Full wwPDB EM Validation Report ⓘ

Nov 4, 2024 – 04:37 AM JST

PDB ID	:	7EQD
EMDB ID	:	EMD-31258
Title	:	STRUCTURE OF PHOTOSYNTHETIC LH1-RC SUPER-COMPLEX OF RHODOSPIRILLUM RUBRUM
Authors	:	Tani, K.; Kanno, R.; Ji, X.-C.; Yu, L.-J.; Hall, M.; Kimura, Y.; Madigan, M.T.; Mizoguchi, A.; Humbel, B.M.; Wang-Otomo, Z.-Y.
Deposited on	:	2021-05-01
Resolution	:	2.76 Å(reported)
Based on initial model	:	5Y5S

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:

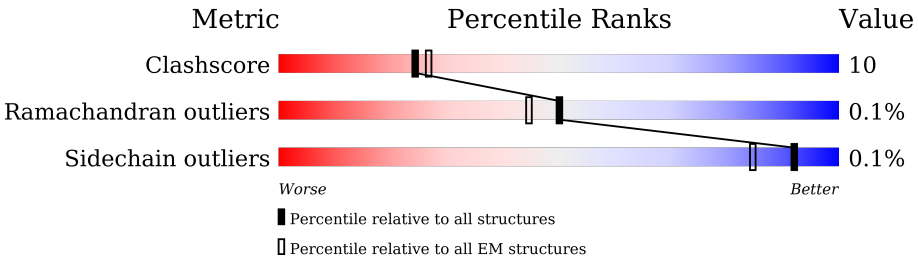
EMDB validation analysis	:	0.0.1.dev113
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.76 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	L	275	75% 25%
2	M	305	11% 71% 29%
3	H	256	23% 69% 31%
4	1	62	19% 58% 18% 24%
4	3	62	31% 53% 23% 24%
4	5	62	31% 58% 18% 24%
4	7	62	18% 63% 13% 24%
4	9	62	5% 56% 19% 24%

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Mol	Chain	Length	Quality of chain
4	A	62	8% 52% 24% 24%
4	D	62	10% 58% 18% 24%
4	F	62	6% 56% 19% 24%
4	I	62	58% 18% 24%
4	K	62	53% 21% 24%
4	O	62	13% 63% 13% 24%
4	Q	62	6% 52% 24% 24%
4	S	62	16% 63% 13% 24%
4	U	62	16% 60% 16% 24%
4	W	62	13% 55% 21% 24%
4	Y	62	19% 60% 16% 24%
5	0	55	13% 64% 18% 18%
5	2	55	16% 64% 16% 20%
5	4	55	25% 62% 20% 18%
5	6	55	31% 69% 13% 18%
5	8	55	18% 62% 18% 20%
5	B	55	16% 64% 18% 18%
5	E	55	13% 60% 20% 20%
5	G	55	5% 69% 13% 18%
5	J	55	11% 64% 18% 18%
5	N	55	9% 64% 18% 18%
5	P	55	18% 62% 18% 20%
5	R	55	5% 62% 20% 18%
5	T	55	16% 65% 16% 18%
5	V	55	27% 73% 9% 18%

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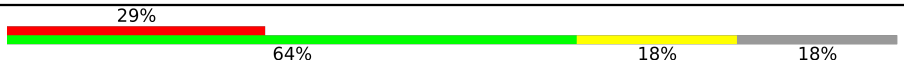
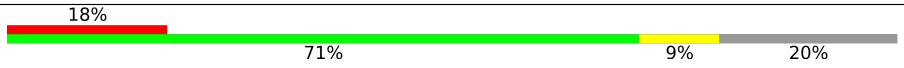
Mol	Chain	Length	Quality of chain
5	X	55	
5	Z	55	

2 Entry composition

There are 15 unique types of molecules in this entry. The entry contains 23122 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 Reaction center protein L chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	L	275	Total	C	N	O	S	0	0
			2169	1458	345	356	10		

- Molecule 2 is a protein called Reaction center protein M chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	M	304	Total	C	N	O	S	0	0
			2408	1608	396	395	9		

- Molecule 3 is a protein called Photoreaction center protein H.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	H	256	Total	C	N	O	S	0	0
			1951	1248	339	361	3		

- Molecule 4 is a protein called Light-harvesting protein B-870 alpha chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	A	47	Total	C	N	O	S	0	0
			397	269	65	62	1		
4	D	47	Total	C	N	O	S	0	0
			397	269	65	62	1		
4	F	47	Total	C	N	O	S	0	0
			397	269	65	62	1		
4	I	47	Total	C	N	O	S	0	0
			391	266	62	62	1		
4	K	47	Total	C	N	O	S	0	0
			391	266	62	62	1		
4	O	47	Total	C	N	O	S	0	0
			387	264	61	61	1		
4	Q	47	Total	C	N	O	S	0	0
			391	266	62	62	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	S	47	Total	C	N	O	S	0	0
			382	258	61	62	1		
4	U	47	Total	C	N	O	S	0	0
			391	266	62	62	1		
4	W	47	Total	C	N	O	S	0	0
			397	269	65	62	1		
4	Y	47	Total	C	N	O	S	0	0
			391	266	62	62	1		
4	1	47	Total	C	N	O	S	0	0
			393	266	64	62	1		
4	3	47	Total	C	N	O	S	0	0
			393	266	64	62	1		
4	5	47	Total	C	N	O	S	0	0
			393	266	64	62	1		
4	7	47	Total	C	N	O	S	0	0
			382	258	61	62	1		
4	9	47	Total	C	N	O	S	0	0
			391	266	62	62	1		

- Molecule 5 is a protein called Light-harvesting protein B-870 beta chain.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	B	45	Total	C	N	O	0	0
			367	250	58	59		
5	E	44	Total	C	N	O	0	0
			351	240	57	54		
5	G	45	Total	C	N	O	0	0
			367	250	58	59		
5	J	45	Total	C	N	O	0	0
			367	250	58	59		
5	N	45	Total	C	N	O	0	0
			367	250	58	59		
5	P	44	Total	C	N	O	0	0
			359	244	57	58		
5	R	45	Total	C	N	O	0	0
			363	248	58	57		
5	T	45	Total	C	N	O	0	0
			350	239	57	54		
5	V	45	Total	C	N	O	0	0
			354	242	58	54		
5	X	45	Total	C	N	O	0	0
			362	246	58	58		

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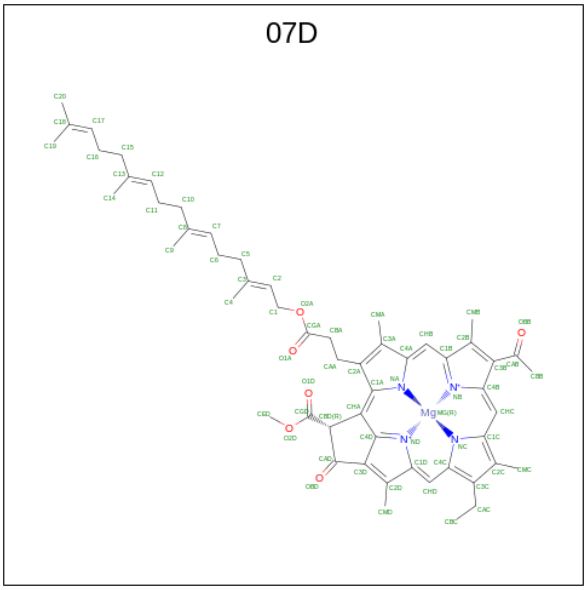
Mol	Chain	Residues	Atoms				AltConf	Trace
5	Z	44	Total 355	C 242	N 57	O 56	0	0
5	2	44	Total 351	C 239	N 56	O 56	0	0
5	4	45	Total 350	C 239	N 57	O 54	0	0
5	6	45	Total 346	C 237	N 57	O 52	0	0
5	8	44	Total 349	C 239	N 57	O 53	0	0
5	0	45	Total 367	C 250	N 58	O 59	0	0

- Molecule 6 is Trans-Geranyl BACTERIOCHLOROPHYLL A (three-letter code: 07D) (formula: $C_{55}H_{64}MgN_4O_6$).



Mol	Chain	Residues	Atoms					AltConf
6	L	1	Total 66	C 55	Mg 1	N 4	O 6	0
6	L	1	Total 66	C 55	Mg 1	N 4	O 6	0
6	M	1	Total 66	C 55	Mg 1	N 4	O 6	0
6	M	1	Total 66	C 55	Mg 1	N 4	O 6	0
6	A	1	Total 66	C 55	Mg 1	N 4	O 6	0

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Mol	Chain	Residues	Atoms					AltConf
6	B	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	D	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	E	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	F	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	G	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	I	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	J	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	K	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	N	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	O	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	P	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	Q	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	Q	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	S	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	T	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	U	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	V	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	W	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	X	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	Y	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	Z	1	Total	C	Mg	N	O	0
			66	55	1	4	6	

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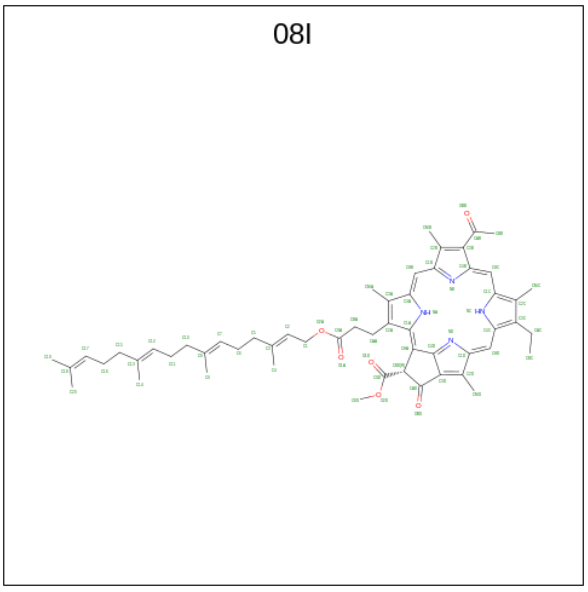
Mol	Chain	Residues	Atoms					AltConf
6	1	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	2	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	3	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	4	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	5	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	6	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	7	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	8	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	9	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
6	0	1	Total	C	Mg	N	O	0
			66	55	1	4	6	

- Molecule 7 is Trans-Geranyl BACTERIOPHEOPHYTIN A (three-letter code: 08I) (formula: $C_{55}H_{66}N_4O_6$).



Mol	Chain	Residues	Atoms				AltConf
7	L	1	Total	C	N	O	0
			65	55	4	6	

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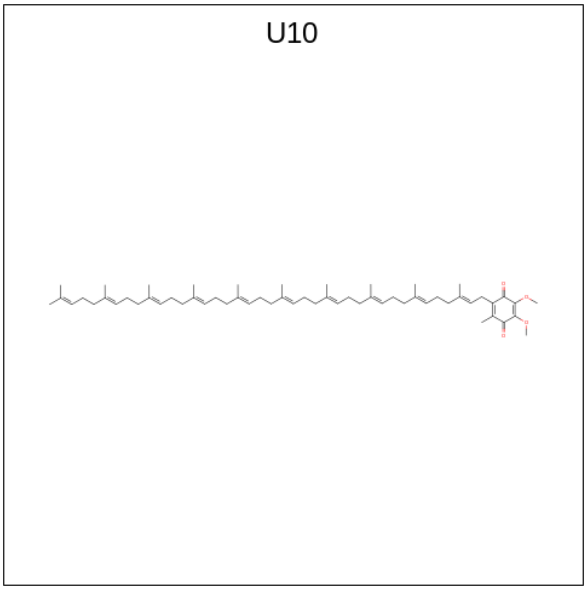
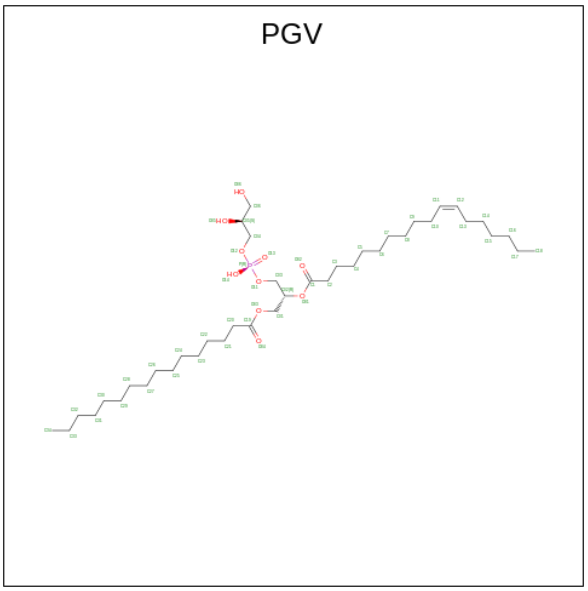
Mol	Chain	Residues	Atoms				AltConf
7	M	1	Total	C	N	O	0
			65	55	4	6	

- Molecule 8 is UBIQUINONE-10 (three-letter code: U10) (formula: $C_{59}H_{90}O_4$).



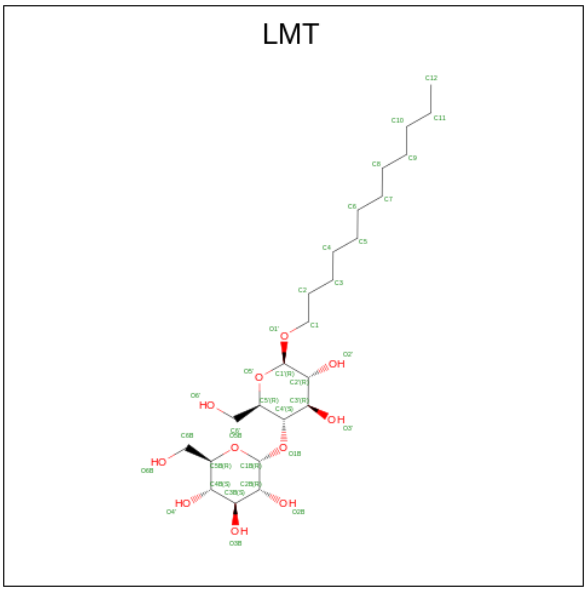
Mol	Chain	Residues	Atoms			AltConf
8	L	1	Total	C	O	0
			28	24	4	
8	M	1	Total	C	O	0
			18	14	4	

- Molecule 9 is (1R)-2-{[{[(2S)-2,3-DIHYDROXYPROPYL]OXY}(HYDROXY)PHOSPHORYL]OXY}-1-[(PALMITOYLOXY)METHYL]ETHYL (11E)-OCTADEC-11-ENOATE (three-letter code: PGV) (formula: $C_{40}H_{77}O_{10}P$).



Mol	Chain	Residues	Atoms				AltConf
9	L	1	Total	C	O	P	0
			43	32	10	1	
9	H	1	Total	C	O	P	0
			36	25	10	1	

- Molecule 10 is DODECYL-BETA-D-MALTOSIDE (three-letter code: LMT) (formula: $C_{24}H_{46}O_{11}$).



Mol	Chain	Residues	Atoms			AltConf
10	L	1	Total	C	O	0
			28	17	11	

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Mol	Chain	Residues	Atoms	AltConf
10	L	1	Total C O 32 21 11	0
10	M	1	Total C O 35 24 11	0
10	M	1	Total C O 29 18 11	0
10	H	1	Total C O 35 24 11	0
10	B	1	Total C O 35 24 11	0
10	E	1	Total C O 35 24 11	0
10	G	1	Total C O 35 24 11	0
10	J	1	Total C O 35 24 11	0
10	N	1	Total C O 35 24 11	0
10	P	1	Total C O 35 24 11	0
10	R	1	Total C O 35 24 11	0
10	T	1	Total C O 35 24 11	0
10	V	1	Total C O 35 24 11	0
10	X	1	Total C O 35 24 11	0
10	Z	1	Total C O 35 24 11	0
10	2	1	Total C O 35 24 11	0
10	4	1	Total C O 35 24 11	0
10	5	1	Total C O 31 20 11	0
10	5	1	Total C O 35 24 11	0
10	6	1	Total C O 35 24 11	0
10	8	1	Total C O 35 24 11	0

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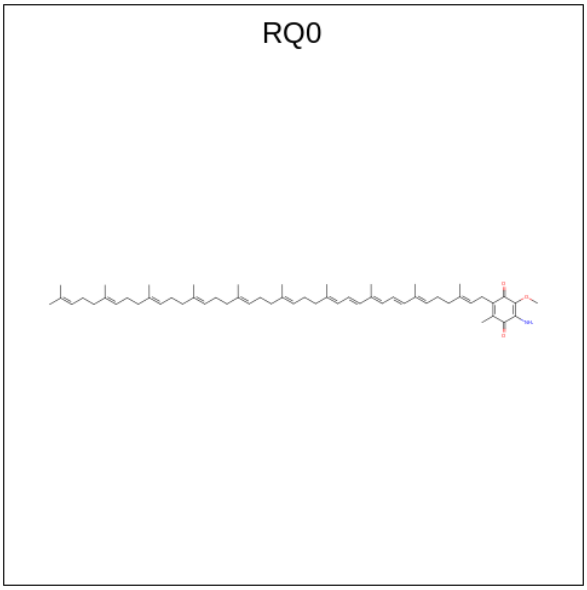
Mol	Chain	Residues	Atoms			AltConf
10	0	1	Total	C	O	0
			35	24	11	

- Molecule 11 is FE (III) ION (three-letter code: FE) (formula: Fe).

