47
6	y	318	0UR	C4-C3-C2	4.87	124.25	120.08
6	y	317	0UR	C34-C27-C26	-4.86	105.35	114.36
6	y	322	0UR	C33-C32-C31	-4.84	113.20	123.56
6	y	318	0UR	C37-C23-C1	4.82	116.59	109.71
8	y	319	0IE	C37-C36-C31	-4.81	118.18	124.49
4	U	415	CLA	C3B-C4B-NB	-4.78	106.08	110.52
4	1	303	CLA	C4D-CHA-C1A	4.77	127.05	121.25
4	U	415	CLA	C1D-ND-C4D	-4.77	102.95	106.33
6	y	317	0UR	C36-C28-C29	-4.70	100.54	109.44
4	1	303	CLA	C3B-C2B-C1B	4.68	112.82	107.16
6	U	420	0UR	C36-C28-C29	-4.66	100.61	109.44
7	y	320	LUT	C35-C15-C14	4.64	132.98	123.47
4	1	303	CLA	C4A-NA-C1A	4.58	108.77	106.71
6	U	420	0UR	O40-C30-C29	-4.57	99.18	110.74
8	y	319	0IE	C33-C34-C35	-4.57	104.05	110.30
4	y	306	CLA	CMD-C2D-C1D	4.54	132.71	124.71
6	y	318	0UR	O40-C30-C31	-4.52	100.30	110.53
6	U	420	0UR	C33-C32-C31	-4.52	113.89	123.56
6	1	316	0UR	O39-C25-C26	-4.47	100.09	109.68
7	y	320	LUT	C11-C10-C9	4.42	133.62	127.31
6	1	316	0UR	C36-C28-C19	4.41	116.22	109.55
12	U	421	NEX	C39-C29-C30	-4.36	116.82	122.92
7	y	320	LUT	C12-C13-C14	4.34	125.60	118.94
7	y	320	LUT	C20-C13-C14	-4.31	116.89	122.92
4	1	308	CLA	C4D-CHA-C1A	4.25	126.43	121.25
7	y	320	LUT	C8-C9-C10	4.25	125.46	118.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	y	322	0UR	C23-C1-C27	-4.23	107.81	119.35
8	y	321	0IE	C41-C28-C27	-4.22	114.53	123.56
6	y	322	0UR	O39-C25-C24	-4.21	101.44	109.80
7	1	313	LUT	C40-C33-C34	-4.19	117.06	122.92
7	1	313	LUT	C22-C23-C24	-4.17	106.99	111.74
6	y	318	0UR	C24-C25-C26	-4.16	104.61	110.30
8	y	319	0IE	C23-C16-C15	4.15	128.74	122.92
6	1	316	0UR	O40-C30-C29	-4.15	100.25	110.74
6	y	322	0UR	O39-C25-C26	-4.12	100.85	109.68
4	1	303	CLA	C3D-C4D-ND	-4.12	103.58	110.24
6	y	318	0UR	C34-C27-C1	4.09	129.87	124.49
8	y	319	0IE	C22-C12-C11	-4.08	117.21	122.92
4	y	306	CLA	CHD-C1D-ND	-4.07	120.72	124.45
4	U	416	CLA	CHD-C1D-ND	-4.03	120.75	124.45
6	1	316	0UR	O42-C2-C41	-4.03	114.74	120.58
6	1	316	0UR	C9-C8-C7	3.99	133.00	127.31
6	1	312	0UR	C38-C28-C19	3.99	115.59	109.55
6	y	323	0UR	C24-C25-C26	-3.98	104.85	110.30
4	y	311	CLA	CHD-C1D-ND	-3.98	120.80	124.45
4	y	313	CLA	C4D-CHA-C1A	3.97	126.08	121.25
4	y	306	CLA	C1D-CHD-C4C	-3.94	117.55	126.06
4	y	304	CLA	CHD-C1D-ND	-3.94	120.83	124.45
4	U	411	CLA	C4D-CHA-C1A	3.94	126.04	121.25
4	U	415	CLA	CAC-C3C-C2C	-3.93	120.80	127.53
6	y	318	0UR	C25-C26-C27	-3.93	104.03	111.85
5	U	406	CHL	C4D-CHA-C1A	3.91	126.01	121.25
4	U	412	CLA	CHD-C1D-ND	-3.91	120.86	124.45
4	1	301	CLA	C4D-CHA-C1A	3.91	126.00	121.25
4	U	405	CLA	C4D-CHA-C1A	3.90	126.00	121.25
6	y	322	0UR	O44-C43-C3	-3.90	98.67	109.11
5	U	409	CHL	C4D-CHA-C1A	3.89	125.99	121.25
6	y	318	0UR	C10-C11-C12	3.88	132.84	127.31
4	U	417	CLA	C4D-CHA-C1A	3.87	125.96	121.25
6	y	322	0UR	C21-C12-C13	-3.87	111.98	118.08
8	y	321	0IE	C34-C35-C36	-3.87	104.15	111.85
4	U	416	CLA	C4D-CHA-C1A	3.85	125.94	121.25
4	y	303	CLA	C4D-CHA-C1A	3.85	125.94	121.25
5	y	315	CHL	C4D-CHA-C1A	3.84	125.92	121.25
8	y	319	0IE	C25-C26-C27	-3.83	107.38	111.74
4	1	303	CLA	C4B-CHC-C1C	3.83	135.41	126.34
6	U	420	0UR	O40-C30-C31	-3.82	101.90	110.53
4	U	413	CLA	CHD-C1D-ND	-3.81	120.95	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	y	306	CLA	C4A-NA-C1A	-3.81	104.99	106.71
4	y	308	CLA	C3B-C4B-NB	-3.80	106.99	110.52
6	y	323	0UR	C28-C19-C18	-3.79	107.91	112.70
4	U	412	CLA	C4D-CHA-C1A	3.79	125.86	121.25
4	y	312	CLA	C4D-CHA-C1A	3.79	125.86	121.25
4	y	310	CLA	CHD-C1D-ND	-3.79	120.97	124.45
4	y	310	CLA	C4D-CHA-C1A	3.78	125.86	121.25
4	1	304	CLA	C4D-CHA-C1A	3.78	125.84	121.25
6	y	318	0UR	C36-C28-C29	-3.77	102.29	109.44
5	1	310	CHL	C4D-CHA-C1A	3.77	125.84	121.25
8	y	319	0IE	C6-C7-C8	3.77	124.72	118.94
6	1	316	0UR	C33-C32-C31	-3.77	115.50	123.56
4	y	309	CLA	C4D-CHA-C1A	3.77	125.83	121.25
4	1	311	CLA	C4D-CHA-C1A	3.75	125.81	121.25
5	U	409	CHL	CHD-C1D-ND	-3.74	121.01	124.45
4	1	305	CLA	C4D-CHA-C1A	3.73	125.79	121.25
4	1	303	CLA	C1D-CHD-C4C	-3.72	118.02	126.06
7	y	320	LUT	C15-C35-C34	3.72	131.10	123.47
4	y	304	CLA	C4D-CHA-C1A	3.71	125.76	121.25
6	y	317	0UR	C29-C30-C31	-3.71	107.52	111.74
4	1	309	CLA	C4D-CHA-C1A	3.70	125.75	121.25
7	y	320	LUT	C31-C30-C29	3.69	132.58	127.31
5	U	410	CHL	C4D-CHA-C1A	3.68	125.73	121.25
4	y	311	CLA	C4D-CHA-C1A	3.68	125.73	121.25
5	y	307	CHL	C4D-CHA-C1A	3.68	125.73	121.25
4	U	408	CLA	C4D-CHA-C1A	3.67	125.72	121.25
4	y	305	CLA	CHD-C1D-ND	-3.67	121.08	124.45
4	U	418	CLA	C4D-CHA-C1A	3.66	125.71	121.25
4	1	311	CLA	CHD-C1D-ND	-3.66	121.09	124.45
11	U	422	LMN	CBR-CCM-CBT	3.65	118.04	109.40
6	y	323	0UR	O39-C25-C24	-3.64	102.56	109.80
11	U	404	LMN	CBR-CCM-CBT	-3.63	100.80	109.40
4	1	303	CLA	C2A-C1A-CHA	3.63	130.20	123.86
5	U	406	CHL	CHD-C1D-ND	-3.63	121.12	124.45
4	U	405	CLA	C1-O2A-CGA	3.62	125.95	116.44
4	U	415	CLA	CHD-C1D-ND	-3.62	121.13	124.45
4	1	308	CLA	CHD-C1D-ND	-3.61	121.13	124.45
6	y	317	0UR	C10-C11-C12	3.61	132.47	127.31
4	1	304	CLA	CHD-C1D-ND	-3.59	121.16	124.45
4	U	417	CLA	CHD-C1D-ND	-3.56	121.18	124.45
6	y	322	0UR	C37-C23-C1	3.56	114.80	109.71
4	U	405	CLA	CHD-C1D-ND	-3.56	121.19	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	y	322	0UR	O40-C30-C31	-3.55	102.50	110.53
7	1	313	LUT	C10-C11-C12	3.55	134.30	123.22
7	U	419	LUT	C31-C30-C29	3.55	132.37	127.31
6	y	318	0UR	C22-C16-C15	3.55	127.89	122.92
4	1	302	CLA	C4D-CHA-C1A	3.54	125.56	121.25
6	y	322	0UR	C36-C28-C38	-3.54	102.67	107.89
4	1	303	CLA	OBD-CAD-C3D	3.54	137.04	128.52
4	1	303	CLA	CMB-C2B-C3B	-3.53	118.03	126.59
8	y	319	0IE	O42-C26-C25	-3.53	101.81	110.74
4	1	307	CLA	C4D-CHA-C1A	3.53	125.55	121.25
6	1	316	0UR	C22-C16-C15	3.53	127.86	122.92
4	U	414	CLA	C4D-CHA-C1A	3.51	125.52	121.25
4	y	313	CLA	CHD-C1D-ND	-3.51	121.23	124.45
6	1	316	0UR	C48-C47-C46	3.50	129.81	125.84
6	y	317	0UR	C33-C32-C31	-3.50	116.07	123.56
7	1	313	LUT	C2-C3-C4	-3.50	105.52	110.30
4	1	302	CLA	CHD-C1D-ND	-3.49	121.25	124.45
6	y	317	0UR	O40-C30-C29	-3.47	101.97	110.74
6	1	315	0UR	C38-C28-C19	3.46	114.79	109.55
4	U	407	CLA	C4D-CHA-C1A	3.46	125.46	121.25
6	y	322	0UR	C13-C12-C11	3.46	124.25	118.94
4	1	306	CLA	C4D-CHA-C1A	3.45	125.45	121.25
4	y	316	CLA	C4D-CHA-C1A	3.45	125.44	121.25
8	y	321	0IE	C44-C24-C43	-3.43	102.83	107.89
4	y	314	CLA	C4D-CHA-C1A	3.43	125.42	121.25
6	y	318	0UR	C22-C16-C17	-3.43	112.67	118.08
6	y	318	0UR	C36-C28-C38	-3.42	102.86	107.89
4	y	314	CLA	CHD-C1D-ND	-3.41	121.32	124.45
8	y	319	0IE	C37-C36-C35	-3.40	108.06	114.36
8	y	321	0IE	C24-C19-C28	-3.39	105.33	111.42
5	1	310	CHL	CHD-C1D-ND	-3.39	121.34	124.45
7	y	320	LUT	C32-C33-C34	3.38	124.14	118.94
4	y	316	CLA	CHD-C1D-ND	-3.38	121.34	124.45
4	y	305	CLA	C4D-CHA-C1A	3.38	125.36	121.25
11	U	422	LMN	O3-C3-C2	-3.37	102.56	110.35
8	y	321	0IE	C37-C36-C35	-3.37	108.12	114.36
4	U	414	CLA	CHD-C1D-ND	-3.36	121.37	124.45
6	U	420	0UR	C35-C23-C1	3.35	114.50	109.71
4	U	408	CLA	CHD-C1D-ND	-3.35	121.38	124.45
4	1	309	CLA	CHD-C1D-ND	-3.34	121.38	124.45
6	1	315	0UR	C28-C19-C32	3.31	117.35	111.42
4	y	312	CLA	CHD-C1D-ND	-3.31	121.41	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	U	407	CLA	CHD-C1D-ND	-3.30	121.42	124.45
4	U	413	CLA	C4D-CHA-C1A	3.29	125.26	121.25
7	U	419	LUT	C35-C15-C14	3.29	130.21	123.47
4	1	303	CLA	O1D-CGD-CBD	-3.28	117.77	124.48
7	y	320	LUT	C19-C9-C10	-3.28	118.33	122.92
4	U	415	CLA	CHA-C1A-NA	-3.27	118.90	126.40
6	y	317	0UR	C20-C7-C8	-3.27	118.34	122.92
4	1	305	CLA	CHD-C1D-ND	-3.27	121.45	124.45
6	y	317	0UR	C36-C28-C38	-3.26	103.08	107.89
4	U	411	CLA	CHD-C1D-ND	-3.26	121.46	124.45
6	y	323	0UR	C36-C28-C19	3.25	114.47	109.55
8	y	319	0IE	C13-C12-C11	3.24	123.92	118.94
6	U	420	0UR	C25-C26-C27	-3.23	105.42	111.85
4	y	308	CLA	CHC-C4B-NB	3.22	127.66	124.26
4	1	306	CLA	CHD-C1D-ND	-3.22	121.50	124.45
6	U	420	0UR	C24-C25-C26	-3.21	105.91	110.30
4	y	303	CLA	CHD-C1D-ND	-3.21	121.50	124.45
6	U	420	0UR	C34-C27-C26	-3.20	108.43	114.36
6	y	318	0UR	O39-C25-C24	-3.20	103.45	109.80
8	y	321	0IE	C23-C16-C17	-3.19	113.05	118.08
4	1	301	CLA	CHD-C1D-ND	-3.18	121.53	124.45
6	y	317	0UR	C22-C16-C15	3.18	127.38	122.92
8	y	319	0IE	C21-C7-C6	-3.18	113.07	118.08
8	y	319	0IE	C34-C35-C36	-3.16	105.55	111.85
4	y	308	CLA	CHA-C1A-NA	-3.16	119.16	126.40
6	1	315	0UR	C17-C16-C15	-3.16	114.09	118.94
8	y	319	0IE	C32-C33-C34	-3.16	106.51	113.64
6	y	322	0UR	C9-C8-C7	3.15	131.80	127.31
4	U	418	CLA	CHD-C1D-ND	-3.14	121.57	124.45
6	y	317	0UR	C34-C27-C1	3.14	128.62	124.49
6	y	323	0UR	C22-C16-C17	-3.14	113.13	118.08
4	y	309	CLA	CHD-C1D-ND	-3.13	121.58	124.45
4	U	415	CLA	CHB-C1B-NB	3.13	127.57	124.26
6	y	323	0UR	C48-C47-C46	3.13	132.55	125.85
6	y	317	0UR	C37-C23-C1	3.12	114.17	109.71
8	y	321	0IE	C20-C3-C4	3.10	128.81	124.83
6	1	315	0UR	C22-C16-C15	3.08	127.24	122.92
4	1	311	CLA	C4A-NA-C1A	3.08	108.09	106.71
5	y	315	CHL	CHD-C1D-ND	-3.08	121.62	124.45
7	y	320	LUT	O3-C3-C2	-3.07	103.69	109.80
6	y	322	0UR	C35-C23-C1	3.07	114.09	109.71
6	U	420	0UR	C37-C23-C1	3.07	114.09	109.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	U	421	NEX	C20-C13-C14	-3.06	118.64	122.92
7	1	313	LUT	C37-C21-C26	-3.06	104.91	109.55
6	y	322	0UR	C17-C16-C15	-3.05	114.26	118.94
4	1	303	CLA	CMC-C2C-C1C	3.04	129.66	125.04
6	y	317	0UR	C35-C23-C1	3.01	114.02	109.71
7	y	320	LUT	C39-C29-C30	-3.01	118.71	122.92
7	y	320	LUT	C40-C33-C34	-3.00	118.72	122.92
7	U	419	LUT	C19-C9-C10	-3.00	118.72	122.92
12	U	421	NEX	C40-C33-C34	-2.99	118.73	122.92
5	y	307	CHL	CHD-C1D-ND	-2.99	121.71	124.45
6	1	316	0UR	C43-C3-C4	-2.98	121.41	125.02
6	1	316	0UR	O39-C25-C24	-2.98	103.89	109.80
6	U	420	0UR	C10-C11-C12	2.97	131.55	127.31
4	1	303	CLA	CHA-C1A-NA	-2.97	119.60	126.40
6	y	323	0UR	C9-C8-C7	2.97	131.55	127.31
6	U	420	0UR	C22-C16-C17	-2.96	113.41	118.08
6	1	312	0UR	C22-C16-C15	2.96	127.07	122.92
8	y	321	0IE	C10-C11-C12	2.95	131.52	127.31
4	U	415	CLA	C2C-C1C-NC	-2.95	107.21	109.97
4	y	308	CLA	CAA-C2A-C1A	-2.94	102.34	111.97
8	y	321	0IE	C21-C7-C8	-2.94	118.81	122.92
6	y	322	0UR	C43-C3-C4	2.93	128.56	125.02
6	U	420	0UR	C22-C16-C15	2.92	127.01	122.92
6	y	317	0UR	C4-C3-C2	2.92	122.58	120.08
9	U	402	LMG	O7-C8-C7	2.91	118.95	108.40
4	U	415	CLA	CAA-CBA-CGA	-2.90	104.78	113.25
7	1	313	LUT	O3-C3-C2	2.90	115.56	109.80
4	1	307	CLA	CHD-C1D-ND	-2.89	121.79	124.45
4	1	303	CLA	O2D-CGD-CBD	2.88	116.39	111.27
6	y	322	0UR	C25-C26-C27	-2.88	106.11	111.85
4	y	308	CLA	CAA-CBA-CGA	-2.86	104.88	113.25
4	y	306	CLA	CHA-C1A-NA	-2.86	119.86	126.40
6	1	312	0UR	C36-C28-C19	2.86	113.87	109.55
6	1	316	0UR	C25-C26-C27	-2.86	106.17	111.85
12	U	421	NEX	C28-C29-C30	2.85	123.32	118.94
6	1	316	0UR	C5-C4-C3	-2.85	123.58	127.00
4	U	415	CLA	CMC-C2C-C3C	-2.85	118.38	126.12
4	U	415	CLA	C3B-C2B-C1B	2.85	110.60	107.16
5	U	410	CHL	CHD-C1D-ND	-2.85	121.84	124.45
6	y	323	0UR	C38-C28-C29	2.83	114.79	109.44
5	y	315	CHL	CHA-C1A-NA	-2.83	119.92	126.40
6	U	420	0UR	O44-C43-C3	-2.82	101.56	109.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	1	315	0UR	C36-C28-C38	-2.82	103.74	107.89
8	y	319	0IE	C23-C16-C17	2.82	122.51	118.08
6	y	322	0UR	C20-C7-C6	-2.81	113.66	118.08
6	y	317	0UR	C23-C1-C27	-2.80	111.72	119.35
4	1	308	CLA	CHA-C1A-NA	-2.79	120.01	126.40
6	y	323	0UR	C10-C11-C12	2.78	131.27	127.31
6	U	420	0UR	C20-C7-C6	-2.77	113.70	118.08
6	U	420	0UR	O39-C25-C24	-2.76	104.31	109.80
4	U	405	CLA	CHA-C1A-NA	-2.76	120.08	126.40
6	1	316	0UR	C47-C46-C45	2.76	129.95	122.92
8	y	321	0IE	C44-C24-C25	-2.75	104.23	109.44
6	1	312	0UR	C36-C28-C38	-2.73	103.87	107.89
12	U	421	NEX	C11-C10-C9	2.73	131.21	127.31
6	y	318	0UR	C28-C19-C32	-2.73	106.53	111.42
6	y	323	0UR	C34-C27-C26	-2.72	109.31	114.36
5	U	410	CHL	CHA-C1A-NA	-2.72	120.16	126.40
6	1	316	0UR	C6-C7-C8	2.72	123.11	118.94
4	y	311	CLA	CHA-C1A-NA	-2.71	120.18	126.40
4	y	305	CLA	CAA-C2A-C3A	2.71	120.19	112.78
4	U	414	CLA	CHA-C1A-NA	-2.70	120.23	126.40
4	U	418	CLA	CHA-C1A-NA	-2.70	120.23	126.40
4	1	305	CLA	CHA-C1A-NA	-2.69	120.23	126.40
4	U	407	CLA	CHA-C1A-NA	-2.69	120.24	126.40
4	y	306	CLA	C1D-ND-C4D	-2.68	104.43	106.33
6	1	312	0UR	C17-C16-C15	-2.67	114.84	118.94
4	y	312	CLA	CHA-C1A-NA	-2.67	120.28	126.40
6	1	315	0UR	C24-C25-C26	-2.67	106.65	110.30
11	U	422	LMN	C1-O5-C5	-2.67	108.45	113.69
4	y	313	CLA	CHA-C1A-NA	-2.67	120.29	126.40
5	y	307	CHL	CHA-C1A-NA	-2.66	120.30	126.40
7	U	419	LUT	C39-C29-C30	-2.66	119.20	122.92
4	1	307	CLA	CHA-C1A-NA	-2.65	120.32	126.40
4	y	305	CLA	CAA-C2A-C1A	-2.65	103.28	111.97
4	U	417	CLA	CHA-C1A-NA	-2.65	120.33	126.40
5	U	406	CHL	CHA-C1A-NA	-2.64	120.35	126.40
4	U	411	CLA	CHA-C1A-NA	-2.64	120.36	126.40
8	y	319	0IE	O1-C2-C3	-2.64	115.84	120.66
4	1	309	CLA	CHA-C1A-NA	-2.64	120.36	126.40
4	U	415	CLA	CMC-C2C-C1C	2.62	129.03	125.04
6	1	312	0UR	C33-C32-C31	-2.62	117.96	123.56
4	y	316	CLA	CHA-C1A-NA	-2.62	120.41	126.40
4	1	301	CLA	CHA-C1A-NA	-2.61	120.41	126.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	U	413	CLA	CHA-C1A-NA	-2.61	120.42	126.40
7	1	313	LUT	C1-C6-C7	2.61	123.16	115.78
8	1	314	0IE	C14-C15-C16	-2.60	123.60	127.31
7	U	419	LUT	C28-C29-C30	-2.60	114.95	118.94
6	y	317	0UR	O44-C45-C46	2.60	118.45	111.55
6	y	323	0UR	C47-C46-C45	2.59	129.53	122.92
4	1	303	CLA	CHB-C1B-C2B	2.59	134.56	127.24
4	y	303	CLA	CHA-C1A-NA	-2.59	120.47	126.40
6	y	318	0UR	C37-C23-C24	-2.58	97.45	109.05
4	1	306	CLA	CHA-C1A-NA	-2.58	120.50	126.40
8	y	319	0IE	O29-C20-C3	-2.57	104.32	111.03
4	y	308	CLA	CAC-C3C-C4C	2.57	128.15	124.81
6	U	420	0UR	C14-C15-C16	2.57	130.97	127.31
4	1	311	CLA	CHA-C1A-NA	-2.56	120.53	126.40
4	1	302	CLA	CHA-C1A-NA	-2.56	120.54	126.40
6	U	420	0UR	O42-C2-C3	-2.56	115.99	120.66
4	1	304	CLA	CHA-C1A-NA	-2.55	120.55	126.40
4	y	310	CLA	CHA-C1A-NA	-2.55	120.55	126.40
8	1	314	0IE	C10-C9-C8	-2.55	118.25	123.47
4	U	412	CLA	CHA-C1A-NA	-2.55	120.57	126.40
4	U	408	CLA	CHA-C1A-NA	-2.54	120.57	126.40
7	U	419	LUT	C35-C34-C33	2.54	130.94	127.31
4	y	304	CLA	CHA-C1A-NA	-2.53	120.60	126.40
6	1	316	0UR	C20-C7-C6	-2.53	114.09	118.08
4	y	309	CLA	CHA-C1A-NA	-2.53	120.61	126.40
4	y	314	CLA	CHA-C1A-NA	-2.53	120.61	126.40
6	y	317	0UR	O57-C45-C46	-2.52	114.75	123.58
6	1	316	0UR	C4-C3-C2	2.52	122.24	120.08
4	y	313	CLA	C4A-NA-C1A	2.52	107.84	106.71
4	y	305	CLA	CHA-C1A-NA	-2.51	120.64	126.40
4	y	312	CLA	C4A-NA-C1A	2.51	107.83	106.71
5	U	409	CHL	CHA-C1A-NA	-2.50	120.68	126.40
5	1	310	CHL	CHA-C1A-NA	-2.50	120.68	126.40
4	1	303	CLA	CMB-C2B-C1B	2.49	129.16	125.37
6	y	317	0UR	O39-C25-C24	-2.49	104.86	109.80
12	U	421	NEX	C12-C13-C14	2.48	122.75	118.94
8	1	314	0IE	C6-C7-C8	-2.47	115.15	118.94
4	U	416	CLA	CHA-C1A-NA	-2.47	120.75	126.40
4	U	415	CLA	CMB-C2B-C3B	-2.46	120.62	126.59
4	U	417	CLA	C4A-NA-C1A	2.45	107.81	106.71
4	1	306	CLA	CHC-C4B-NB	-2.45	121.67	124.26
4	U	415	CLA	OBD-CAD-C3D	2.43	134.37	128.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	y	319	0IE	O40-C34-C33	-2.43	104.98	109.80
6	y	318	0UR	C13-C12-C11	2.42	122.65	118.94
8	y	319	0IE	C15-C14-C13	-2.41	115.71	123.22
4	U	415	CLA	CMD-C2D-C1D	2.40	128.95	124.71
6	U	420	0UR	C23-C1-C27	-2.38	112.85	119.35
4	1	303	CLA	CAA-CBA-CGA	-2.37	106.23	112.51
4	1	308	CLA	CHC-C4B-NB	-2.36	121.76	124.26
7	U	419	LUT	C15-C35-C34	2.34	128.27	123.47
6	y	318	0UR	C29-C30-C31	-2.34	109.08	111.74
6	y	322	0UR	C22-C16-C17	-2.34	114.39	118.08
6	y	317	0UR	C43-C3-C2	2.34	122.15	116.66
6	1	312	0UR	O40-C30-C29	-2.34	104.83	110.74
6	U	420	0UR	C10-C9-C8	2.33	128.26	123.47
4	y	308	CLA	CHD-C1D-ND	-2.33	122.31	124.45
6	1	315	0UR	C36-C28-C29	-2.33	105.03	109.44
4	y	310	CLA	C4A-NA-C1A	2.32	107.75	106.71
4	1	302	CLA	CHC-C4B-NB	-2.31	121.81	124.26
4	1	302	CLA	C4A-NA-C1A	2.31	107.75	106.71
4	1	303	CLA	CHD-C1D-ND	-2.31	122.33	124.45
6	1	315	0UR	O40-C30-C29	-2.31	104.91	110.74
4	y	310	CLA	CHC-C4B-NB	-2.30	121.82	124.26
6	U	420	0UR	C9-C8-C7	2.30	130.59	127.31
4	1	303	CLA	CHA-C4D-ND	2.29	137.29	132.50
5	y	315	CHL	C4A-NA-C1A	2.28	107.73	106.71
6	y	318	0UR	C48-C47-C46	2.28	130.74	125.85
4	1	309	CLA	CHC-C4B-NB	-2.28	121.84	124.26
6	y	318	0UR	O39-C25-C26	-2.28	104.78	109.68
11	U	422	LMN	OAR-CCO-CCU	-2.28	105.07	110.35
7	U	419	LUT	C19-C9-C8	2.28	121.66	118.08
11	U	422	LMN	O4-C4-C5	-2.27	103.23	109.45
4	1	303	CLA	C3D-C2D-C1D	-2.27	102.73	105.83
6	1	312	0UR	C24-C25-C26	-2.27	107.20	110.30
4	U	411	CLA	C4A-NA-C1A	2.26	107.72	106.71
4	U	416	CLA	CHD-C1D-C2D	2.26	130.22	125.48
5	y	307	CHL	C2C-C3C-C4C	2.26	108.10	106.49
8	1	314	0IE	C38-C32-C31	2.26	112.94	109.71
4	y	304	CLA	CHD-C1D-C2D	2.26	130.21	125.48
6	y	322	0UR	C6-C7-C8	2.25	122.40	118.94
7	U	419	LUT	C11-C10-C9	2.25	130.52	127.31
4	y	306	CLA	CHC-C4B-NB	2.25	126.64	124.26
6	U	420	0UR	C47-C46-C45	2.25	128.65	122.92
4	U	405	CLA	C5-C3-C2	2.24	125.66	121.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	y	303	CLA	C5-C3-C2	2.24	125.66	121.12
7	y	320	LUT	C35-C34-C33	2.23	130.50	127.31
4	1	304	CLA	CHC-C4B-NB	-2.23	121.89	124.26
6	y	323	0UR	O42-C2-C3	-2.23	116.58	120.66
4	y	306	CLA	CBC-CAC-C3C	-2.22	106.31	112.43
6	y	317	0UR	C22-C16-C17	-2.22	114.58	118.08
4	1	307	CLA	CHC-C4B-NB	-2.22	121.91	124.26
4	1	307	CLA	O2D-CGD-CBD	2.22	115.21	111.27
8	y	321	0IE	C39-C32-C38	-2.21	101.74	108.53
4	1	303	CLA	CAC-C3C-C2C	-2.20	123.77	127.53
11	U	422	LMN	CBT-OBV-CCJ	2.20	119.07	113.36
4	y	314	CLA	CHC-C4B-NB	-2.20	121.93	124.26
11	U	422	LMN	O1-C1-C2	2.20	111.73	108.30
4	y	308	CLA	C3B-C2B-C1B	2.19	109.81	107.16
4	y	311	CLA	CHD-C1D-C2D	2.19	130.08	125.48
4	y	304	CLA	CHC-C4B-NB	-2.19	121.94	124.26
4	y	313	CLA	CHC-C4B-NB	-2.19	121.94	124.26
4	y	316	CLA	CHC-C4B-NB	-2.18	121.94	124.26
4	y	303	CLA	C4A-NA-C1A	2.18	107.69	106.71
4	U	415	CLA	CMB-C2B-C1B	2.18	128.69	125.37
8	1	314	0IE	O40-C34-C35	-2.18	105.00	109.68
6	U	420	0UR	O44-C45-C46	2.18	117.35	111.55
4	y	310	CLA	CHD-C1D-C2D	2.17	130.03	125.48
4	U	412	CLA	CHD-C1D-C2D	2.17	130.03	125.48
6	U	420	0UR	C6-C7-C8	2.17	122.27	118.94
4	U	405	CLA	C4A-NA-C1A	2.16	107.68	106.71
6	1	315	0UR	C43-C3-C2	2.16	121.73	116.66
6	1	312	0UR	C36-C28-C29	-2.16	105.35	109.44
12	U	421	NEX	C15-C35-C34	2.15	127.88	123.47
8	y	321	0IE	C22-C12-C11	2.15	125.94	122.92
8	y	321	0IE	C17-C16-C15	2.15	122.24	118.94
4	U	413	CLA	CHD-C1D-C2D	2.15	129.99	125.48
4	y	305	CLA	CHD-C1D-C2D	2.14	129.98	125.48
11	U	422	LMN	O5-C1-O1	-2.14	104.91	109.97
4	U	418	CLA	C4A-NA-C1A	2.13	107.66	106.71
4	y	314	CLA	C4A-NA-C1A	2.13	107.66	106.71
6	y	323	0UR	O44-C45-O57	2.13	127.61	122.93
4	1	304	CLA	C4A-NA-C1A	2.13	107.66	106.71
6	1	316	0UR	C37-C23-C1	2.12	112.74	109.71
6	y	317	0UR	C9-C8-C7	2.12	130.33	127.31
6	1	312	0UR	C43-C3-C2	2.12	121.63	116.66
6	1	315	0UR	C6-C7-C8	-2.11	115.70	118.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	y	306	CLA	CHB-C1B-NB	2.11	126.50	124.26
4	U	407	CLA	CHC-C4B-NB	-2.11	122.02	124.26
7	y	320	LUT	C1-C6-C7	2.11	121.75	115.78
6	y	317	0UR	C14-C15-C16	2.11	130.32	127.31
6	y	317	0UR	C48-C47-C46	2.11	129.49	125.34
11	U	422	LMN	OCB-CCQ-CCH	2.10	112.88	107.28
7	1	313	LUT	C20-C13-C12	-2.09	114.78	118.08
6	1	316	0UR	O44-C43-C3	-2.09	103.50	109.11
4	1	306	CLA	C4A-NA-C1A	2.09	107.65	106.71
4	1	311	CLA	CHD-C1D-C2D	2.09	129.86	125.48
4	1	308	CLA	C4A-NA-C1A	2.08	107.64	106.71
6	1	316	0UR	C23-C24-C25	-2.08	108.94	113.64
8	y	321	0IE	C22-C12-C13	-2.08	114.81	118.08
11	U	422	LMN	CBR-CCM-CBQ	2.08	113.85	109.97
12	U	421	NEX	C19-C9-C10	-2.07	120.03	122.92
5	U	409	CHL	C2C-C3C-C4C	2.07	107.96	106.49
5	U	409	CHL	CHD-C1D-C2D	2.07	129.81	125.48
5	y	307	CHL	C4A-NA-C1A	2.07	107.64	106.71
6	1	315	0UR	C10-C9-C8	-2.06	119.25	123.47
7	U	419	LUT	C20-C13-C14	-2.06	120.03	122.92
7	U	419	LUT	C15-C14-C13	2.06	130.25	127.31
4	U	415	CLA	CHC-C1C-NC	2.06	127.33	124.20
4	1	304	CLA	CHD-C1D-C2D	2.06	129.79	125.48
4	1	305	CLA	CHC-C4B-NB	-2.05	122.08	124.26
8	y	321	0IE	C5-C6-C7	2.05	132.18	126.42
11	U	422	LMN	O2-C2-C1	2.05	115.03	110.05
4	1	308	CLA	CHD-C1D-C2D	2.05	129.78	125.48
6	U	420	0UR	C43-C3-C4	-2.05	122.54	125.02
7	y	320	LUT	C7-C8-C9	-2.05	123.14	126.23
4	U	414	CLA	CHD-C1D-C2D	2.04	129.76	125.48
11	U	404	LMN	CBR-CCM-CBS	2.04	114.22	109.40
4	U	417	CLA	CHD-C1D-C2D	2.03	129.75	125.48
4	y	313	CLA	CHD-C1D-C2D	2.03	129.73	125.48
6	U	420	0UR	C36-C28-C38	-2.03	104.91	107.89
4	U	408	CLA	CHD-C1D-C2D	2.02	129.73	125.48
4	y	312	CLA	CHD-C1D-C2D	2.02	129.73	125.48
6	1	316	0UR	C35-C23-C37	-2.02	102.32	108.53
4	y	314	CLA	CHD-C1D-C2D	2.02	129.71	125.48
6	y	323	0UR	C35-C23-C1	2.02	112.59	109.71
6	y	318	0UR	O42-C2-C3	-2.01	116.98	120.66
6	y	317	0UR	C35-C23-C37	-2.01	102.36	108.53
5	U	406	CHL	CHD-C1D-C2D	2.01	129.69	125.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1	310	CHL	CHC-C4B-NB	-2.01	122.13	124.26

There are no chirality outliers.