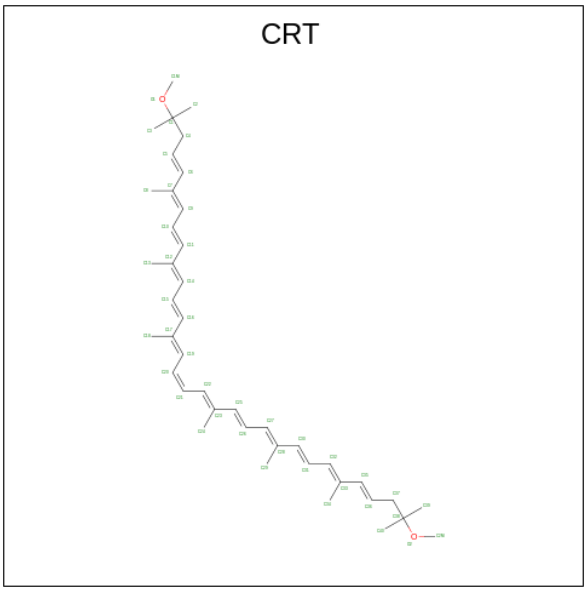
Mol	Chain	Residues	Atoms		AltConf
11	M	1	Total	Fe	0
			1	1	

- Molecule 12 is 2-azanyl-5-[(2 {E},6 {E},8 {E},10 {E},12 {E},14 {E},18 {E},22 {E},26 {E} ,30 {E},34 {E})-3,7,11,15,19,23,27,31,35,39-decamethyltetraconta-2,6,8,10,12,14,18,22,26, 30,34,38-dodecaenyl]-3-methoxy-6-methyl-cyclohexa-2,5-diene-1,4-dione (three-letter code: RQ0) (formula: $C_{58}H_{85}NO_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
12	M	1	Total	C	N	O	0
			62	58	1	3	

- Molecule 13 is SPIRILLOXANTHIN (three-letter code: CRT) (formula: $C_{42}H_{60}O_2$).



Mol	Chain	Residues	Atoms	AltConf
13	M	1	Total C O 44 42 2	0
13	A	1	Total C O 44 42 2	0
13	E	1	Total C O 44 42 2	0
13	G	1	Total C O 44 42 2	0
13	J	1	Total C O 44 42 2	0
13	N	1	Total C O 44 42 2	0
13	P	1	Total C O 44 42 2	0
13	R	1	Total C O 44 42 2	0
13	T	1	Total C O 44 42 2	0
13	V	1	Total C O 44 42 2	0
13	X	1	Total C O 44 42 2	0
13	Z	1	Total C O 44 42 2	0
13	2	1	Total C O 44 42 2	0
13	4	1	Total C O 44 42 2	0

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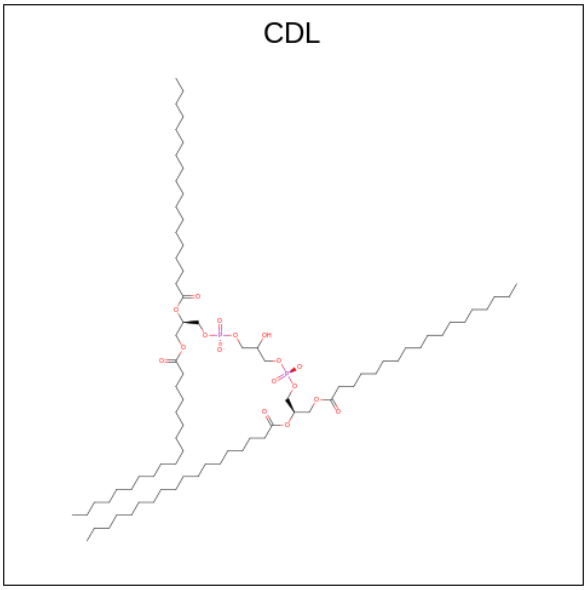
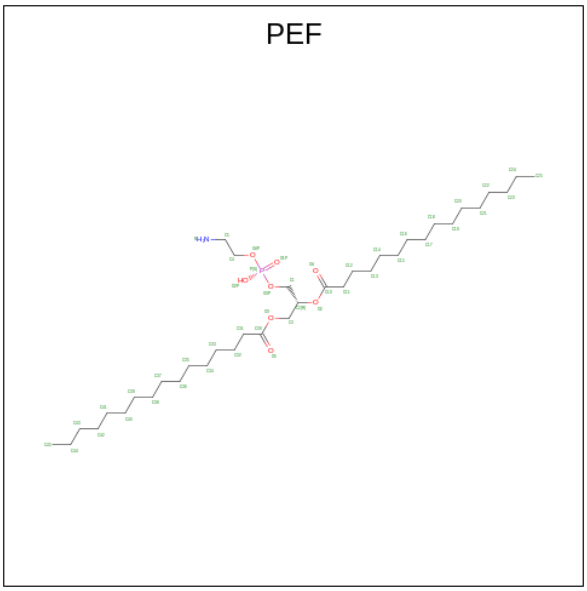
Mol	Chain	Residues	Atoms	AltConf
13	6	1	Total C O 44 42 2	0
13	8	1	Total C O 44 42 2	0
13	0	1	Total C O 44 42 2	0

- Molecule 14 is CARDIOLIPIN (three-letter code: CDL) (formula: $C_{81}H_{156}O_{17}P_2$).



Mol	Chain	Residues	Atoms	AltConf
14	M	1	Total C O P 68 49 17 2	0
14	M	1	Total C O P 68 49 17 2	0
14	H	1	Total C O P 64 45 17 2	0
14	H	1	Total C O P 59 40 17 2	0
14	H	1	Total C O P 33 15 16 2	0

- Molecule 15 is DI-PALMITOYL-3-SN-PHOSPHATIDYLETHANOLAMINE (three-letter code: PEF) (formula: $C_{37}H_{74}NO_8P$).

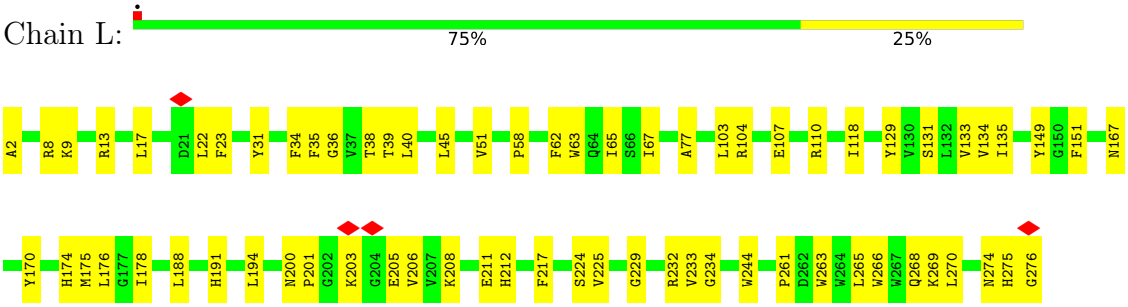


Mol	Chain	Residues	Atoms					AltConf
15	H	1	Total	C	N	O	P	0
			13	5	1	6	1	
15	K	1	Total	C	N	O	P	0
			31	21	1	8	1	
15	K	1	Total	C	N	O	P	0
			42	32	1	8	1	

3 Residue-property plots (i)

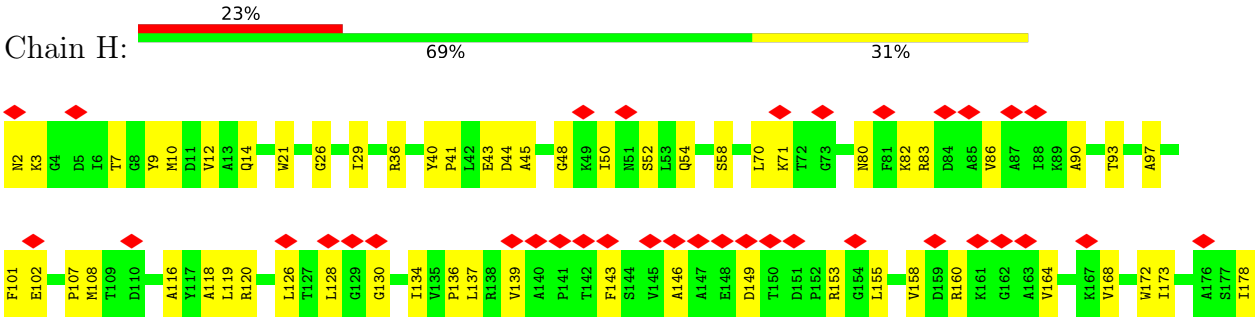
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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.

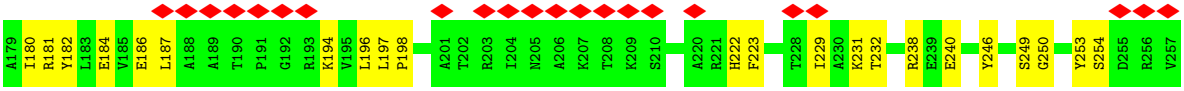
• Molecule 1: Reaction center protein L chain



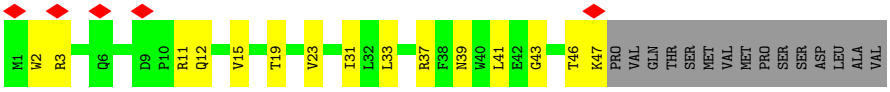
• Molecule 2: Reaction center protein M chain

• Molecule 3: Photoreaction center protein H



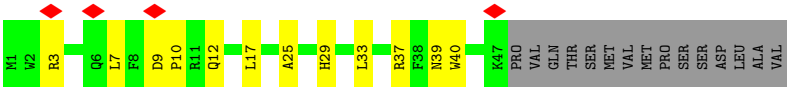


• Molecule 4: Light-harvesting protein B-870 alpha chain

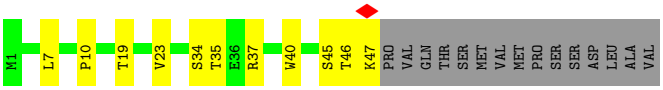


• Molecule 4: Light-harvesting protein B-870 alpha chain

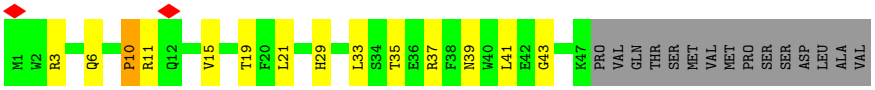
• Molecule 4: Light-harvesting protein B-870 alpha chain



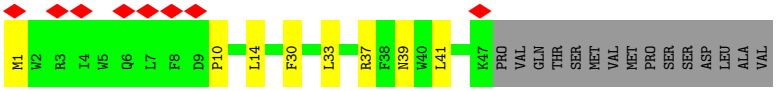
• Molecule 4: Light-harvesting protein B-870 alpha chain



• Molecule 4: Light-harvesting protein B-870 alpha chain

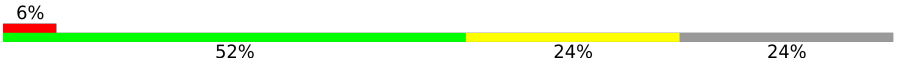


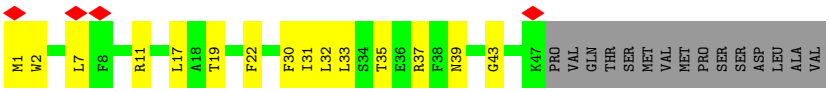
• Molecule 4: Light-harvesting protein B-870 alpha chain



• Molecule 4: Light-harvesting protein B-870 alpha chain

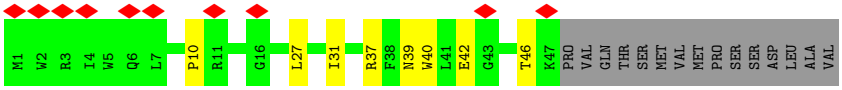
Chain Q:





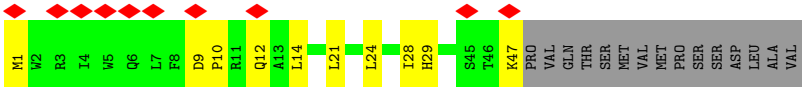
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain S:



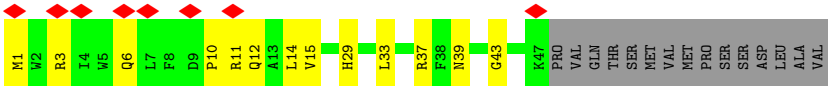
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain U:



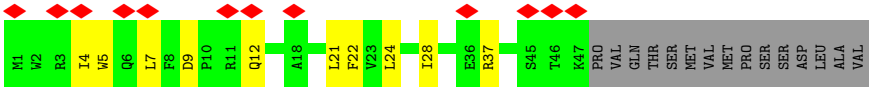
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain W:



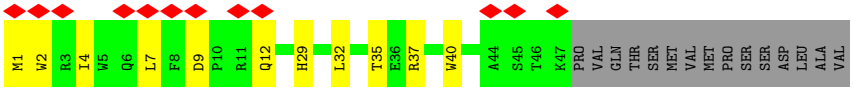
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain Y:



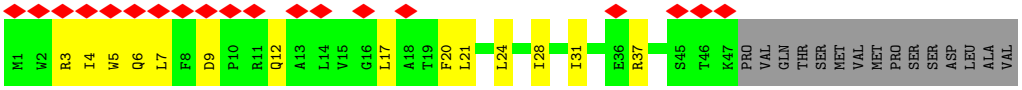
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain 1:



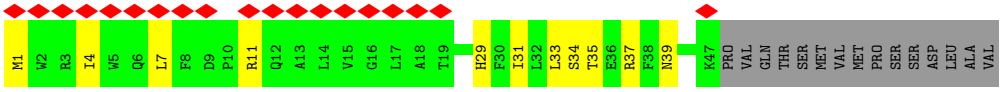
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain 3:



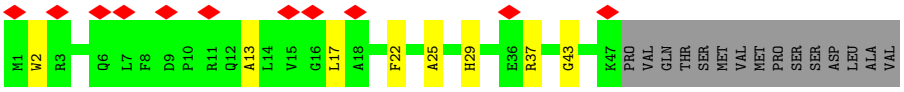
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain 5:



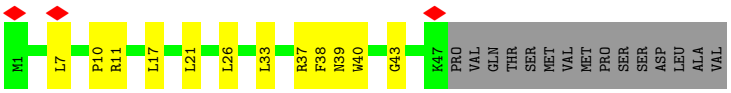
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain 7:



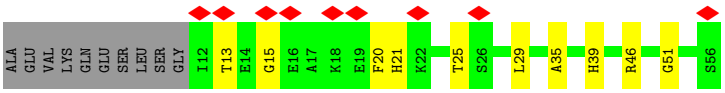
• Molecule 4: Light-harvesting protein B-870 alpha chain

Chain 9:



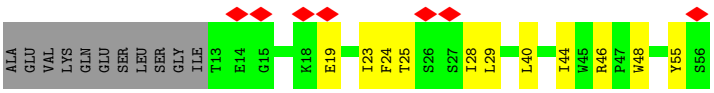
• Molecule 5: Light-harvesting protein B-870 beta chain

Chain B:



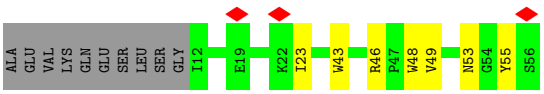
• Molecule 5: Light-harvesting protein B-870 beta chain

Chain E:



• Molecule 5: Light-harvesting protein B-870 beta chain

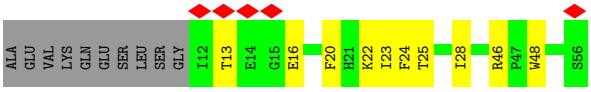
Chain G:



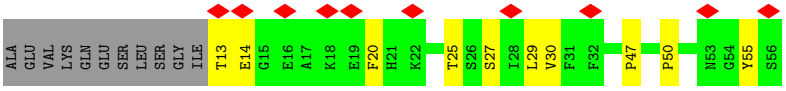
• Molecule 5: Light-harvesting protein B-870 beta chain

Chain J:

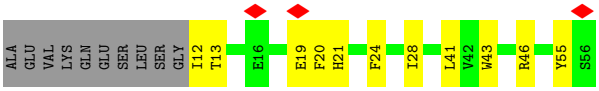
• Molecule 5: Light-harvesting protein B-870 beta chain



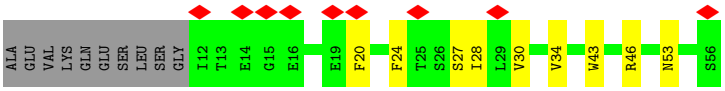
• Molecule 5: Light-harvesting protein B-870 beta chain



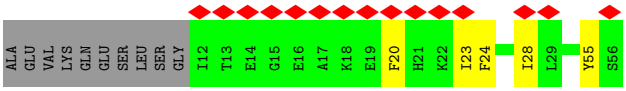
• Molecule 5: Light-harvesting protein B-870 beta chain



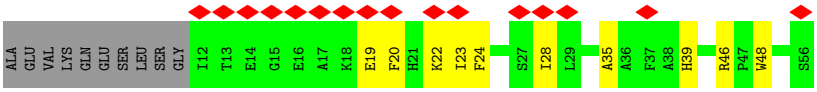
• Molecule 5: Light-harvesting protein B-870 beta chain



• Molecule 5: Light-harvesting protein B-870 beta chain

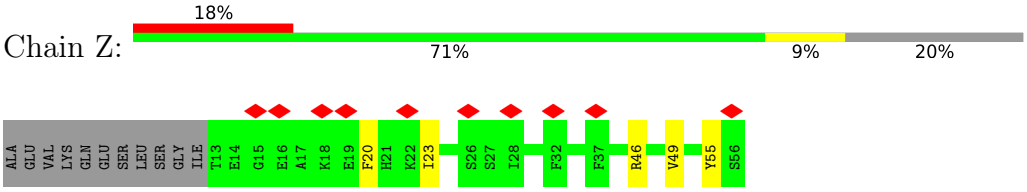


• Molecule 5: Light-harvesting protein B-870 beta chain



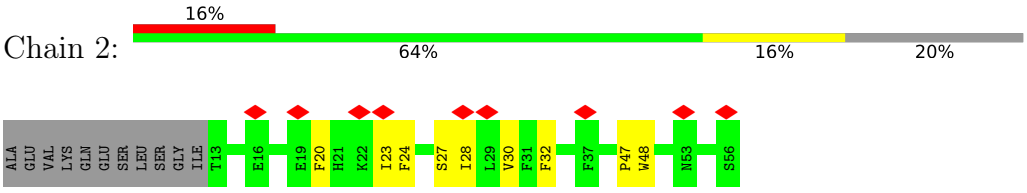
• Molecule 5: Light-harvesting protein B-870 beta chain

Chain Z:



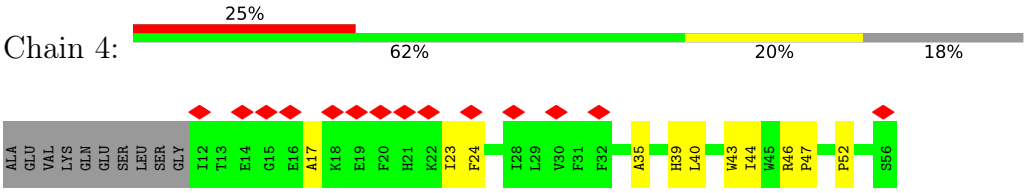
• Molecule 5: Light-harvesting protein B-870 beta chain

Chain 2:



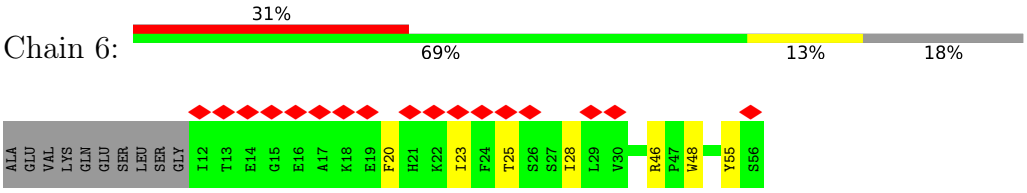
• Molecule 5: Light-harvesting protein B-870 beta chain

Chain 4:



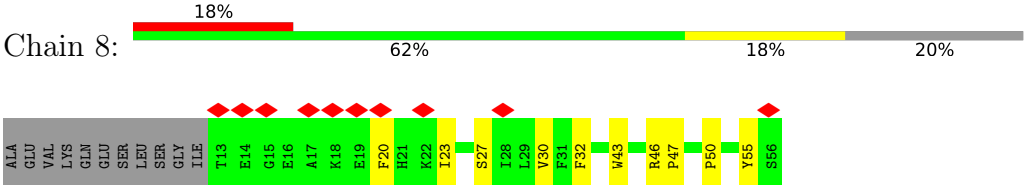
• Molecule 5: Light-harvesting protein B-870 beta chain

Chain 6:



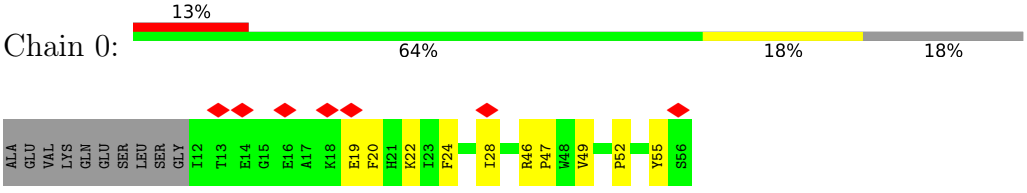
• Molecule 5: Light-harvesting protein B-870 beta chain

Chain 8:



• Molecule 5: Light-harvesting protein B-870 beta chain

Chain 0:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	145033	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	42	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	0.238	Depositor
Minimum map value	-0.137	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.033	Depositor
Map size (Å)	295.2, 295.2, 295.2	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.82000005, 0.82000005, 0.82000005	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: 07D, PGV, CDL, 08I, FME, FE, LMT, PEF, U10, RQ0, CRT

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	L	0.30	0/2253	0.48	0/3082
2	M	0.30	0/2499	0.47	0/3408
3	H	0.28	0/1993	0.54	0/2714
4	1	0.25	0/395	0.46	0/539
4	3	0.27	0/395	0.48	0/539
4	5	0.26	0/395	0.51	0/539
4	7	0.26	0/382	0.45	0/520
4	9	0.27	0/393	0.45	0/536
4	A	0.26	0/399	0.45	0/543
4	D	0.28	0/399	0.47	0/543
4	F	0.27	0/399	0.48	0/543
4	I	0.29	0/393	0.43	0/536
4	K	0.30	0/393	0.53	1/536 (0.2%)
4	O	0.30	0/389	0.60	1/531 (0.2%)
4	Q	0.28	0/393	0.47	0/536
4	S	0.26	0/382	0.43	0/520
4	U	0.26	0/393	0.44	0/536
4	W	0.27	0/399	0.48	0/543
4	Y	0.26	0/393	0.49	0/536
5	0	0.28	0/383	0.38	0/522
5	2	0.27	0/367	0.42	0/502
5	4	0.28	0/366	0.50	0/501
5	6	0.27	0/362	0.38	0/496
5	8	0.27	0/365	0.45	0/498
5	B	0.27	0/383	0.41	0/522
5	E	0.28	0/367	0.43	0/501
5	G	0.28	0/383	0.39	0/522
5	J	0.29	0/383	0.39	0/522
5	N	0.28	0/383	0.39	0/522
5	P	0.30	0/375	0.43	0/511
5	R	0.29	0/379	0.40	0/517
5	T	0.27	0/366	0.39	0/501

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
5	V	0.28	0/370	0.36	0/505
5	X	0.27	0/378	0.37	0/515
5	Z	0.27	0/371	0.43	0/506
All	All	0.28	0/19018	0.46	2/25943 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	O	10	PRO	CA-N-CD	-8.07	100.20	111.50
4	K	10	PRO	CA-N-CD	-5.71	103.50	111.50

There are no chirality outliers.

There are no planarity outliers.

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	L	2169	0	2129	57	0
2	M	2408	0	2336	68	0
3	H	1951	0	1973	66	0
4	1	393	0	396	10	0
4	3	393	0	396	11	0
4	5	393	0	396	10	0
4	7	382	0	388	7	0
4	9	391	0	396	14	0
4	A	397	0	407	13	0
4	D	397	0	407	10	0
4	F	397	0	407	9	0
4	I	391	0	396	11	0
4	K	391	0	396	12	0
4	O	387	0	390	5	0
4	Q	391	0	396	14	0
4	S	382	0	388	6	0
4	U	391	0	396	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	W	397	0	407	11	0
4	Y	391	0	396	10	0
5	0	367	0	355	8	0
5	2	351	0	329	11	0
5	4	350	0	322	9	0
5	6	346	0	318	8	0
5	8	349	0	331	11	0
5	B	367	0	355	7	0
5	E	351	0	336	9	0
5	G	367	0	355	9	0
5	J	367	0	355	11	0
5	N	367	0	355	11	0
5	P	359	0	344	8	0
5	R	363	0	351	9	0
5	T	350	0	322	7	0
5	V	354	0	333	5	0
5	X	362	0	341	10	0
5	Z	355	0	340	6	0
6	0	66	0	0	0	0
6	1	66	0	0	0	0
6	2	66	0	0	3	0
6	3	66	0	0	0	0
6	4	66	0	0	0	0
6	5	66	0	0	0	0
6	6	66	0	0	0	0
6	7	66	0	0	1	0
6	8	66	0	0	2	0
6	9	66	0	0	0	0
6	A	66	0	0	0	0
6	B	66	0	0	0	0
6	D	66	0	0	0	0
6	E	66	0	0	1	0
6	F	66	0	0	0	0
6	G	66	0	0	1	0
6	I	66	0	0	0	0
6	J	66	0	0	0	0
6	K	66	0	0	0	0
6	L	132	0	0	0	0
6	M	132	0	0	0	0
6	N	66	0	0	1	0
6	O	66	0	0	0	0
6	P	66	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	Q	132	0	0	0	0
6	S	66	0	0	0	0
6	T	66	0	0	0	0
6	U	66	0	0	0	0
6	V	66	0	0	0	0
6	W	66	0	0	0	0
6	X	66	0	0	0	0
6	Y	66	0	0	1	0
6	Z	66	0	0	0	0
7	L	65	0	0	0	0
7	M	65	0	0	0	0
8	L	28	0	31	4	0
8	M	18	0	15	1	0
9	H	36	0	42	6	0
9	L	43	0	59	4	0
10	0	35	0	46	1	0
10	2	35	0	46	1	0
10	4	35	0	46	0	0
10	5	66	0	81	4	0
10	6	35	0	46	2	0
10	8	35	0	46	1	0
10	B	35	0	46	2	0
10	E	35	0	46	2	0
10	G	35	0	46	3	0
10	H	35	0	46	6	0
10	J	35	0	46	2	0
10	L	60	0	66	0	0
10	M	64	0	77	5	0
10	N	35	0	46	0	0
10	P	35	0	46	1	0
10	R	35	0	46	2	0
10	T	35	0	46	1	0
10	V	35	0	46	0	0
10	X	35	0	46	1	0
10	Z	35	0	46	2	0
11	M	1	0	0	0	0
12	M	62	0	0	0	0
13	0	44	0	60	5	0
13	2	44	0	60	9	0
13	4	44	0	60	8	0
13	6	44	0	60	7	0
13	8	44	0	60	7	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	A	44	0	60	3	0
13	E	44	0	60	7	0
13	G	44	0	60	6	0
13	J	44	0	60	8	0
13	M	44	0	60	6	0
13	N	44	0	60	9	0
13	P	44	0	60	4	0
13	R	44	0	60	6	0
13	T	44	0	60	4	0
13	V	44	0	60	6	0
13	X	44	0	60	8	0
13	Z	44	0	60	7	0
14	H	156	0	155	8	0
14	M	136	0	160	7	0
15	H	13	0	11	3	0
15	K	73	0	95	5	0
All	All	23122	0	20832	460	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 10.