All (434) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	1	303	CLA	C1A-C2A-CAA-CBA
4	1	303	CLA	C3A-C2A-CAA-CBA
4	1	303	CLA	C2C-C3C-CAC-CBC
4	1	303	CLA	C4C-C3C-CAC-CBC
4	1	306	CLA	C1A-C2A-CAA-CBA
4	1	307	CLA	CBD-CGD-O2D-CED
4	1	307	CLA	O1D-CGD-O2D-CED
4	1	309	CLA	O2A-C1-C2-C3
4	U	405	CLA	CBA-CGA-O2A-C1
4	U	405	CLA	O1A-CGA-O2A-C1
4	U	411	CLA	CBA-CGA-O2A-C1
4	U	411	CLA	O1A-CGA-O2A-C1
4	U	411	CLA	C2-C3-C5-C6
4	U	411	CLA	C4-C3-C5-C6
4	U	414	CLA	C4-C3-C5-C6
4	U	415	CLA	C1A-C2A-CAA-CBA
4	U	415	CLA	C2C-C3C-CAC-CBC
4	U	415	CLA	C4C-C3C-CAC-CBC
4	U	416	CLA	C4B-C3B-CAB-CBB
4	U	416	CLA	CBD-CGD-O2D-CED
4	U	416	CLA	C1-C2-C3-C4
4	U	416	CLA	C1-C2-C3-C5
4	U	417	CLA	CHA-CBD-CGD-O1D
4	U	417	CLA	CHA-CBD-CGD-O2D
4	y	305	CLA	C3A-C2A-CAA-CBA
4	y	305	CLA	CHA-CBD-CGD-O1D
4	y	305	CLA	CHA-CBD-CGD-O2D
4	y	306	CLA	C2B-C3B-CAB-CBB
4	y	306	CLA	C4B-C3B-CAB-CBB
4	y	308	CLA	C1-C2-C3-C4
4	y	308	CLA	C1-C2-C3-C5
4	y	312	CLA	C2-C3-C5-C6
4	y	312	CLA	C4-C3-C5-C6
5	U	410	CHL	C2-C3-C5-C6
5	U	410	CHL	C4-C3-C5-C6
5	y	307	CHL	O2A-C1-C2-C3

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Mol	Chain	Res	Type	Atoms
5	y	307	CHL	C2-C3-C5-C6
5	y	307	CHL	C4-C3-C5-C6
6	1	312	0UR	O44-C45-C46-C47
6	1	315	0UR	O42-C2-C3-C43
6	1	315	0UR	C5-C6-C7-C20
6	1	315	0UR	C5-C6-C7-C8
6	1	315	0UR	C11-C12-C13-C14
6	1	315	0UR	C21-C12-C13-C14
6	1	315	0UR	C15-C16-C17-C18
6	1	315	0UR	C22-C16-C17-C18
6	1	316	0UR	O42-C2-C3-C43
6	1	316	0UR	C3-C4-C5-C6
6	1	316	0UR	C5-C6-C7-C20
6	1	316	0UR	C5-C6-C7-C8
6	y	317	0UR	C2-C3-C43-O44
6	y	317	0UR	C4-C3-C43-O44
6	y	317	0UR	O42-C2-C3-C43
6	y	317	0UR	C46-C45-O44-C43
6	y	318	0UR	O42-C2-C3-C43
6	y	322	0UR	C2-C3-C43-O44
6	y	322	0UR	C4-C3-C43-O44
6	y	322	0UR	O42-C2-C3-C43
6	y	322	0UR	O42-C2-C3-C4
6	y	322	0UR	C22-C16-C17-C18
6	y	322	0UR	C17-C18-C19-C28
6	y	323	0UR	O42-C2-C3-C43
6	y	323	0UR	C5-C6-C7-C20
6	y	323	0UR	C5-C6-C7-C8
6	y	323	0UR	C11-C12-C13-C14
6	y	323	0UR	C21-C12-C13-C14
7	1	313	LUT	C6-C7-C8-C9
7	1	313	LUT	C10-C11-C12-C13
7	1	313	LUT	C11-C12-C13-C14
7	1	313	LUT	C11-C12-C13-C20
7	1	313	LUT	C26-C27-C28-C29
7	1	313	LUT	C27-C28-C29-C30
7	1	313	LUT	C27-C28-C29-C39
7	1	313	LUT	C32-C33-C34-C35
7	1	313	LUT	C40-C33-C34-C35
7	U	419	LUT	C1-C6-C7-C8
7	U	419	LUT	C5-C6-C7-C8
7	y	320	LUT	C1-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
7	y	320	LUT	C5-C6-C7-C8
7	y	320	LUT	C11-C12-C13-C14
7	y	320	LUT	C11-C12-C13-C20
7	y	320	LUT	C28-C29-C30-C31
7	y	320	LUT	C39-C29-C30-C31
7	y	320	LUT	C30-C31-C32-C33
7	y	320	LUT	C32-C33-C34-C35
7	y	320	LUT	C40-C33-C34-C35
8	1	314	0IE	O1-C2-C3-C20
8	y	319	0IE	C5-C6-C7-C21
8	y	319	0IE	O1-C2-C3-C20
8	y	319	0IE	O29-C20-C3-C4
8	y	319	0IE	O29-C20-C3-C2
8	y	319	0IE	C2-C30-C31-C36
8	y	319	0IE	C7-C8-C9-C10
8	y	321	0IE	C5-C6-C7-C21
8	y	321	0IE	C5-C6-C7-C8
8	y	321	0IE	C23-C16-C17-C18
9	U	402	LMG	O6-C1-O1-C7
9	U	402	LMG	O10-C28-O8-C9
9	U	402	LMG	C29-C28-O8-C9
10	U	403	LHG	C2-C3-O3-P
10	U	403	LHG	C3-O3-P-O4
10	U	403	LHG	C4-O6-P-O4
10	U	403	LHG	C4-O6-P-O5
11	U	404	LMN	CBL-CBR-CCM-CBQ
11	U	404	LMN	CBL-CBR-CCM-CBS
11	U	404	LMN	CBL-CBR-CCM-CBT
11	U	422	LMN	C2-C1-O1-CBS
11	U	422	LMN	O5-C1-O1-CBS
11	U	422	LMN	CBK-CBQ-CCM-CBS
11	U	422	LMN	CBL-CBR-CCM-CBQ
11	U	422	LMN	O1-CBS-CCM-CBR
11	U	422	LMN	OBX-CCJ-OBV-CBT
11	y	301	LMN	O5-C1-O1-CBS
11	y	301	LMN	CBL-CBR-CCM-CBQ
11	y	301	LMN	CBL-CBR-CCM-CBS
11	y	301	LMN	CBL-CBR-CCM-CBT
11	y	302	LMN	O1-CBS-CCM-CBQ
11	y	302	LMN	OBV-CBT-CCM-CBQ
11	y	302	LMN	OBV-CBT-CCM-CBR
12	U	421	NEX	C12-C13-C14-C15

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Mol	Chain	Res	Type	Atoms
12	U	421	NEX	C20-C13-C14-C15
12	U	421	NEX	C32-C33-C34-C35
12	U	421	NEX	C40-C33-C34-C35
4	U	416	CLA	O1D-CGD-O2D-CED
11	U	404	LMN	OBY-CCR-O4-C4
6	y	317	0UR	O57-C45-O44-C43
4	y	308	CLA	CBA-CGA-O2A-C1
6	U	420	0UR	C46-C45-O44-C43
4	U	414	CLA	C2-C3-C5-C6
4	1	303	CLA	C2A-CAA-CBA-CGA
4	U	414	CLA	C2A-CAA-CBA-CGA
4	y	308	CLA	O1A-CGA-O2A-C1
8	y	319	0IE	C9-C10-C11-C12
11	y	302	LMN	C5-C4-O4-CCR
6	U	420	0UR	O57-C45-O44-C43
11	y	302	LMN	CCH-CCQ-OCB-CCS
11	y	302	LMN	OBV-CBT-CCM-CBS
6	U	420	0UR	O44-C45-C46-C47
7	y	320	LUT	C14-C15-C35-C34
11	U	422	LMN	C3-C4-O4-CCR
4	U	415	CLA	CBD-CGD-O2D-CED
11	y	302	LMN	C4-C5-C6-O6
4	U	418	CLA	C2A-CAA-CBA-CGA
11	U	422	LMN	OAJ-CBN-CCD-OBZ
11	y	302	LMN	O5-C5-C6-O6
6	y	322	0UR	O44-C45-C46-C47
7	1	313	LUT	C9-C10-C11-C12
8	1	314	0IE	C13-C14-C15-C16
9	U	402	LMG	C2-C1-O1-C7
4	U	416	CLA	C6-C7-C8-C9
4	1	303	CLA	CBD-CGD-O2D-CED
6	1	312	0UR	C5-C6-C7-C20
6	1	316	0UR	C22-C16-C17-C18
6	U	420	0UR	C21-C12-C13-C14
6	y	317	0UR	C5-C6-C7-C20
6	y	322	0UR	C21-C12-C13-C14
7	y	320	LUT	C7-C8-C9-C19
8	1	314	0IE	C5-C6-C7-C21
8	1	314	0IE	C23-C16-C17-C18
8	1	314	0IE	C15-C16-C17-C18
11	U	422	LMN	O5-C5-C6-O6
11	U	404	LMN	CBI-CBK-CBQ-CCM

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Mol	Chain	Res	Type	Atoms
11	U	422	LMN	CBI-CBK-CBQ-CCM
4	y	308	CLA	C5-C6-C7-C8
11	U	404	LMN	C4-C5-C6-O6
5	y	307	CHL	C5-C6-C7-C8
11	U	422	LMN	OAJ-CBN-CCD-CCO
4	U	412	CLA	C8-C10-C11-C12
4	U	416	CLA	C5-C6-C7-C8
4	U	405	CLA	C15-C16-C17-C18
6	1	312	0UR	C46-C45-O44-C43
6	y	318	0UR	C46-C45-O44-C43
4	y	306	CLA	C2A-CAA-CBA-CGA
4	U	415	CLA	C3-C5-C6-C7
4	U	414	CLA	C5-C6-C7-C8
6	U	420	0UR	O57-C45-C46-C47
7	1	313	LUT	C30-C31-C32-C33
7	y	320	LUT	C10-C11-C12-C13
10	U	403	LHG	O2-C2-C3-O3
6	y	322	0UR	C46-C45-O44-C43
10	U	403	LHG	C3-O3-P-O6
10	U	403	LHG	C4-O6-P-O3
10	U	403	LHG	C1-C2-C3-O3
6	y	322	0UR	O57-C45-O44-C43
6	1	312	0UR	C3-C4-C5-C6
6	U	420	0UR	C3-C4-C5-C6
7	1	313	LUT	C11-C10-C9-C19
7	1	313	LUT	C20-C13-C14-C15
11	y	301	LMN	CCF-CCQ-OCB-CCS
11	y	302	LMN	CBH-CBJ-CBL-CBR
7	1	313	LUT	C11-C10-C9-C8
7	1	313	LUT	C12-C13-C14-C15
4	U	407	CLA	C10-C11-C12-C13
6	1	316	0UR	C46-C45-O44-C43
6	y	322	0UR	C51-C52-C53-C54
11	U	422	LMN	CBE-CBG-CBI-CBK
11	U	404	LMN	O5-C5-C6-O6
4	U	405	CLA	C2A-CAA-CBA-CGA
4	y	305	CLA	C2A-CAA-CBA-CGA
5	U	410	CHL	C2A-CAA-CBA-CGA
6	y	323	0UR	C22-C16-C17-C18
6	y	322	0UR	O57-C45-C46-C47
6	1	316	0UR	C11-C12-C13-C14
6	y	323	0UR	C15-C16-C17-C18

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Mol	Chain	Res	Type	Atoms
7	y	320	LUT	C7-C8-C9-C10
4	U	407	CLA	C3-C5-C6-C7
11	U	422	LMN	CAX-CAZ-CBB-CBD
4	U	408	CLA	C6-C7-C8-C10
11	U	422	LMN	CAY-CBA-CBC-CBE
11	U	422	LMN	CAZ-CBB-CBD-CBF
4	U	415	CLA	O1D-CGD-O2D-CED
11	U	422	LMN	CCF-CCQ-OCB-CCS
6	1	312	0UR	O57-C45-O44-C43
6	1	316	0UR	O57-C45-O44-C43
6	y	318	0UR	O57-C45-O44-C43
4	U	407	CLA	C3A-C2A-CAA-CBA
6	y	323	0UR	C51-C52-C53-C54
4	1	307	CLA	C2C-C3C-CAC-CBC
11	y	302	LMN	O1-CBS-CCM-CBT
7	1	313	LUT	C14-C15-C35-C34
4	y	311	CLA	C3-C5-C6-C7
4	U	416	CLA	C2B-C3B-CAB-CBB
11	U	422	LMN	CBF-CBH-CBJ-CBL
4	U	415	CLA	CBA-CGA-O2A-C1
11	U	422	LMN	OAL-CBP-CCF-CCQ
11	U	404	LMN	CBB-CBD-CBF-CBH
6	y	323	0UR	C48-C49-C50-C51
4	U	407	CLA	C4-C3-C5-C6
4	U	405	CLA	C11-C10-C8-C7
4	U	407	CLA	C2-C3-C5-C6
5	U	409	CHL	C6-C7-C8-C10
4	U	415	CLA	O1A-CGA-O2A-C1
11	U	422	LMN	CCH-CCQ-OCB-CCS
6	y	323	0UR	O57-C45-C46-C47
11	y	301	LMN	CCH-CCQ-OCB-CCS
4	y	306	CLA	O1D-CGD-O2D-CED
11	y	301	LMN	C2-C1-O1-CBS
9	U	401	LMG	O6-C5-C6-O5
11	U	404	LMN	OAL-CBP-CCF-OBX
11	y	301	LMN	OAJ-CBN-CCD-OBZ
4	y	311	CLA	C2-C3-C5-C6
4	U	405	CLA	C11-C10-C8-C9
5	U	409	CHL	C6-C7-C8-C9
11	U	422	LMN	C5-C4-O4-CCR
6	y	317	0UR	C5-C6-C7-C8
4	U	407	CLA	C1A-C2A-CAA-CBA

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Mol	Chain	Res	Type	Atoms
4	y	305	CLA	C1A-C2A-CAA-CBA
4	U	408	CLA	C6-C7-C8-C9
6	y	322	0UR	C48-C49-C50-C51
11	y	302	LMN	OAL-CBP-CCF-OBX
11	U	404	LMN	OBZ-CCS-OCB-CCQ
9	U	402	LMG	C8-C7-O1-C1
6	1	312	0UR	O57-C45-C46-C47
6	U	420	0UR	C47-C48-C49-C50
11	U	422	LMN	OAI-CBM-CCC-OBY
4	U	416	CLA	CBA-CGA-O2A-C1
11	U	404	LMN	O1-CBS-CCM-CBT
4	U	414	CLA	C2-C1-O2A-CGA
11	y	302	LMN	CBJ-CBL-CBR-CCM
11	y	302	LMN	C2-C1-O1-CBS
11	y	302	LMN	CCF-CCQ-OCB-CCS
5	U	410	CHL	C11-C10-C8-C7
5	U	410	CHL	C11-C10-C8-C9
11	y	302	LMN	C3-C4-O4-CCR
11	U	404	LMN	CAA-CAW-CAY-CBA
6	y	323	0UR	O44-C45-C46-C47
4	y	309	CLA	C5-C6-C7-C8
4	U	416	CLA	C4-C3-C5-C6
11	y	301	LMN	CBJ-CBL-CBR-CCM
11	U	422	LMN	OAL-CBP-CCF-OBX
11	U	422	LMN	C4-C5-C6-O6
4	U	416	CLA	C8-C10-C11-C12
6	y	323	0UR	C49-C50-C51-C52
11	U	422	LMN	CAA-CAW-CAY-CBA
4	U	416	CLA	C2-C3-C5-C6
4	1	307	CLA	C4C-C3C-CAC-CBC
6	U	420	0UR	C48-C49-C50-C51
4	U	416	CLA	O1A-CGA-O2A-C1
4	U	405	CLA	C16-C17-C18-C20
11	U	422	LMN	CAB-CAX-CAZ-CBB
4	y	309	CLA	C2C-C3C-CAC-CBC
4	U	415	CLA	C2A-CAA-CBA-CGA
6	1	316	0UR	C21-C12-C13-C14
6	1	312	0UR	C5-C6-C7-C8
6	1	316	0UR	C15-C16-C17-C18
6	y	322	0UR	C15-C16-C17-C18
8	1	314	0IE	C5-C6-C7-C8
8	y	321	0IE	C15-C16-C17-C18

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Mol	Chain	Res	Type	Atoms
11	U	404	LMN	CBG-CBI-CBK-CBQ
6	1	315	0UR	C3-C4-C5-C6
7	1	313	LUT	C33-C34-C35-C15
6	1	312	0UR	O42-C2-C3-C4
6	1	316	0UR	O42-C2-C3-C4
6	U	420	0UR	O42-C2-C3-C4
6	y	317	0UR	O42-C2-C3-C4
6	y	317	0UR	C45-C46-C47-C48
6	y	318	0UR	O42-C2-C3-C4
8	1	314	0IE	O1-C2-C3-C4
8	y	319	0IE	O1-C2-C3-C4
8	y	321	0IE	O1-C2-C3-C4
4	U	405	CLA	C10-C11-C12-C13
4	U	407	CLA	CAD-CBD-CGD-O2D
4	y	310	CLA	CAD-CBD-CGD-O2D
5	1	310	CHL	CAD-CBD-CGD-O2D
5	y	315	CHL	CAD-CBD-CGD-O2D
9	U	401	LMG	C7-C8-O7-C10
4	y	310	CLA	C4-C3-C5-C6
11	y	301	LMN	OBX-CCJ-OBV-CBT
11	y	302	LMN	OBX-CCJ-OBV-CBT
4	y	304	CLA	CAA-CBA-CGA-O2A
4	1	303	CLA	CHA-CBD-CGD-O1D
4	y	313	CLA	CHA-CBD-CGD-O1D
4	y	313	CLA	CHA-CBD-CGD-O2D
11	U	404	LMN	O1-CBS-CCM-CBQ
11	U	404	LMN	O1-CBS-CCM-CBR
11	U	422	LMN	O1-CBS-CCM-CBT
11	y	302	LMN	O1-CBS-CCM-CBR
5	U	409	CHL	C3-C5-C6-C7
11	y	301	LMN	OBZ-CCS-OCB-CCQ
4	U	405	CLA	C16-C17-C18-C19
11	U	422	LMN	CBD-CBF-CBH-CBJ
4	U	416	CLA	C2A-CAA-CBA-CGA
4	y	311	CLA	C5-C6-C7-C8
6	y	318	0UR	C9-C10-C11-C12
7	1	313	LUT	C13-C14-C15-C35
4	y	311	CLA	C4-C3-C5-C6
6	U	420	0UR	O42-C2-C3-C43
6	y	322	0UR	C17-C18-C19-C32
8	y	321	0IE	O1-C2-C3-C20
6	y	322	0UR	C27-C1-C41-C2

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Mol	Chain	Res	Type	Atoms
11	U	422	LMN	CCM-CBT-OBV-CCJ
11	y	302	LMN	CCM-CBS-O1-C1
4	U	414	CLA	C13-C15-C16-C17
11	y	301	LMN	CCW-CCS-OCB-CCQ
4	y	305	CLA	C5-C6-C7-C8
4	y	303	CLA	C2A-CAA-CBA-CGA
4	U	415	CLA	C2-C1-O2A-CGA
4	y	305	CLA	C2-C1-O2A-CGA
11	U	422	LMN	CCW-CCS-OCB-CCQ
11	U	422	LMN	CCL-CCJ-OBV-CBT
11	y	301	LMN	CBH-CBJ-CBL-CBR
11	U	422	LMN	OBY-CCR-O4-C4
4	U	416	CLA	C6-C7-C8-C10
11	U	422	LMN	OBZ-CCS-OCB-CCQ
5	y	307	CHL	CAA-CBA-CGA-O2A
11	U	422	LMN	CBG-CBI-CBK-CBQ
6	y	318	0UR	C46-C47-C48-C49
5	U	409	CHL	C4-C3-C5-C6
6	y	323	0UR	C47-C48-C49-C50
10	U	403	LHG	C7-C8-C9-C10
8	1	314	0IE	C9-C10-C11-C12
4	U	408	CLA	C5-C6-C7-C8
4	U	411	CLA	C2-C1-O2A-CGA
4	y	314	CLA	C2-C1-O2A-CGA
4	U	415	CLA	C3A-C2A-CAA-CBA
4	U	416	CLA	C3A-C2A-CAA-CBA
4	1	308	CLA	CAA-CBA-CGA-O1A
11	y	302	LMN	CBG-CBI-CBK-CBQ
11	U	422	LMN	CCV-CCR-O4-C4
12	U	421	NEX	C39-C29-C30-C31
5	U	410	CHL	O2A-C1-C2-C3
4	U	416	CLA	C1A-C2A-CAA-CBA
4	1	303	CLA	CAA-CBA-CGA-O1A
4	1	308	CLA	CAA-CBA-CGA-O2A
12	U	421	NEX	C28-C29-C30-C31
6	1	312	0UR	C9-C10-C11-C12
6	y	323	0UR	C7-C8-C9-C10
7	1	313	LUT	C29-C30-C31-C32
11	U	404	LMN	CBD-CBF-CBH-CBJ
11	U	422	LMN	CBL-CBR-CCM-CBS
11	U	422	LMN	CBL-CBR-CCM-CBT
5	U	410	CHL	C8-C10-C11-C12

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Mol	Chain	Res	Type	Atoms
6	1	315	0UR	C13-C14-C15-C16
4	y	308	CLA	C4-C3-C5-C6
4	y	310	CLA	C2-C3-C5-C6
5	y	315	CHL	CAA-CBA-CGA-O2A
4	1	303	CLA	CAA-CBA-CGA-O2A
4	y	309	CLA	C8-C10-C11-C12
6	y	323	0UR	O42-C2-C3-C4
11	U	404	LMN	CCH-CCQ-OCB-CCS
5	U	410	CHL	C3A-C2A-CAA-CBA
4	1	303	CLA	CAD-CBD-CGD-O2D
4	1	304	CLA	CAD-CBD-CGD-O2D
4	U	408	CLA	CAD-CBD-CGD-O2D
4	U	413	CLA	CAD-CBD-CGD-O2D
4	y	303	CLA	CAD-CBD-CGD-O2D
4	y	316	CLA	CAD-CBD-CGD-O2D
11	U	404	LMN	CCW-CCS-OCB-CCQ
11	U	404	LMN	CCF-CCQ-OCB-CCS
5	y	315	CHL	CAA-CBA-CGA-O1A
4	y	305	CLA	CAA-CBA-CGA-O2A
11	U	422	LMN	CAW-CAY-CBA-CBC
6	U	420	0UR	C11-C12-C13-C14
8	y	319	0IE	C5-C6-C7-C8
4	U	405	CLA	O2A-C1-C2-C3
4	1	303	CLA	CHA-CBD-CGD-O2D
4	1	309	CLA	CHA-CBD-CGD-O1D
4	1	309	CLA	CHA-CBD-CGD-O2D
4	1	311	CLA	CHA-CBD-CGD-O2D
4	U	416	CLA	CHA-CBD-CGD-O1D
4	U	416	CLA	CHA-CBD-CGD-O2D
6	y	323	0UR	C46-C47-C48-C49
11	U	422	LMN	O1-CBS-CCM-CBQ
4	U	416	CLA	C11-C10-C8-C9
8	1	314	0IE	O29-C20-C3-C4
4	U	415	CLA	C6-C7-C8-C9
5	U	406	CHL	C10-C11-C12-C13
6	y	317	0UR	C11-C12-C13-C14
6	y	318	0UR	C15-C16-C17-C18
5	U	410	CHL	C1A-C2A-CAA-CBA
5	y	307	CHL	C3-C5-C6-C7
4	U	407	CLA	C4B-C3B-CAB-CBB
4	U	417	CLA	C4B-C3B-CAB-CBB
4	y	313	CLA	C4B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
9	U	401	LMG	O8-C28-C29-C30
4	U	405	CLA	C5-C6-C7-C8
4	y	305	CLA	CAA-CBA-CGA-O1A
5	U	409	CHL	C2-C3-C5-C6
4	y	308	CLA	CAD-CBD-CGD-O1D
6	1	316	0UR	C23-C1-C41-C2
6	y	323	0UR	C23-C1-C41-C2
8	y	319	0IE	C2-C30-C31-C32
11	y	301	LMN	CBF-CBH-CBJ-CBL
4	U	414	CLA	C11-C10-C8-C7
6	1	312	0UR	O42-C2-C3-C43
6	1	316	0UR	C3-C2-C41-C1
6	y	318	0UR	C3-C2-C41-C1
6	y	322	0UR	C3-C2-C41-C1
8	1	314	0IE	O29-C20-C3-C2
6	y	322	0UR	C11-C12-C13-C14
6	y	323	0UR	C13-C14-C15-C16
4	y	304	CLA	CAA-CBA-CGA-O1A
10	U	403	LHG	O7-C7-C8-C9
4	U	417	CLA	CAA-CBA-CGA-O2A

There are no ring outliers.

51 monomers are involved in 124 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	y	319	0IE	2	0
4	y	305	CLA	4	0
4	y	316	CLA	2	0
5	y	307	CHL	2	0
11	U	422	LMN	1	0
4	1	307	CLA	1	0
4	y	314	CLA	2	0
4	y	312	CLA	2	0
4	y	311	CLA	1	0
6	1	316	0UR	1	0
4	y	309	CLA	5	0
4	U	416	CLA	7	0
7	y	320	LUT	5	0
5	U	410	CHL	1	0
5	1	310	CHL	1	0
4	1	301	CLA	2	0
5	U	406	CHL	1	0

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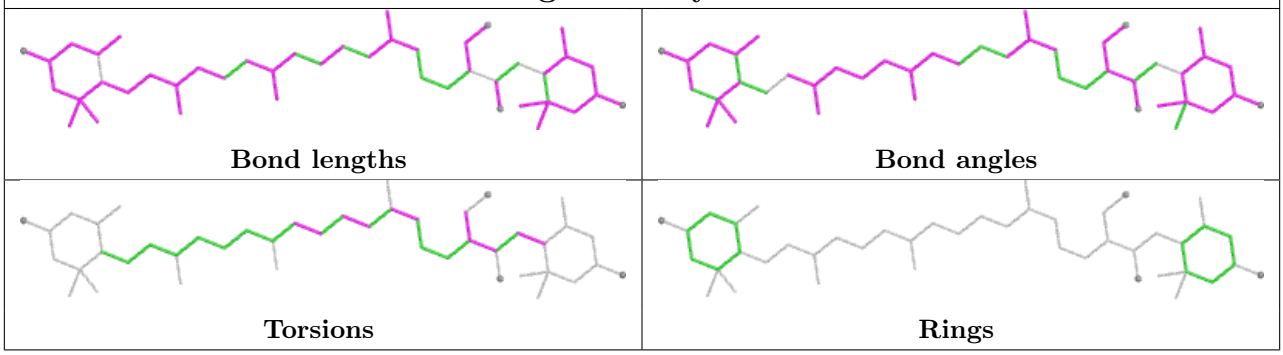
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	1	304	CLA	1	0
4	1	305	CLA	2	0
4	1	311	CLA	1	0
4	1	306	CLA	5	0
4	U	405	CLA	3	0
4	U	408	CLA	1	0
4	y	306	CLA	11	0
4	1	309	CLA	1	0
4	y	308	CLA	4	0
5	U	409	CHL	1	0
7	1	313	LUT	4	0
9	U	402	LMG	4	0
11	U	404	LMN	2	0
4	1	302	CLA	3	0
5	y	315	CHL	3	0
4	1	308	CLA	3	0
11	y	302	LMN	1	0
4	U	418	CLA	2	0
4	U	417	CLA	1	0
4	U	415	CLA	10	0
4	U	414	CLA	5	0
4	U	413	CLA	2	0
4	y	310	CLA	1	0
4	y	303	CLA	1	0
6	y	317	0UR	3	0
11	y	301	LMN	5	0
4	1	303	CLA	7	0
7	U	419	LUT	4	0
4	U	411	CLA	2	0
4	U	412	CLA	1	0
4	y	304	CLA	1	0
6	y	323	0UR	1	0
4	y	313	CLA	1	0
4	U	407	CLA	1	0

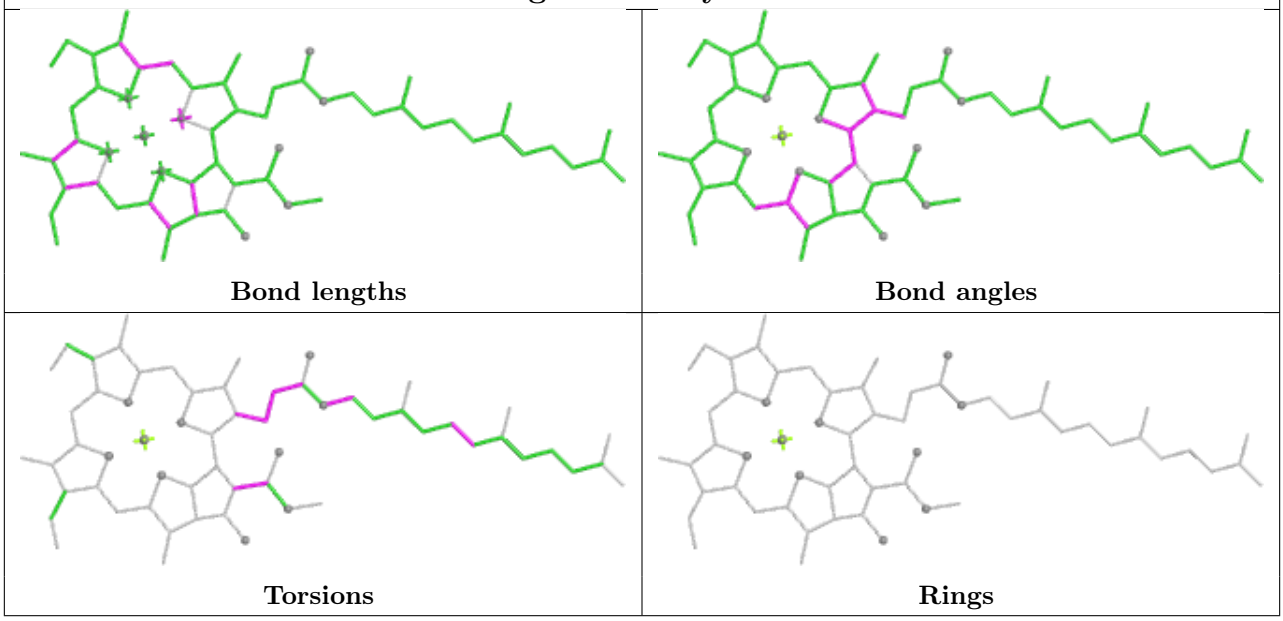
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

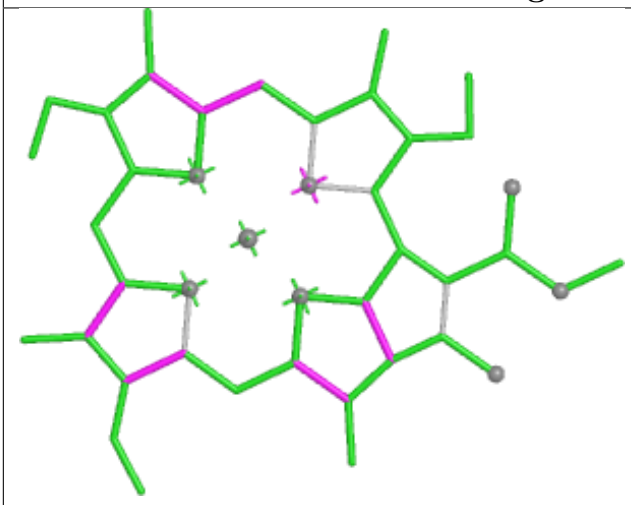
Ligand 0IE y 319



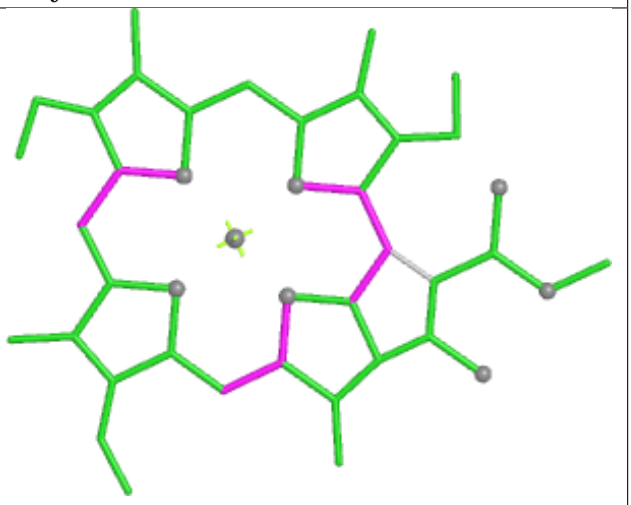
Ligand CLA y 305



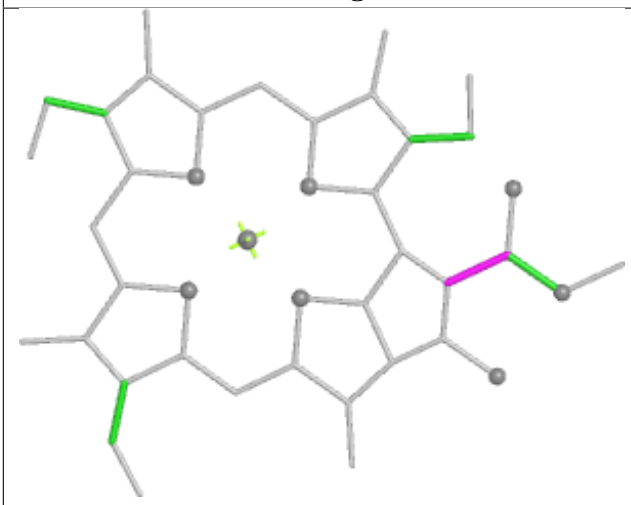
Ligand CLA y 316



Bond lengths



Bond angles

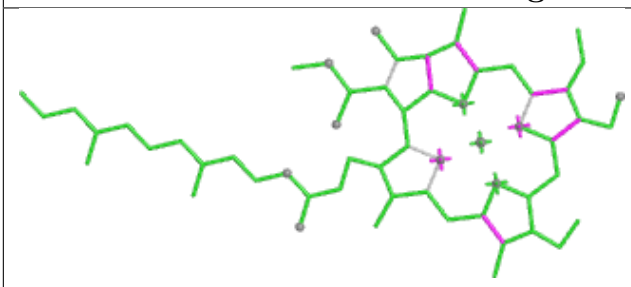


Torsions

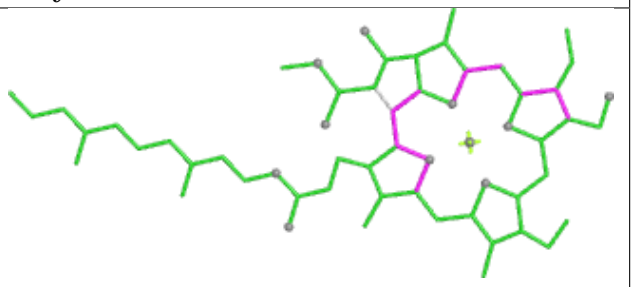


Rings

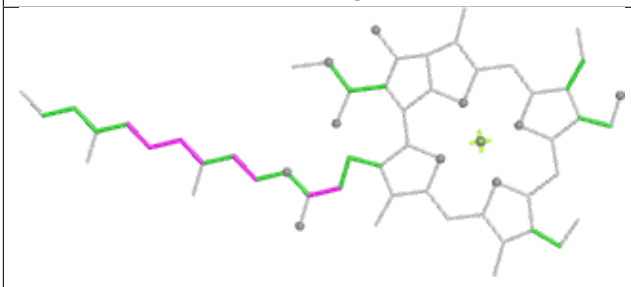
Ligand CHL y 307



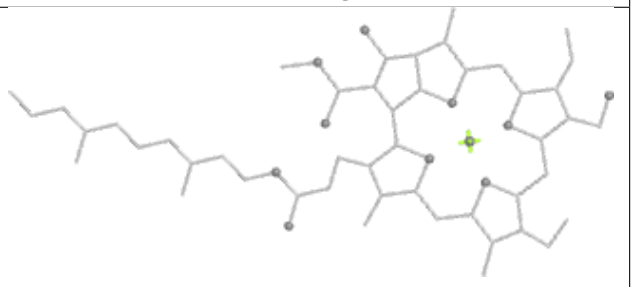
Bond lengths



Bond angles

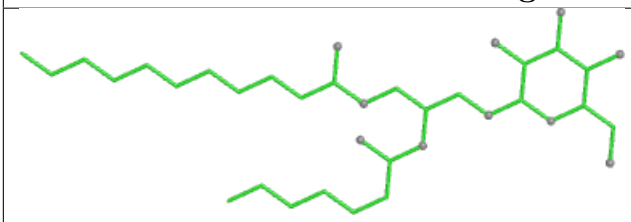


Torsions

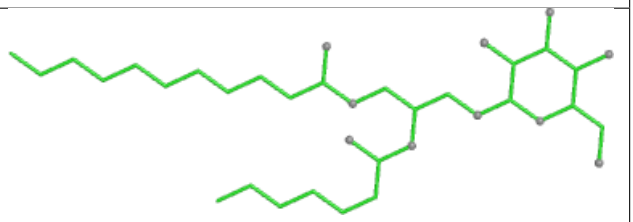


Rings

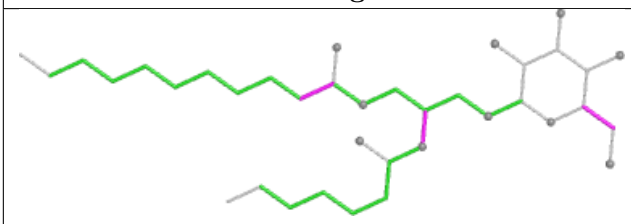
Ligand LMG U 401



Bond lengths



Bond angles



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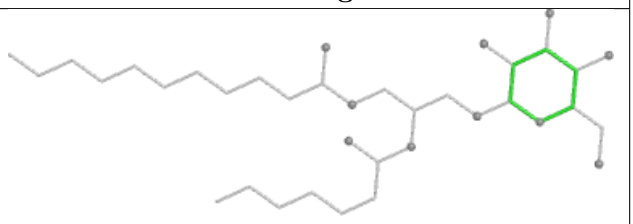
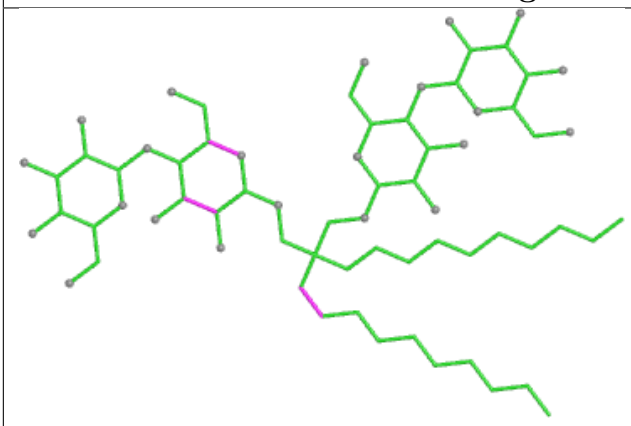


Rings

Ligand LMN U 422



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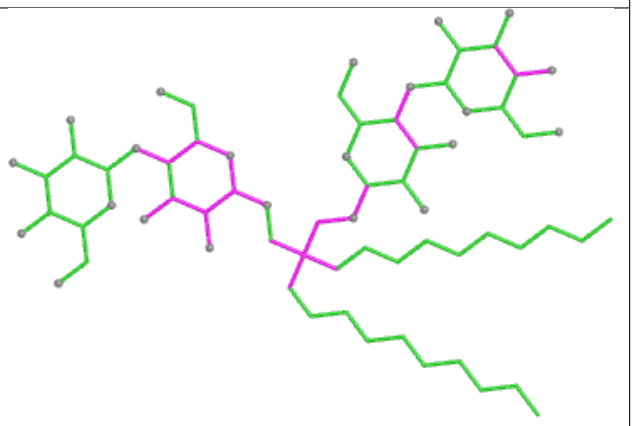
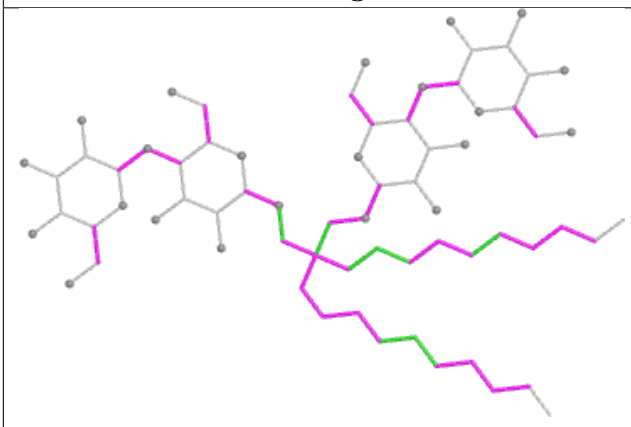
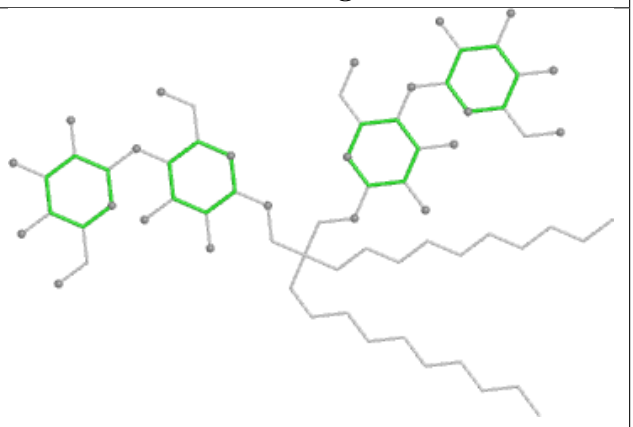


Bond angles

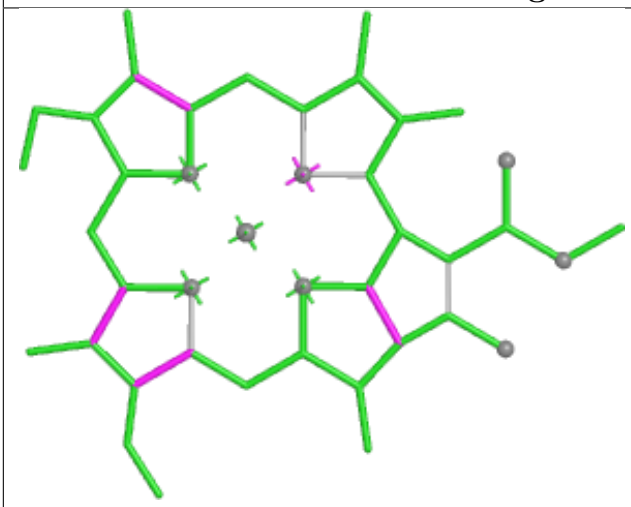


Torsions



Rings

Ligand CLA 1 307



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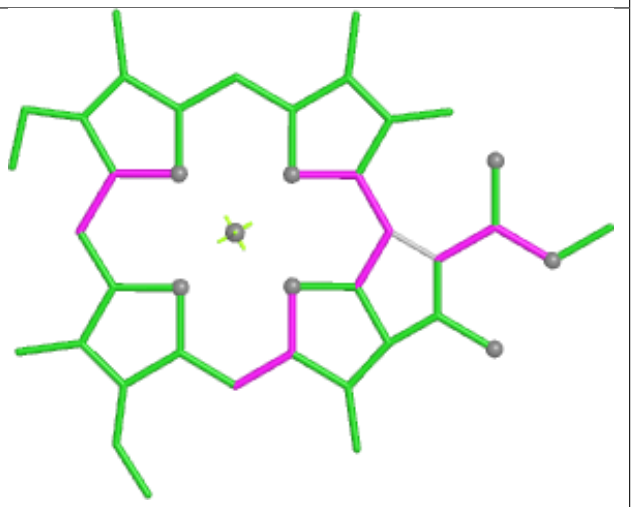

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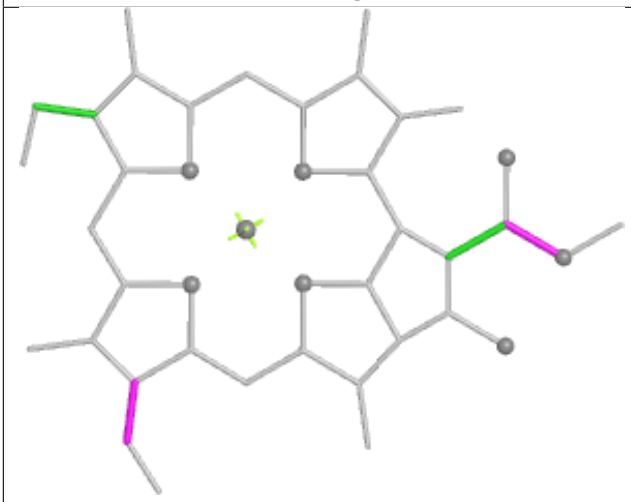

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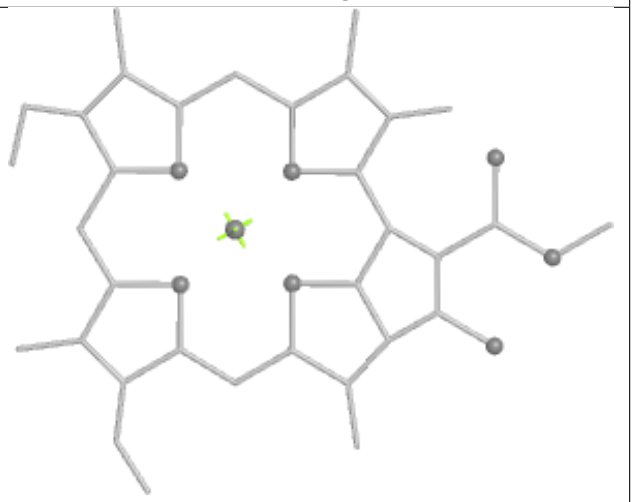
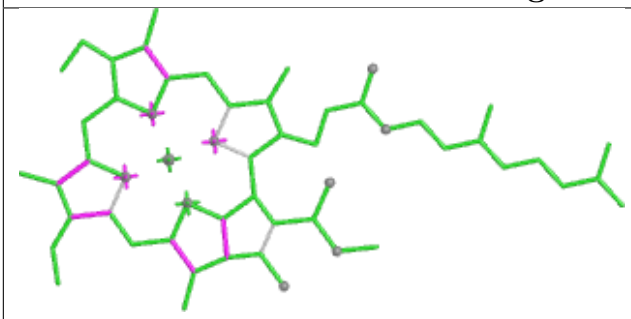


Rings

Ligand CLA y 314



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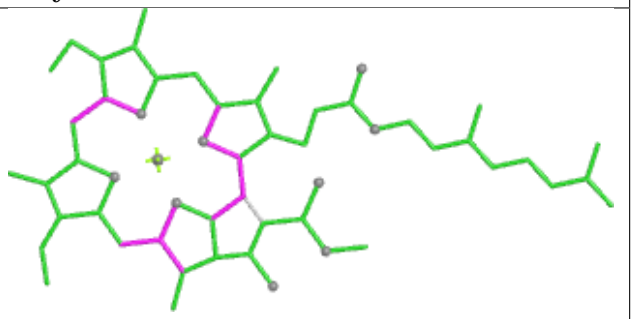

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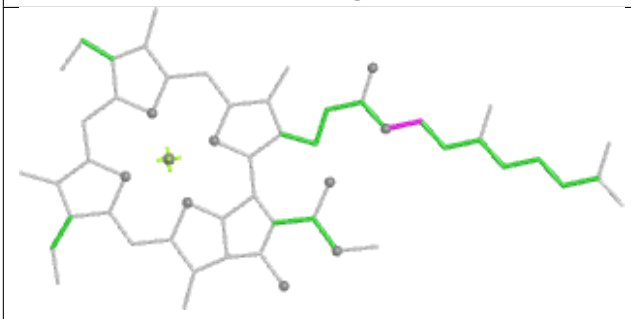

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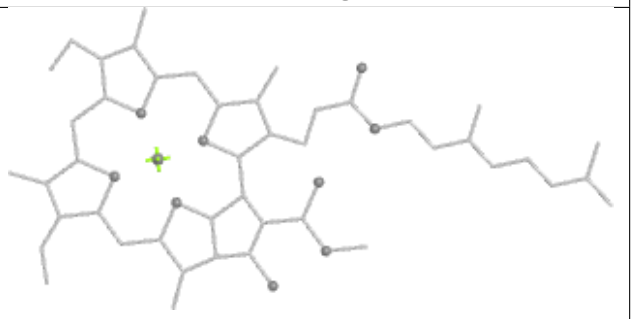
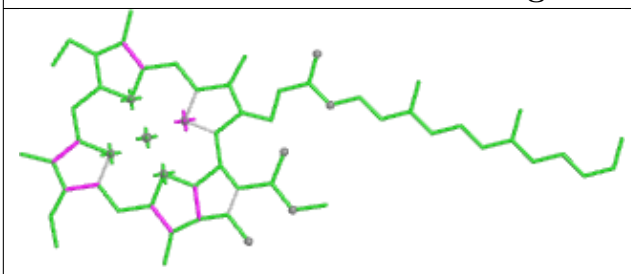
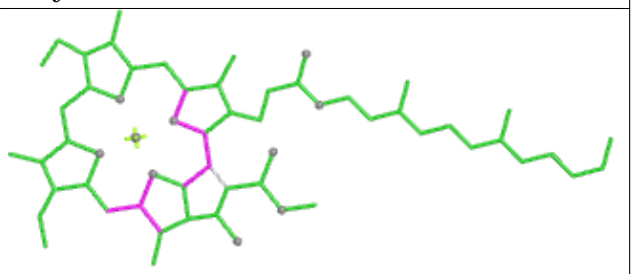


Rings

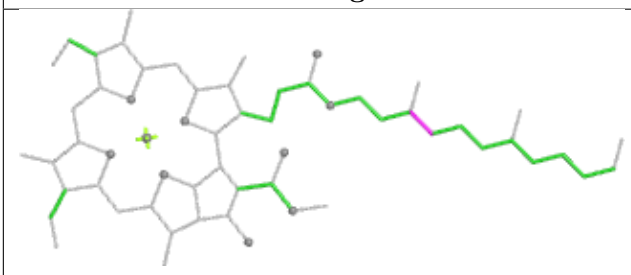
Ligand CLA y 312



Bond lengths



Bond angles



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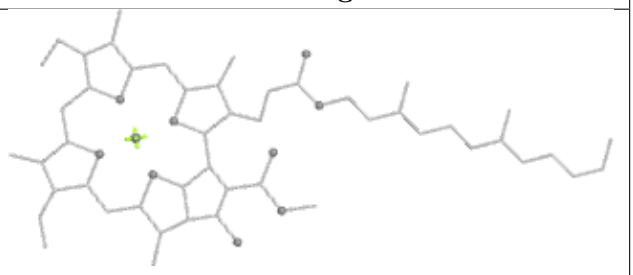
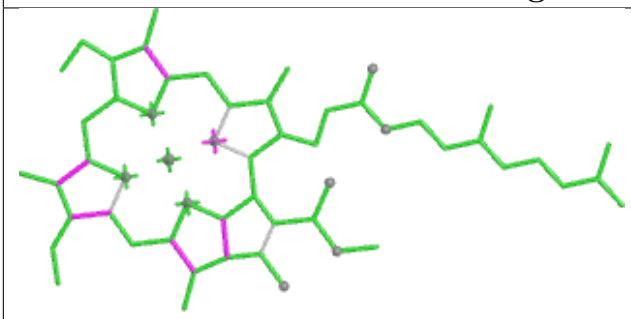


Rings

Ligand CLA y 311



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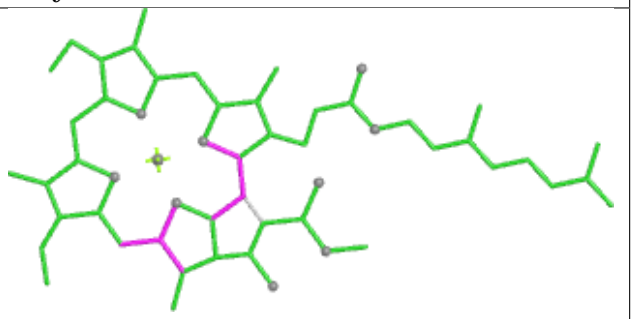
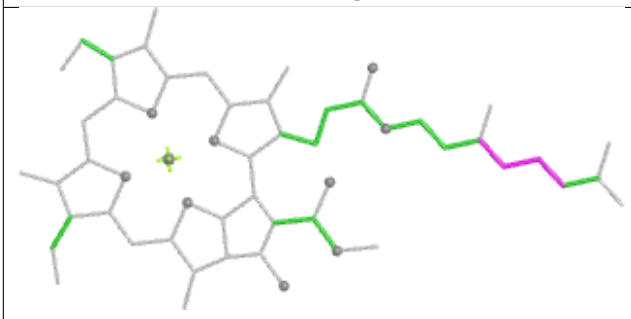


Bond angles



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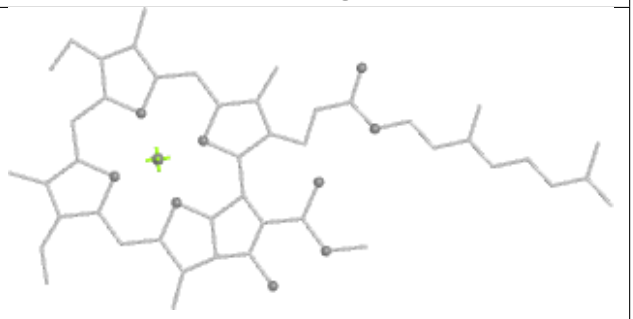
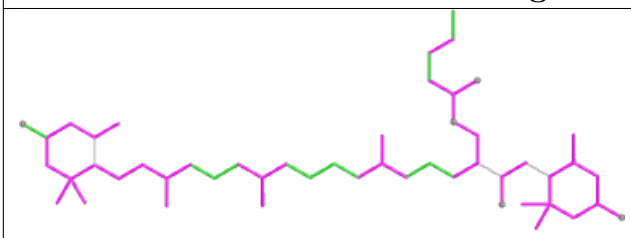


Rings

Ligand 0UR 1 316



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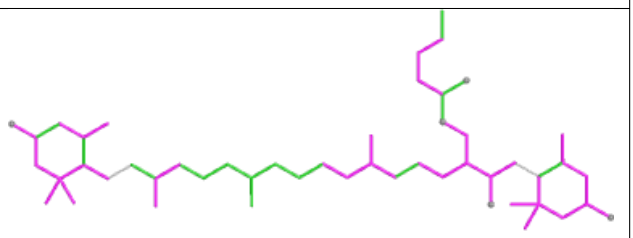
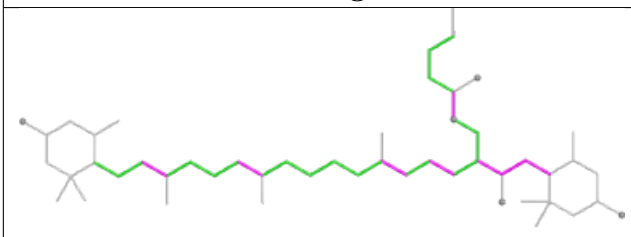
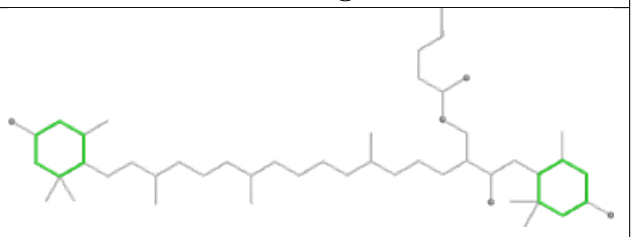


Bond angles

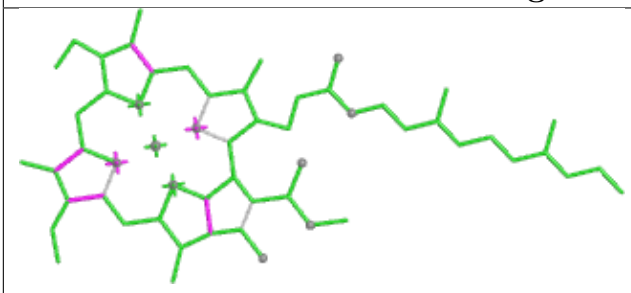


Torsions



Rings

Ligand CLA y 309



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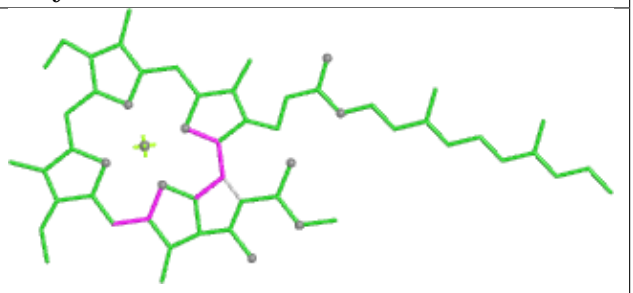
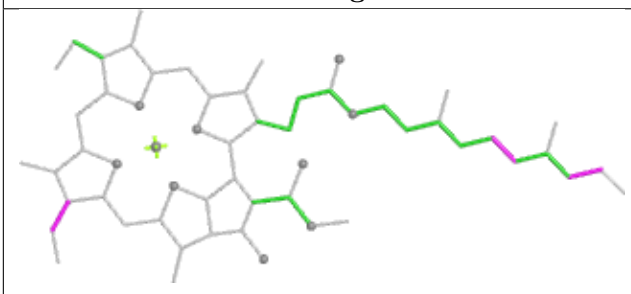


Bond angles



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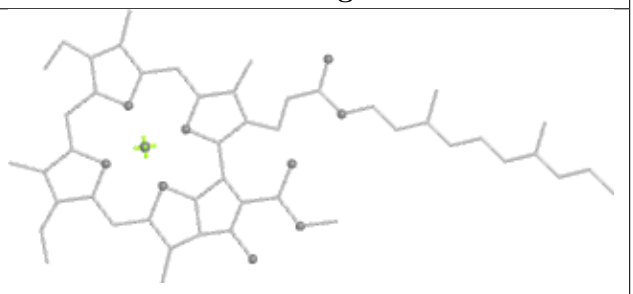
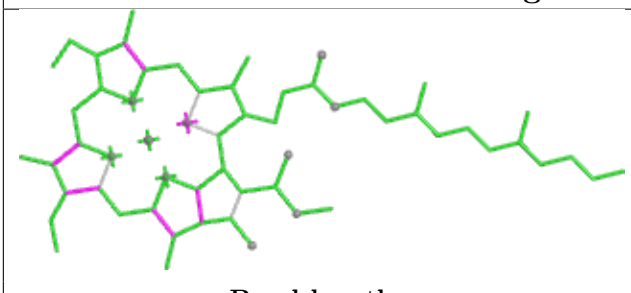


Rings

Ligand CLA U 416



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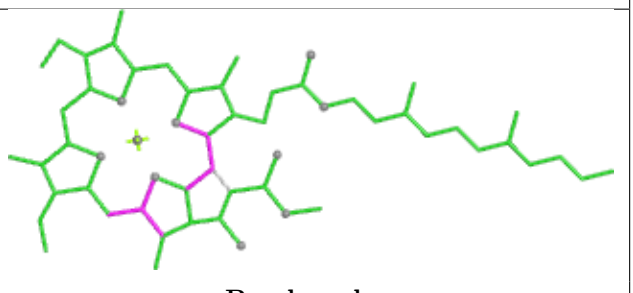
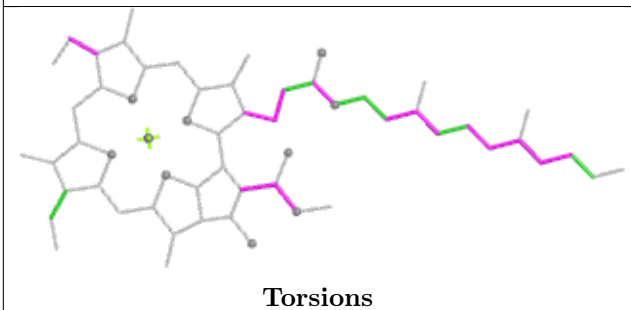


Bond angles



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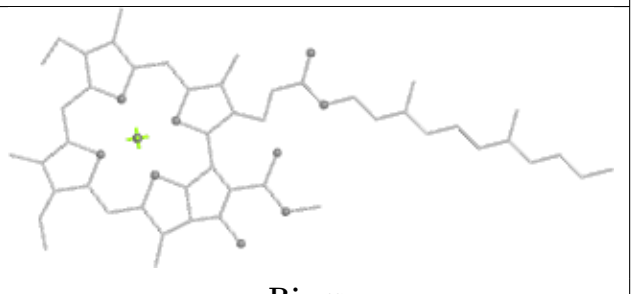
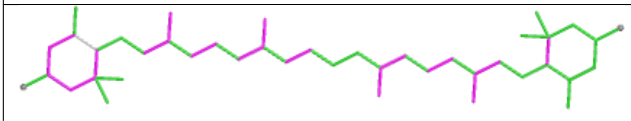


Rings

Ligand LUT y 320



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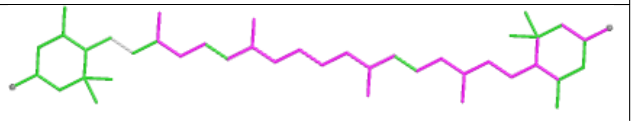

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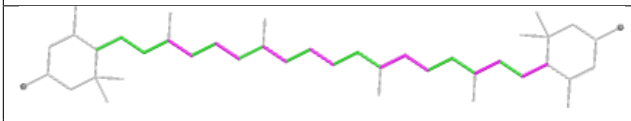

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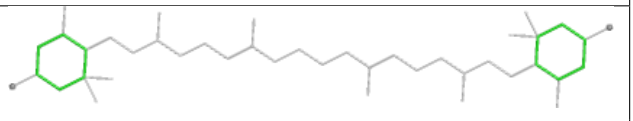
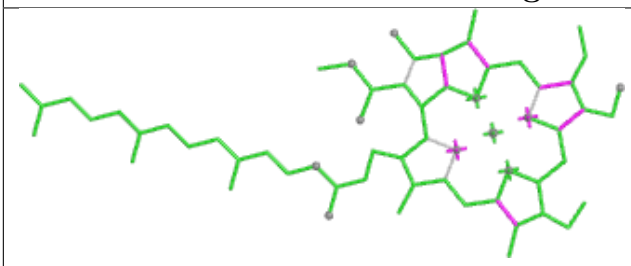


Rings

Ligand CHL U 410



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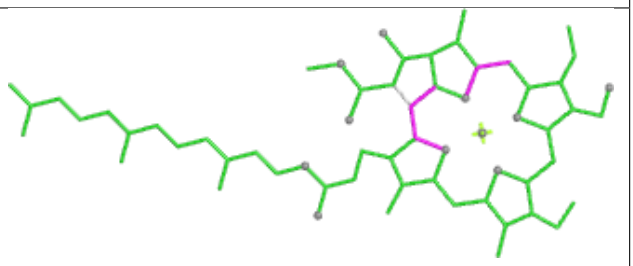
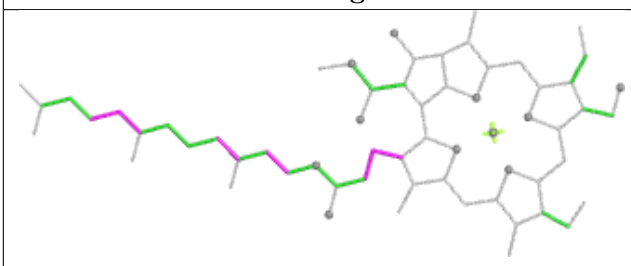