All (460) 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)
3:H:172:TRP:HB2	3:H:182:TYR:HB2	1.59	0.84
5:Z:23:ILE:HD11	13:Z:101:CRT:H6	1.57	0.84
5:2:23:ILE:HD11	13:2:101:CRT:H6	1.64	0.78
4:9:37:ARG:NH1	5:0:47:PRO:O	2.16	0.77
4:I:37:ARG:NH1	5:J:47:PRO:O	2.18	0.76
1:L:188:LEU:HD13	2:M:215:PHE:HB2	1.68	0.75
2:M:51:TYR:O	2:M:131:ARG:NH2	2.19	0.75
13:A:102:CRT:H82	4:9:7:LEU:HD12	1.70	0.73
2:M:6:ASN:ND2	2:M:226:SER:OG	2.23	0.72
1:L:2:ALA:N	3:H:43:GLU:O	2.23	0.71
1:L:201:PRO:HB2	1:L:205:GLU:HB3	1.72	0.71
5:X:23:ILE:HD11	13:X:101:CRT:H6	1.72	0.70
4:O:37:ARG:NH1	5:P:47:PRO:O	2.24	0.70
2:M:134:ARG:NH2	10:M:410:LMT:O2B	2.24	0.69
3:H:54:GLN:HE21	15:H:305:PEF:H52	1.55	0.69
3:H:158:VAL:HG12	3:H:164:VAL:HA	1.74	0.69
1:L:63:TRP:CH2	9:H:302:PGV:H012	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:31:ILE:HG12	10:5:201:LMT:H32	1.76	0.68
3:H:54:GLN:HG2	3:H:58:SER:HB3	1.75	0.68
4:W:33:LEU:O	4:W:39:ASN:ND2	2.27	0.68
4:Y:9:ASP:OD2	4:Y:12:GLN:NE2	2.27	0.67
4:7:37:ARG:NH1	5:8:47:PRO:O	2.25	0.66
4:Q:33:LEU:O	4:Q:39:ASN:ND2	2.30	0.65
4:5:33:LEU:O	4:5:39:ASN:ND2	2.29	0.65
2:M:151:SER:HG	2:M:276:THR:HG1	1.44	0.65
1:L:200:ASN:HB3	14:M:408:CDL:HB22	1.77	0.65
1:L:23:PHE:HD1	1:L:34:PHE:HA	1.62	0.65
4:9:37:ARG:O	5:0:46:ARG:NH1	2.30	0.65
5:2:20:PHE:HB2	13:2:101:CRT:H23	1.78	0.65
14:M:408:CDL:H771	3:H:26:GLY:HA3	1.78	0.64
3:H:41:PRO:HG2	3:H:50:ILE:HD12	1.79	0.64
4:O:14:LEU:HD22	13:P:101:CRT:H81	1.79	0.64
3:H:173:ILE:HG22	3:H:180:ILE:HA	1.79	0.64
4:D:33:LEU:O	4:D:39:ASN:ND2	2.30	0.64
2:M:129:TRP:NE1	2:M:146:ALA:O	2.31	0.64
3:H:58:SER:OG	4:D:12:GLN:NE2	2.31	0.63
4:F:33:LEU:O	4:F:39:ASN:ND2	2.32	0.62
10:J:103:LMT:H6’	10:J:103:LMT:H2O1	1.47	0.62
4:I:7:LEU:HD22	4:K:11:ARG:HB2	1.80	0.62
5:J:20:PHE:HA	13:J:101:CRT:H6	1.80	0.62
5:G:43:TRP:HZ2	10:G:103:LMT:H2’	1.65	0.62
5:2:24:PHE:O	5:2:28:ILE:HG12	1.99	0.62
4:K:33:LEU:O	4:K:39:ASN:ND2	2.29	0.61
1:L:191:HIS:ND1	8:L:303:U10:O2	2.27	0.61
4:Q:17:LEU:HD11	13:R:101:CRT:H243	1.82	0.61
5:Z:49:VAL:HG21	10:Z:103:LMT:H21	1.83	0.61
1:L:131:SER:HA	1:L:135:ILE:HB	1.83	0.61
5:R:19:GLU:HB2	13:R:101:CRT:H21A	1.83	0.60
5:V:23:ILE:HG21	13:V:101:CRT:H6	1.82	0.60
3:H:52:SER:HB2	14:H:303:CDL:HA22	1.82	0.60
2:M:238:THR:HG21	3:H:70:LEU:HD11	1.83	0.60
3:H:80:ASN:HD22	3:H:82:LYS:HD3	1.67	0.60
3:H:134:ILE:HD12	3:H:181:ARG:HG3	1.83	0.60
5:R:24:PHE:O	5:R:28:ILE:HG12	2.02	0.60
13:Z:101:CRT:H372	4:1:29:HIS:CG	2.37	0.60
2:M:55:THR:HG22	10:M:410:LMT:H6’2	1.84	0.59
2:M:37:TYR:OH	3:H:149:ASP:OD1	2.19	0.58
4:K:10:PRO:HB3	5:N:20:PHE:CE1	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:W:37:ARG:O	5:X:46:ARG:NH1	2.36	0.58
4:5:37:ARG:O	5:6:46:ARG:NH1	2.36	0.58
3:H:14:GLN:NE2	9:H:302:PGV:O13	2.36	0.58
2:M:291:ASP:OD1	3:H:3:LYS:NZ	2.33	0.58
3:H:44:ASP:HB3	3:H:48:GLY:H	1.68	0.58
2:M:204:SER:OG	2:M:275:CYS:O	2.18	0.58
4:D:9:ASP:HB3	4:D:12:GLN:HG3	1.83	0.58
3:H:137:LEU:HD13	3:H:153:ARG:HH21	1.67	0.58
5:N:13:THR:HB	5:N:16:GLU:HG2	1.84	0.58
2:M:58:LEU:HD23	4:Q:19:THR:HG23	1.84	0.58
4:K:39:ASN:HD21	15:K:102:PEF:H52	1.68	0.58
5:J:16:GLU:HB2	13:J:101:CRT:H31A	1.86	0.57
2:M:108:LEU:HD11	4:Q:31:ILE:HG23	1.85	0.57
4:A:12:GLN:HA	4:A:15:VAL:HG12	1.87	0.57
2:M:286:THR:HB	2:M:293:TRP:HE1	1.70	0.57
5:E:48:TRP:HZ2	10:E:103:LMT:H71	1.69	0.57
1:L:31:TYR:O	1:L:104:ARG:NH1	2.36	0.57
1:L:174:HIS:CE1	1:L:178:ILE:HD11	2.40	0.56
5:T:43:TRP:HZ2	10:T:103:LMT:H2'	1.70	0.56
4:3:9:ASP:HB3	4:3:12:GLN:HB3	1.86	0.56
4:3:37:ARG:O	5:4:46:ARG:NH1	2.38	0.56
1:L:225:VAL:O	2:M:44:ASP:N	2.35	0.56
13:A:102:CRT:H21A	5:B:20:PHE:HB2	1.86	0.56
4:U:12:GLN:HE22	4:W:11:ARG:HH22	1.52	0.56
5:0:24:PHE:O	5:0:28:ILE:HG12	2.06	0.56
2:M:128:TRP:O	2:M:132:MET:HG2	2.06	0.56
10:H:306:LMT:O2'	15:K:102:PEF:O4	2.23	0.56
2:M:284:LEU:HD13	15:K:102:PEF:H352	1.86	0.56
4:A:37:ARG:O	5:B:46:ARG:NH1	2.39	0.56
4:S:37:ARG:HH12	4:S:46:THR:HG23	1.71	0.55
5:X:19:GLU:HG3	5:X:22:LYS:HE3	1.87	0.55
5:0:19:GLU:HA	5:0:22:LYS:HD3	1.88	0.55
1:L:203:LYS:O	1:L:205:GLU:HG2	2.06	0.55
4:3:4:ILE:HG23	13:6:101:CRT:H83	1.88	0.55
5:6:48:TRP:HZ2	10:6:103:LMT:H82	1.71	0.55
4:1:1:FME:HA	4:1:4:ILE:HD11	1.89	0.55
4:W:3:ARG:HD2	4:W:6:GLN:HE22	1.72	0.55
1:L:275:HIS:H	2:M:87:ARG:NH2	2.04	0.55
5:X:24:PHE:O	5:X:28:ILE:HG13	2.07	0.55
2:M:251:TRP:HA	2:M:254:THR:HG22	1.89	0.55
3:H:182:TYR:HD1	3:H:198:PRO:HA	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:5:1:FME:SD	4:5:1:FME:N	2.80	0.55
5:X:24:PHE:CZ	5:X:28:ILE:HD11	2.42	0.54
1:L:133:VAL:HG23	1:L:134:VAL:HG23	1.89	0.54
4:W:14:LEU:HD21	5:X:20:PHE:HZ	1.72	0.54
4:1:9:ASP:HB3	4:1:12:GLN:HG2	1.88	0.54
2:M:39:LEU:HD12	2:M:47:ILE:HD11	1.89	0.54
1:L:188:LEU:HD13	2:M:215:PHE:CB	2.38	0.54
5:V:24:PHE:O	5:V:28:ILE:HG12	2.08	0.54
5:4:23:ILE:HG21	13:4:101:CRT:H9	1.89	0.53
1:L:268:GLN:NE2	2:M:87:ARG:O	2.41	0.53
10:H:306:LMT:O2'	15:K:102:PEF:N	2.36	0.53
4:K:15:VAL:O	4:K:19:THR:HG23	2.07	0.53
1:L:274:ASN:HA	2:M:87:ARG:HH21	1.72	0.53
5:G:49:VAL:HG21	10:G:103:LMT:H31	1.90	0.53
4:Q:7:LEU:HD12	13:T:101:CRT:H82	1.91	0.53
5:4:40:LEU:O	5:4:44:ILE:HG12	2.08	0.53
5:X:20:PHE:HB2	13:X:101:CRT:H23	1.90	0.53
5:T:24:PHE:O	5:T:28:ILE:HG12	2.08	0.53
4:U:10:PRO:HB3	5:V:20:PHE:CZ	2.42	0.53
3:H:93:THR:HG22	3:H:102:GLU:HG2	1.91	0.53
5:P:50:PRO:HA	10:P:103:LMT:H6'1	1.91	0.53
4:W:3:ARG:HB3	13:Z:101:CRT:H21A	1.91	0.52
4:3:7:LEU:HD21	4:5:11:ARG:HB3	1.91	0.52
1:L:170:TYR:HA	1:L:175:MET:HE3	1.90	0.52
3:H:120:ARG:O	3:H:238:ARG:NH1	2.43	0.52
4:I:19:THR:O	4:I:23:VAL:HG23	2.09	0.52
5:R:55:TYR:OH	4:S:40:TRP:O	2.18	0.52
5:8:55:TYR:OH	4:9:40:TRP:O	2.25	0.52
1:L:17:LEU:HD23	1:L:110:ARG:HH11	1.75	0.52
4:D:37:ARG:O	5:E:46:ARG:NH1	2.42	0.52
5:G:53:ASN:O	4:I:45:SER:OG	2.27	0.52
2:M:242:THR:HB	3:H:118:ALA:H	1.74	0.52
4:I:7:LEU:HD12	13:N:101:CRT:H82	1.91	0.52
1:L:104:ARG:NH2	2:M:254:THR:O	2.42	0.52
4:Q:32:LEU:O	4:Q:35:THR:OG1	2.26	0.52
5:Z:55:TYR:OH	4:1:40:TRP:O	2.26	0.52
4:3:20:PHE:HD2	4:3:21:LEU:HD22	1.75	0.52
1:L:103:LEU:O	1:L:107:GLU:HG3	2.10	0.51
4:W:10:PRO:HG2	13:X:101:CRT:H1M1	1.93	0.51
1:L:67:ILE:HB	1:L:149:TYR:HB2	1.92	0.51
4:5:4:ILE:HA	13:8:101:CRT:H83	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:13:ARG:HD3	3:H:102:GLU:OE2	2.11	0.51
4:I:47:LYS:NZ	5:J:56:SER:HB2	2.25	0.51
4:K:35:THR:HG21	4:O:41:LEU:HB3	1.93	0.51
4:9:10:PRO:HB3	5:0:20:PHE:CZ	2.46	0.51
4:1:37:ARG:NH2	5:2:47:PRO:O	2.39	0.51
5:8:23:ILE:HG21	13:8:101:CRT:H6	1.92	0.51
2:M:260:THR:HG22	2:M:262:GLU:H	1.76	0.51
2:M:285:LEU:HD12	10:M:411:LMT:H32	1.91	0.51
4:I:46:THR:HG23	5:J:46:ARG:HH21	1.75	0.51
2:M:4:TYR:OH	2:M:8:LEU:O	2.20	0.51
4:A:33:LEU:O	4:A:39:ASN:ND2	2.44	0.51
5:N:48:TRP:NE1	6:N:102:07D:OBB	2.43	0.51
4:Y:9:ASP:OD1	4:Y:9:ASP:N	2.44	0.51
5:J:45:TRP:CZ2	5:J:46:ARG:HD2	2.46	0.51
1:L:36:GLY:O	1:L:40:LEU:HG	2.11	0.50
5:B:13:THR:HG22	5:B:15:GLY:H	1.76	0.50
5:N:23:ILE:HG13	13:N:101:CRT:H9	1.93	0.50
4:5:34:SER:O	10:5:203:LMT:O6B	2.21	0.50
5:2:27:SER:HA	5:2:30:VAL:HG12	1.92	0.50
4:3:5:TRP:HB2	5:4:17:ALA:HB1	1.92	0.50
5:4:24:PHE:CD1	13:4:101:CRT:H16	2.46	0.50
5:X:48:TRP:HZ2	10:X:103:LMT:H61	1.75	0.50
4:Y:5:TRP:CD2	5:Z:20:PHE:HE2	2.30	0.50
3:H:182:TYR:OH	3:H:240:GLU:HB2	2.11	0.50
5:B:51:GLY:HA3	10:B:102:LMT:H6'1	1.93	0.50
5:G:23:ILE:CG2	13:G:101:CRT:H9	2.42	0.50
5:6:20:PHE:HB2	13:6:101:CRT:H31A	1.92	0.50
1:L:9:LYS:HE3	3:H:116:ALA:HB1	1.93	0.50
4:K:3:ARG:O	4:K:6:GLN:HB2	2.11	0.50
5:P:55:TYR:CD2	4:Q:43:GLY:HA3	2.47	0.50
5:6:23:ILE:HD12	13:6:101:CRT:H9	1.94	0.50
5:6:25:THR:HA	5:6:28:ILE:HG22	1.93	0.50
1:L:265:LEU:O	1:L:269:LYS:HG2	2.12	0.50
3:H:21:TRP:NE1	9:H:302:PGV:H201	2.26	0.50
5:P:20:PHE:HE1	13:P:101:CRT:H82	1.77	0.50
4:D:21:LEU:HD21	13:E:101:CRT:H22	1.94	0.50
2:M:14:ARG:HE	2:M:35:PHE:HB3	1.77	0.49
1:L:62:PHE:HA	1:L:65:ILE:HD12	1.93	0.49
4:Y:37:ARG:O	5:Z:46:ARG:NH1	2.45	0.49
1:L:45:LEU:HD11	4:9:26:LEU:HD23	1.94	0.49
4:A:3:ARG:HB3	13:E:101:CRT:H31A	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:147:TRP:CZ2	14:M:408:CDL:H111	2.47	0.49
13:6:101:CRT:H35	6:7:101:07D:CHB	2.42	0.49
5:R:20:PHE:HB2	13:R:101:CRT:H23	1.93	0.49
5:G:48:TRP:NE1	6:G:102:07D:OBB	2.43	0.49
5:Z:23:ILE:HD11	13:Z:101:CRT:C6	2.36	0.49
10:M:410:LMT:H121	4:Q:22:PHE:HZ	1.76	0.49
2:M:158:SER:HA	2:M:162:ILE:HB	1.95	0.49
4:A:2:TRP:HB3	5:B:21:HIS:CD2	2.48	0.49
13:A:102:CRT:H372	4:D:29:HIS:CG	2.48	0.49
1:L:63:TRP:HA	1:L:151:PHE:HB3	1.94	0.49
3:H:136:PRO:HG2	3:H:139:VAL:HG22	1.95	0.49
5:8:23:ILE:HG23	13:8:101:CRT:H9	1.94	0.49
1:L:36:GLY:HA2	1:L:39:THR:HG22	1.95	0.48
4:D:7:LEU:HD21	4:F:10:PRO:HB2	1.95	0.48
5:E:25:THR:HA	5:E:28:ILE:HG22	1.95	0.48
5:8:23:ILE:CG2	13:8:101:CRT:H9	2.42	0.48
1:L:232:ARG:HG2	2:M:223:LEU:HD21	1.93	0.48
2:M:225:VAL:HG23	2:M:230:GLY:HA3	1.96	0.48
4:Y:4:ILE:HA	13:2:101:CRT:H83	1.95	0.48
5:E:23:ILE:HB	13:E:101:CRT:H6	1.95	0.48
4:9:33:LEU:O	4:9:39:ASN:ND2	2.47	0.48
2:M:94:LEU:HB3	2:M:176:PHE:HB2	1.95	0.48
4:7:37:ARG:O	5:8:46:ARG:NH1	2.45	0.48
2:M:199:PRO:HB3	9:H:302:PGV:H22	1.96	0.48
3:H:36:ARG:HG2	3:H:40:TYR:CZ	2.48	0.48
13:V:101:CRT:H372	4:W:29:HIS:CG	2.49	0.48
4:U:21:LEU:HD11	13:V:101:CRT:H20	1.96	0.48
4:S:37:ARG:O	5:T:46:ARG:NH1	2.46	0.48
2:M:63:GLY:O	2:M:67:ILE:HG12	2.14	0.48
3:H:108:MET:HB3	3:H:246:TYR:CE1	2.49	0.48
1:L:22:LEU:HA	4:9:11:ARG:NH2	2.29	0.47
5:N:23:ILE:HD11	13:N:101:CRT:C6	2.43	0.47
13:2:101:CRT:H25	6:2:102:07D:O1A	2.14	0.47
1:L:208:LYS:HD2	1:L:212:HIS:CD2	2.49	0.47
1:L:211:GLU:HG3	3:H:128:LEU:HD22	1.96	0.47
3:H:197:LEU:HD12	3:H:223:PHE:HE2	1.79	0.47
5:2:32:PHE:HE1	6:2:102:07D:CGA	2.27	0.47
13:2:101:CRT:H20	13:2:101:CRT:H181	1.78	0.47
2:M:292:ASN:OD1	2:M:295:GLU:HG2	2.13	0.47
3:H:187:LEU:HD11	3:H:223:PHE:HB3	1.96	0.47
13:6:101:CRT:H343	4:7:22:PHE:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:13:VAL:HB	3:H:178:ILE:HG22	1.97	0.47
4:D:20:PHE:HD2	4:D:21:LEU:HD12	1.78	0.47
2:M:88:GLN:O	2:M:92:LEU:HG	2.14	0.47
13:M:407:CRT:H181	13:M:407:CRT:H20	1.75	0.47
3:H:155:LEU:O	3:H:168:VAL:HG12	2.15	0.47
4:A:3:ARG:HE	13:E:101:CRT:H31A	1.79	0.47
15:K:103:PEF:H312	4:O:30:PHE:HD1	1.80	0.47
5:8:50:PRO:HG3	4:9:43:GLY:HA2	1.97	0.47
5:0:49:VAL:HG21	10:0:103:LMT:H11	1.97	0.47
3:H:196:LEU:HD11	3:H:229:ILE:HD13	1.97	0.47
4:A:41:LEU:HA	4:9:38:PHE:HE2	1.80	0.47
4:U:9:ASP:N	4:U:9:ASP:OD1	2.45	0.47
5:6:20:PHE:CD2	13:6:101:CRT:H21A	2.50	0.47
1:L:266:TRP:O	1:L:270:LEU:HD12	2.14	0.47
2:M:134:ARG:NH2	10:M:410:LMT:H2O1	2.12	0.47
5:6:25:THR:O	5:6:28:ILE:HG22	2.15	0.47
4:9:17:LEU:HD11	13:0:101:CRT:H243	1.96	0.47
5:4:35:ALA:O	5:4:39:HIS:ND1	2.45	0.47
4:K:21:LEU:HD11	13:N:101:CRT:H22	1.96	0.46
3:H:186:GLU:HB2	3:H:194:LYS:HE2	1.97	0.46
3:H:250:GLY:O	3:H:254:SER:HB2	2.15	0.46
14:H:303:CDL:H331	15:H:305:PEF:H31	1.96	0.46
13:4:101:CRT:H372	4:5:29:HIS:CG	2.50	0.46
5:J:24:PHE:CD2	13:J:101:CRT:H14	2.49	0.46
13:Z:101:CRT:H5	13:Z:101:CRT:H23	1.64	0.46
3:H:3:LYS:O	10:H:306:LMT:O2B	2.34	0.46
3:H:231:LYS:O	3:H:232:THR:OG1	2.29	0.46
4:F:3:ARG:NE	5:J:19:GLU:OE2	2.49	0.46
10:6:103:LMT:H1B	10:6:103:LMT:H3'	1.62	0.46
5:6:55:TYR:CE2	4:7:43:GLY:HA3	2.51	0.46
5:4:43:TRP:CE2	5:4:47:PRO:HB3	2.51	0.46
2:M:160:GLY:O	2:M:164:PRO:HG2	2.16	0.46
2:M:246:ARG:NH2	3:H:116:ALA:O	2.48	0.46
13:P:101:CRT:H20	13:P:101:CRT:H181	1.79	0.46
2:M:14:ARG:HH11	3:H:146:ALA:HB1	1.81	0.46
2:M:116:ILE:HG12	4:Q:30:PHE:HB3	1.98	0.46
3:H:90:ALA:HB1	3:H:101:PHE:HB3	1.97	0.46
5:E:55:TYR:OH	4:F:40:TRP:O	2.34	0.45
4:Q:37:ARG:O	5:R:46:ARG:NH1	2.45	0.45
5:R:12:ILE:HG23	5:R:13:THR:HG23	1.98	0.45
2:M:99:ALA:HB1	2:M:169:ASN:HD21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:E:103:LMT:H5B	10:E:103:LMT:H6E	1.99	0.45
5:J:24:PHE:O	5:J:28:ILE:HG22	2.16	0.45
1:L:206:VAL:HG21	3:H:71:LYS:HB3	1.98	0.45
14:M:409:CDL:H761	14:M:409:CDL:H131	1.97	0.45
5:2:23:ILE:HD11	13:2:101:CRT:C6	2.40	0.45
1:L:176:LEU:HD23	1:L:244:TRP:CE2	2.52	0.45
1:L:35:PHE:HA	1:L:38:THR:OG1	2.17	0.45
3:H:108:MET:SD	3:H:249:SER:OG	2.66	0.45
5:N:23:ILE:HD11	13:N:101:CRT:H6	1.98	0.45
1:L:22:LEU:HA	4:9:11:ARG:HH21	1.82	0.45
2:M:19:SER:OG	2:M:29:ARG:NH1	2.50	0.45
1:L:263:TRP:O	1:L:266:TRP:HD1	2.00	0.45
2:M:289:VAL:HG11	3:H:12:VAL:HB	1.99	0.45
3:H:45:ALA:HB3	3:H:97:ALA:HB1	1.99	0.45
4:I:35:THR:HG21	4:K:41:LEU:HB3	1.99	0.45
1:L:63:TRP:CD1	1:L:151:PHE:CD2	3.05	0.45
2:M:33:PRO:HG3	2:M:49:PRO:HD3	1.99	0.44
5:N:22:LYS:HB2	5:N:22:LYS:HE2	1.72	0.44
4:S:27:LEU:O	4:S:31:ILE:HG13	2.17	0.44
5:T:53:ASN:OD1	4:U:47:LYS:NZ	2.43	0.44
10:2:103:LMT:H52	10:2:103:LMT:H21	1.86	0.44
2:M:257:PHE:HB3	14:H:303:CDL:HB4	1.99	0.44
3:H:7:THR:HG23	3:H:7:THR:O	2.17	0.44
3:H:29:ILE:HG12	14:H:304:CDL:H1	1.98	0.44
3:H:40:TYR:OH	14:H:303:CDL:OB3	2.24	0.44
5:E:40:LEU:O	5:E:44:ILE:HG12	2.16	0.44
4:1:7:LEU:HD21	13:4:101:CRT:H1M1	1.99	0.44
1:L:229:GLY:O	1:L:233:VAL:HG13	2.17	0.44
5:G:55:TYR:OH	4:I:40:TRP:O	2.35	0.44
4:3:3:ARG:HA	4:3:6:GLN:HG2	2.00	0.44
14:M:408:CDL:HA62	14:M:408:CDL:H511	1.98	0.44
3:H:3:LYS:O	10:H:306:LMT:O6'	2.18	0.44
5:G:43:TRP:CZ2	10:G:103:LMT:H2'	2.50	0.44
13:J:101:CRT:H20	13:J:101:CRT:H181	1.84	0.44
5:T:30:VAL:O	5:T:34:VAL:HG23	2.16	0.44
4:W:12:GLN:HA	4:W:15:VAL:HG12	2.00	0.44
4:D:32:LEU:O	4:D:35:THR:OG1	2.31	0.44
13:Z:101:CRT:H372	4:1:29:HIS:CD2	2.51	0.44
4:1:32:LEU:O	4:1:35:THR:OG1	2.25	0.44
1:L:224:SER:OG	8:L:303:U10:H4M2	2.18	0.44
2:M:159:LEU:HD23	2:M:283:ILE:HG21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:101:CRT:H10	13:J:101:CRT:H81	1.90	0.44
13:X:101:CRT:H342	6:Y:101:07D:O1A	2.17	0.44
13:X:101:CRT:H343	4:Y:22:PHE:CE1	2.53	0.44
5:8:20:PHE:HB2	13:8:101:CRT:H23	1.99	0.44
13:8:101:CRT:H25	6:8:102:07D:O1A	2.17	0.44
3:H:184:GLU:HG2	3:H:194:LYS:HD2	2.00	0.44
13:X:101:CRT:H10	13:X:101:CRT:H81	1.74	0.44
13:0:101:CRT:H15	13:0:101:CRT:H131	1.86	0.44
5:T:27:SER:HA	5:T:30:VAL:HG22	1.99	0.44
13:T:101:CRT:H372	4:U:29:HIS:CD2	2.53	0.44
2:M:156:PHE:CZ	13:M:407:CRT:H293	2.51	0.44
4:F:9:ASP:HB3	4:F:12:GLN:HG2	2.00	0.44
13:J:101:CRT:H372	4:K:29:HIS:CG	2.52	0.43
4:S:10:PRO:HB3	5:T:20:PHE:CZ	2.52	0.43
5:8:27:SER:HA	5:8:30:VAL:HG12	2.00	0.43
3:H:143:PHE:HE2	3:H:178:ILE:HG23	1.83	0.43
4:F:17:LEU:HD11	13:G:101:CRT:H243	1.99	0.43
4:I:10:PRO:HB3	5:J:20:PHE:CE2	2.52	0.43
5:P:13:THR:OG1	5:P:14:GLU:N	2.51	0.43
4:Y:28:ILE:HG12	13:Z:101:CRT:H2M1	2.00	0.43
13:6:101:CRT:H372	4:7:29:HIS:CG	2.54	0.43
13:8:101:CRT:H15	13:8:101:CRT:H131	1.85	0.43
14:H:303:CDL:H782	14:H:303:CDL:H752	1.70	0.43
1:L:118:ILE:HD11	2:M:221:THR:HA	2.01	0.43
2:M:159:LEU:HD22	2:M:184:TRP:CH2	2.53	0.43
10:H:306:LMT:O6B	4:I:34:SER:O	2.32	0.43
4:U:14:LEU:HD11	5:V:20:PHE:HZ	1.83	0.43
4:1:4:ILE:HD12	4:1:4:ILE:H	1.84	0.43
1:L:234:GLY:HA3	2:M:215:PHE:CZ	2.53	0.43
4:A:37:ARG:NH1	4:A:46:THR:OG1	2.51	0.43
10:5:201:LMT:H12	10:5:201:LMT:H41	1.89	0.43
4:7:13:ALA:O	4:7:17:LEU:HD23	2.19	0.43
1:L:194:LEU:HD22	1:L:217:PHE:CE2	2.53	0.43
2:M:155:LEU:HA	2:M:280:ALA:HB2	2.01	0.43
2:M:160:GLY:HA3	13:M:407:CRT:H292	2.00	0.43
4:F:37:ARG:O	5:G:46:ARG:NH1	2.50	0.43
10:R:102:LMT:H1B	10:R:102:LMT:H3'	1.48	0.43
3:H:160:ARG:HH22	3:H:254:SER:HB3	1.83	0.43
4:5:31:ILE:O	4:5:35:THR:HG23	2.19	0.43
1:L:77:ALA:HB2	10:5:203:LMT:H3'	2.00	0.43
3:H:21:TRP:CD1	9:H:302:PGV:H201	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:201:HIS:CE1	2:M:205:ILE:HD11	2.54	0.43
3:H:80:ASN:ND2	3:H:82:LYS:HD3	2.32	0.43
4:A:43:GLY:HA3	5:0:55:TYR:CE2	2.54	0.43
4:O:33:LEU:O	4:O:39:ASN:ND2	2.43	0.43
5:P:27:SER:HA	5:P:30:VAL:HG12	2.01	0.43
3:H:41:PRO:O	3:H:83:ARG:NH2	2.46	0.42
4:A:47:LYS:HE3	5:0:52:PRO:HB2	2.01	0.42
5:E:19:GLU:O	5:E:23:ILE:HG13	2.18	0.42
4:9:21:LEU:HD11	13:0:101:CRT:H20	2.01	0.42
3:H:2:ASN:O	10:H:306:LMT:O4'	2.31	0.42
13:E:101:CRT:H5	13:E:101:CRT:H23	1.54	0.42
13:X:101:CRT:H15	13:X:101:CRT:H131	1.87	0.42
4:1:1:FME:H	5:4:23:ILE:HD12	1.83	0.42
13:2:101:CRT:H10	13:2:101:CRT:H81	1.88	0.42
2:M:174:VAL:HA	2:M:175:PRO:HD3	1.88	0.42
13:N:101:CRT:H10	13:N:101:CRT:H81	1.78	0.42
13:P:101:CRT:H15	13:P:101:CRT:H131	1.78	0.42
4:U:24:LEU:O	4:U:28:ILE:HG13	2.19	0.42
5:N:24:PHE:CD2	13:N:101:CRT:H14	2.55	0.42
4:3:24:LEU:O	4:3:28:ILE:HG13	2.20	0.42
5:B:25:THR:O	5:B:29:LEU:HD23	2.20	0.42
13:G:101:CRT:H15	13:G:101:CRT:H131	1.75	0.42
5:N:25:THR:O	5:N:28:ILE:HG22	2.20	0.42
3:H:10:MET:HA	3:H:14:GLN:OE1	2.19	0.42
5:E:25:THR:O	5:E:29:LEU:HD23	2.20	0.42
5:P:25:THR:O	5:P:29:LEU:HD23	2.19	0.42
4:Y:21:LEU:HD23	4:Y:21:LEU:HA	1.87	0.42
13:G:101:CRT:H26	13:G:101:CRT:H241	1.93	0.42
5:8:43:TRP:HZ2	10:8:103:LMT:H2'	1.84	0.42
1:L:8:ARG:CZ	3:H:86:VAL:HG13	2.50	0.42
8:L:303:U10:H122	8:L:303:U10:H101	1.81	0.42
2:M:26:ILE:HA	4:Q:11:ARG:NH1	2.35	0.42
2:M:99:ALA:CB	2:M:169:ASN:HD21	2.33	0.42
2:M:218:HIS:CE1	2:M:233:GLU:OE2	2.73	0.42
5:J:50:PRO:HG3	4:K:43:GLY:HA2	2.00	0.42
13:N:101:CRT:H15	13:N:101:CRT:H131	1.94	0.42
4:Y:7:LEU:CD1	13:2:101:CRT:H5	2.50	0.42
13:0:101:CRT:H20	13:0:101:CRT:H181	1.87	0.42
2:M:105:PHE:CE2	13:M:407:CRT:H401	2.55	0.42
5:R:41:LEU:HD23	5:R:41:LEU:HA	1.92	0.42
13:R:101:CRT:H10	13:R:101:CRT:H81	1.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:V:55:TYR:CE2	4:W:43:GLY:HA3	2.55	0.42
5:2:24:PHE:CD1	13:2:101:CRT:H14	2.55	0.42
9:L:304:PGV:H202	4:A:31:ILE:HG12	2.02	0.42
13:M:407:CRT:H10	13:M:407:CRT:H81	1.88	0.42
4:Q:2:TRP:HA	5:R:21:HIS:ND1	2.35	0.42
1:L:118:ILE:HD13	2:M:250:PHE:CE2	2.56	0.41
5:B:35:ALA:O	5:B:39:HIS:ND1	2.42	0.41
4:F:7:LEU:HD11	13:J:101:CRT:H23	2.01	0.41
4:Q:7:LEU:HD23	4:Q:7:LEU:HA	1.94	0.41
13:R:101:CRT:H15	13:R:101:CRT:H131	1.86	0.41
13:V:101:CRT:H20	13:V:101:CRT:H181	1.86	0.41
4:Y:24:LEU:O	4:Y:28:ILE:HG13	2.20	0.41
1:L:58:PRO:HA	9:L:304:PGV:H061	2.01	0.41
14:H:303:CDL:H771	14:H:303:CDL:H802	1.89	0.41
14:M:409:CDL:H571	14:M:409:CDL:H601	1.85	0.41
4:A:11:ARG:HB2	4:9:7:LEU:HD22	2.01	0.41
4:F:25:ALA:O	4:F:29:HIS:ND1	2.40	0.41
5:X:35:ALA:O	5:X:39:HIS:ND1	2.50	0.41
10:Z:103:LMT:H3'	10:Z:103:LMT:H1B	1.80	0.41
5:2:48:TRP:NE1	6:2:102:07D:OBB	2.48	0.41
4:5:1:FME:HB2	4:5:4:ILE:HD11	2.02	0.41
8:L:303:U10:H151	8:L:303:U10:H171	1.67	0.41
9:L:304:PGV:H61	9:L:304:PGV:H92	1.89	0.41
2:M:300:HIS:ND1	9:H:302:PGV:O14	2.48	0.41
3:H:119:LEU:HD12	3:H:238:ARG:NH1	2.35	0.41
5:E:24:PHE:CD2	13:E:101:CRT:H14	2.56	0.41
13:R:101:CRT:H20	13:R:101:CRT:H181	1.90	0.41
5:X:28:ILE:HG12	13:X:101:CRT:H19	2.02	0.41
1:L:205:GLU:OE1	2:M:140:LYS:HD3	2.21	0.41
14:M:408:CDL:H352	14:M:408:CDL:H321	1.81	0.41
3:H:108:MET:HB3	3:H:246:TYR:HE1	1.85	0.41
3:H:172:TRP:CE2	3:H:196:LEU:HD21	2.56	0.41
5:G:23:ILE:HG21	13:G:101:CRT:H9	2.01	0.41
1:L:211:GLU:HG2	1:L:212:HIS:N	2.36	0.41
3:H:126:LEU:HD12	3:H:130:GLY:HA2	2.03	0.41
14:H:304:CDL:OA2	15:H:305:PEF:N	2.54	0.41
13:V:101:CRT:H15	13:V:101:CRT:H131	1.83	0.41
1:L:129:TYR:O	1:L:133:VAL:HG22	2.20	0.41
1:L:167:ASN:HB3	1:L:261:PRO:HG3	2.02	0.41
2:M:277:PHE:O	2:M:281:ILE:HG12	2.21	0.41
2:M:298:VAL:HG22	2:M:303:ALA:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:7:THR:O	3:H:9:TYR:N	2.53	0.41
13:G:101:CRT:H20	13:G:101:CRT:H181	1.85	0.41
3:H:107:PRO:HB2	3:H:253:TYR:CZ	2.56	0.41
13:J:101:CRT:H26	13:J:101:CRT:H241	1.89	0.41
5:2:28:ILE:HG23	5:2:32:PHE:CE2	2.56	0.41
5:4:24:PHE:CE1	13:4:101:CRT:H16	2.55	0.41
4:5:7:LEU:H	4:5:7:LEU:HD23	1.86	0.41
2:M:84:GLU:OE2	2:M:87:ARG:HD2	2.21	0.41
4:D:20:PHE:CD2	4:D:21:LEU:HD12	2.55	0.41
5:N:24:PHE:HA	13:N:101:CRT:H14	2.03	0.41
5:P:55:TYR:CE2	4:Q:43:GLY:HA3	2.56	0.41
13:T:101:CRT:H181	13:T:101:CRT:H20	1.78	0.41
1:L:51:VAL:HG22	9:L:304:PGV:H272	2.02	0.41
3:H:222:HIS:O	3:H:246:TYR:OH	2.29	0.41
1:L:175:MET:HB2	8:M:401:U10:H1M2	2.03	0.40
1:L:274:ASN:O	1:L:276:GLY:N	2.53	0.40
4:K:37:ARG:O	5:N:46:ARG:NH1	2.54	0.40
4:S:39:ASN:ND2	4:S:42:GLU:OE1	2.53	0.40
13:M:407:CRT:H26	13:M:407:CRT:H241	1.93	0.40
10:J:103:LMT:O1B	10:J:103:LMT:O6'	2.39	0.40
13:T:101:CRT:H10	13:T:101:CRT:H81	1.85	0.40
5:8:32:PHE:HE1	6:8:102:07D:CGA	2.33	0.40
4:A:19:THR:O	4:A:23:VAL:HG23	2.20	0.40
13:E:101:CRT:H25	6:E:102:07D:O1A	2.21	0.40
13:V:101:CRT:H392	4:W:29:HIS:CB	2.52	0.40
4:3:17:LEU:HD11	13:4:101:CRT:H243	2.03	0.40
13:4:101:CRT:H26	13:4:101:CRT:H241	1.93	0.40
13:0:101:CRT:H10	13:0:101:CRT:H81	1.87	0.40
4:7:25:ALA:O	4:7:29:HIS:ND1	2.48	0.40
10:B:102:LMT:H3'	10:B:102:LMT:H1B	1.78	0.40
5:R:43:TRP:CH2	10:R:102:LMT:H11	2.56	0.40
5:2:28:ILE:HG23	5:2:32:PHE:HE2	1.87	0.40
4:3:21:LEU:HD11	13:4:101:CRT:C25	2.51	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	L	273/275 (99%)	258 (94%)	15 (6%)	0	100	100
2	M	302/305 (99%)	292 (97%)	10 (3%)	0	100	100
3	H	254/256 (99%)	233 (92%)	21 (8%)	0	100	100
4	1	45/62 (73%)	44 (98%)	0	1 (2%)	5	9
4	3	45/62 (73%)	45 (100%)	0	0	100	100
4	5	45/62 (73%)	42 (93%)	3 (7%)	0	100	100
4	7	45/62 (73%)	44 (98%)	0	1 (2%)	5	9
4	9	45/62 (73%)	45 (100%)	0	0	100	100
4	A	45/62 (73%)	45 (100%)	0	0	100	100
4	D	45/62 (73%)	45 (100%)	0	0	100	100
4	F	45/62 (73%)	45 (100%)	0	0	100	100
4	I	45/62 (73%)	45 (100%)	0	0	100	100
4	K	45/62 (73%)	45 (100%)	0	0	100	100
4	O	45/62 (73%)	45 (100%)	0	0	100	100
4	Q	45/62 (73%)	44 (98%)	1 (2%)	0	100	100
4	S	45/62 (73%)	45 (100%)	0	0	100	100
4	U	45/62 (73%)	42 (93%)	3 (7%)	0	100	100
4	W	45/62 (73%)	43 (96%)	2 (4%)	0	100	100
4	Y	45/62 (73%)	41 (91%)	4 (9%)	0	100	100
5	0	43/55 (78%)	43 (100%)	0	0	100	100
5	2	42/55 (76%)	40 (95%)	2 (5%)	0	100	100
5	4	43/55 (78%)	42 (98%)	1 (2%)	0	100	100
5	6	43/55 (78%)	43 (100%)	0	0	100	100
5	8	42/55 (76%)	41 (98%)	1 (2%)	0	100	100
5	B	43/55 (78%)	41 (95%)	2 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	E	42/55 (76%)	41 (98%)	1 (2%)	0	100	100
5	G	43/55 (78%)	43 (100%)	0	0	100	100
5	J	43/55 (78%)	42 (98%)	1 (2%)	0	100	100
5	N	43/55 (78%)	41 (95%)	2 (5%)	0	100	100
5	P	42/55 (76%)	42 (100%)	0	0	100	100
5	R	43/55 (78%)	43 (100%)	0	0	100	100
5	T	43/55 (78%)	43 (100%)	0	0	100	100
5	V	43/55 (78%)	42 (98%)	1 (2%)	0	100	100
5	X	43/55 (78%)	42 (98%)	1 (2%)	0	100	100
5	Z	42/55 (76%)	40 (95%)	2 (5%)	0	100	100
All	All	2232/2708 (82%)	2157 (97%)	73 (3%)	2 (0%)	50	70