Bond angles



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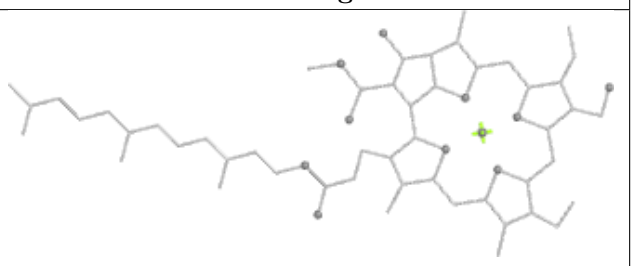
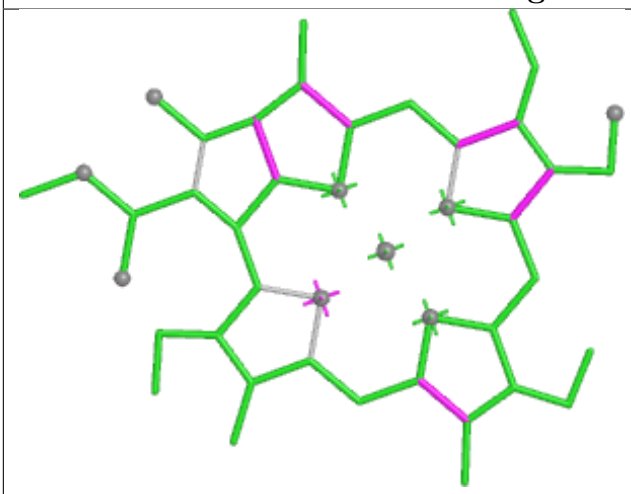


Rings

Ligand CHL 1 310



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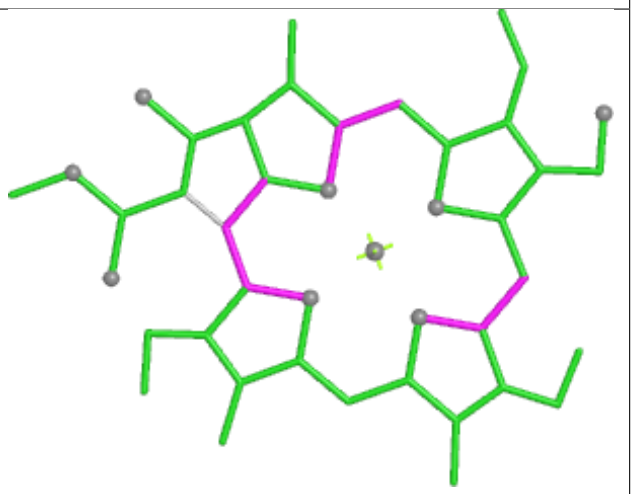
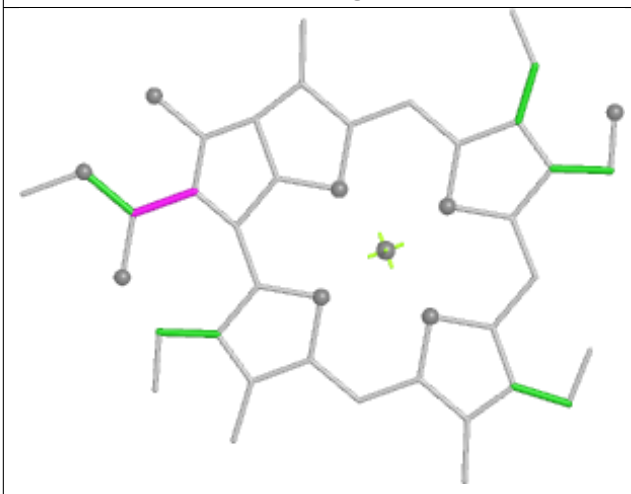


Bond angles



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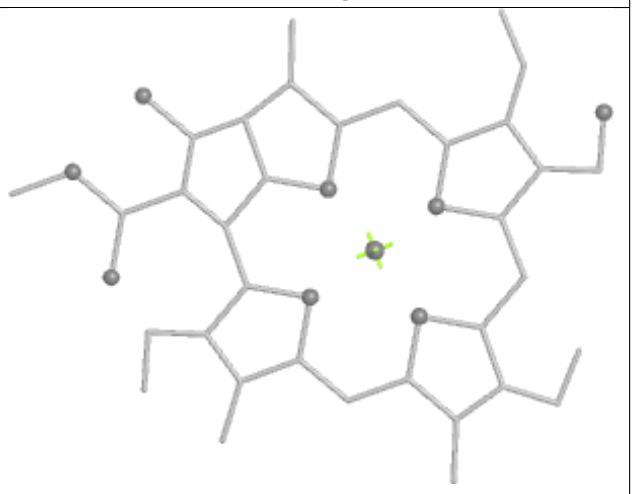
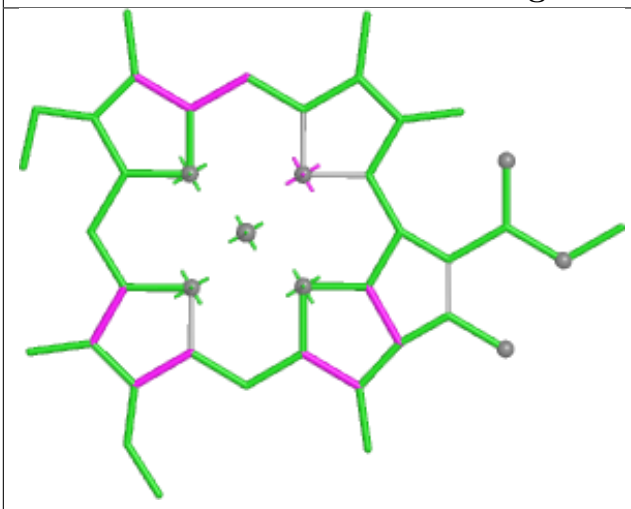


Rings

Ligand CLA 1 301



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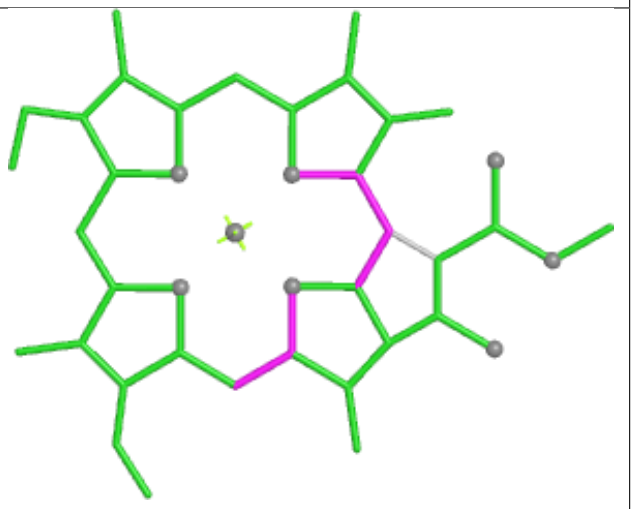
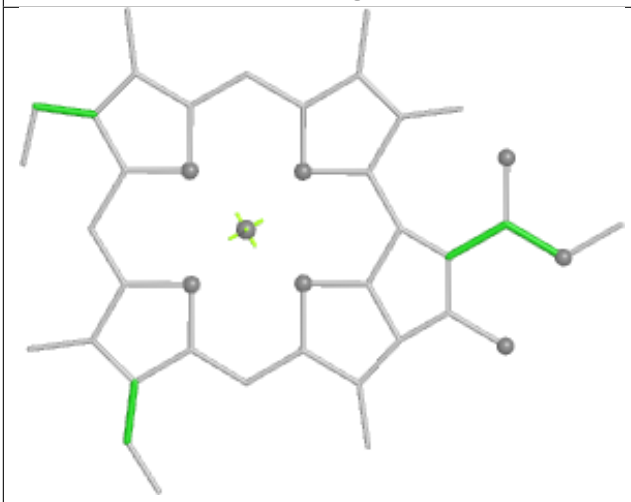


Bond angles



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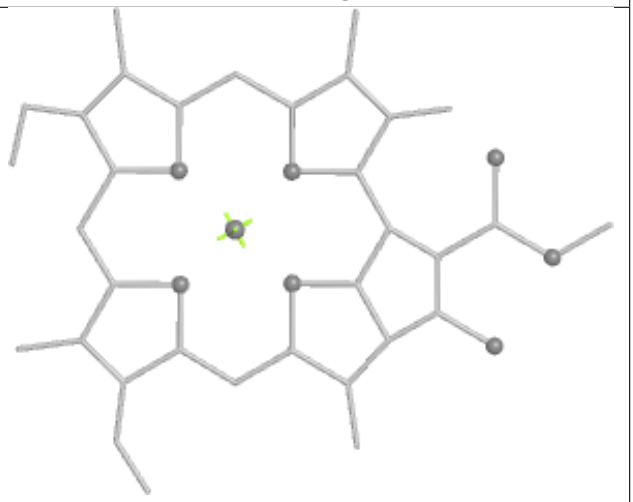
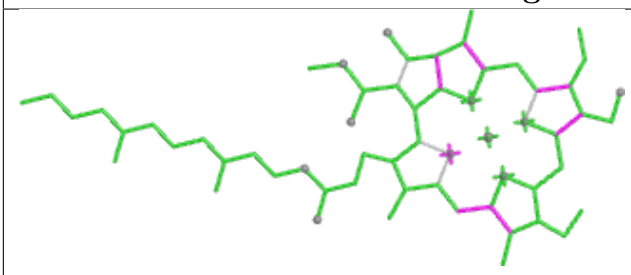


Rings

Ligand CHL U 406



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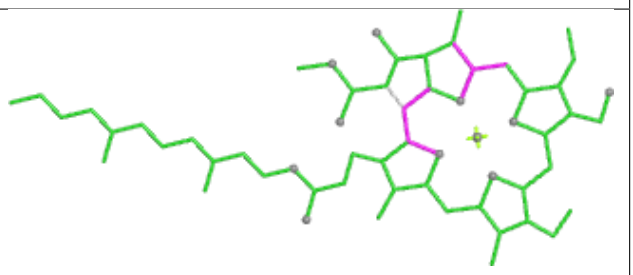

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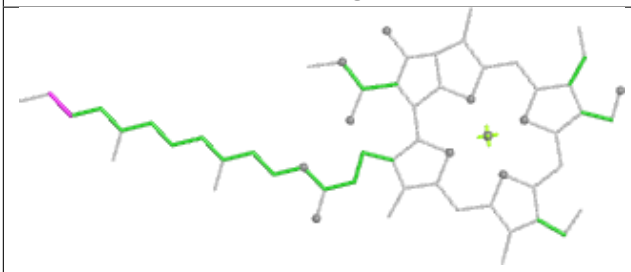

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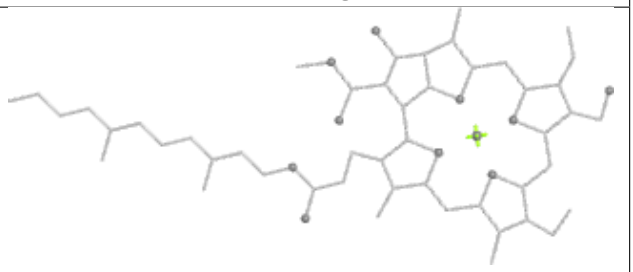
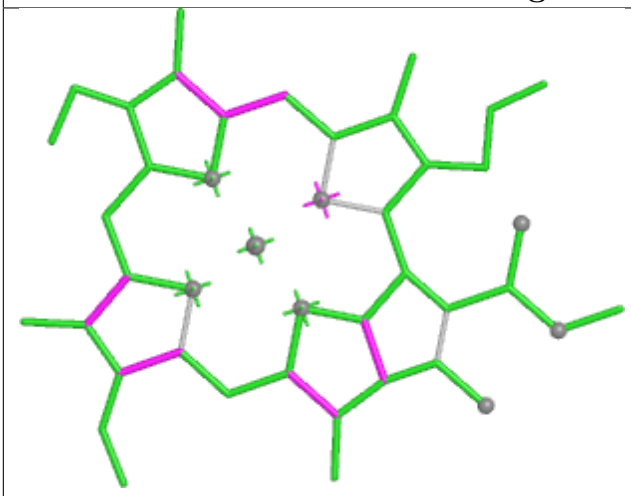


Rings

Ligand CLA 1 304



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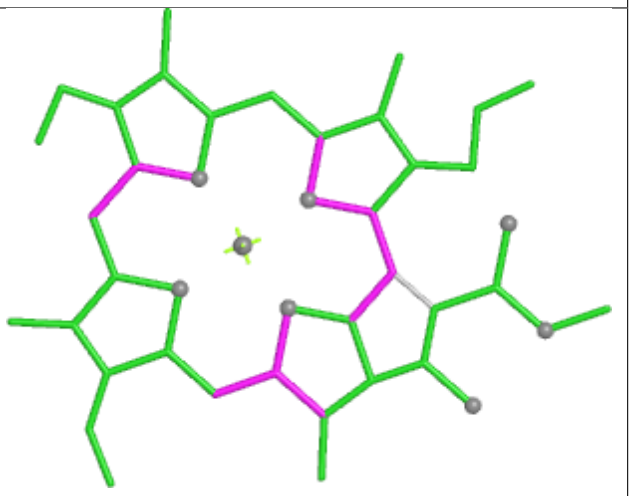
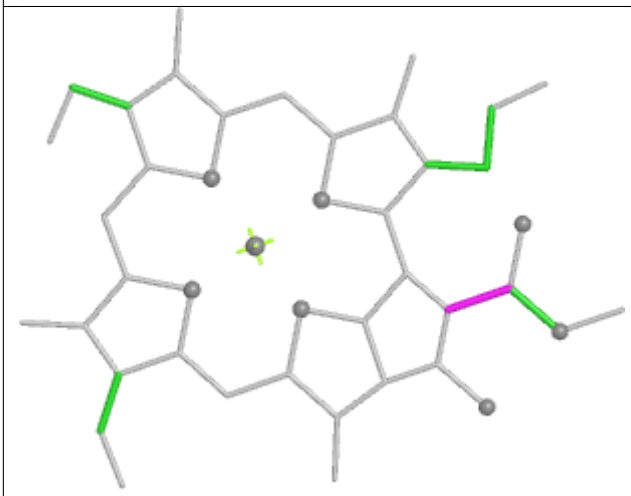


Bond angles



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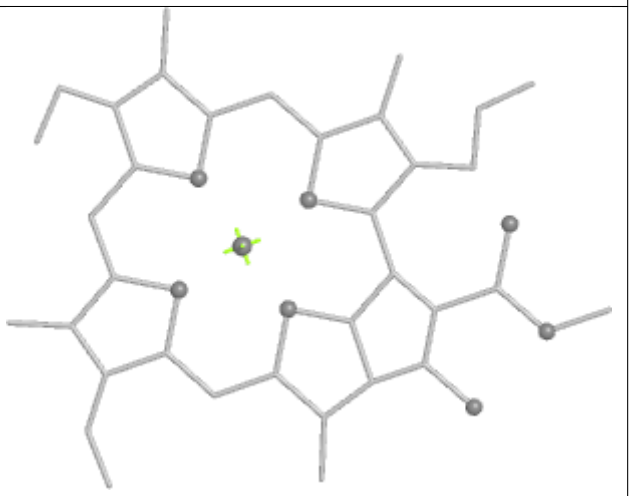
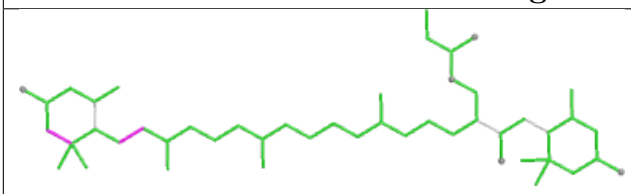


Rings

Ligand 0UR 1 312



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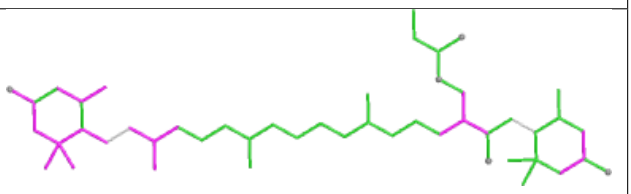
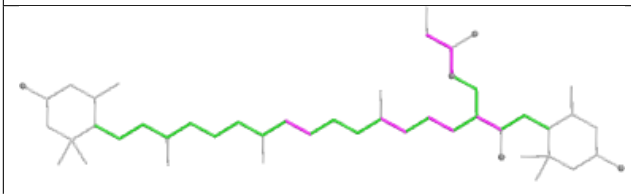


Bond angles



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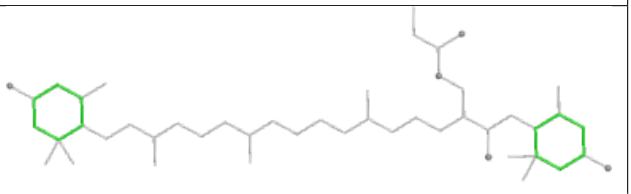
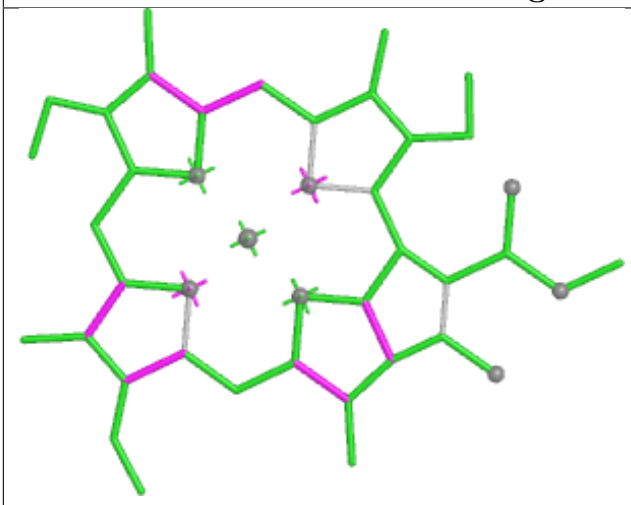


Rings

Ligand CLA 1 305



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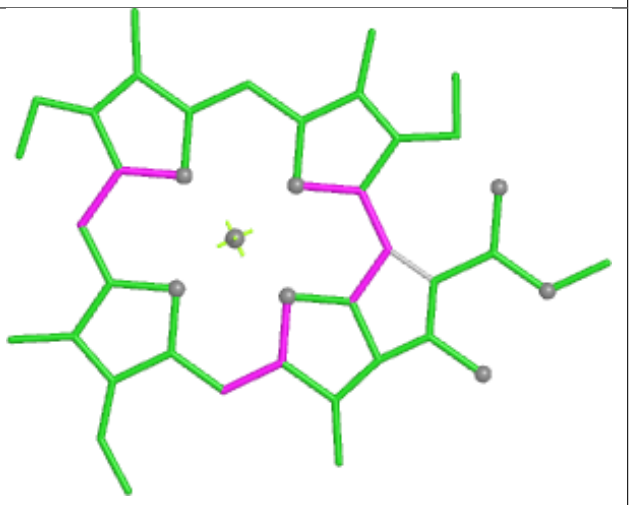
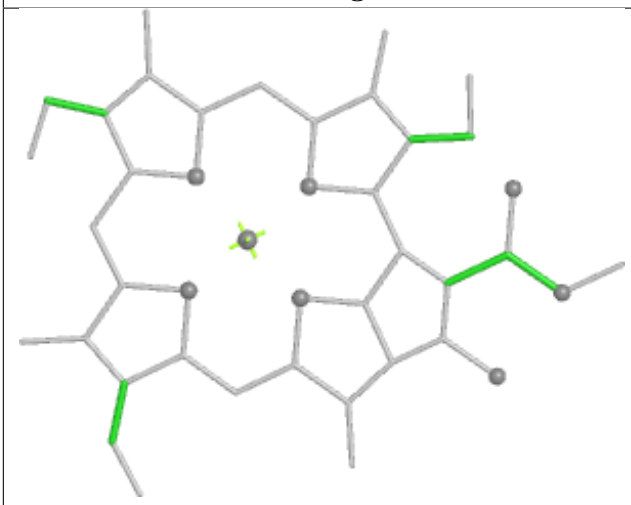


Bond angles



Torsions

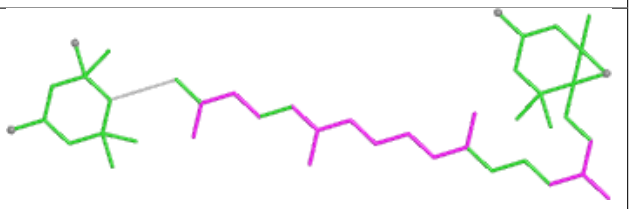


Rings

Ligand NEX U 421



Bond lengths



Bond angles

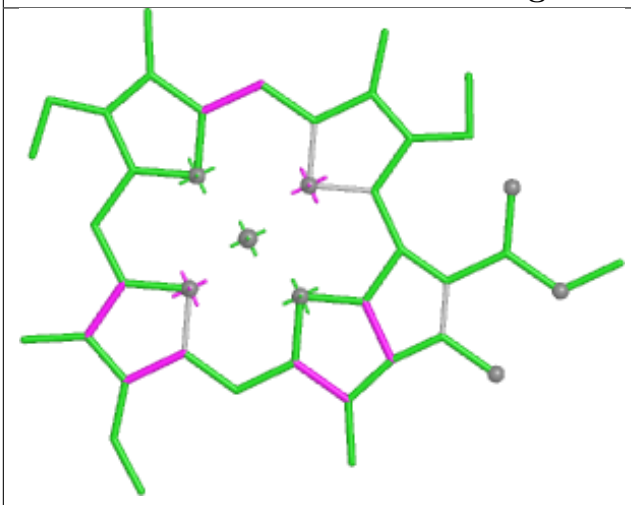


Torsions



Rings

Ligand CLA 1 311



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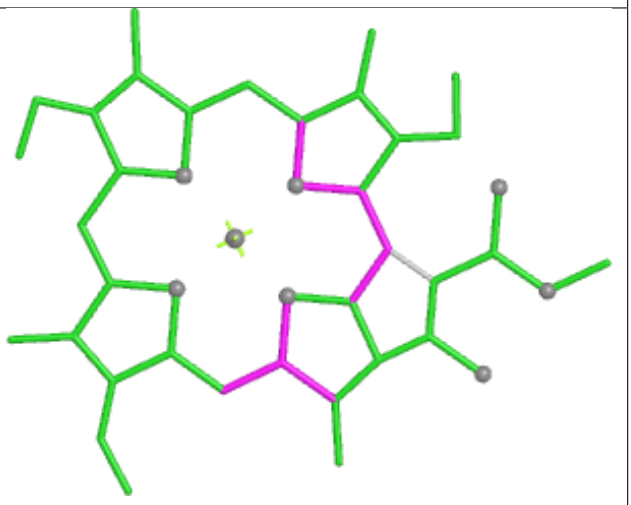
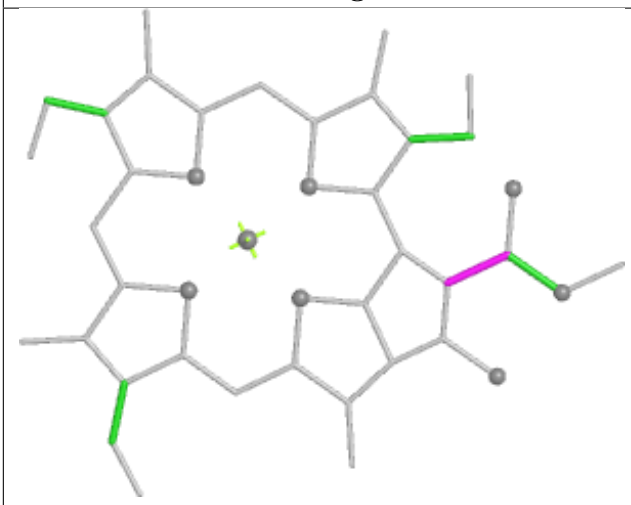


Bond angles

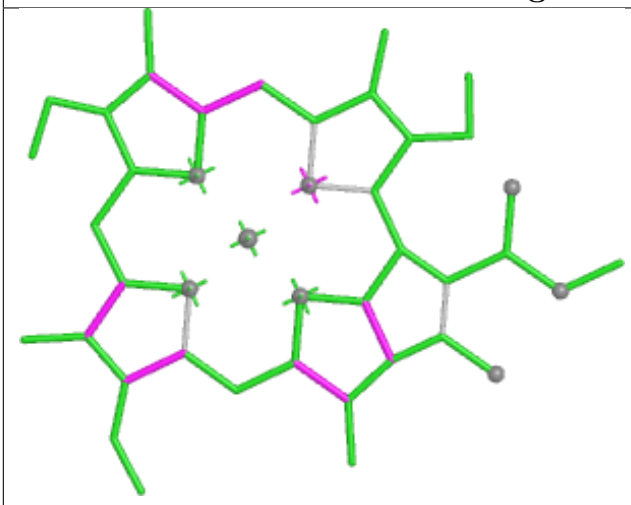


Torsions



Rings

Ligand CLA 1 306



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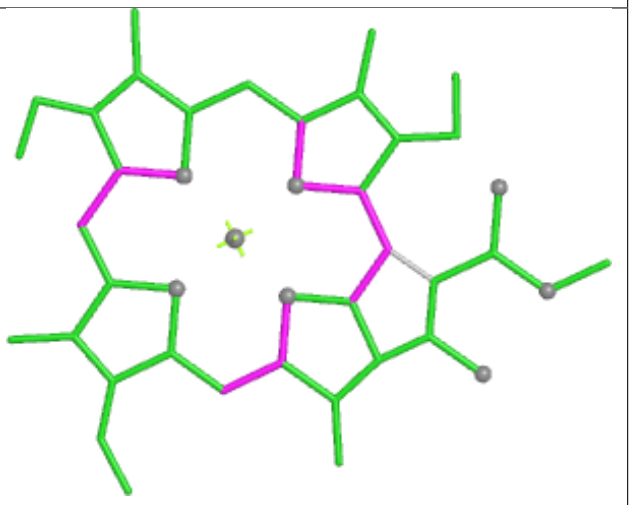
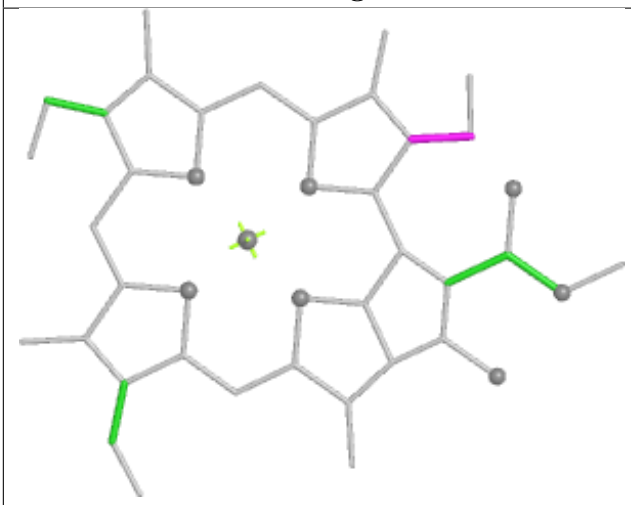


Bond angles

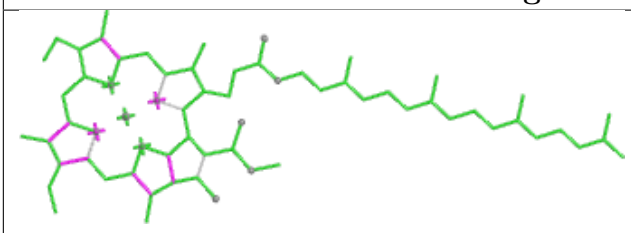


Torsions



Rings

Ligand CLA U 405



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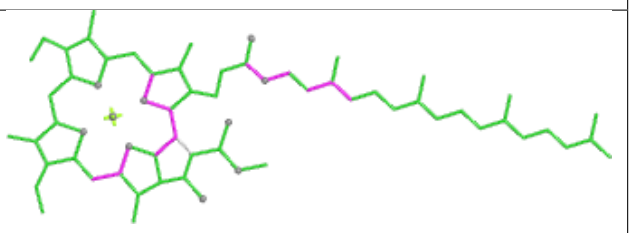
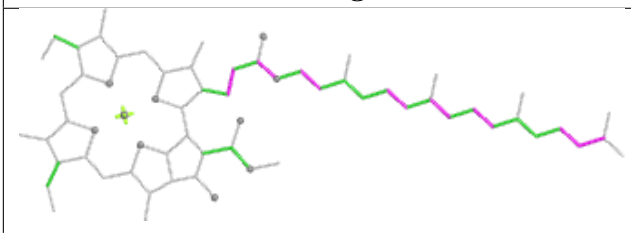


Bond angles



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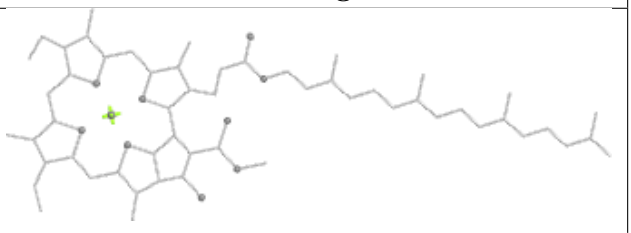
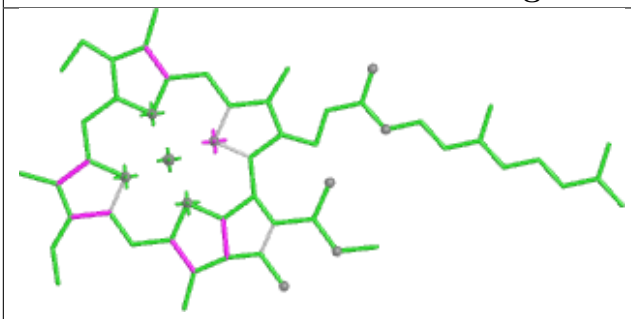


Rings

Ligand CLA U 408



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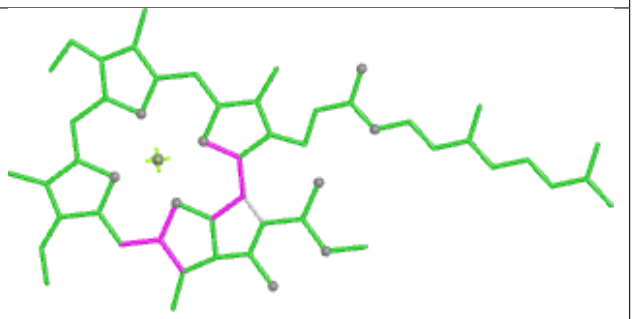
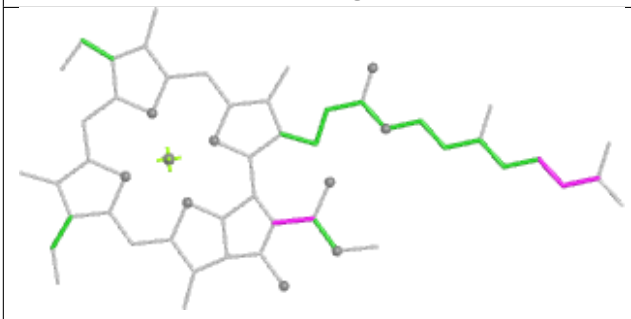
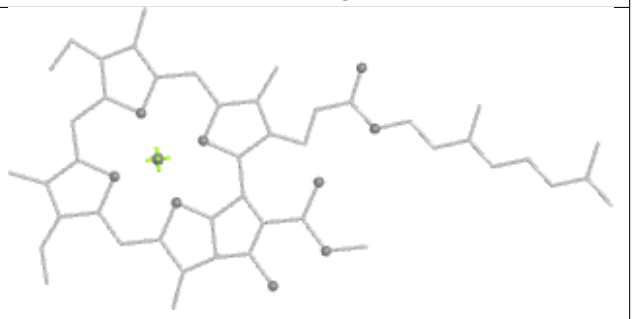


Bond angles

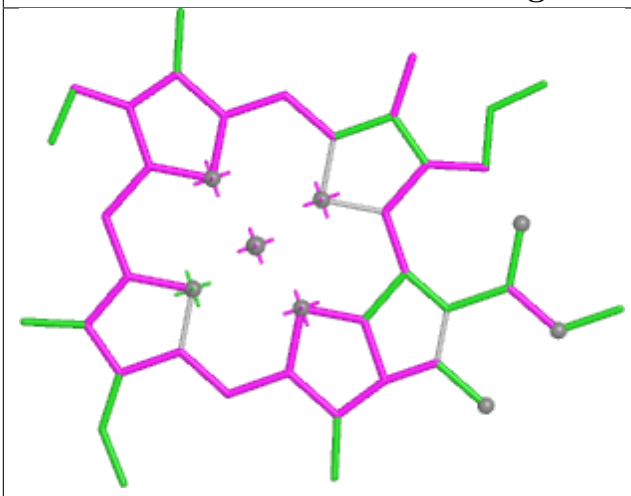


Torsions



Rings

Ligand CLA y 306



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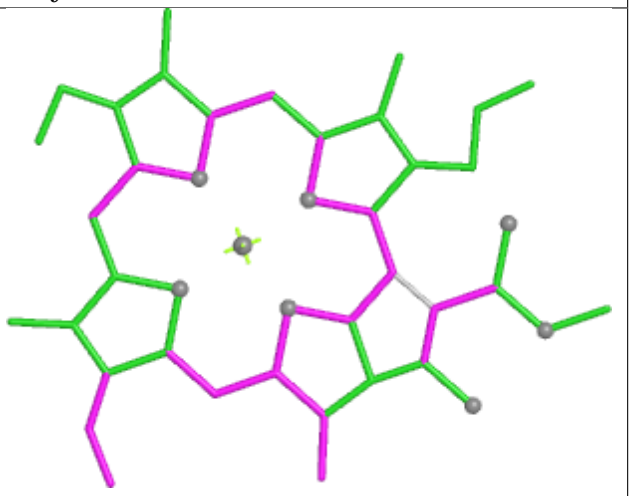
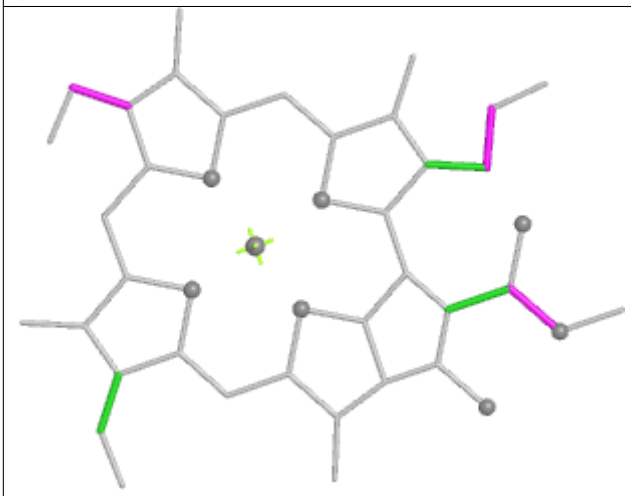
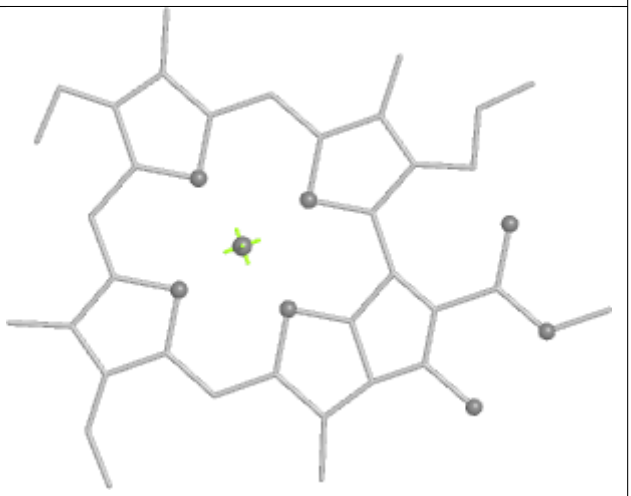


Bond angles

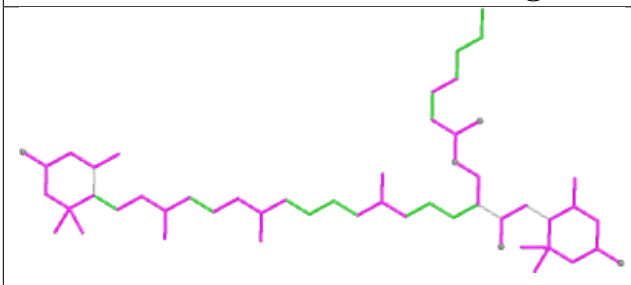


Torsions

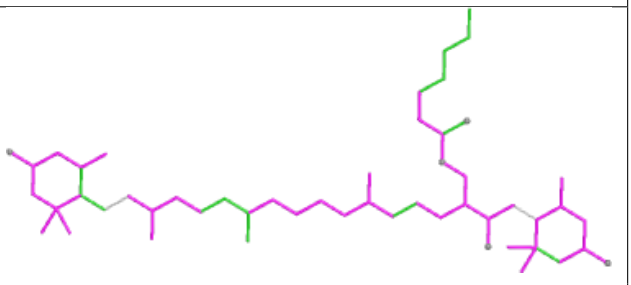


Rings

Ligand 0UR U 420



Bond lengths



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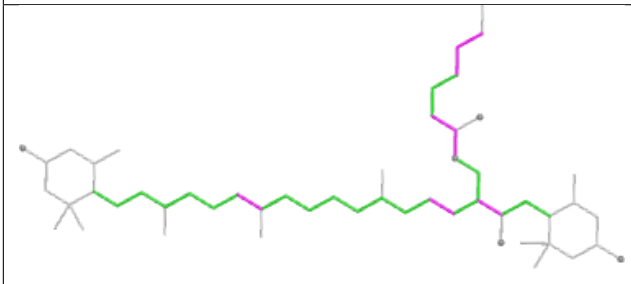

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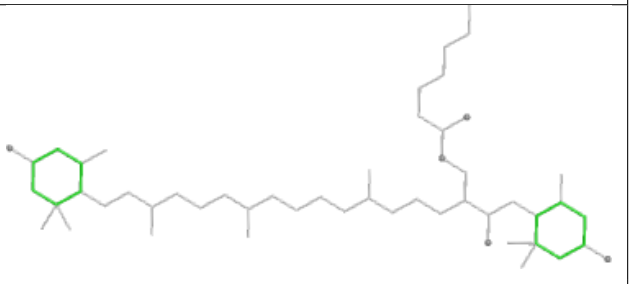
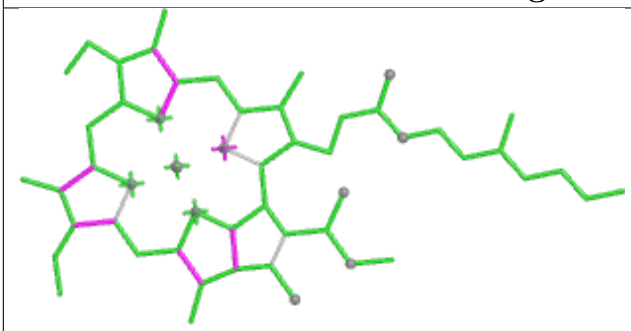


Rings

Ligand CLA 1 309



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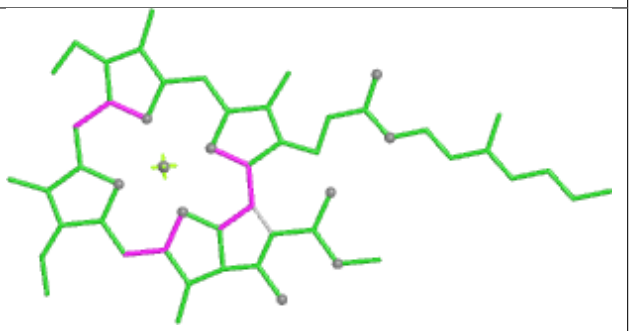
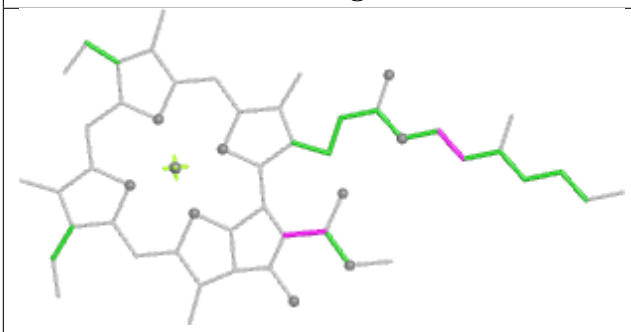


Bond angles



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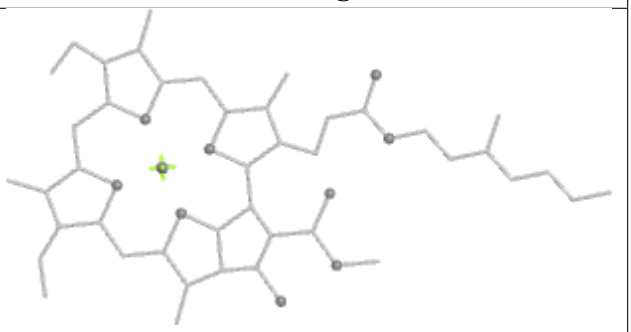
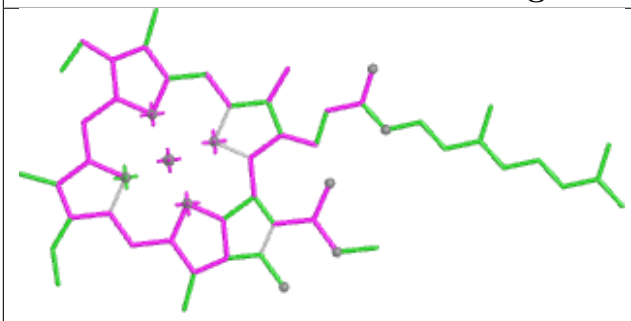


Rings

Ligand CLA y 308



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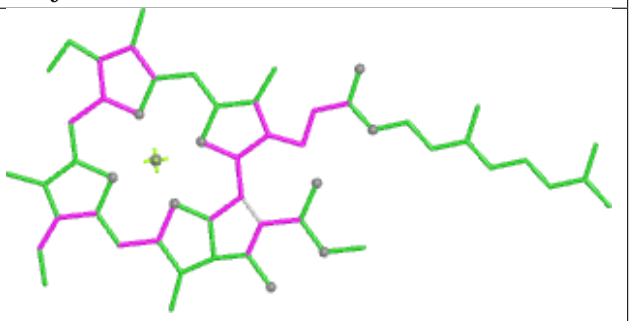
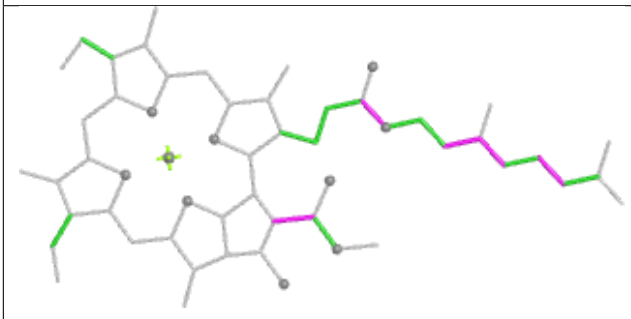


Bond angles



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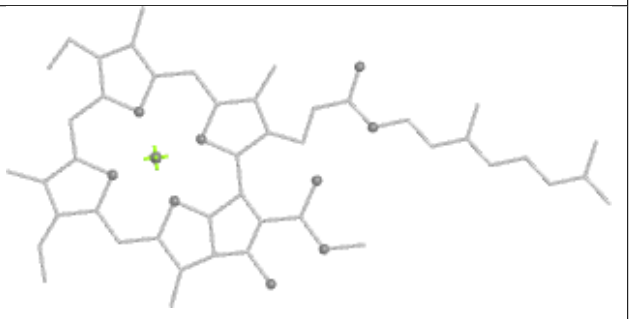
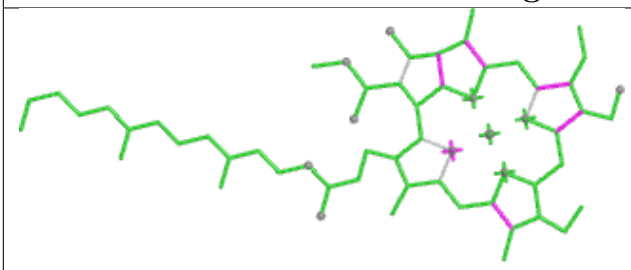
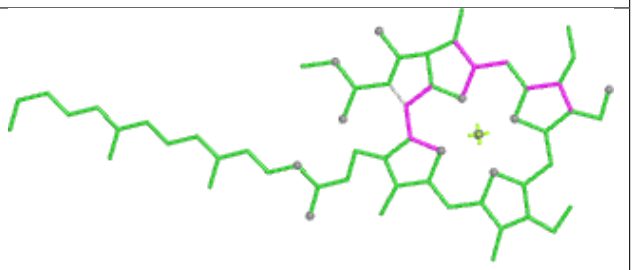


Rings

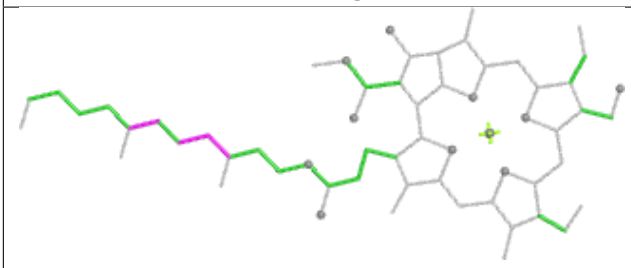
Ligand CHL U 409



Bond lengths



Bond angles



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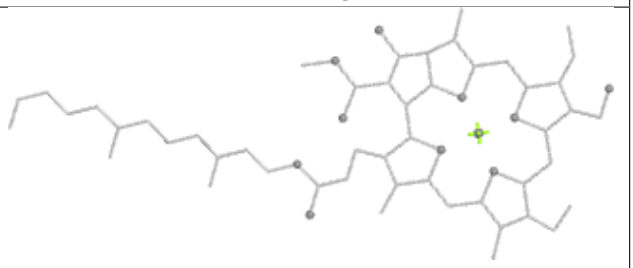
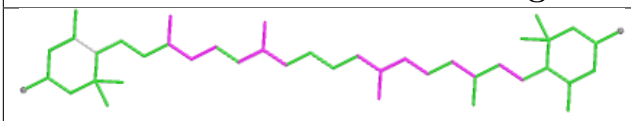


Rings

Ligand LUT 1 313



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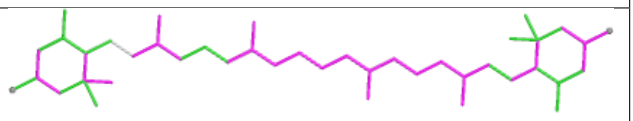
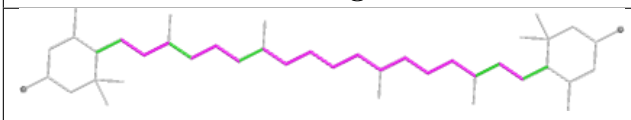


Bond angles



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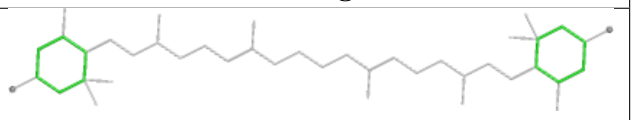
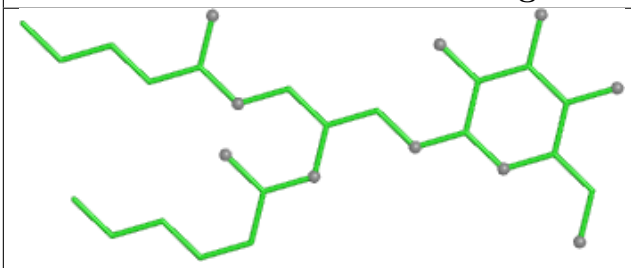
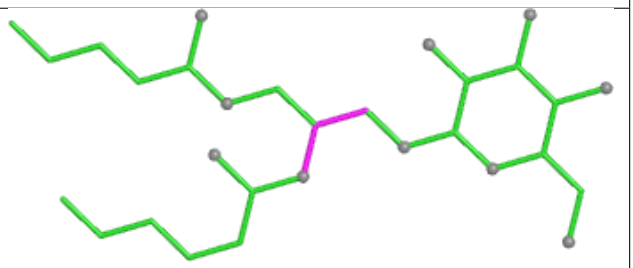


Rings

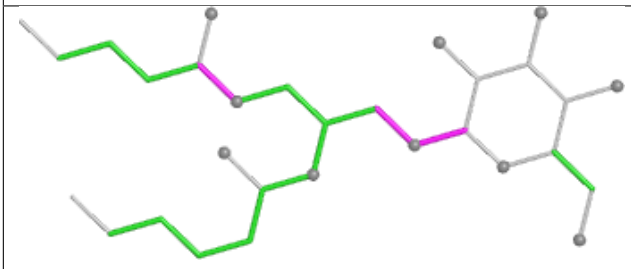
Ligand LMG U 402



Bond lengths



Bond angles



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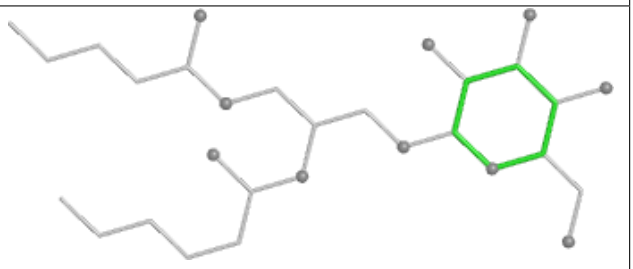
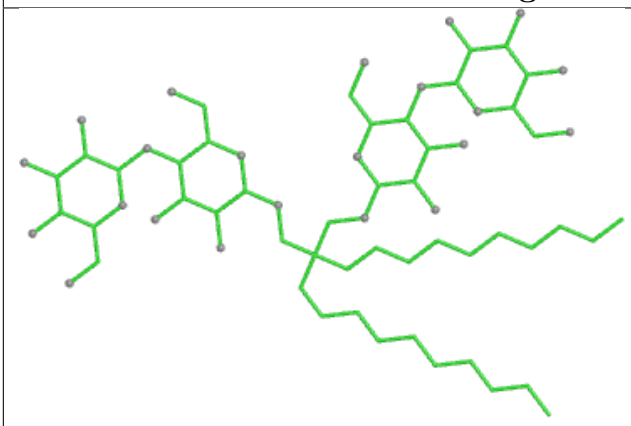


Rings

Ligand LMN U 404



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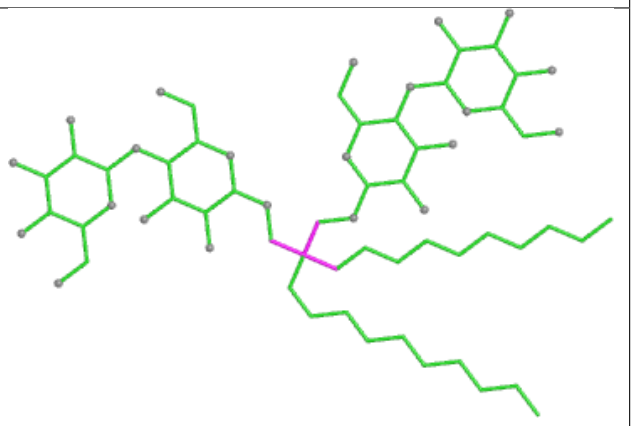
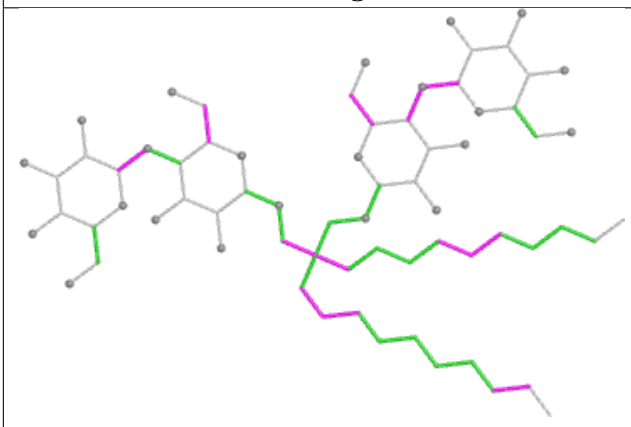


Bond angles



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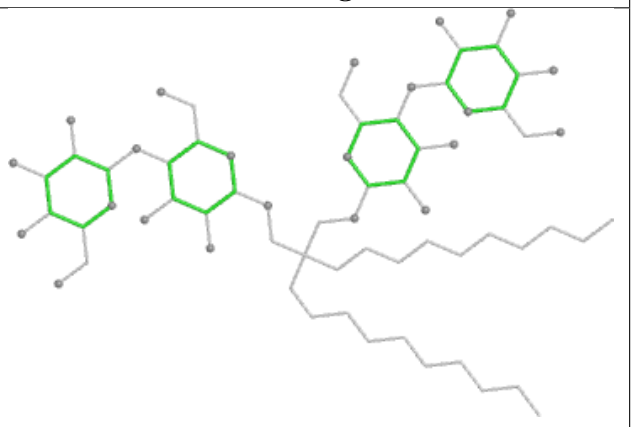
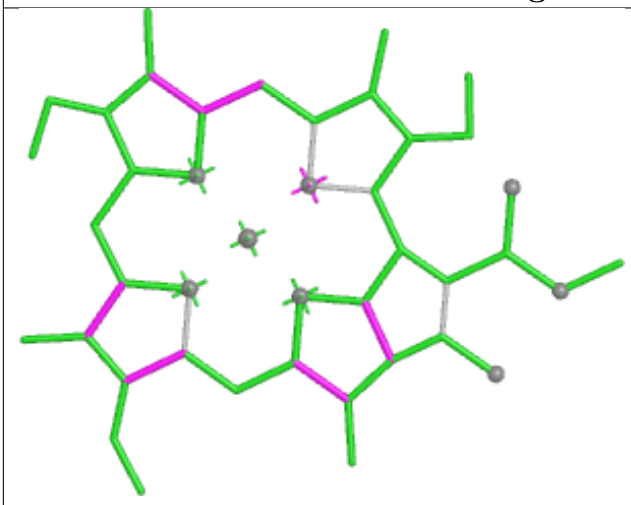


Rings

Ligand CLA 1 302



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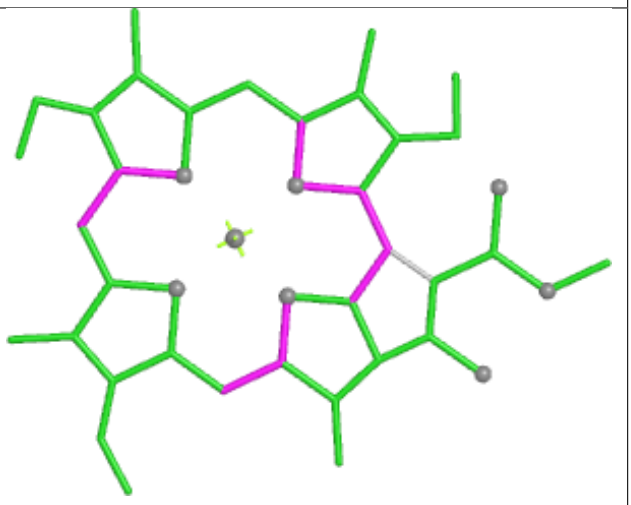
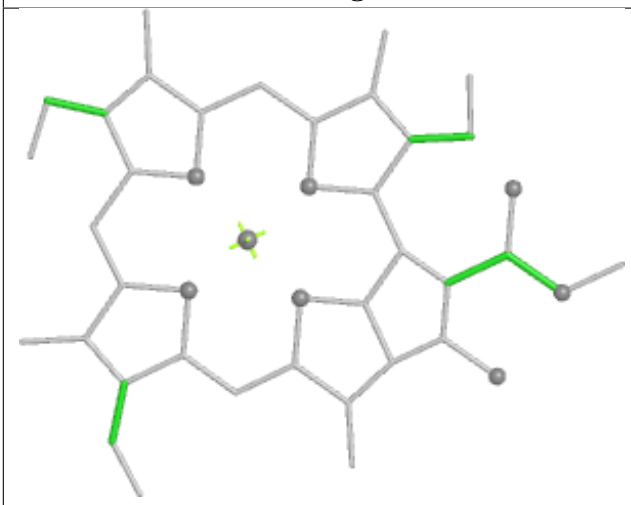


Bond angles

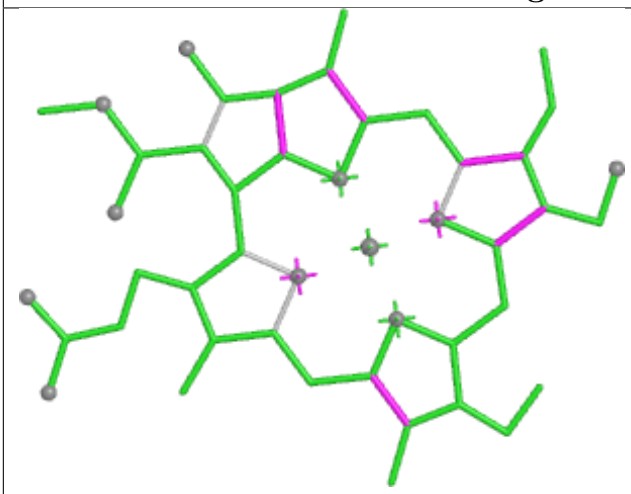


Torsions



Rings

Ligand CHL y 315



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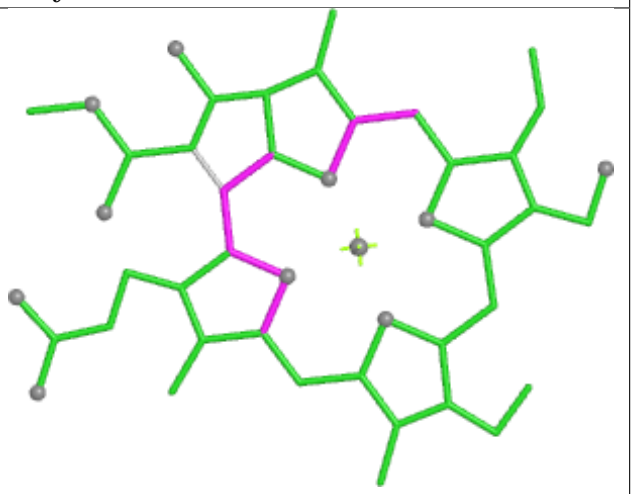
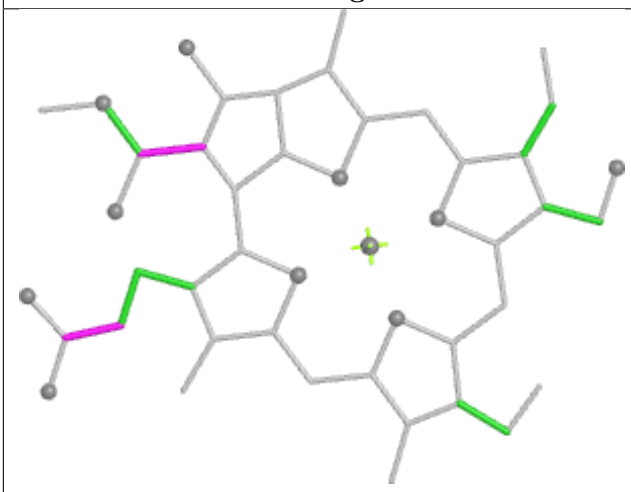


Bond angles



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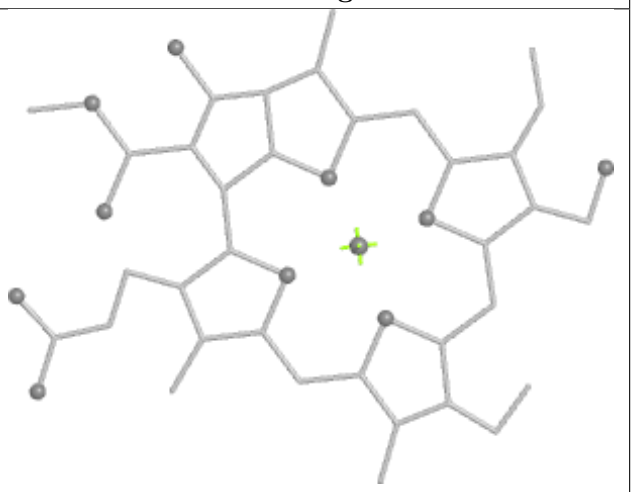
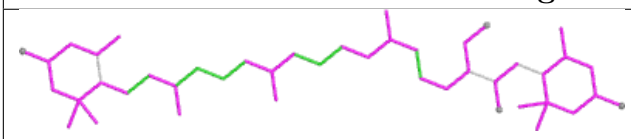


Rings

Ligand 0IE y 321



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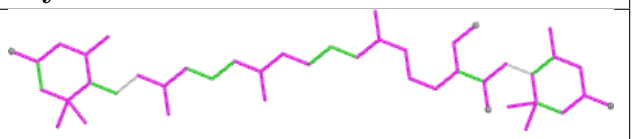
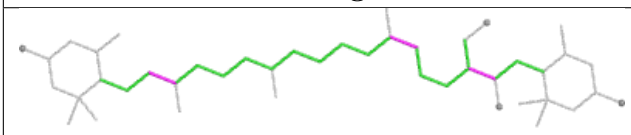


Bond angles



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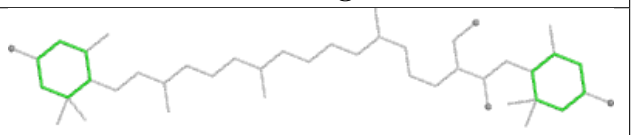
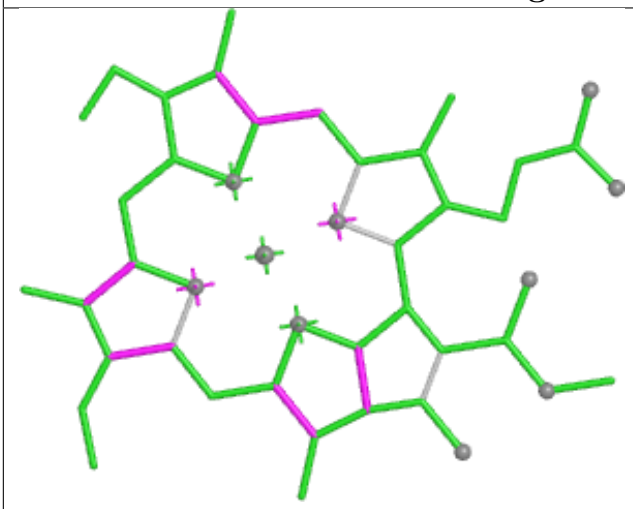


Rings

Ligand CLA 1 308



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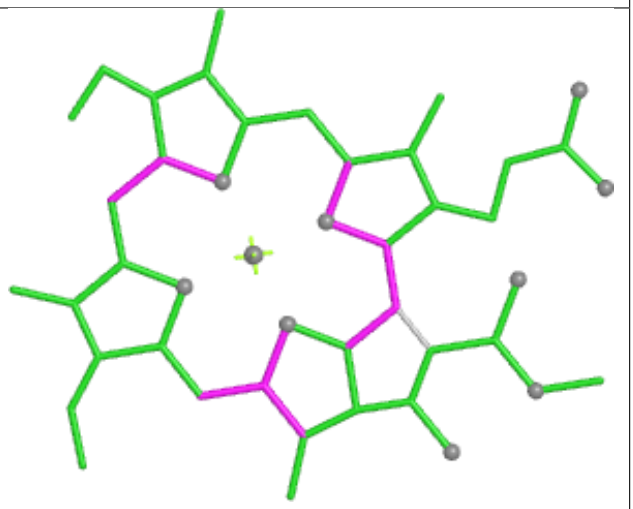
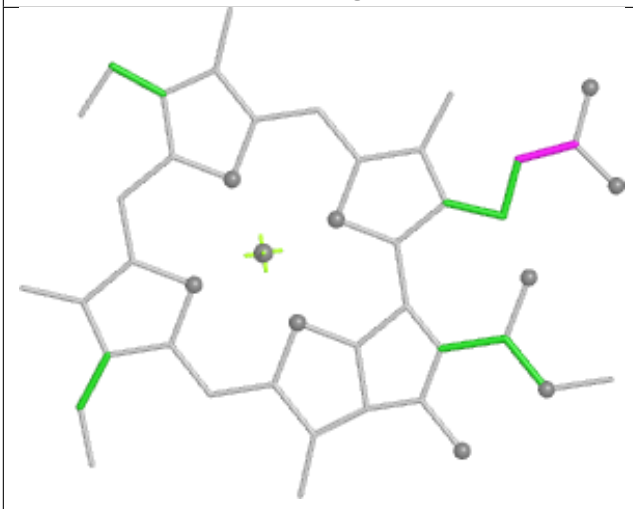