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	7	2	TRP
4	1	2	TRP

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	L	219/219 (100%)	219 (100%)	0	100	100
2	M	235/239 (98%)	235 (100%)	0	100	100
3	H	199/203 (98%)	199 (100%)	0	100	100
4	1	39/54 (72%)	39 (100%)	0	100	100
4	3	39/54 (72%)	39 (100%)	0	100	100
4	5	39/54 (72%)	39 (100%)	0	100	100
4	7	38/54 (70%)	38 (100%)	0	100	100
4	9	39/54 (72%)	39 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
4	A	40/54 (74%)	40 (100%)	0	100 100
4	D	40/54 (74%)	40 (100%)	0	100 100
4	F	40/54 (74%)	40 (100%)	0	100 100
4	I	39/54 (72%)	39 (100%)	0	100 100
4	K	39/54 (72%)	39 (100%)	0	100 100
4	O	38/54 (70%)	38 (100%)	0	100 100
4	Q	39/54 (72%)	39 (100%)	0	100 100
4	S	38/54 (70%)	38 (100%)	0	100 100
4	U	39/54 (72%)	39 (100%)	0	100 100
4	W	40/54 (74%)	40 (100%)	0	100 100
4	Y	39/54 (72%)	39 (100%)	0	100 100
5	0	37/45 (82%)	37 (100%)	0	100 100
5	2	34/45 (76%)	34 (100%)	0	100 100
5	4	32/45 (71%)	31 (97%)	1 (3%)	35 56
5	6	31/45 (69%)	31 (100%)	0	100 100
5	8	33/45 (73%)	33 (100%)	0	100 100
5	B	37/45 (82%)	37 (100%)	0	100 100
5	E	34/45 (76%)	34 (100%)	0	100 100
5	G	37/45 (82%)	37 (100%)	0	100 100
5	J	37/45 (82%)	37 (100%)	0	100 100
5	N	37/45 (82%)	37 (100%)	0	100 100
5	P	36/45 (80%)	36 (100%)	0	100 100
5	R	36/45 (80%)	36 (100%)	0	100 100
5	T	32/45 (71%)	32 (100%)	0	100 100
5	V	33/45 (73%)	33 (100%)	0	100 100
5	X	35/45 (78%)	35 (100%)	0	100 100
5	Z	35/45 (78%)	35 (100%)	0	100 100
All	All	1834/2245 (82%)	1833 (100%)	1 (0%)	92 97