Bond angles

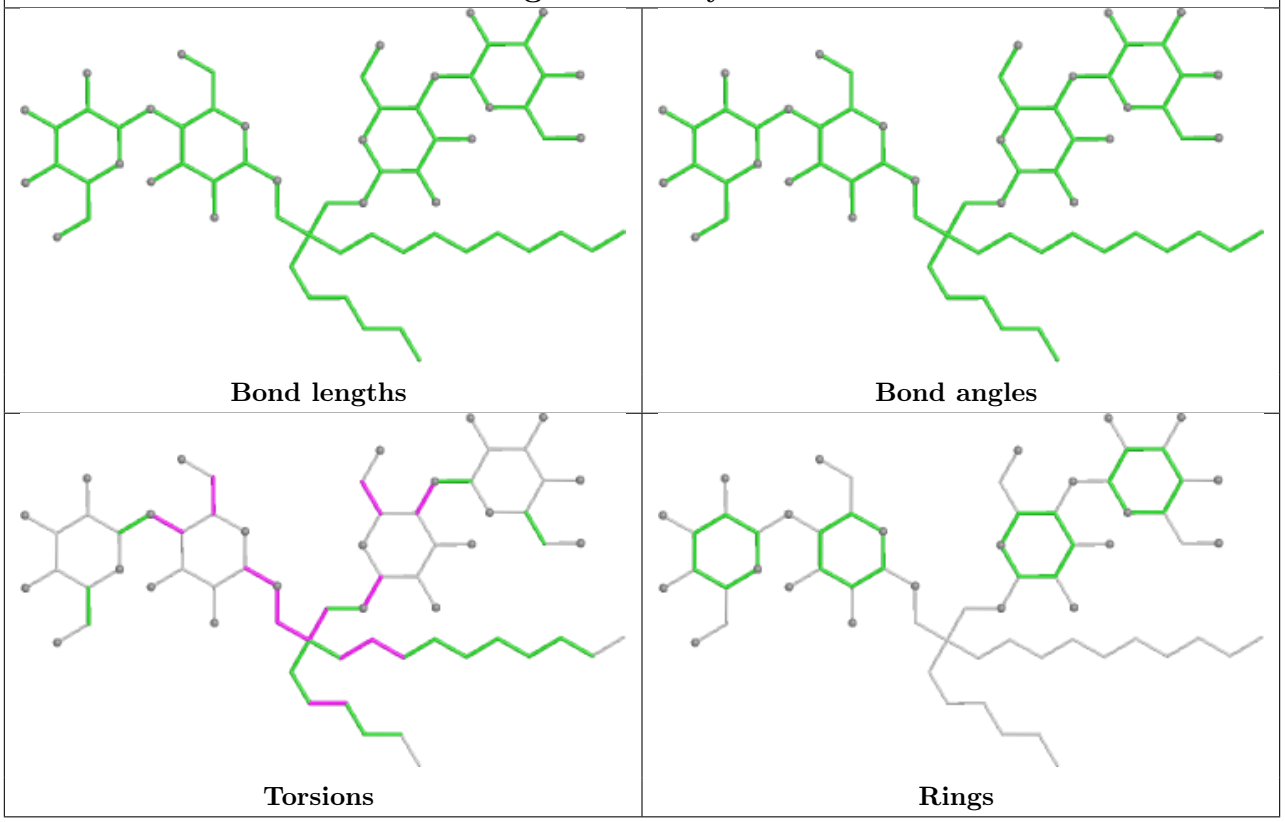


Torsions

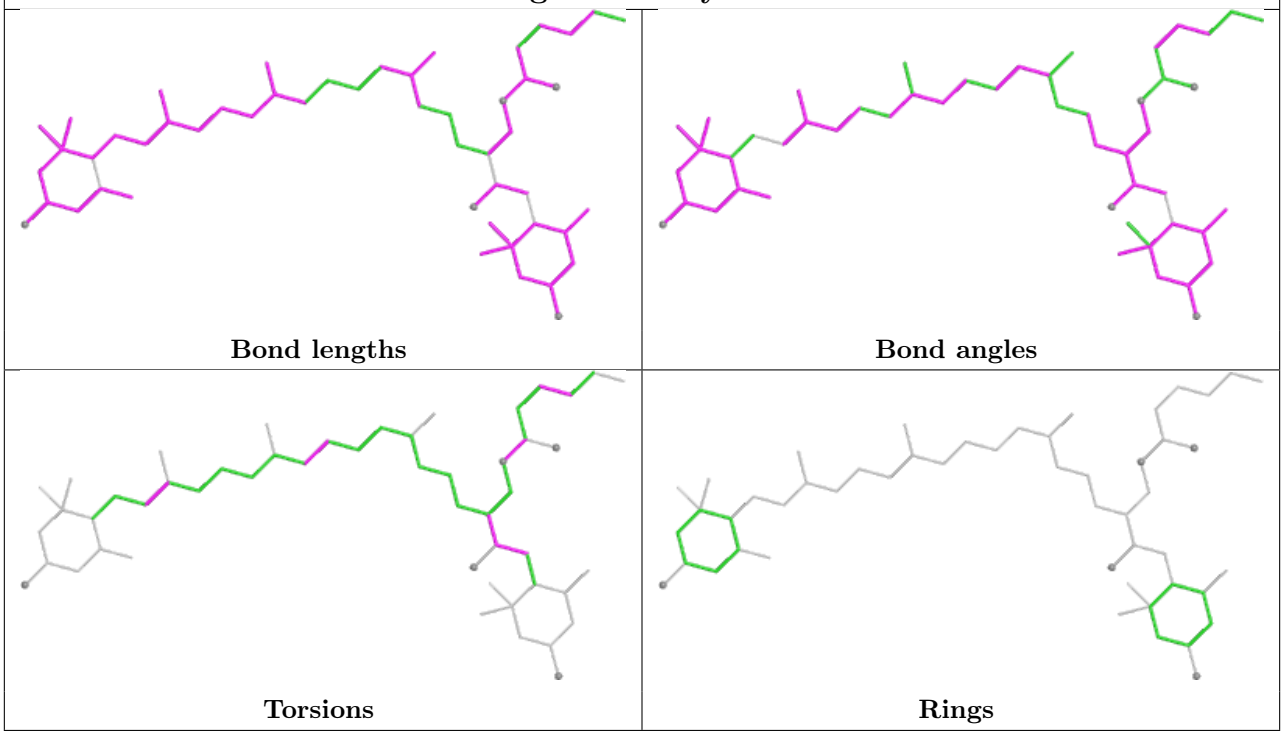


Rings

Ligand LMN y 302



Ligand 0UR y 318



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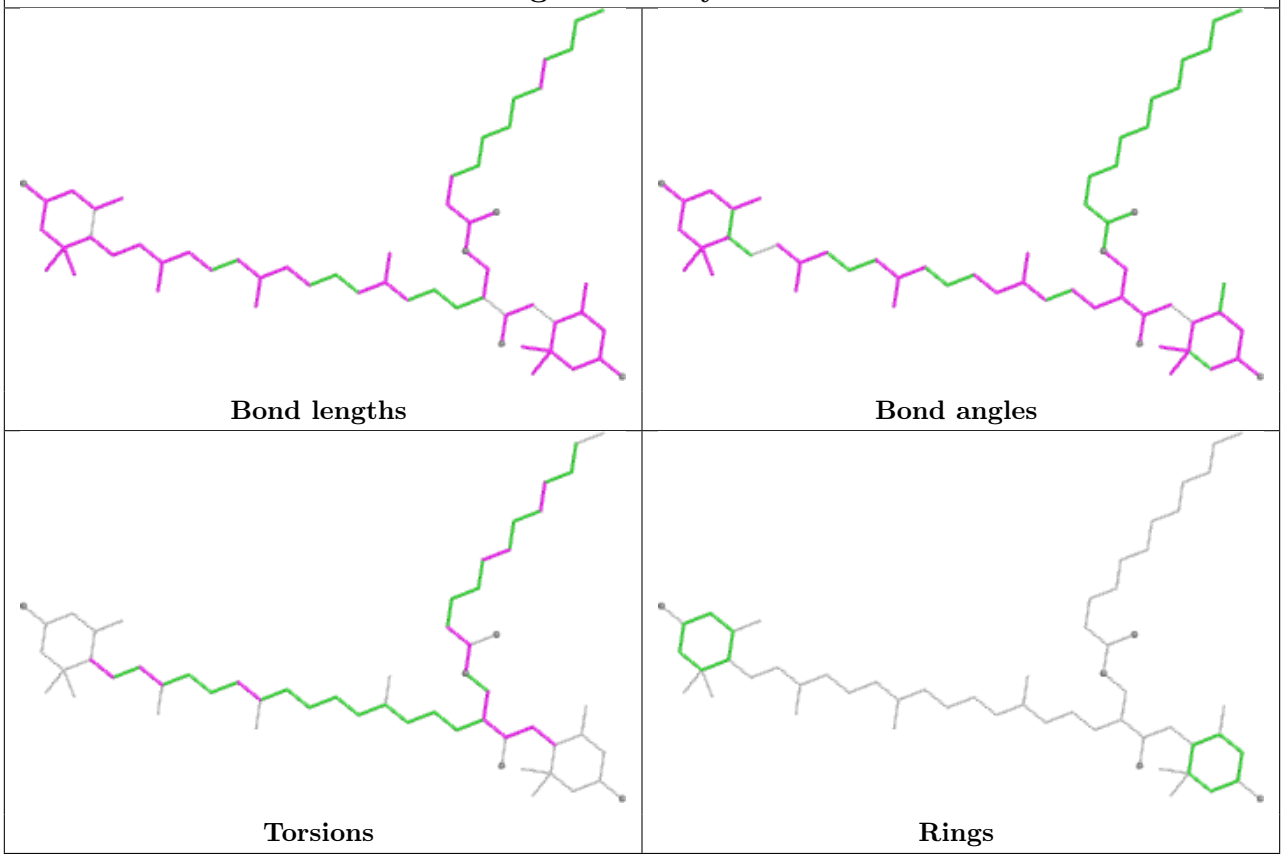
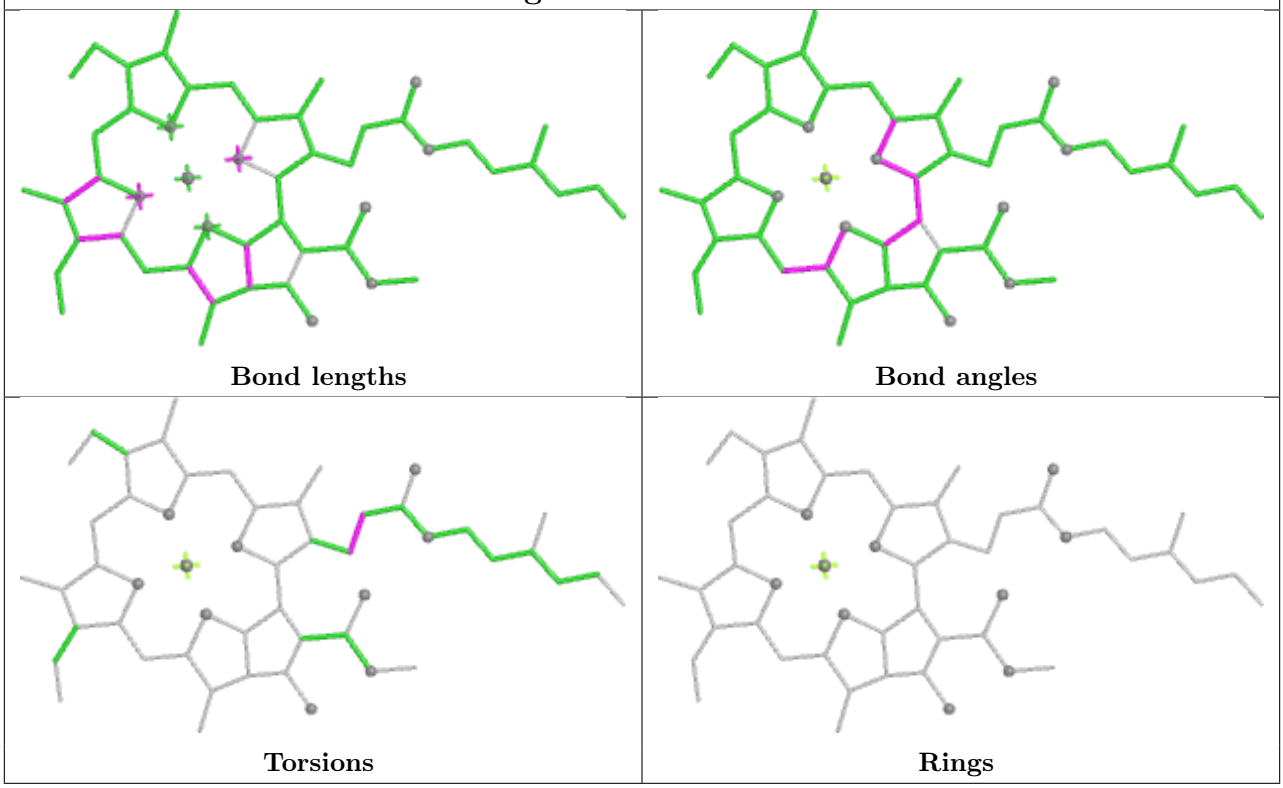
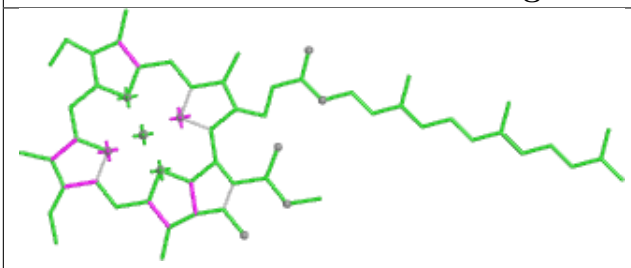
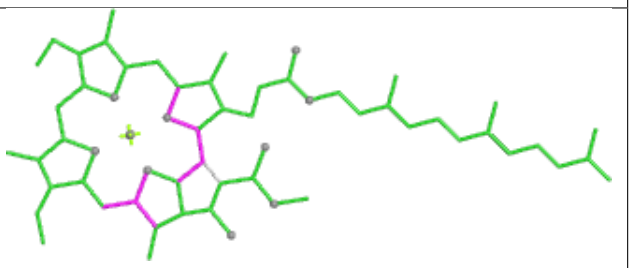
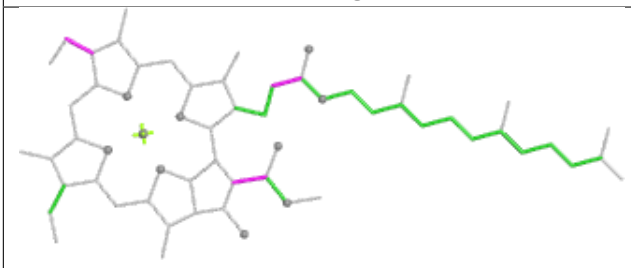
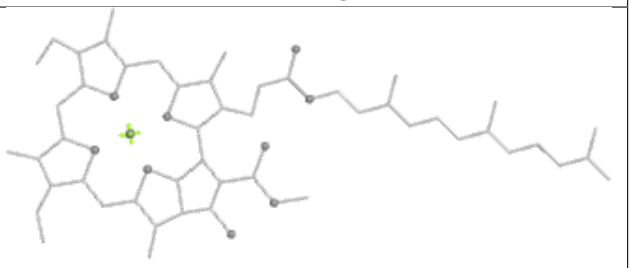


Ligand CLA U 418



Ligand CLA U 417	
 Bond lengths	 Bond angles
 Torsions	 Rings

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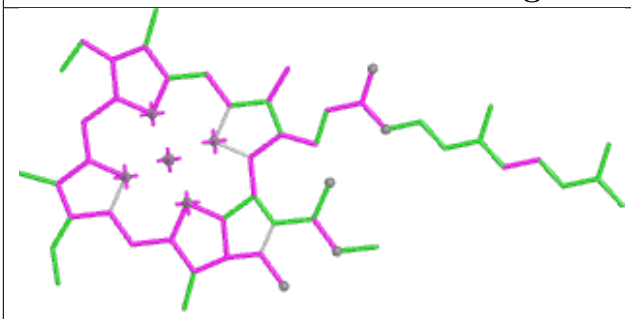
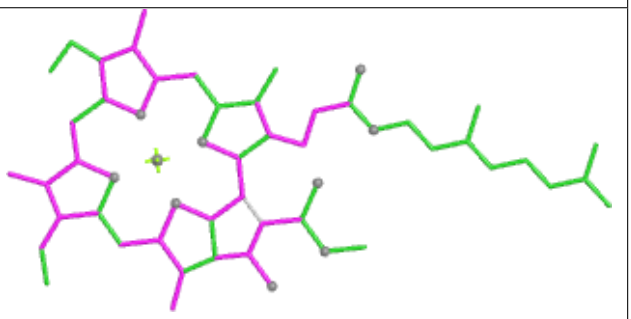
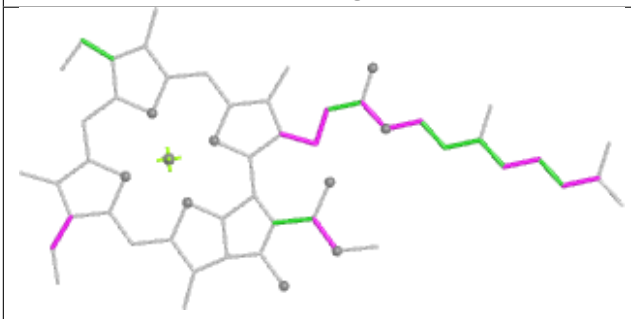
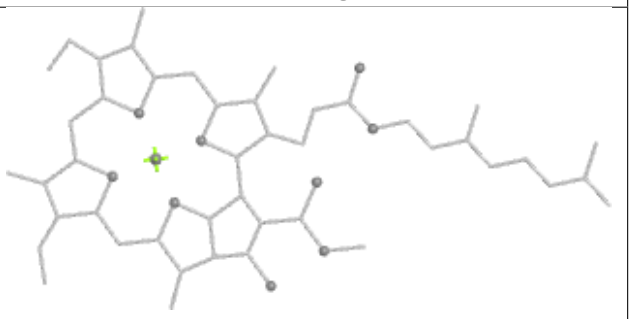
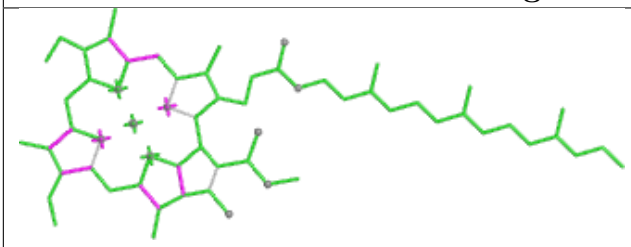
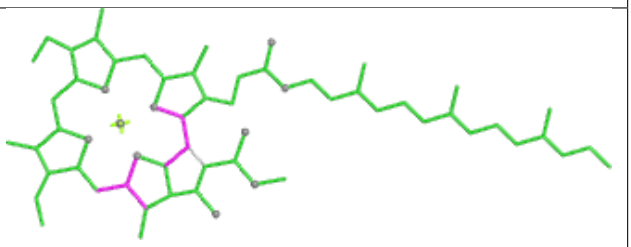
 Bond lengths	 Bond angles
 Torsions	 Rings

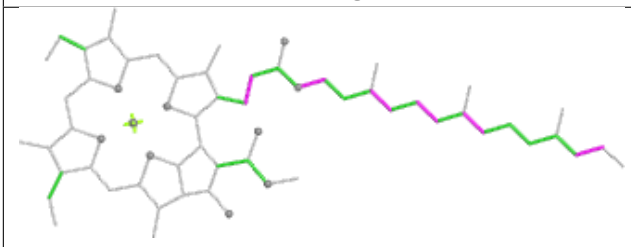
Ligand CLA U 414



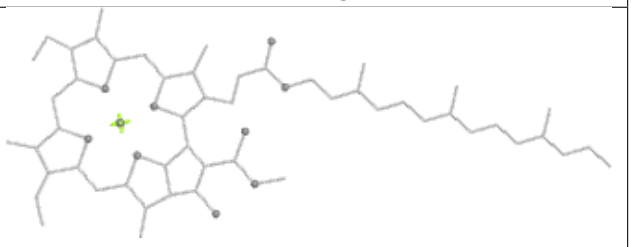
Bond lengths



Bond angles

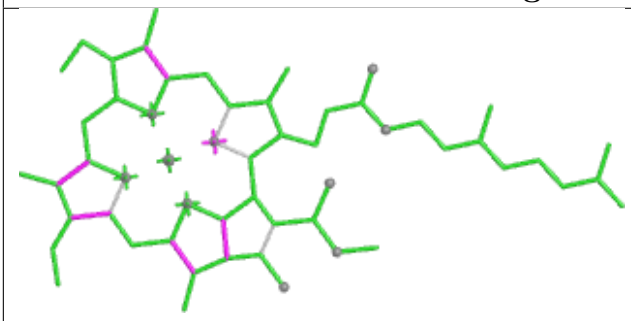


Torsions

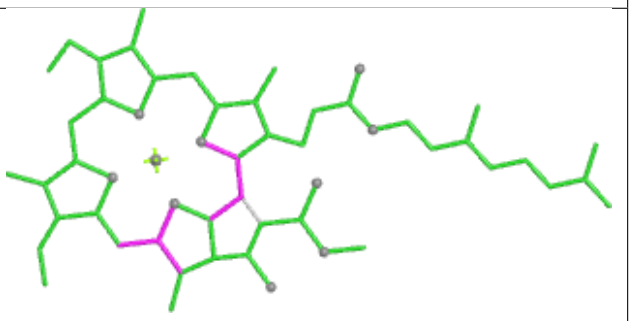


Rings

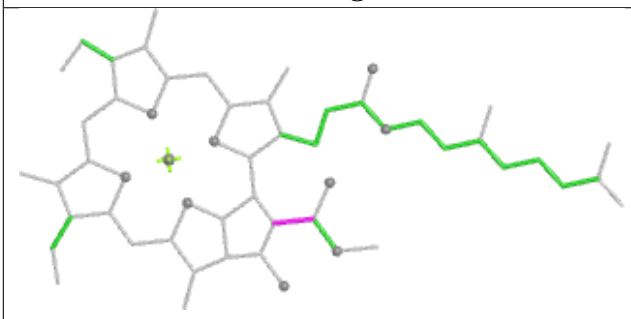
Ligand CLA U 413



Bond lengths



Bond angles



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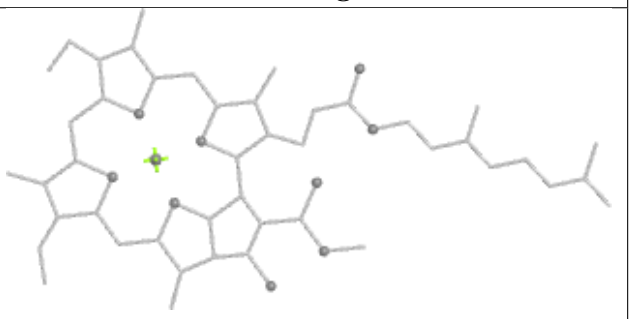
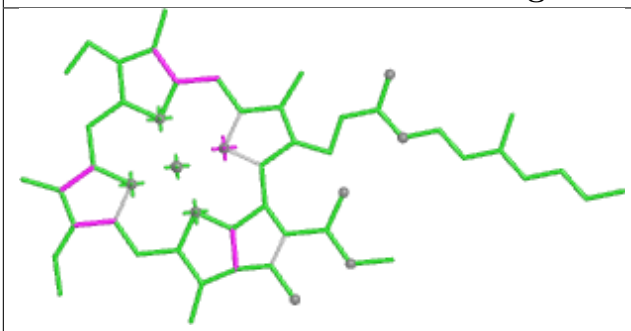


Rings

Ligand CLA y 310



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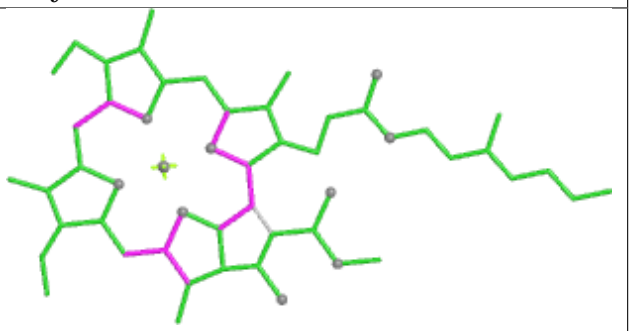

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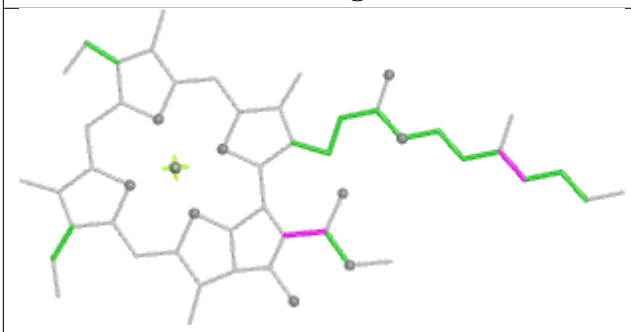

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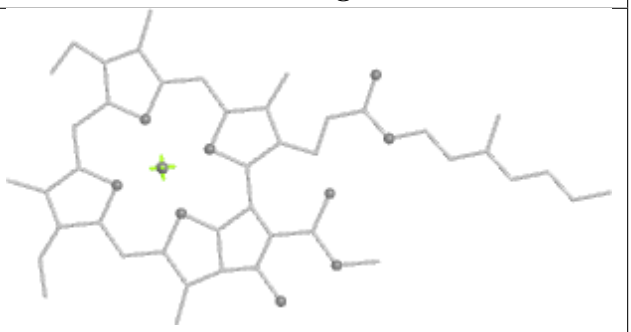
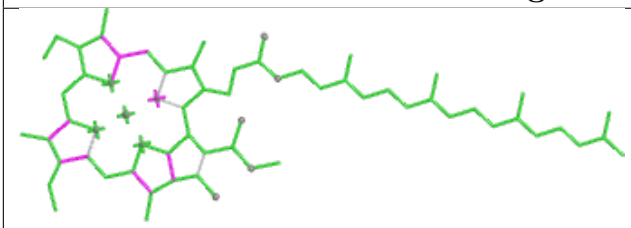


Rings

Ligand CLA y 303



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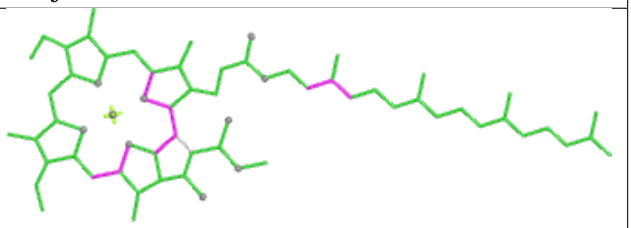

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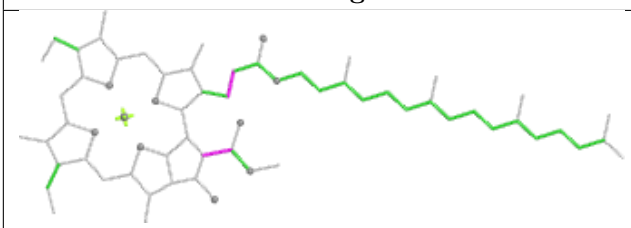

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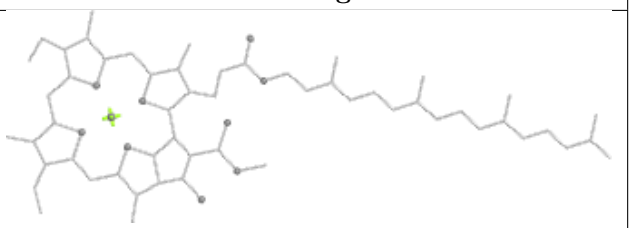
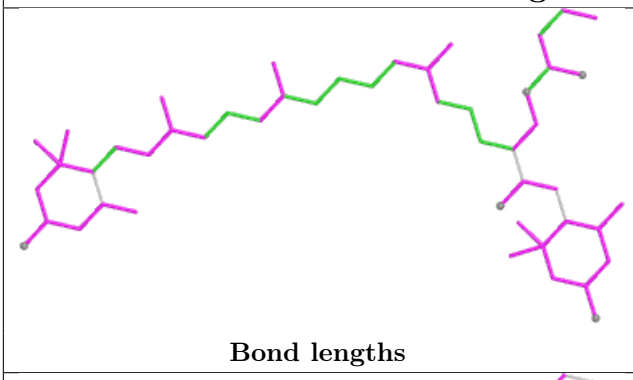


Rings

Ligand 0UR y 317



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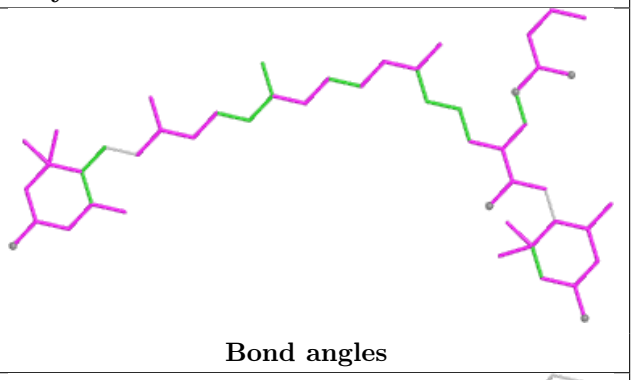
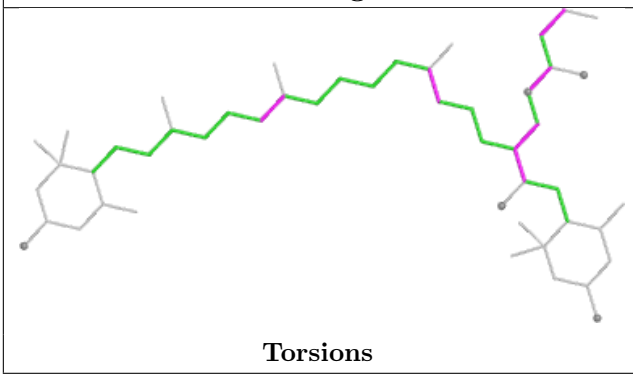


Bond angles



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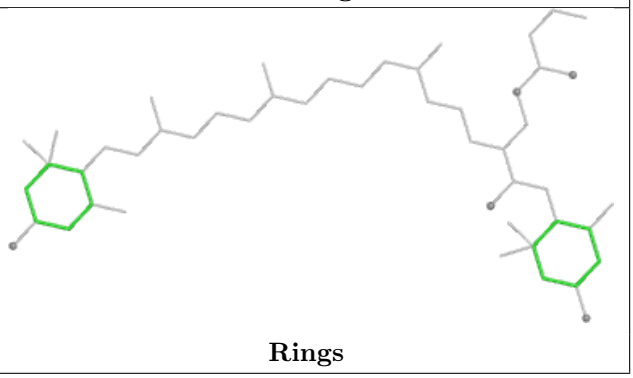
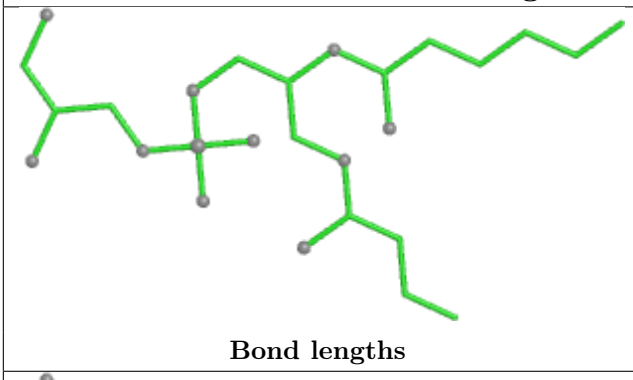


Rings

Ligand LHG U 403



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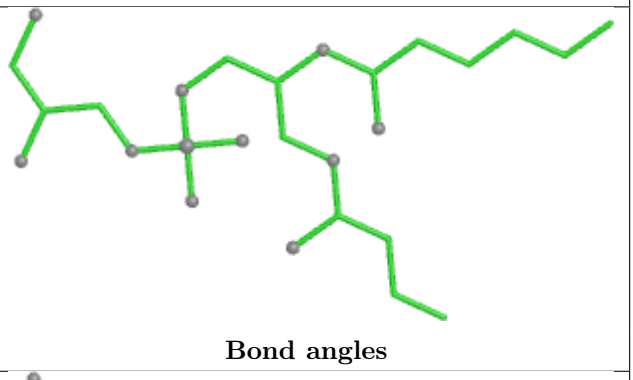
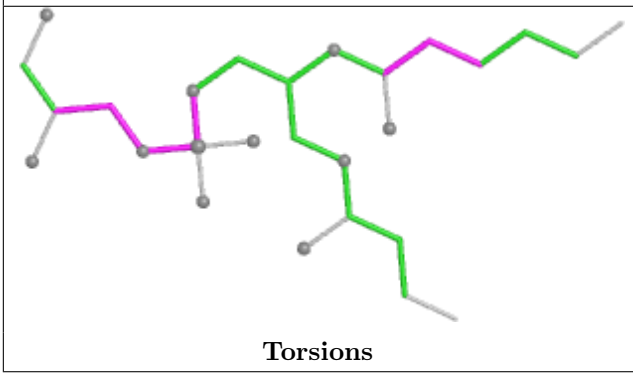


Bond angles



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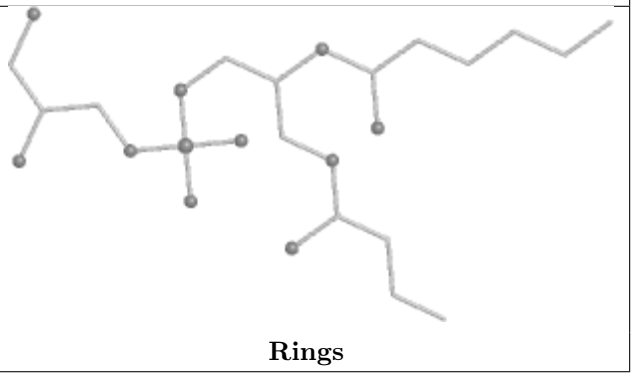
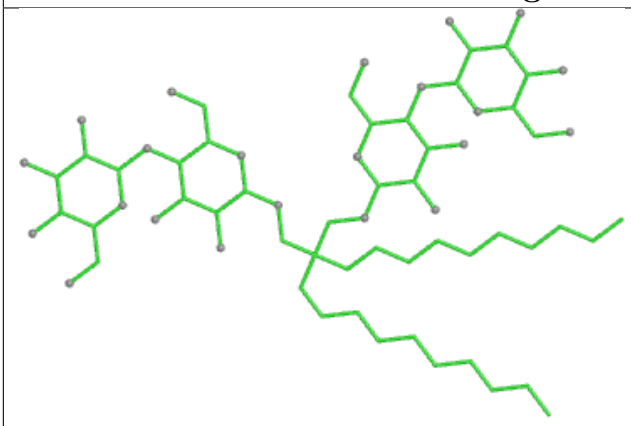


Rings

Ligand LMN y 301



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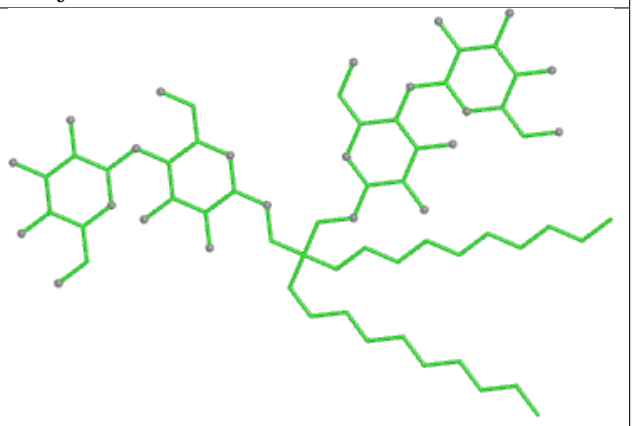
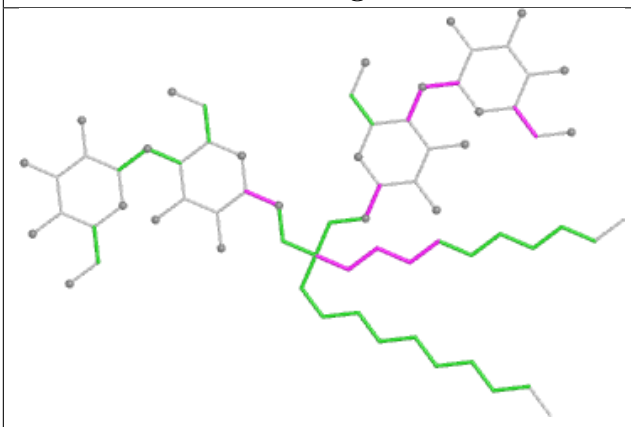


Bond angles



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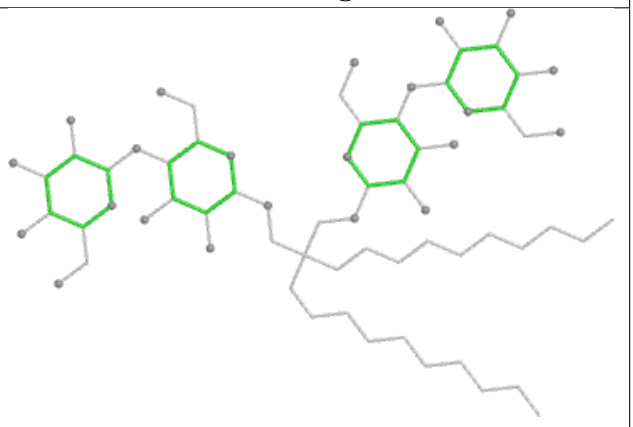
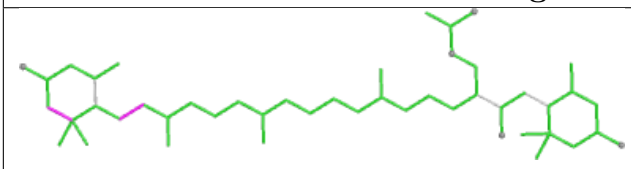


Rings

Ligand 0UR 1 315



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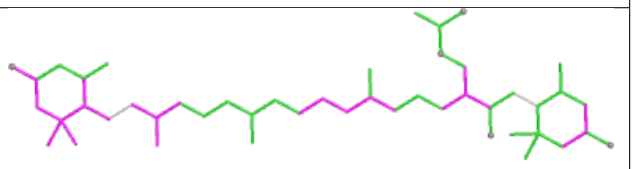

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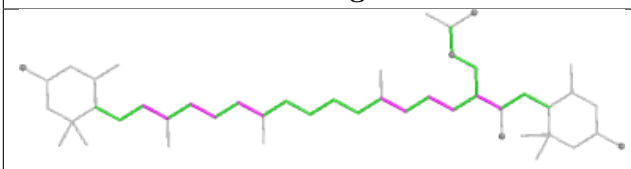

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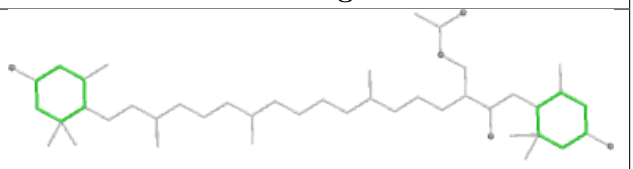
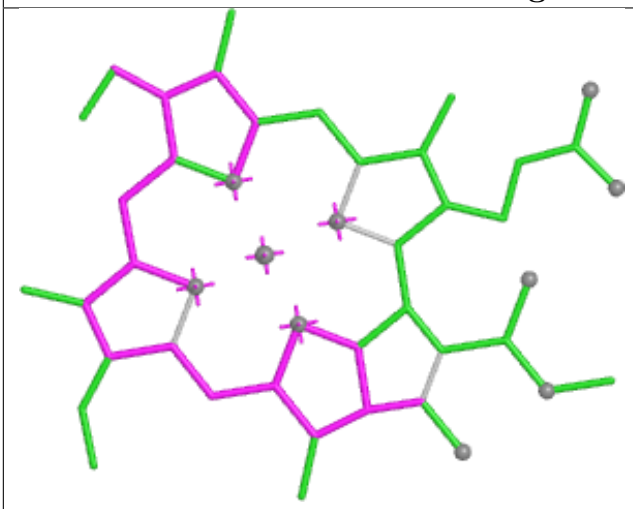


Rings

Ligand CLA 1 303



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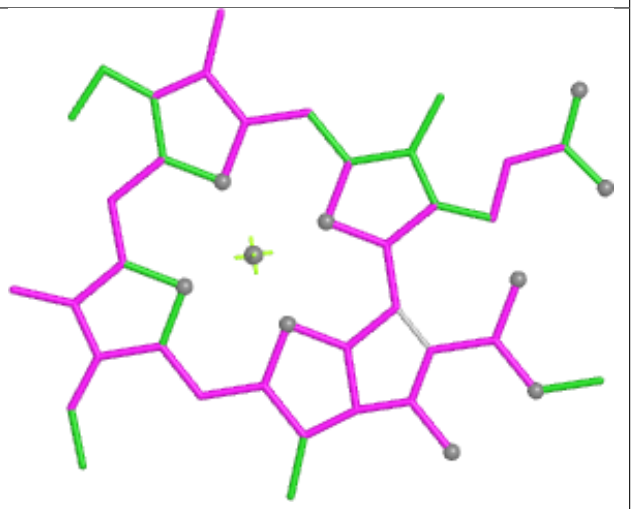

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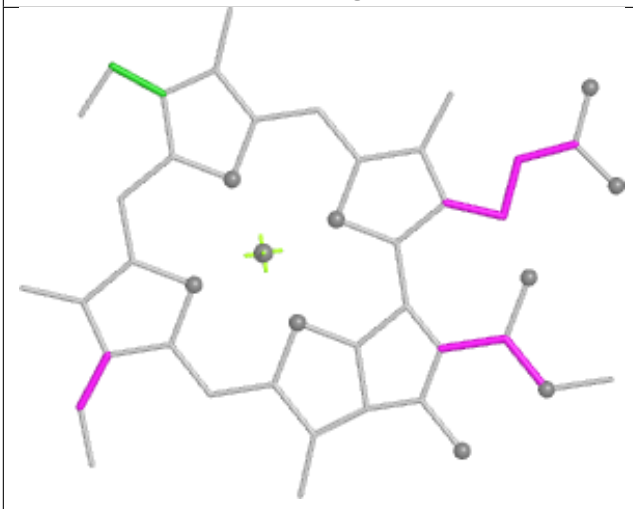
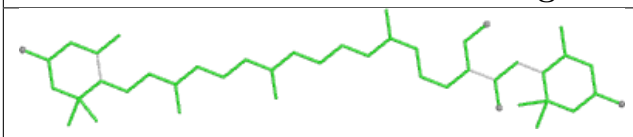


Torsions



Rings

Ligand 0IE 1 314



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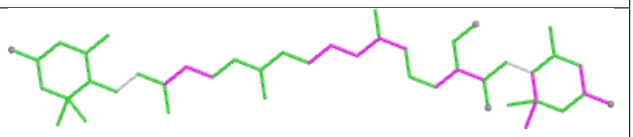
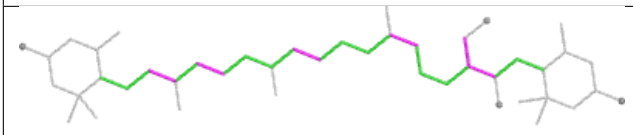


Bond angles



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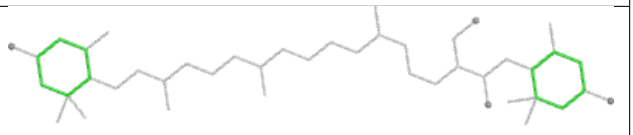
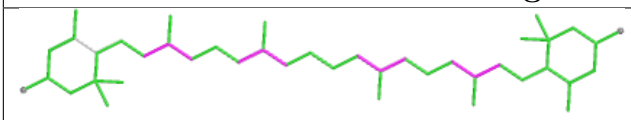


Rings

Ligand LUT U 419



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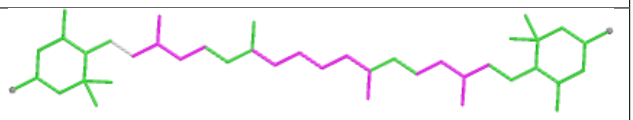
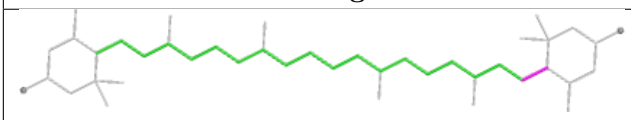


Bond angles



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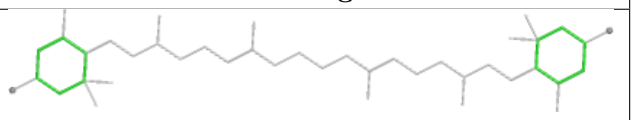
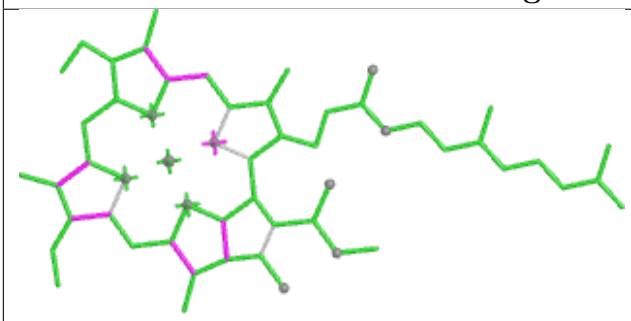
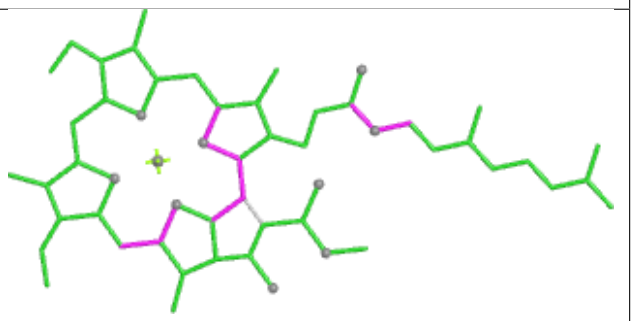


Rings

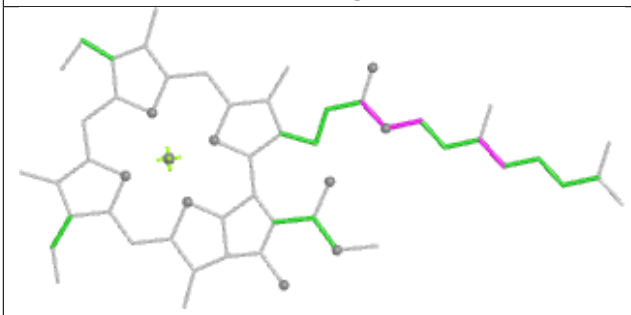
Ligand CLA U 411



Bond lengths



Bond angles



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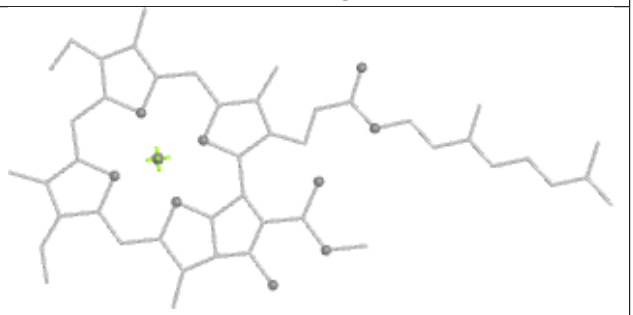
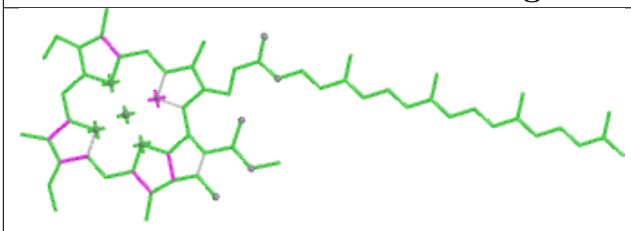


Rings

Ligand CLA U 412



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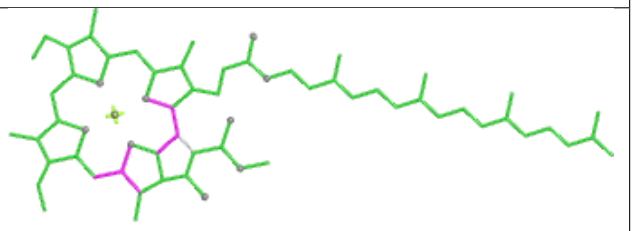
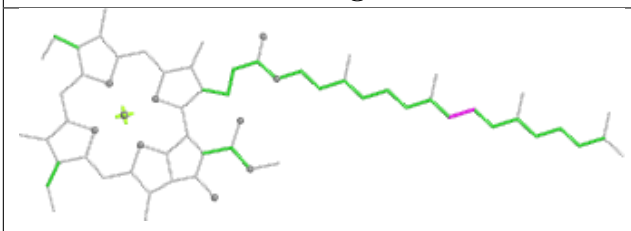


Bond angles



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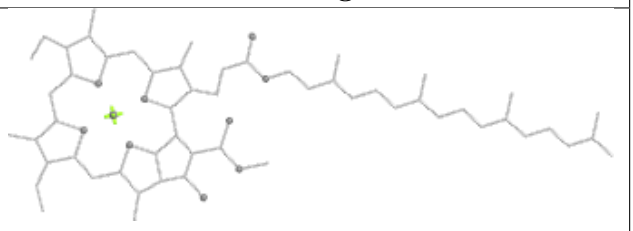
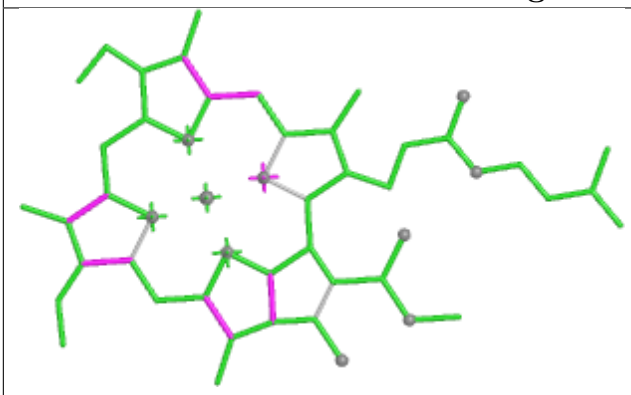


Rings

Ligand CLA y 304



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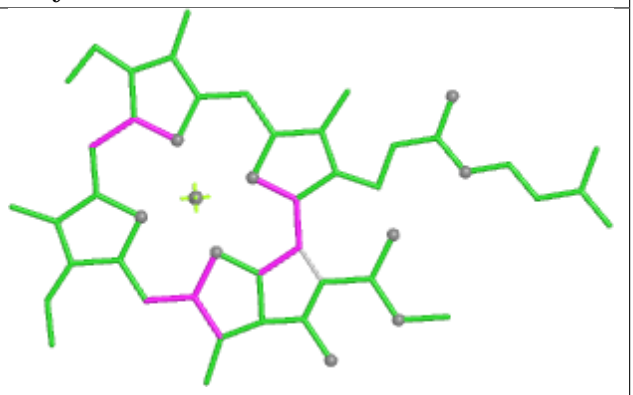
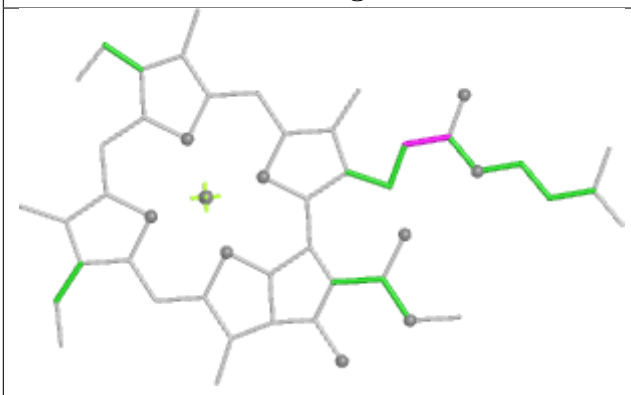


Bond angles



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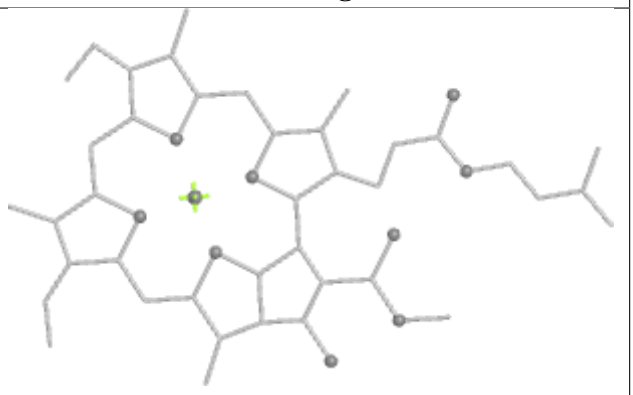
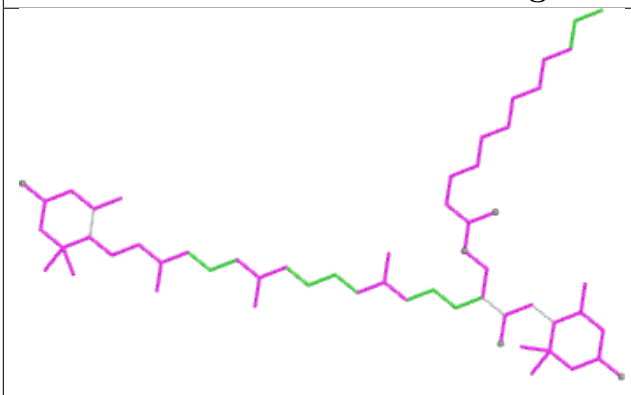
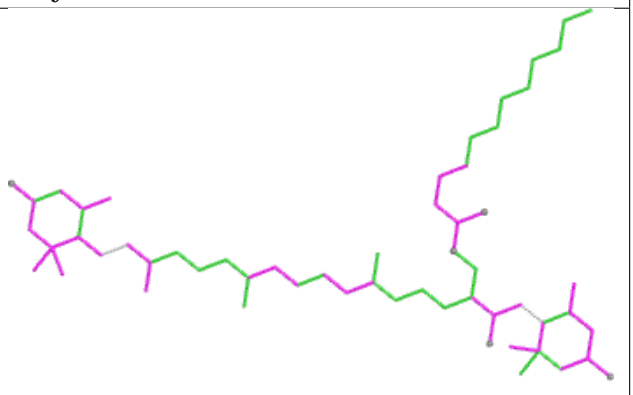


Rings

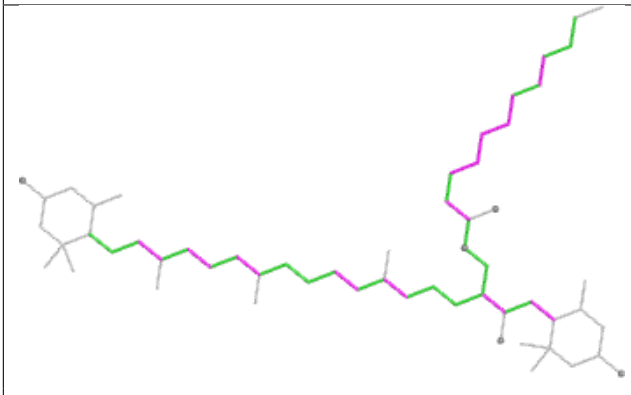
Ligand 0UR y 323



Bond lengths



Bond angles



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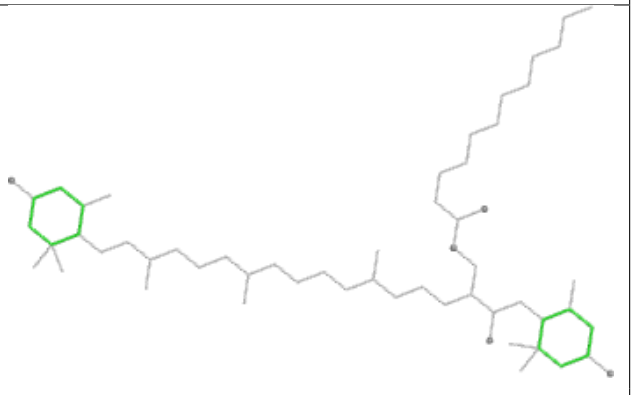
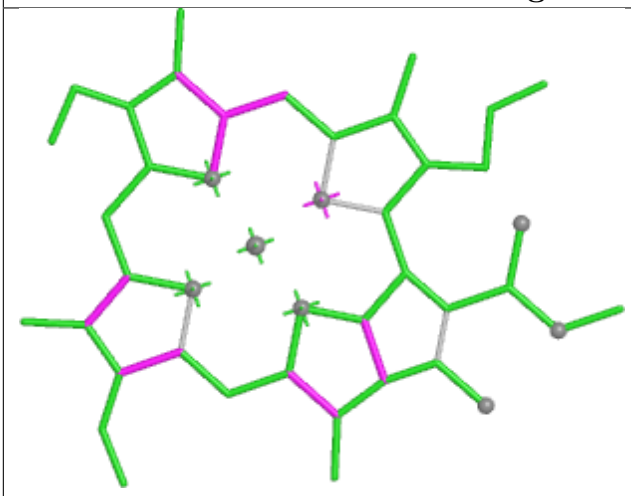
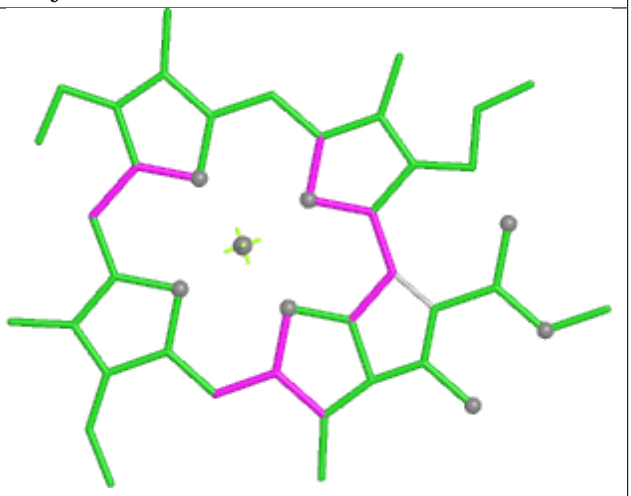


Rings

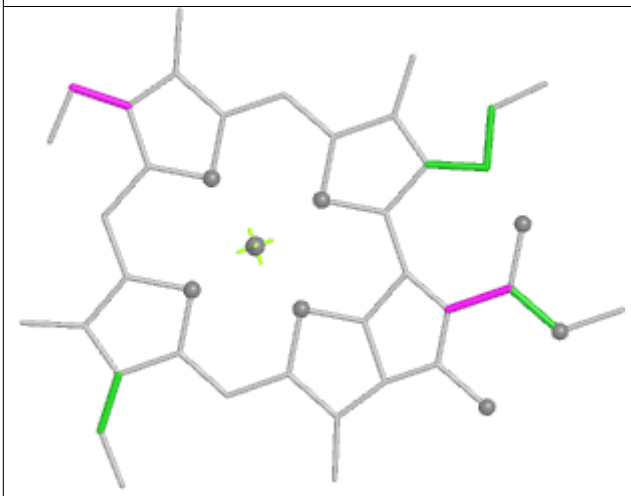
Ligand CLA y 313



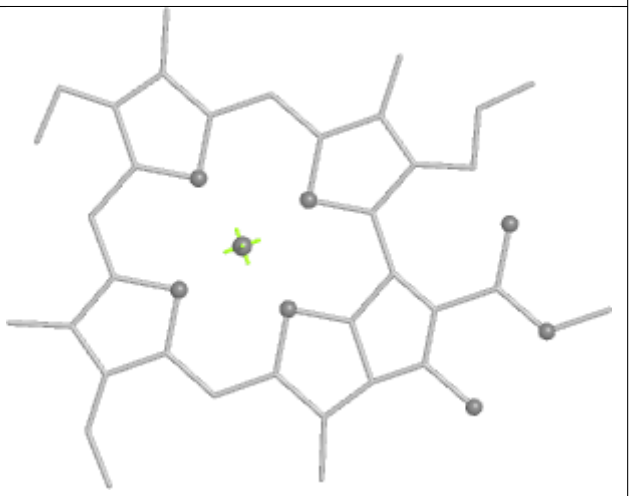
Bond lengths



Bond angles

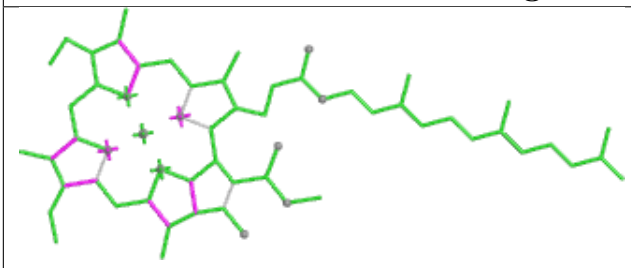


Torsions

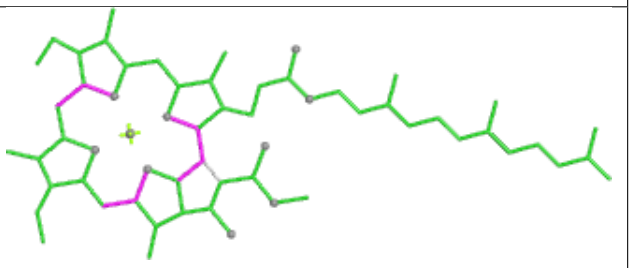


Rings

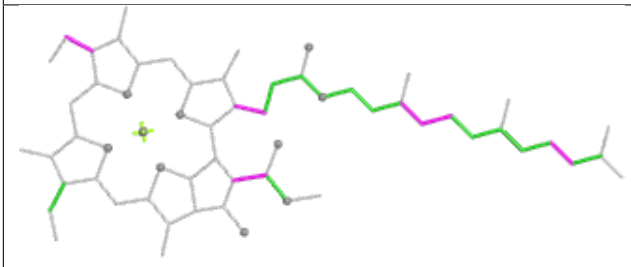
Ligand CLA U 407



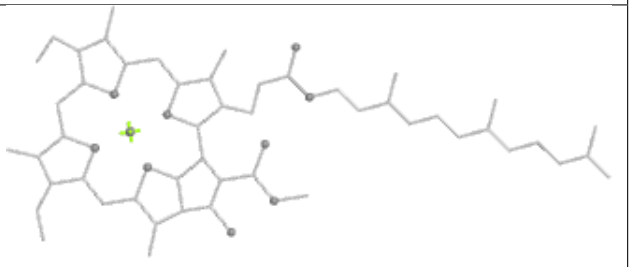
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

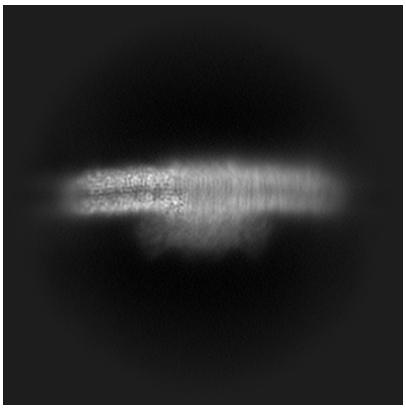
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-69051. These allow visual inspection of the internal detail of the map and identification of artifacts.