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	4	52	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (13) such sidechains are listed below:

Mol	Chain	Res	Type
1	L	200	ASN
1	L	268	GLN
2	M	5	GLN
2	M	6	ASN
2	M	88	GLN
3	H	54	GLN
3	H	106	ASN
4	D	12	GLN
4	U	12	GLN
4	W	6	GLN
4	Y	12	GLN
4	7	12	GLN
5	8	53	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)

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	FME	7	1	4	8,9,10	0.93	0	7,9,11	0.88	0
4	FME	U	1	4	8,9,10	0.92	0	7,9,11	1.03	1 (14%)
4	FME	W	1	4	8,9,10	0.91	0	7,9,11	1.56	2 (28%)
4	FME	1	1	4	8,9,10	0.91	0	7,9,11	0.98	0
4	FME	S	1	4	8,9,10	0.91	0	7,9,11	0.86	0
4	FME	5	1	4	8,9,10	0.95	0	7,9,11	0.85	0
4	FME	K	1	4	8,9,10	0.92	0	7,9,11	0.83	0
4	FME	F	1	4	8,9,10	0.87	0	7,9,11	0.90	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	FME	A	1	4	8,9,10	0.95	0	7,9,11	0.97	0
4	FME	3	1	4	8,9,10	0.92	0	7,9,11	0.97	0
4	FME	9	1	4	8,9,10	0.94	0	7,9,11	0.89	0
4	FME	Y	1	4	8,9,10	0.92	0	7,9,11	0.81	0
4	FME	D	1	4	8,9,10	0.91	0	7,9,11	0.98	0
4	FME	Q	1	4	8,9,10	0.84	0	7,9,11	1.63	2 (28%)
4	FME	I	1	4	8,9,10	0.93	0	7,9,11	0.92	0
4	FME	O	1	4	8,9,10	0.88	0	7,9,11	1.26	2 (28%)

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
4	FME	7	1	4	-	4/7/9/11	-
4	FME	U	1	4	-	5/7/9/11	-
4	FME	W	1	4	-	3/7/9/11	-
4	FME	1	1	4	-	0/7/9/11	-
4	FME	S	1	4	-	2/7/9/11	-
4	FME	5	1	4	-	0/7/9/11	-
4	FME	K	1	4	-	5/7/9/11	-
4	FME	F	1	4	-	3/7/9/11	-
4	FME	A	1	4	-	2/7/9/11	-
4	FME	3	1	4	-	4/7/9/11	-
4	FME	9	1	4	-	4/7/9/11	-
4	FME	Y	1	4	-	4/7/9/11	-
4	FME	D	1	4	-	4/7/9/11	-
4	FME	Q	1	4	-	3/7/9/11	-
4	FME	I	1	4	-	6/7/9/11	-
4	FME	O	1	4	-	2/7/9/11	-

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	Q	1	FME	C-CA-N	3.03	115.20	109.73
4	W	1	FME	CA-N-CN	2.75	127.05	122.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	W	1	FME	C-CA-N	2.66	114.53	109.73
4	Q	1	FME	CA-N-CN	2.53	126.72	122.82
4	U	1	FME	C-CA-N	2.22	113.74	109.73
4	O	1	FME	C-CA-N	2.12	113.56	109.73
4	O	1	FME	CA-N-CN	2.11	126.07	122.82

There are no chirality outliers.

All (51) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	1	FME	O-C-CA-CB
4	D	1	FME	N-CA-CB-CG
4	I	1	FME	CB-CA-N-CN
4	I	1	FME	N-CA-CB-CG
4	I	1	FME	O-C-CA-CB
4	I	1	FME	CA-CB-CG-SD
4	K	1	FME	O1-CN-N-CA
4	K	1	FME	CB-CA-N-CN
4	K	1	FME	C-CA-CB-CG
4	O	1	FME	CB-CA-N-CN
4	O	1	FME	O-C-CA-CB
4	Q	1	FME	CB-CA-N-CN
4	Q	1	FME	C-CA-CB-CG
4	S	1	FME	O-C-CA-CB
4	U	1	FME	CB-CA-N-CN
4	W	1	FME	CB-CA-N-CN
4	W	1	FME	C-CA-CB-CG
4	Y	1	FME	O1-CN-N-CA
4	Y	1	FME	N-CA-CB-CG
4	3	1	FME	N-CA-CB-CG
4	7	1	FME	O1-CN-N-CA
4	7	1	FME	N-CA-CB-CG
4	7	1	FME	C-CA-CB-CG
4	9	1	FME	O1-CN-N-CA
4	9	1	FME	N-CA-CB-CG
4	I	1	FME	CB-CG-SD-CE
4	Y	1	FME	CB-CG-SD-CE
4	A	1	FME	N-CA-CB-CG
4	F	1	FME	N-CA-CB-CG
4	U	1	FME	N-CA-CB-CG
4	W	1	FME	N-CA-CB-CG
4	F	1	FME	CB-CG-SD-CE

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Mol	Chain	Res	Type	Atoms
4	S	1	FME	CB-CG-SD-CE
4	U	1	FME	CB-CG-SD-CE
4	9	1	FME	CB-CG-SD-CE
4	F	1	FME	CA-CB-CG-SD
4	Q	1	FME	N-CA-CB-CG
4	D	1	FME	CB-CG-SD-CE
4	3	1	FME	CA-CB-CG-SD
4	K	1	FME	N-CA-CB-CG
4	U	1	FME	CA-CB-CG-SD
4	7	1	FME	CB-CG-SD-CE
4	D	1	FME	CB-CA-N-CN
4	3	1	FME	CB-CA-N-CN
4	D	1	FME	C-CA-CB-CG
4	I	1	FME	C-CA-CB-CG
4	U	1	FME	C-CA-CB-CG
4	Y	1	FME	C-CA-CB-CG
4	3	1	FME	C-CA-CB-CG
4	K	1	FME	CB-CG-SD-CE
4	9	1	FME	CB-CA-N-CN

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	1	1	FME	2	0
4	5	1	FME	2	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 92 ligands modelled in this entry, 1 is monoatomic - leaving 91 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the

expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
8	U10	L	303	-	28,28,63	0.90	2 (7%)	34,37,79	0.65	0
15	PEF	K	103	-	41,41,46	1.01	2 (4%)	44,46,51	1.11	4 (9%)
10	LMT	8	103	-	36,36,36	0.42	0	47,47,47	0.79	1 (2%)
6	07D	2	102	-	69,74,74	1.73	9 (13%)	74,115,115	2.69	19 (25%)
6	07D	G	102	-	69,74,74	1.72	7 (10%)	74,115,115	2.67	17 (22%)
10	LMT	V	103	-	36,36,36	0.48	0	47,47,47	0.96	4 (8%)
6	07D	6	102	-	69,74,74	1.74	8 (11%)	74,115,115	2.80	19 (25%)
6	07D	V	102	-	69,74,74	1.71	8 (11%)	74,115,115	2.71	19 (25%)
10	LMT	X	103	-	36,36,36	0.44	0	47,47,47	0.78	1 (2%)
6	07D	Q	101	-	69,74,74	1.72	9 (13%)	74,115,115	2.80	20 (27%)
6	07D	9	101	-	69,74,74	1.75	8 (11%)	74,115,115	2.75	21 (28%)
10	LMT	G	103	-	36,36,36	0.44	0	47,47,47	0.76	0
6	07D	7	101	-	69,74,74	1.72	8 (11%)	74,115,115	2.74	18 (24%)
6	07D	O	101	-	69,74,74	1.76	10 (14%)	74,115,115	2.68	18 (24%)
13	CRT	P	101	-	41,43,43	0.70	0	50,54,54	1.71	11 (22%)
6	07D	5	202	-	69,74,74	1.75	9 (13%)	74,115,115	2.86	25 (33%)
14	CDL	H	301	-	63,63,99	1.14	4 (6%)	69,75,111	1.21	4 (5%)
10	LMT	N	103	-	36,36,36	0.43	0	47,47,47	0.97	3 (6%)
13	CRT	G	101	-	41,43,43	0.72	0	50,54,54	1.77	10 (20%)
10	LMT	H	306	-	36,36,36	0.44	0	47,47,47	0.88	1 (2%)
13	CRT	Z	101	-	41,43,43	0.71	0	50,54,54	1.67	13 (26%)
6	07D	4	102	-	69,74,74	1.78	10 (14%)	74,115,115	2.70	21 (28%)
10	LMT	R	102	-	36,36,36	0.38	0	47,47,47	0.91	2 (4%)
6	07D	M	404	-	69,74,74	1.74	10 (14%)	74,115,115	2.79	20 (27%)
10	LMT	L	306	-	33,33,36	0.42	0	44,44,47	0.65	1 (2%)
6	07D	L	301	-	69,74,74	1.74	9 (13%)	74,115,115	2.74	17 (22%)
6	07D	F	101	-	69,74,74	1.77	8 (11%)	74,115,115	2.72	19 (25%)
10	LMT	2	103	-	36,36,36	0.47	0	47,47,47	0.84	1 (2%)
10	LMT	5	203	-	36,36,36	0.41	0	47,47,47	0.74	0
14	CDL	M	408	-	67,67,99	1.10	4 (5%)	73,79,111	1.23	8 (10%)
10	LMT	T	103	-	36,36,36	0.42	0	47,47,47	0.87	2 (4%)
10	LMT	4	103	-	36,36,36	0.47	0	47,47,47	0.79	0
6	07D	U	101	-	69,74,74	1.76	8 (11%)	74,115,115	2.68	21 (28%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
7	08I	L	302	-	50,70,70	1.49	3 (6%)	45,101,101	2.21	13 (28%)
13	CRT	4	101	-	41,43,43	0.72	0	50,54,54	1.64	9 (18%)
13	CRT	N	101	-	41,43,43	0.70	0	50,54,54	1.58	8 (16%)
13	CRT	X	101	-	41,43,43	0.69	0	50,54,54	1.74	9 (18%)
10	LMT	E	103	-	36,36,36	0.41	0	47,47,47	0.79	0
6	07D	M	403	-	69,74,74	1.76	9 (13%)	74,115,115	2.67	15 (20%)
6	07D	Y	101	-	69,74,74	1.77	9 (13%)	74,115,115	2.73	21 (28%)
6	07D	Q	102	-	69,74,74	1.72	7 (10%)	74,115,115	2.70	17 (22%)
10	LMT	J	103	-	36,36,36	0.45	0	47,47,47	0.83	1 (2%)
13	CRT	J	101	-	41,43,43	0.69	0	50,54,54	1.61	9 (18%)
10	LMT	L	305	-	29,29,36	0.41	0	40,40,47	0.76	1 (2%)
13	CRT	2	101	-	41,43,43	0.73	0	50,54,54	1.64	10 (20%)
13	CRT	M	407	-	41,43,43	0.75	0	50,54,54	3.81	16 (32%)
6	07D	8	102	-	69,74,74	1.72	8 (11%)	74,115,115	2.89	21 (28%)
6	07D	S	101	-	69,74,74	1.76	9 (13%)	74,115,115	2.69	19 (25%)
13	CRT	E	101	-	41,43,43	0.70	0	50,54,54	1.68	14 (28%)
7	08I	M	405	-	50,70,70	1.52	3 (6%)	45,101,101	1.94	8 (17%)
6	07D	L	307	-	69,74,74	1.74	8 (11%)	74,115,115	2.90	22 (29%)
6	07D	K	101	-	69,74,74	1.72	8 (11%)	74,115,115	2.72	20 (27%)
10	LMT	0	103	-	36,36,36	0.38	0	47,47,47	0.70	1 (2%)
12	RQ0	M	406	-	62,62,62	2.87	28 (45%)	69,78,78	2.37	27 (39%)
10	LMT	M	410	-	36,36,36	0.42	0	47,47,47	0.90	1 (2%)
9	PGV	H	302	-	35,35,50	1.09	2 (5%)	38,41,56	1.29	4 (10%)
6	07D	Z	102	-	69,74,74	1.71	8 (11%)	74,115,115	2.68	15 (20%)
10	LMT	5	201	-	32,32,36	0.50	0	43,43,47	0.92	2 (4%)
13	CRT	0	101	-	41,43,43	0.70	0	50,54,54	1.62	13 (26%)
15	PEF	H	305	-	12,12,46	0.45	0	13,15,51	0.47	0
13	CRT	A	102	-	41,43,43	0.71	0	50,54,54	1.71	14 (28%)
6	07D	E	102	-	69,74,74	1.71	7 (10%)	74,115,115	2.67	18 (24%)
10	LMT	6	103	-	36,36,36	0.45	0	47,47,47	0.83	0
6	07D	0	102	-	69,74,74	1.71	7 (10%)	74,115,115	2.70	17 (22%)
10	LMT	P	103	-	36,36,36	0.43	0	47,47,47	0.68	1 (2%)
13	CRT	V	101	-	41,43,43	0.75	0	50,54,54	1.80	13 (26%)
6	07D	X	102	-	69,74,74	1.73	8 (11%)	74,115,115	2.72	18 (24%)
6	07D	T	102	-	69,74,74	1.73	9 (13%)	74,115,115	2.81	18 (24%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
10	LMT	Z	103	-	36,36,36	0.45	0	47,47,47	0.76	0
6	07D	P	102	-	69,74,74	1.73	8 (11%)	74,115,115	2.73	18 (24%)
8	U10	M	401	-	18,18,63	1.02	2 (11%)	22,25,79	0.69	0
14	CDL	M	409	-	67,67,99	1.14	4 (5%)	73,79,111	1.10	5 (6%)
10	LMT	B	102	-	36,36,36	0.43	0	47,47,47	0.76	1 (2%)
13	CRT	8	101	-	41,43,43	0.69	0	50,54,54	1.58	9 (18%)
6	07D	3	101	-	69,74,74	1.76	9 (13%)	74,115,115	2.69	18 (24%)
9	PGV	L	304	-	42,42,50	0.98	2 (4%)	45,48,56	1.23	4 (8%)
13	CRT	T	101	-	41,43,43	0.70	0	50,54,54	1.79	11 (22%)
6	07D	W	101	-	69,74,74	1.79	10 (14%)	74,115,115	2.71	20 (27%)
13	CRT	R	101	-	41,43,43	0.71	0	50,54,54	1.52	9 (18%)
6	07D	A	101	-	69,74,74	1.76	9 (13%)	74,115,115	2.70	19 (25%)
14	CDL	H	303	-	58,58,99	1.24	4 (6%)	64,70,111	1.22	5 (7%)
13	CRT	6	101	-	41,43,43	0.71	0	50,54,54	1.57	9 (18%)
15	PEF	K	102	-	30,30,46	1.17	2 (6%)	33,35,51	1.17	2 (6%)
6	07D	D	101	-	69,74,74	1.79	9 (13%)	74,115,115	2.77	21 (28%)
6	07D	1	101	-	69,74,74	1.80	8 (11%)	74,115,115	2.70	20 (27%)
6	07D	B	101	-	69,74,74	1.74	8 (11%)	74,115,115	2.86	22 (29%)
6	07D	J	102	-	69,74,74	1.70	8 (11%)	74,115,115	2.81	19 (25%)
6	07D	I	101	-	69,74,74	1.78	11 (15%)	74,115,115	2.83	20 (27%)
10	LMT	M	411	-	30,30,36	0.46	0	41,41,47	0.76	0
14	CDL	H	304	-	32,32,99	1.37	3 (9%)	35,42,111	1.52	4 (11%)
6	07D	N	102	-	69,74,74	1.73	8 (11%)	74,115,115	2.75	21 (28%)

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	U10	L	303	-	-	6/21/45/87	0/1/1/1
15	PEF	K	103	-	-	14/45/45/50	-
10	LMT	8	103	-	-	3/21/61/61	0/2/2/2
6	07D	2	102	-	-	12/41/137/137	-
6	07D	G	102	-	-	10/41/137/137	-
10	LMT	V	103	-	-	3/21/61/61	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	07D	6	102	-	-	13/41/137/137	-
6	07D	V	102	-	-	9/41/137/137	-
10	LMT	X	103	-	-	3/21/61/61	0/2/2/2
6	07D	Q	101	-	-	10/41/137/137	-
6	07D	9	101	-	-	5/41/137/137	-
10	LMT	G	103	-	-	2/21/61/61	0/2/2/2
6	07D	7	101	-	-	12/41/137/137	-
6	07D	O	101	-	-	11/41/137/137	-
13	CRT	P	101	-	-	15/51/51/51	-
6	07D	5	202	-	-	11/41/137/137	-
14	CDL	H	301	-	-	19/74/74/110	-
10	LMT	N	103	-	-	4/21/61/61	0/2/2/2
13	CRT	G	101	-	-	10/51/51/51	-
10	LMT	H	306	-	-	10/21/61/61	0/2/2/2
13	CRT	Z	101	-	-	10/51/51/51	-
6	07D	4	102	-	-	9/41/137/137	-
10	LMT	R	102	-	-	4/21/61/61	0/2/2/2
6	07D	M	404	-	-	9/41/137/137	-
10	LMT	L	306	-	-	6/18/58/61	0/2/2/2
6	07D	L	301	-	-	4/41/137/137	-
6	07D	F	101	-	-	7/41/137/137	-
10	LMT	2	103	-	-	7/21/61/61	0/2/2/2
10	LMT	5	203	-	-	5/21/61/61	0/2/2/2
14	CDL	M	408	-	-	23/78/78/110	-
10	LMT	T	103	-	-	7/21/61/61	0/2/2/2
10	LMT	4	103	-	-	8/21/61/61	0/2/2/2
6	07D	U	101	-	-	7/41/137/137	-
7	08I	L	302	-	-	12/37/105/105	0/5/6/6
13	CRT	4	101	-	-	4/51/51/51	-
13	CRT	N	101	-	-	5/51/51/51	-
13	CRT	X	101	-	-	7/51/51/51	-
10	LMT	E	103	-	-	4/21/61/61	0/2/2/2
6	07D	M	403	-	-	13/41/137/137	-
6	07D	Y	101	-	-	9/41/137/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	07D	Q	102	-	-	13/41/137/137	-
10	LMT	J	103	-	-	5/21/61/61	0/2/2/2
13	CRT	J	101	-	-	2/51/51/51	-
10	LMT	L	305	-	-	0/14/54/61	0/2/2/2
13	CRT	2	101	-	-	11/51/51/51	-
13	CRT	M	407	-	-	10/51/51/51	-
6	07D	8	102	-	-	16/41/137/137	-
6	07D	S	101	-	-	7/41/137/137	-
13	CRT	E	101	-	-	11/51/51/51	-
7	08I	M	405	-	-	2/37/105/105	0/5/6/6
6	07D	L	307	-	-	12/41/137/137	-
6	07D	K	101	-	-	4/41/137/137	-
10	LMT	0	103	-	-	3/21/61/61	0/2/2/2
12	RQ0	M	406	-	-	22/61/85/85	0/1/1/1
10	LMT	M	410	-	-	8/21/61/61	0/2/2/2
9	PGV	H	302	-	-	16/40/40/55	-
6	07D	Z	102	-	-	15/41/137/137	-
10	LMT	5	201	-	-	13/17/57/61	0/2/2/2
13	CRT	0	101	-	-	7/51/51/51	-
15	PEF	H	305	-	-	4/13/13/50	-
13	CRT	A	102	-	-	0/51/51/51	-
6	07D	E	102	-	-	13/41/137/137	-
10	LMT	6	103	-	-	4/21/61/61	0/2/2/2
6	07D	0	102	-	-	9/41/137/137	-
10	LMT	P	103	-	-	9/21/61/61	0/2/2/2
13	CRT	V	101	-	-	7/51/51/51	-
6	07D	X	102	-	-	14/41/137/137	-
6	07D	T	102	-	-	13/41/137/137	-
10	LMT	Z	103	-	-	6/21/61/61	0/2/2/2
6	07D	P	102	-	-	12/41/137/137	-
8	U10	M	401	-	-	1/9/33/87	0/1/1/1
14	CDL	M	409	-	-	23/78/78/110	-
10	LMT	B	102	-	-	8/21/61/61	0/2/2/2
13	CRT	8	101	-	-	7/51/51/51	-
6	07D	3	101	-	-	8/41/137/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	PGV	L	304	-	-	9/47/47/55	-
13	CRT	T	101	-	-	7/51/51/51	-
6	07D	W	101	-	-	6/41/137/137	-
13	CRT	R	101	-	-	7/51/51/51	-
6	07D	A	101	-	-	5/41/137/137	-
14	CDL	H	303	-	-	30/68/68/110	-
13	CRT	6	101	-	-	13/51/51/51	-
15	PEF	K	102	-	-	11/34/34/50	-
6	07D	D	101	-	-	5/41/137/137	-
6	07D	1	101	-	-	12/41/137/137	-
6	07D	B	101	-	-	12/41/137/137	-
6	07D	J	102	-	-	10/41/137/137	-
6	07D	I	101	-	-	11/41/137/137	-
10	LMT	M	411	-	-	5/15/55/61	0/2/2/2
14	CDL	H	304	-	-	20/40/40/110	-
6	07D	N	102	-	-	7/41/137/137	-

All (371) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	M	406	RQ0	C18-C14	9.55	1.59	1.34
12	M	406	RQ0	C11-C07	9.55	1.59	1.34
6	F	101	07D	C2A-C3A	8.25	1.54	1.36
6	G	102	07D	C2A-C3A	8.19	1.54	1.36
6	1	101	07D	C2A-C3A	8.14	1.54	1.36
6	Q	102	07D	C2A-C3A	8.13	1.54	1.36
6	I	101	07D	C2A-C3A	8.09	1.53	1.36
6	N	102	07D	C2A-C3A	8.08	1.53	1.36
6	B	101	07D	C2A-C3A	8.06	1.53	1.36
6	M	404	07D	C2A-C3A	8.06	1.53	1.36
6	Y	101	07D	C2A-C3A	8.05	1.53	1.36
6	4	102	07D	C2A-C3A	8.05	1.53	1.36
6	A	101	07D	C2A-C3A	8.03	1.53	1.36
6	D	101	07D	C2A-C3A	8.03	1.53	1.36
6	0	102	07D	C2A-C3A	8.01	1.53	1.36
6	M	403	07D	C2A-C3A	7.99	1.53	1.36
6	W	101	07D	C2A-C3A	7.98	1.53	1.36
6	X	102	07D	C2A-C3A	7.98	1.53	1.36
6	9	101	07D	C2A-C3A	7.98	1.53	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	2	102	07D	C2A-C3A	7.94	1.53	1.36
6	3	101	07D	C2A-C3A	7.93	1.53	1.36
6	P	102	07D	C2A-C3A	7.92	1.53	1.36
6	S	101	07D	C2A-C3A	7.92	1.53	1.36
6	E	102	07D	C2A-C3A	7.91	1.53	1.36
6	O	101	07D	C2A-C3A	7.90	1.53	1.36
6	L	301	07D	C2A-C3A	7.89	1.53	1.36
6	Z	102	07D	C2A-C3A	7.89	1.53	1.36
6	8	102	07D	C2A-C3A	7.89	1.53	1.36
6	L	307	07D	C2A-C3A	7.88	1.53	1.36
6	K	101	07D	C2A-C3A	7.88	1.53	1.36
6	V	102	07D	C2A-C3A	7.88	1.53	1.36
6	U	101	07D	C2A-C3A	7.87	1.53	1.36
6	T	102	07D	C2A-C3A	7.86	1.53	1.36
6	J	102	07D	C2A-C3A	7.85	1.53	1.36
6	6	102	07D	C2A-C3A	7.82	1.53	1.36
6	Q	101	07D	C2A-C3A	7.77	1.53	1.36
6	5	202	07D	C2A-C3A	7.75	1.53	1.36
6	7	101	07D	C2A-C3A	7.60	1.52	1.36
6	1	101	07D	MG-NA	6.04	2.17	2.05
6	4	102	07D	MG-NA	5.94	2.17	2.05
6	W	101	07D	MG-NA	5.89	2.17	2.05
6	N	102	07D	MG-NA	5.86	2.17	2.05
6	T	102	07D	MG-NA	5.81	2.17	2.05
6	M	404	07D	MG-NA	5.80	2.17	2.05
6	L	301	07D	MG-NA	5.79	2.17	2.05
6	F	101	07D	MG-NA	5.78	2.17	2.05
6	D	101	07D	MG-NA	5.75	2.17	2.05
6	Y	101	07D	MG-NA	5.73	2.17	2.05
6	L	307	07D	MG-NA	5.72	2.17	2.05
6	B	101	07D	MG-NA	5.71	2.17	2.05
6	U	101	07D	MG-NA	5.70	2.17	2.05
6	O	101	07D	MG-NA	5.70	2.17	2.05
6	Z	102	07D	MG-NA	5.70	2.17	2.05
6	5	202	07D	MG-NA	5.69	2.17	2.05
6	X	102	07D	MG-NA	5.66	2.17	2.05
6	M	403	07D	MG-NA	5.66	2.17	2.05
6	A	101	07D	MG-NA	5.65	2.17	2.05
6	V	102	07D	MG-NA	5.65	2.17	2.05
6	S	101	07D	MG-NA	5.64	2.17	2.05
6	I	101	07D	MG-NA	5.62	2.16	2.05
6	8	102	07D	MG-NA	5.61	2.16	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	L	302	08I	C2A-C3A	5.60	1.54	1.37
6	2	102	07D	MG-NA	5.60	2.16	2.05
6	Q	102	07D	MG-NA	5.58	2.16	2.05
6	J	102	07D	MG-NA	5.57	2.16	2.05
6	G	102	07D	MG-NA	5.57	2.16	2.05
6	W	101	07D	C3C-C2C	5.55	1.54	1.37
6	6	102	07D	MG-NA	5.55	2.16	2.05
6	P	102	07D	MG-NA	5.54	2.16	2.05
6	E	102	07D	MG-NA	5.53	2.16	2.05
12	M	406	RQ0	C07-C19	5.52	1.57	1.45
6	9	101	07D	MG-NA	5.51	2.16	2.05
6	3	101	07D	MG-NA	5.51	2.16	2.05
6	K	101	07D	MG-NA	5.50	2.16	2.05
6	I	101	07D	C3C-C2C	5.49	1.53	1.37
6	0	102	07D	MG-NA	5.49	2.16	2.05
7	L	302	08I	C3C-C2C	5.48	1.53	1.37
6	Q	101	07D	MG-NA	5.47	2.16	2.05
6	M	403	07D	C3C-C2C	5.47	1.53	1.37
6	9	101	07D	C3C-C2C	5.47	1.53	1.37
6	7	101	07D	MG-NA	5.46	2.16	2.05
6	Y	101	07D	C3C-C2C	5.46	1.53	1.37
6	Q	101	07D	C3C-C2C	5.46	1.53	1.37
6	7	101	07D	C3C-C2C	5.44	1.53	1.37
6	A	101	07D	C3C-C2C	5.43	1.53	1.37
6	D	101	07D	C3C-C2C	5.43	1.53	1.37
7	M	405	08I	C2A-C3A	5.42	1.53	1.37
6	3	101	07D	C3C-C2C	5.42	1.53	1.37
6	O	101	07D	C3C-C2C	5.40	1.53	1.37
6	B	101	07D	C3C-C2C	5.39	1.53	1.37
6	2	102	07D	C3C-C2C	5.38	1.53	1.37
6	8	102	07D	C3C-C2C	5.38	1.53	1.37
6	K	101	07D	C3C-C2C	5.37	1.53	1.37
6	S	101	07D	C3C-C2C	5.36	1.53	1.37
6	U	101	07D	C3C-C2C	5.36	1.53	1.37
6	X	102	07D	C3C-C2C	5.36	1.53	1.37
6	T	102	07D	C3C-C2C	5.35	1.53	1.37
6	P	102	07D	C3C-C2C	5.35	1.53	1.37
7	M	405	08I	C3C-C2C	5.34	1.53	1.37
6	F	101	07D	C3C-C2C	5.34	1.53	1.37
12	M	406	RQ0	C41-C42	5.33	1.58	1.50
6	E	102	07D	C3C-C2C	5.32	1.53	1.37
6	V	102	07D	C3C-C2C	5.31	1.53	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	G	102	07D	C3C-C2C	5.31	1.53	1.37
12	M	406	RQ0	C14-C23	5.31	1.57	1.45
6	5	202	07D	C3C-C2C	5.31	1.53	1.37
6	Z	102	07D	C3C-C2C	5.30	1.53	1.37
6	4	102	07D	C3C-C2C	5.29	1.53	1.37
6	6	102	07D	C3C-C2C	5.28	1.53	1.37
6	0	102	07D	C3C-C2C	5.26	1.53	1.37
6	J	102	07D	C3C-C2C	5.24	1.53	1.37
6	L	301	07D	C3C-C2C	5.23	1.53	1.37
6	Q	102	07D	C3C-C2C	5.23	1.53	1.37
6	L	307	07D	C3C-C2C	5.23	1.53	1.37
6	1	101	07D	C3C-C2C	5.22	1.53	1.37
6	N	102	07D	C3C-C2C	5.21	1.53	1.37
6	M	404	07D	C3C-C2C	5.01	1.52	1.37
14	H	304	CDL	OB6-CB5	4.89	1.46	1.35
14	H	303	CDL	OA6-CA5	4.80	1.46	1.35
7	M	405	08I	CBD-CGD	-4.52	1.46	1.52
14	M	409	CDL	OA6-CA5	4.47	1.46	1.34
14	H	303	CDL	OA8-CA7	4.35	1.46	1.33
14	M	409	CDL	OB8-CB7	4.31	1.45	1.33
14	H	301	CDL	OB6-CB5	4.30	1.46	1.34
14	H	303	CDL	OB6-CB5	4.28	1.46	1.34
14	M	409	CDL	OA8-CA7	4.24	1.45	1.33
9	H	302	PGV	O03-C19	4.22	1.45	1.33
14	M	408	CDL	OA8-CA7	4.21	1.45	1.33
15	K	102	PEF	O2-C10	4.20	1.46	1.34
15	K	103	PEF	O3-C30	4.18	1.45	1.33
14	M	409	CDL	OB6-CB5	4.17	1.46	1.34
14	H	301	CDL	OA8-CA7	4.14	1.45	1.33
9	L	304	PGV	O01-C1	4.12	1.45	1.34
15	K	102	PEF	O3-C30	4.12	1.45	1.33
14	M	408	CDL	OB8-CB7	4.11	1.45	1.33
14	H	301	CDL	OB8-CB7	4.11	1.45	1.33
9	H	302	PGV	O01-C1	4.11	1.45	1.34
14	M	408	CDL	OB6-CB5	4.10	1.45	1.34
7	L	302	08I	CBD-CGD	-4.07	1.46	1.52
14	M	408	CDL	OA6-CA5	4.07	1.45	1.34
15	K	103	PEF	O2-C10	4.06	1.45	1.34
9	L	304	PGV	O03-C19	4.01	1.45	1.33
14	H	304	CDL	OA6-CA5	4.01	1.45	1.34
14	H	301	CDL	OA6-CA5	3.99	1.45	1.34
14	H	303	CDL	OB8-CB7	3.98	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	M	406	RQ0	C08-C17	3.88	1.59	1.51
12	M	406	RQ0	C18-C27	3.84	1.55	1.43
12	M	406	RQ0	C11-C25	3.81	1.55	1.43
12	M	406	RQ0	C30-C31	3.69	1.59	1.51
12	M	406	RQ0	C29-C35	3.58	1.58	1.51
12	M	406	RQ0	C15-C21	3.57	1.58	1.51
12	M	406	RQ0	C47-C45	3.34	1.58	1.51
6	D	101	07D	C4C-NC	3.26	1.38	1.35
12	M	406	RQ0	C56-C55	-3.23	1.34	1.39
6	S	101	07D	C4C-NC	3.22	1.38	1.35
6	L	307	07D	C4C-NC	3.20	1.38	1.35
6	S	101	07D	CHD-C1D	3.19	1.43	1.35
12	M	406	RQ0	C05-C13	3.18	1.57	1.51
14	H	304	CDL	OA8-CA7	3.15	1.45	1.33
6	L	307	07D	CHD-C1D	3.15	1.43	1.35
6	M	403	07D	CHD-C1D	3.13	1.43	1.35
6	9	101	07D	C4C-NC	3.12	1.38	1.35
12	M	406	RQ0	C06-C16	3.12	1.57	1.51
6	Y	101	07D	C4C-NC	3.12	1.38	1.35
6	3	101	07D	C4C-NC	3.11	1.38	1.35
12	M	406	RQ0	C25-C16	3.10	1.37	1.34
6	L	301	07D	CHD-C1D	3.10	1.42	1.35
6	7	101	07D	C4C-NC	3.06	1.37	1.35
6	1	101	07D	CHD-C1D	3.05	1.42	1.35
8	L	303	U10	C3-C2	-3.04	1.40	1.48
6	U	101	07D	CHD-C1D	3.04	1.42	1.35
6	A	101	07D	C4C-NC	3.03	1.37	1.35
6	E	102	07D	C4C-NC	3.03	1.37	1.35
6	Q	101	07D	C4C-NC	3.03	1.37	1.35
6	U	101	07D	C4C-NC	3.02	1.37	1.35
6	W	101	07D	C4C-NC	3.02	1.37	1.35
6	Q	102	07D	CHD-C1D	3.02	1.42	1.35
6	9	101	07D	CHD-C1D	3.01	1.42	1.35
6	Q	101	07D	CHD-C1D	3.00	1.42	1.35
6	B	101	07D	CHD-C1D	3.00	1.42	1.35
6	M	404	07D	C4C-NC	3.00	1.37	1.35
6	3	101	07D	CHD-C1D	2.99	1.42	1.35
6	1	101	07D	C4C-NC	2.99	1.37	1.35
6	K	101	07D	C4C-NC	2.98	1.37	1.35
6	T	102	07D	C4C-NC	2.98	1.37	1.35
6	O	101	07D	C4C-NC	2.97	1.37	1.35
6	P	102	07D	CHD-C1D	2.96	1.42	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	V	102	07D	C4C-NC	2.96	1.37	1.35
6	5	202	07D	C4C-NC	2.95	1.37	1.35
6	B	101	07D	C4C-NC	2.95	1.37	1.35
6	6	102	07D	C4C-NC	2.94	1.37	1.35
6	X	102	07D	CHD-C1D	2.94	1.42	1.35
6	I	101	07D	C4C-NC	2.93	1.37	1.35
6	M	403	07D	C4C-NC	2.93	1.37	1.35
6	0	102	07D	CHD-C1D	2.93	1.42	1.35
6	I	101	07D	CHD-C1D	2.92	1.42	1.35
6	E	102	07D	CHD-C1D	2.91	1.42	1.35
6	D	101	07D	CHD-C1D	2.91	1.42	1.35
6	G	102	07D	CHD-C1D	2.91	1.42	1.35
6	F	101	07D	C4C-NC	2.91	1.37	1.35
6	X	102	07D	C4C-NC	2.90	1.37	1.35
6	O	101	07D	CHD-C1D	2.90	1.42	1.35
6	P	102	07D	C4C-NC	2.90	1.37	1.35
6	T	102	07D	CHD-C1D	2.89	1.42	1.35
12	M	406	RQ0	O01-C62	-2.89	1.38	1.45
6	2	102	07D	CHD-C1D	2.88	1.42	1.35
6	7	101	07D	CHD-C1D	2.88	1.42	1.35
6	Y	101	07D	CHD-C1D	2.87	1.42	1.35
6	K	101	07D	CHD-C1D	2.87	1.42	1.35
6	Z	102	07D	C4C-NC	2.87	1.37	1.35
6	A	101	07D	CHD-C1D	2.86	1.42	1.35
6	Z	102	07D	CHD-C1D	2.86	1.42	1.35
6	5	202	07D	CHD-C1D	2.85	1.42	1.35
6	6	102	07D	CHD-C1D	2.85	1.42	1.35
6	8	102	07D	C4C-NC	2.85	1.37	1.35
6	L	301	07D	C4C-NC	2.85	1.37	1.35
6	W	101	07D	CHD-C1D	2.83	1.42	1.35
6	M	404	07D	CHD-C1D	2.83	1.42	1.35
6	N	102	07D	C4C-NC	2.81	1.37	1.35
6	8	102	07D	CHD-C1D	2.80	1.42	1.35
6	J	102	07D	CHD-C1D	2.79	1.42	1.35
6	V	102	07D	CHD-C1D	2.78	1.42	1.35
6	F	101	07D	CHD-C1D	2.77	1.42	1.35
6	J	102	07D	C4C-NC	2.77	1.37	1.35
6	N	102	07D	CHD-C1D	2.76	1.42	1.35
6	0	102	07D	C4C-NC	2.76	1.37	1.35
6	4	102	07D	C4C-NC	2.73	1.37	1.35
6	2	102	07D	C4C-NC	2.73	1.37	1.35
6	G	102	07D	C4C-NC	2.67	1.37	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	Q	102	07D	C4C-NC	2.64	1.37	1.35
6	4	102	07D	CHD-C1D	2.63	1.41	1.35
8	M	401	U10	C4-C5	-2.56	1.41	1.48
6	D	101	07D	CHC-C4B	2.49	1.41	1.35
6	M	404	07D	C1B-C2B	-2.47	1.39	1.44
6	4	102	07D	C1A-C2A	2.46	1.50	1.45
6	M	404	07D	CHC-C4B	2.46	1.41	1.35
6	A	101	07D	C1B-C2B	-2.45	1.39	1.44
12	M	406	RQ0	C46-C52	-2.43	1.39	1.46
6	3	101	07D	C1B-C2B	-2.40	1.39	1.44
6	O	101	07D	CHC-C4B	2.40	1.41	1.35
6	S	101	07D	CHC-C4B	2.40	1.41	1.35
6	F	101	07D	CHC-C4B	2.39	1.41	1.35
6	Y	101	07D	C4A-C3A	2.39	1.50	1.45
6	1	101	07D	C1A-C2A	2.38	1.50	1.45
6	Y	101	07D	O1A-CGA	-2.38	1.15	1.22
6	7	101	07D	CHC-C4B	2.38	1.41	1.35
6	W	101	07D	C1B-C2B	-2.38	1.40	1.44
6	U	101	07D	CHC-C4B	2.38	1.41	1.35
6	6	102	07D	CHC-C4B	2.37	1.41	1.35
6	U	101	07D	C1B-C2B	-2.37	1.40	1.44
6	5	202	07D	C4A-C3A	2.37	1.50	1.45
6	Z	102	07D	CHC-C4B	2.37	1.41	1.35
6	5	202	07D	CHC-C4B	2.35	1.41	1.35
6	D	101	07D	C1B-C2B	-2.35	1.40	1.44
6	3	101	07D	CHC-C4B	2.35	1.41	1.35
6	F	101	07D	C4A-C3A	2.35	1.50	1.45
6	A	101	07D	CHC-C4B	2.34	1.41	1.35
6	1	101	07D	CHC-C4B	2.32	1.40	1.35
6	M	403	07D	CHC-C4B	2.32	1.40	1.35
6	K	101	07D	C1B-C2B	-2.31	1.40	1.44
6	2	102	07D	CHC-C4B	2.31	1.40	1.35
6	W	101	07D	C1A-C2A	2.31	1.50	1.45
6	K	101	07D	CHC-C4B	2.30	1.40	1.35
6	7	101	07D	C1B-C2B	-2.29	1.40	1.44
6	9	101	07D	CHC-C4B	2.29	1.40	1.35
6	N	102	07D	CHC-C4B	2.29	1.40	1.35
6	N	102	07D	C1B-C2B	-2.29	1.40	1.44
6	J	102	07D	CHC-C4B	2.29	1.40	1.35
6	X	102	07D	CHC-C4B	2.29	1.40	1.35
6	E	102	07D	C1B-C2B	-2.28	1.40	1.44
6	S	101	07D	C1B-C2B	-2.28	1.40	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	O	101	07D	C1C-NC	2.27	1.37	1.35
6	I	101	07D	CHC-C4B	2.27	1.40	1.35
6	2	102	07D	C1A-C2A	2.27	1.50	1.45
6	M	403	07D	C1B-C2B	-2.26	1.40	1.44
6	9	101	07D	C1B-C2B	-2.26	1.40	1.44
6	Y	101	07D	CHC-C4B	2.26	1.40	1.35
6	P	102	07D	CHC-C4B	2.26	1.40	1.35
6	M	404	07D	C4A-C3A	2.26	1.49	1.45
6	W	101	07D	CHC-C4B	2.25	1.40	1.35
6	W	101	07D	C4A-C3A	2.25	1.49	1.45
6	E	102	07D	CHC-C4B	2.25	1.40	1.35
6	L	301	07D	CHC-C4B	2.24	1.40	1.35
6	8	102	07D	CHC-C4B	2.24	1.40	1.35
12	M	406	RQ0	C08-C12	2.23	1.61	1.53
6	P	102	07D	C1B-C2B	-2.23	1.40	1.44
6	V	102	07D	C4A-C3A	2.23	1.49	1.45
6	T	102	07D	C1B-C2B	-2.23	1.40	1.44
6	G	102	07D	C1B-C2B	-2.23	1.40	1.44
12	M	406	RQ0	C26-C21	2.22	1.38	1.33
6	6	102	07D	C4A-C3A	2.22	1.49	1.45
6	Z	102	07D	C4A-C3A	2.22	1.49	1.45
6	5	202	07D	C1B-C2B	-2.22	1.40	1.44
8	L	303	U10	C4-C5	-2.21	1.42	1.48
6	O	101	07D	C4A-C3A	2.21	1.49	1.45
6	V	102	07D	C1B-C2B	-2.21	1.40	1.44
6	3	101	07D	O1A-CGA	-2.21	1.16	1.22
6	B	101	07D	C4A-C3A	2.20	1.49	1.45
6	0	102	07D	CHC-C4B	2.20	1.40	1.35
6	V	102	07D	CHC-C4B	2.20	1.40	1.35
6	O	101	07D	C1B-C2B	-2.20	1.40	1.44
6	4	102	07D	C4A-C3A	2.20	1.49	1.45
6	I	101	07D	O1A-CGA	-2.20	1.16	1.22
6	I	101	07D	C1B-C2B	-2.20	1.40	1.44
6	8	102	07D	C1B-C2B	-2.20	1.40	1.44
6	2	102	07D	C1B-C2B	-2.20	1.40	1.44
6	Q	101	07D	CHC-C4B	2.20	1.40	1.35
6	N	102	07D	C4A-C3A	2.20	1.49	1.45
6	L	307	07D	CHC-C4B	2.19	1.40	1.35
6	Q	102	07D	C1B-C2B	-2.19	1.40	1.44
6	J	102	07D	C1B-C2B	-2.19	1.40	1.44
6	B	101	07D	CHC-C4B	2.18	1.40	1.35
6	L	301	07D	C1B-C2B	-2.18	1.40	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	T	102	07D	CHC-C4B	2.17	1.40	1.35
6	2	102	07D	C1C-NC	2.17	1.37	1.35
6	Q	102	07D	CHC-C4B	2.17	1.40	1.35
6	3	101	07D	C4A-C3A	2.17	1.49	1.45
8	M	401	U10	C3-C2	-2.17	1.42	1.48
6	U	101	07D	C1A-C2A	2.16	1.50	1.45
6	D	101	07D	C4A-C3A	2.15	1.49	1.45
6	L	301	07D	O1A-CGA	-2.14	1.16	1.22
6	M	404	07D	CBD-CGD	-2.14	1.45	1.52
6	L	307	07D	C4A-C3A	2.14	1.49	1.45
6	T	102	07D	C4A-C3A	2.14	1.49	1.45
6	1	101	07D	C4A-C3A	2.13	1.49	1.45
6	4	102	07D	CHC-C4B	2.12	1.40	1.35
6	Z	102	07D	C1B-C2B	-2.12	1.40	1.44
6	Q	101	07D	C1C-NC	2.11	1.37	1.35
12	M	406	RQ0	C32-C31	2.11	1.38	1.33
12	M	406	RQ0	C57-C50	-2.11	1.46	1.50
6	I	101	07D	C15-C13	2.10	1.55	1.51
6	S	101	07D	C1C-NC	2.10	1.37	1.35
6	G	102	07D	CHC-C4B	2.10	1.40	1.35
6	D	101	07D	C1A-C2A	2.10	1.50	1.45
6	X	102	07D	C1B-C2B	-2.10	1.40	1.44
6	W	101	07D	O1A-CGA	-2.10	1.16	1.22
6	B	101	07D	C1B-C2B	-2.09	1.40	1.44
12	M	406	RQ0	C42-C35	2.09	1.38	1.33
6	S	101	07D	C4A-C3A	2.08	1.49	1.45
6	7	101	07D	C4A-C3A	2.07	1.49	1.45
6	M	404	07D	C1A-C2A	2.07	1.50	1.45
6	T	102	07D	C1A-C2A	2.06	1.50	1.45
6	L	307	07D	C1B-C2B	-2.06	1.40	1.44
6	A	101	07D	C1A-C2A	2.06	1.50	1.45
6	4	102	07D	C1D-C2D	-2.05	1.40	1.44
12	M	406	RQ0	C24-C17	2.04	1.37	1.33
12	M	406	RQ0	C22-C13	2.04	1.37	1.33
6	L	301	07D	C4A-C3A	2.03	1.49	1.45
6	4	102	07D	C1B-C2B	-2.03	1.40	1.44
6	Q	101	07D	C1B-C2B	-2.03	1.40	1.44
6	P	102	07D	C1C-NC	2.03	1.37	1.35
6	O	101	07D	O1A-CGA	-2.03	1.16	1.22
6	K	101	07D	C1C-NC	2.03	1.37	1.35
12	M	406	RQ0	C34-C43	2.03	1.57	1.50
6	X	102	07D	C1C-NC	2.03	1.37	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	101	07D	C1B-C2B	-2.03	1.40	1.44
6	9	101	07D	O1A-CGA	-2.02	1.16	1.22
6	M	403	07D	O1A-CGA	-2.02	1.16	1.22
12	M	406	RQ0	C43-C45	2.02	1.37	1.33
6	6	102	07D	C1B-C2B	-2.02	1.40	1.44
6	J	102	07D	C3D-C4D	-2.02	1.38	1.43
6	Y	101	07D	C1B-C2B	-2.01	1.40	1.44
6	I	101	07D	C4A-C3A	2.01	1.49	1.45
6	Q	101	07D	C4A-C3A	2.01	1.49	1.45
6	5	202	07D	C15-C13	2.01	1.55	1.51
6	M	403	07D	C1A-C2A	2.01	1.50	1.45
6	I	101	07D	C1A-C2A	2.00	1.50	1.45
12	M	406	RQ0	C30-C34	2.00	1.60	1.53
6	A	101	07D	C4A-C3A	2.00	1.49	1.45
6	8	102	07D	C4A-C3A	2.00	1.49	1.45
6	0	102	07D	C4A-C3A	2.00	1.49	1.45