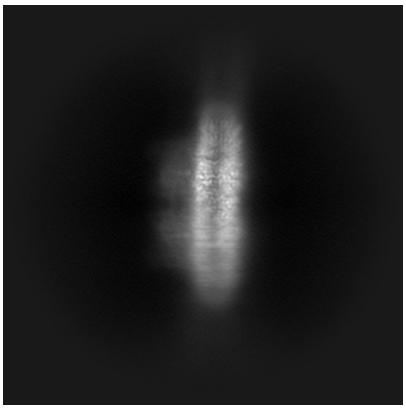
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

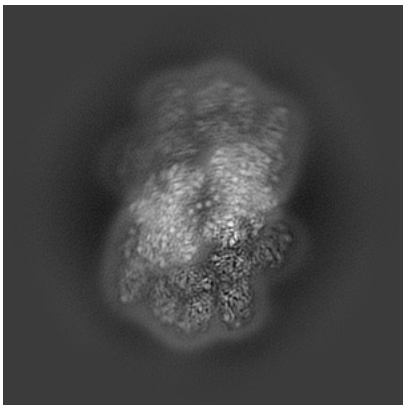
6.1.1 Primary map



X

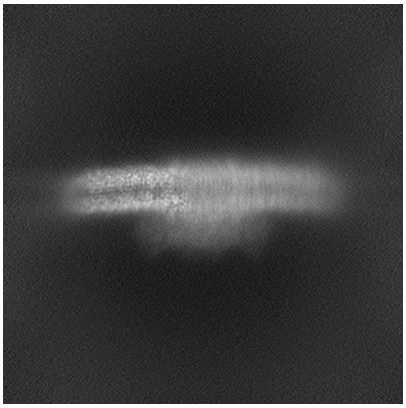


Y

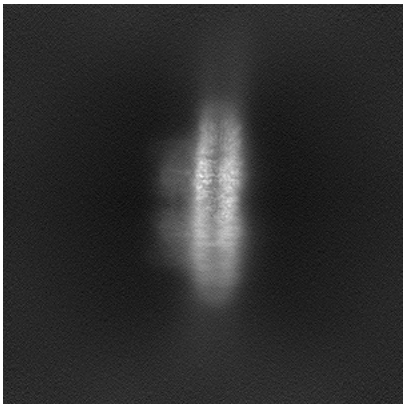


Z

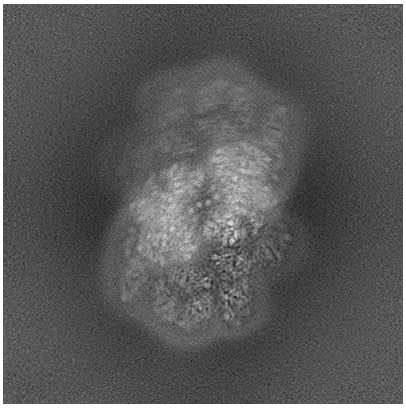
6.1.2 Raw map



X



Y

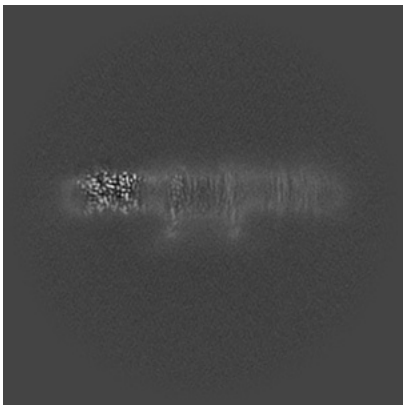


Z

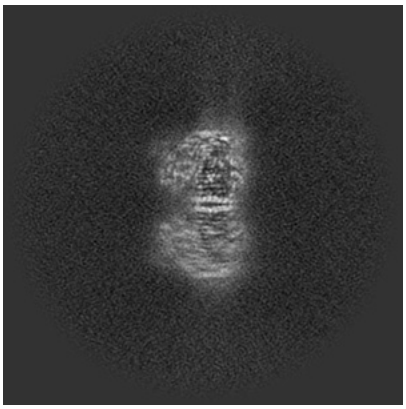
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

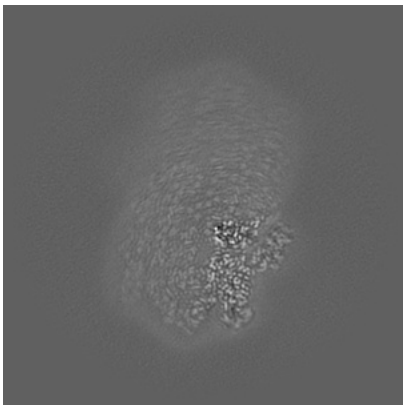
6.2.1 Primary map



X Index: 256

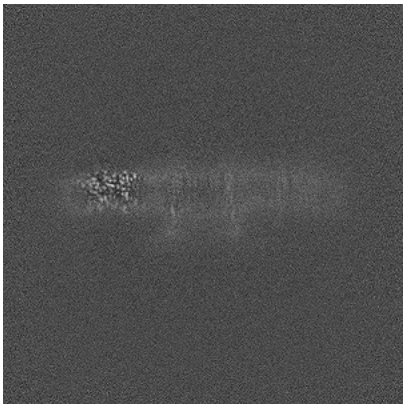


Y Index: 256

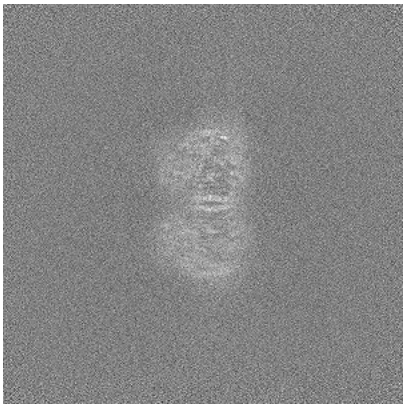


Z Index: 256

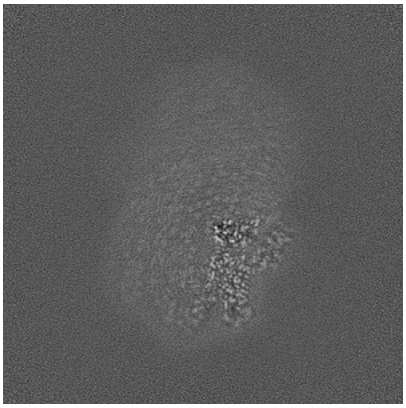
6.2.2 Raw map



X Index: 256



Y Index: 256

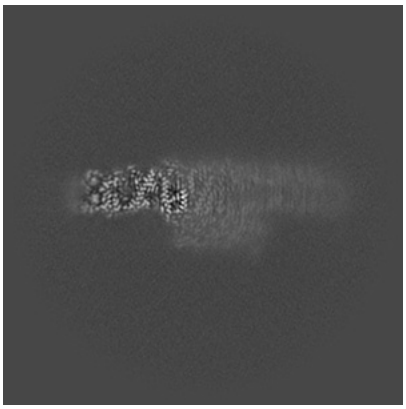


Z Index: 256

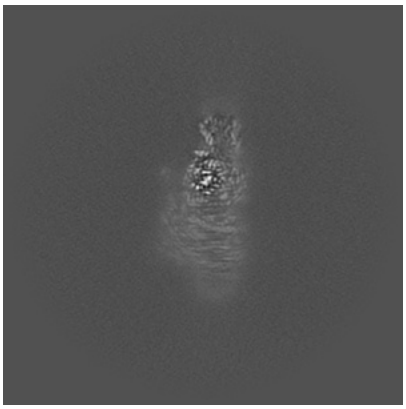
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

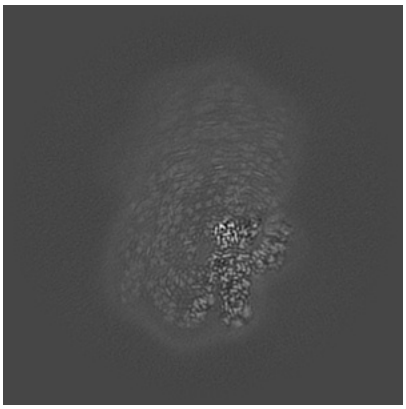
6.3.1 Primary map



X Index: 292

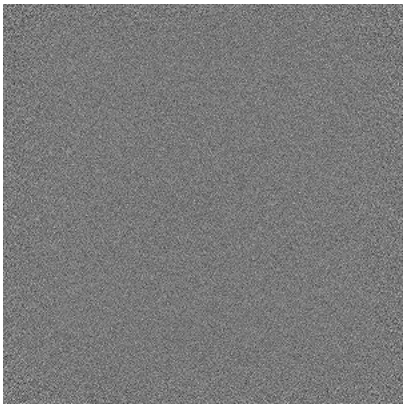


Y Index: 218

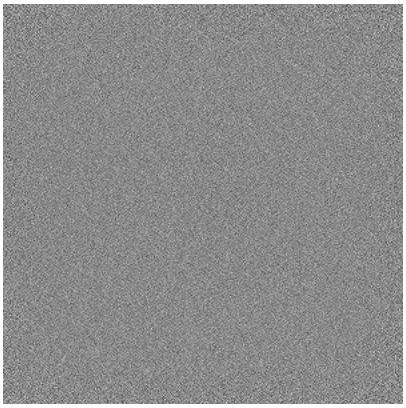


Z Index: 259

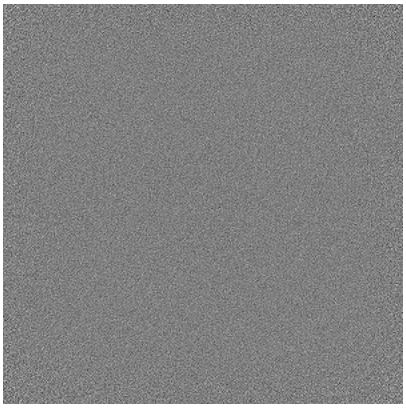
6.3.2 Raw map



X Index: 0



Y Index: 0

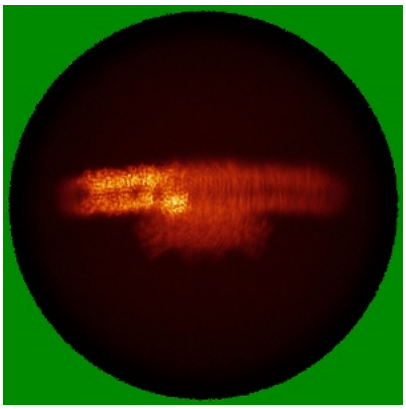


Z Index: 511

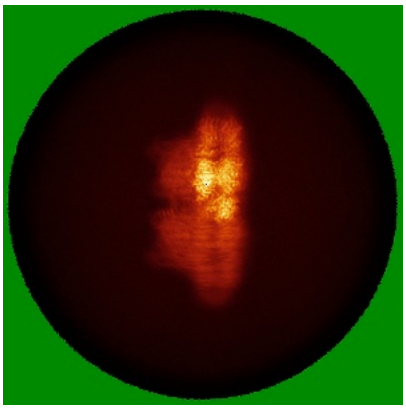
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

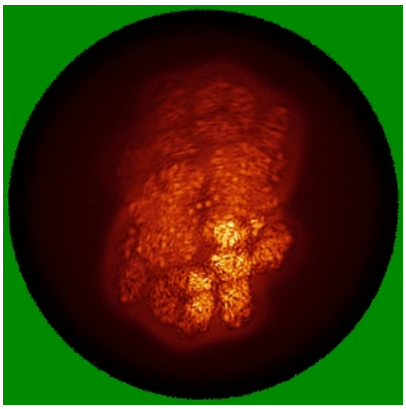
6.4.1 Primary map



X

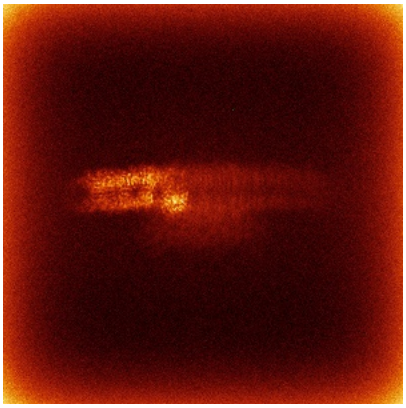


Y

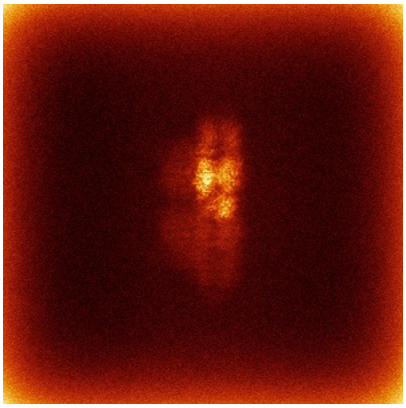


Z

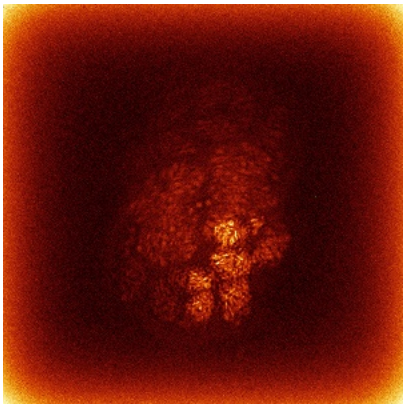
6.4.2 Raw map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

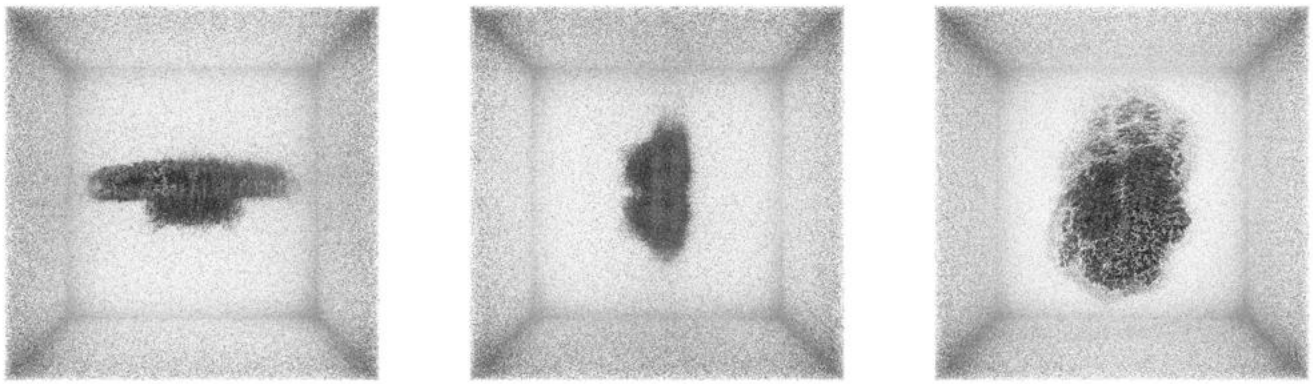
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

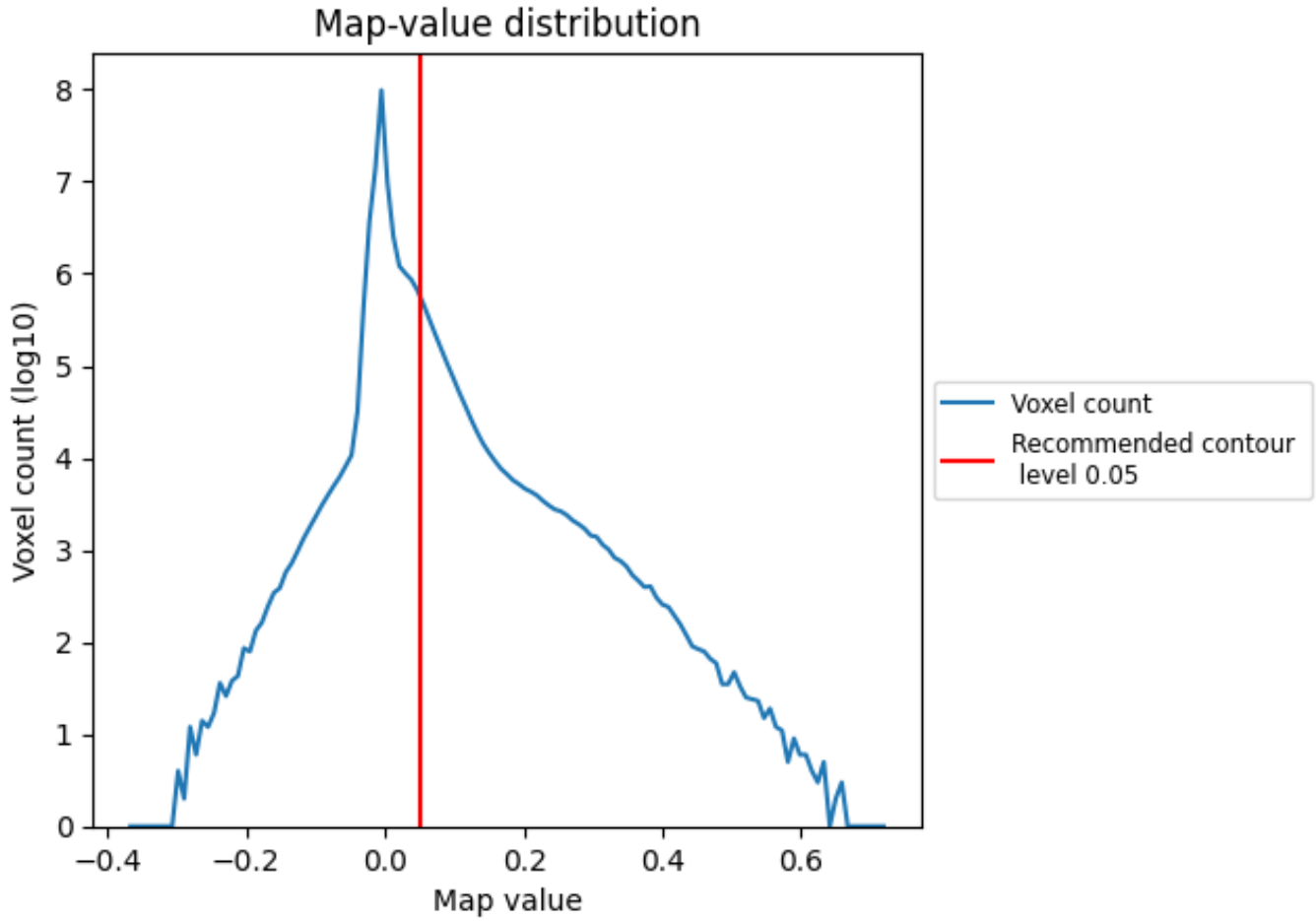
6.6 Mask visualisation (i)

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

7 Map analysis

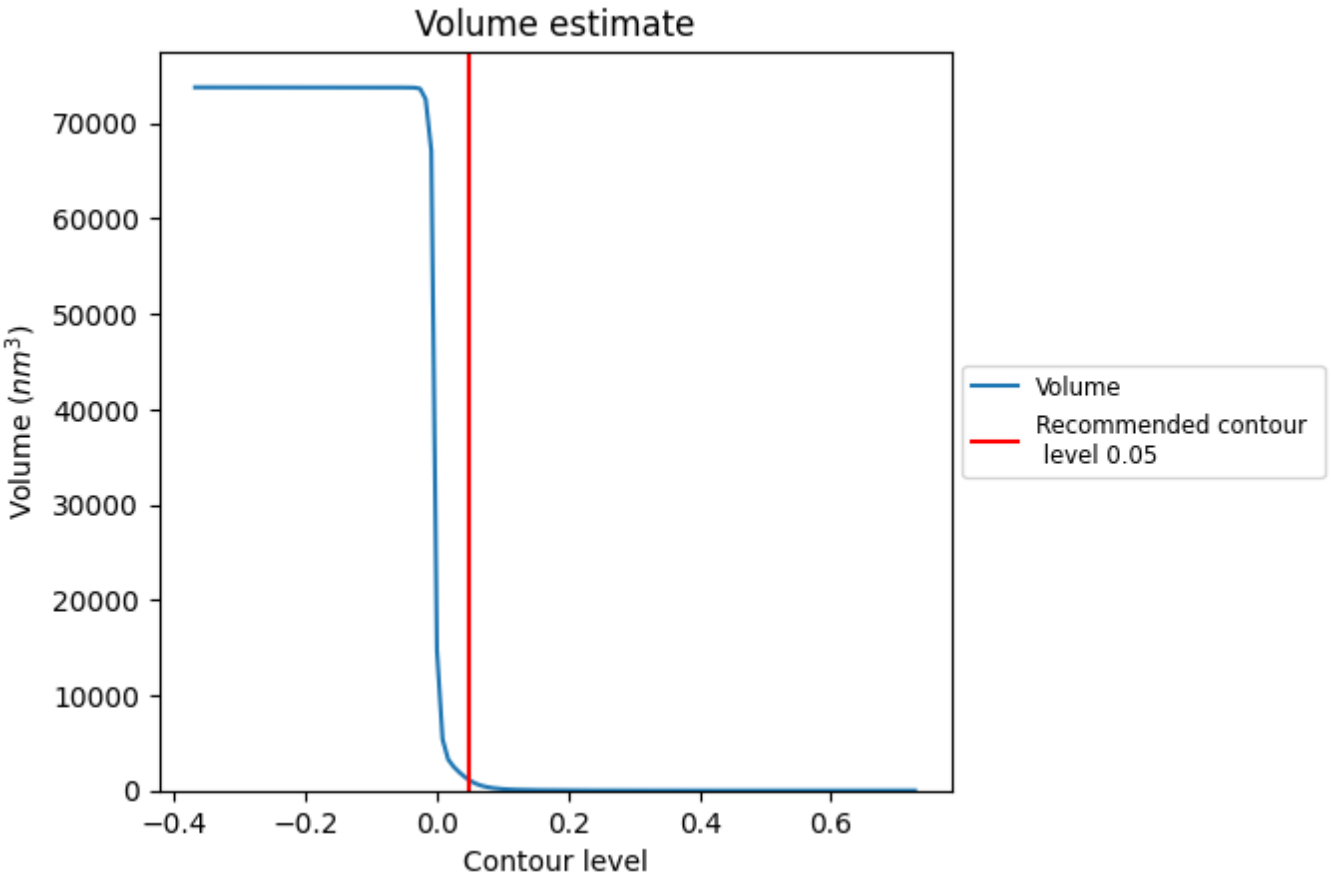
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

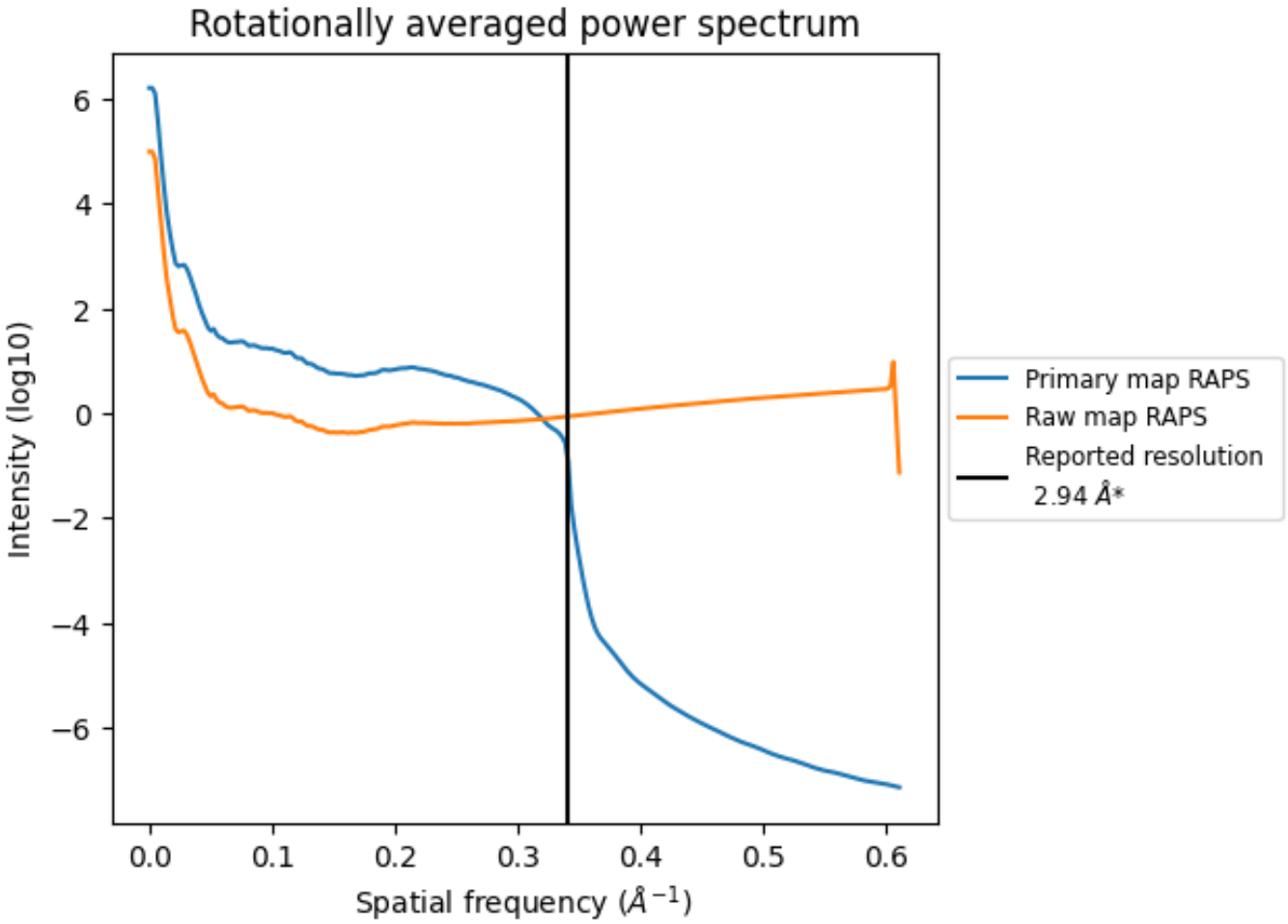
7.2 Volume estimate



The volume at the recommended contour level is 1084 nm^3; this corresponds to an approximate mass of 979 kDa.

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

7.3 Rotationally averaged power spectrum (i)

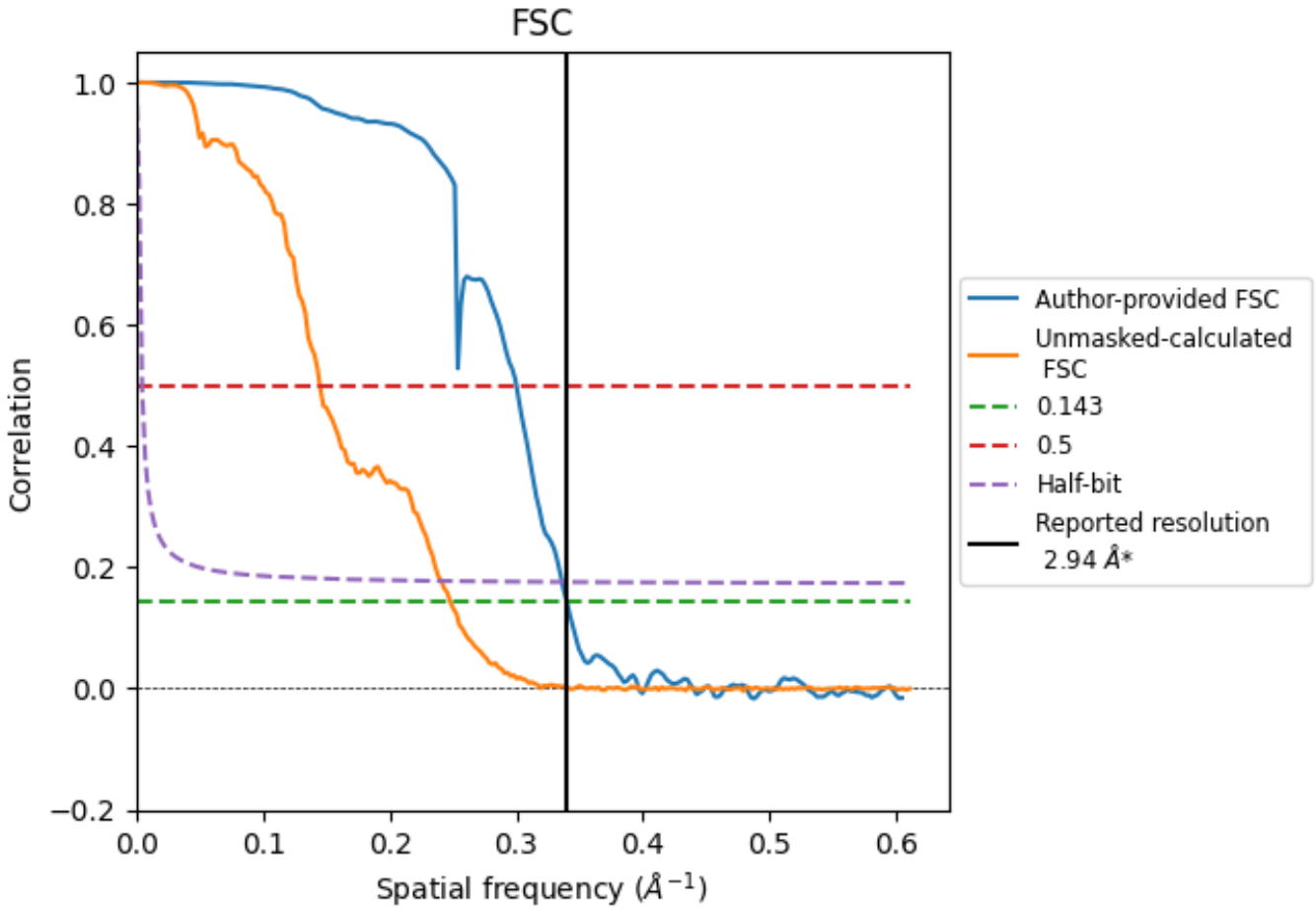


*Reported resolution corresponds to spatial frequency of 0.340 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.340 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.94	-	-
Author-provided FSC curve	2.94	3.33	2.98
Unmasked-calculated*	4.03	6.90	4.15

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.03 differs from the reported value 2.94 by more than 10 %

9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-69051 and PDB model 23KM. Per-residue inclusion information can be found in section 3 on page 12.

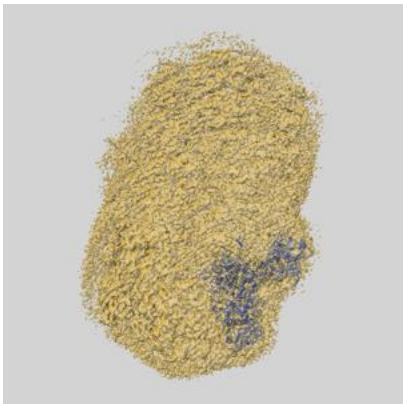
9.1 Map-model overlay



X



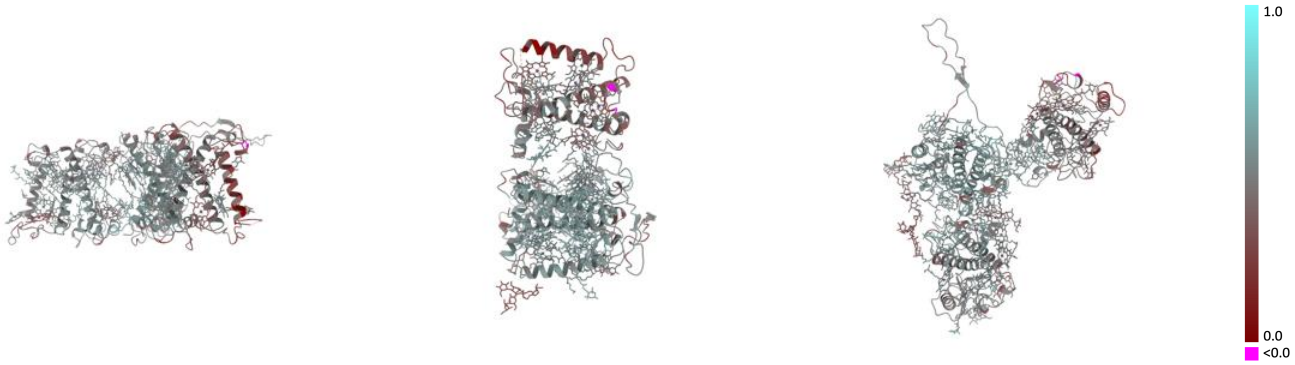
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.05 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

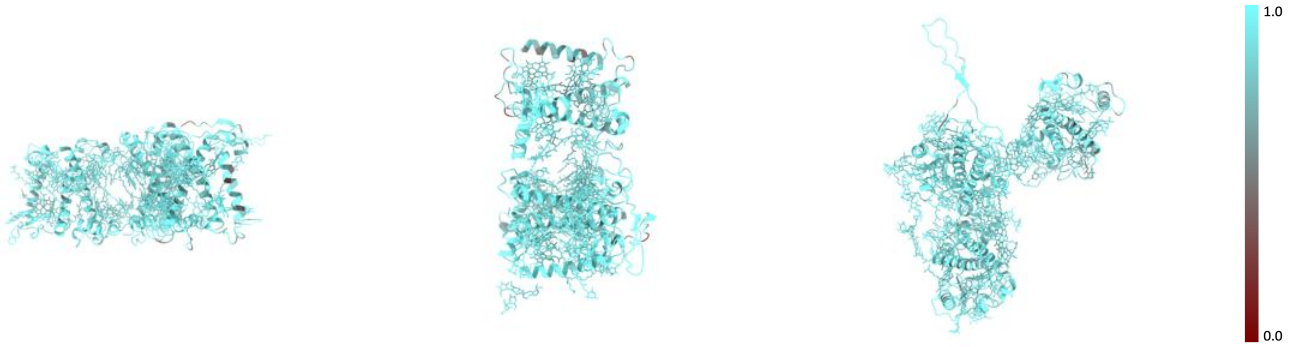
9.2 Q-score mapped to coordinate model



X Y Z

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

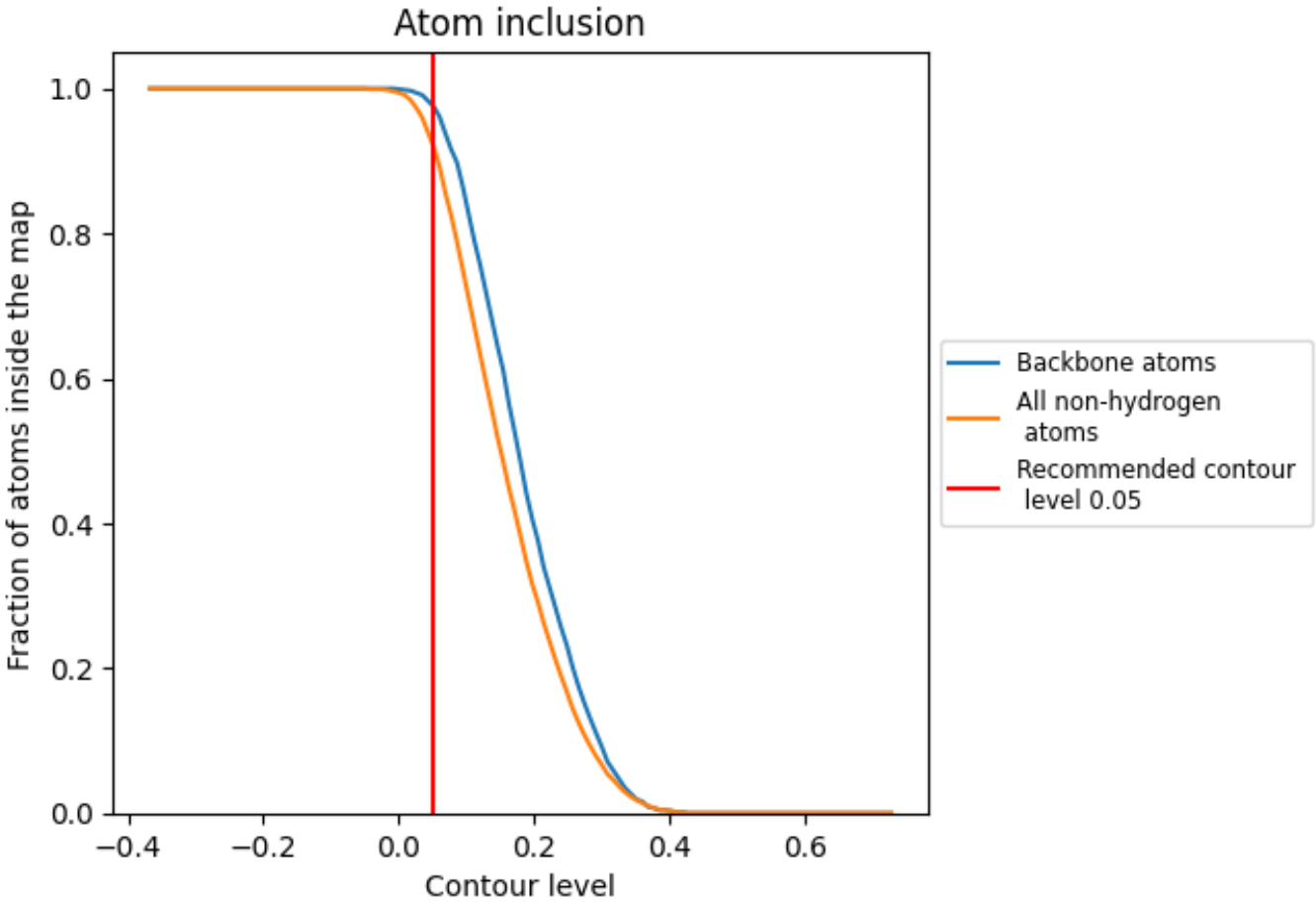
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.05).

9.4 Atom inclusion (i)



At the recommended contour level, 98% of all backbone atoms, 92% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.05) and Q-score for the entire model and for each chain.



Chain	Atom inclusion	Q-score
All	0.9230	0.4870
1	0.8710	0.4190
U	0.9530	0.5320
y	0.9350	0.4940