All (992) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	M	407	CRT	C2-C1-C4	-15.77	86.64	110.86
13	M	407	CRT	C3-C1-C4	-15.66	86.81	110.86
6	W	101	07D	CMC-C2C-C1C	-10.64	112.11	128.46
6	V	102	07D	CMC-C2C-C1C	-10.48	112.36	128.46
6	I	101	07D	CMC-C2C-C1C	-10.45	112.41	128.46
6	9	101	07D	CMC-C2C-C1C	-10.41	112.47	128.46
6	7	101	07D	CMC-C2C-C1C	-10.36	112.53	128.46
6	3	101	07D	CMC-C2C-C1C	-10.36	112.54	128.46
6	L	307	07D	CMC-C2C-C1C	-10.30	112.63	128.46
6	G	102	07D	CMC-C2C-C1C	-10.26	112.69	128.46
6	P	102	07D	CMC-C2C-C1C	-10.21	112.78	128.46
6	S	101	07D	CMC-C2C-C1C	-10.21	112.78	128.46
6	D	101	07D	CMC-C2C-C1C	-10.15	112.86	128.46
6	B	101	07D	CMC-C2C-C1C	-10.14	112.87	128.46
6	U	101	07D	CMC-C2C-C1C	-10.14	112.88	128.46
6	0	102	07D	CMC-C2C-C1C	-10.12	112.91	128.46
6	A	101	07D	CMC-C2C-C1C	-10.08	112.97	128.46
6	T	102	07D	CMC-C2C-C1C	-10.06	113.01	128.46
6	6	102	07D	CMC-C2C-C1C	-10.06	113.01	128.46
6	Q	102	07D	CMC-C2C-C1C	-10.04	113.03	128.46
6	K	101	07D	CMC-C2C-C1C	-10.03	113.05	128.46
6	Q	101	07D	CMC-C2C-C1C	-10.02	113.07	128.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	Y	101	07D	CMC-C2C-C1C	-10.01	113.08	128.46
6	2	102	07D	CMC-C2C-C1C	-9.98	113.13	128.46
6	4	102	07D	CMC-C2C-C1C	-9.96	113.15	128.46
6	N	102	07D	CMC-C2C-C1C	-9.96	113.16	128.46
6	X	102	07D	CMC-C2C-C1C	-9.93	113.20	128.46
6	L	301	07D	CMC-C2C-C1C	-9.92	113.22	128.46
6	J	102	07D	CMC-C2C-C1C	-9.91	113.23	128.46
6	5	202	07D	CMC-C2C-C1C	-9.87	113.29	128.46
6	E	102	07D	CMC-C2C-C1C	-9.86	113.30	128.46
6	F	101	07D	CMC-C2C-C1C	-9.79	113.41	128.46
6	8	102	07D	CMC-C2C-C1C	-9.77	113.44	128.46
6	1	101	07D	CMC-C2C-C1C	-9.76	113.46	128.46
6	O	101	07D	CMC-C2C-C1C	-9.59	113.72	128.46
6	Z	102	07D	CMC-C2C-C1C	-9.53	113.82	128.46
6	M	403	07D	CMC-C2C-C1C	-9.45	113.95	128.46
6	M	404	07D	CMC-C2C-C1C	-9.41	114.00	128.46
6	D	101	07D	CAA-C2A-C3A	-8.68	111.72	127.88
6	U	101	07D	CAA-C2A-C3A	-8.68	111.72	127.88
12	M	406	RQ0	C50-C46-C52	-8.47	111.60	119.58
6	Q	101	07D	CMA-C3A-C4A	-8.44	109.83	124.71
6	K	101	07D	CAA-C2A-C3A	-8.44	112.16	127.88
6	L	301	07D	CAA-C2A-C3A	-8.43	112.18	127.88
6	M	404	07D	CAA-C2A-C3A	-8.33	112.36	127.88
6	4	102	07D	CAA-C2A-C3A	-8.30	112.42	127.88
6	Z	102	07D	CAA-C2A-C3A	-8.29	112.43	127.88
6	W	101	07D	CAA-C2A-C3A	-8.29	112.44	127.88
6	I	101	07D	CAA-C2A-C3A	-8.27	112.48	127.88
6	A	101	07D	CAA-C2A-C3A	-8.26	112.50	127.88
6	P	102	07D	CAA-C2A-C3A	-8.24	112.53	127.88
6	J	102	07D	CAA-C2A-C3A	-8.22	112.56	127.88
6	O	101	07D	CAA-C2A-C3A	-8.15	112.71	127.88
6	7	101	07D	CAA-C2A-C3A	-8.14	112.72	127.88
6	2	102	07D	CAA-C2A-C3A	-8.13	112.74	127.88
6	S	101	07D	CAA-C2A-C3A	-8.10	112.79	127.88
6	9	101	07D	CMA-C3A-C4A	-8.07	110.48	124.71
6	F	101	07D	CAA-C2A-C3A	-8.07	112.86	127.88
6	9	101	07D	CAA-C2A-C3A	-8.05	112.88	127.88
6	L	301	07D	CMA-C3A-C4A	-8.05	110.53	124.71
6	3	101	07D	CAA-C2A-C3A	-8.02	112.94	127.88
6	Y	101	07D	CAA-C2A-C3A	-8.02	112.95	127.88
6	8	102	07D	CAA-C2A-C3A	-8.01	112.96	127.88
6	6	102	07D	CAA-C2A-C3A	-7.98	113.02	127.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	M	403	07D	CAA-C2A-C3A	-7.97	113.03	127.88
6	L	307	07D	C1C-C2C-C3C	-7.97	101.45	107.00
6	G	102	07D	CAA-C2A-C3A	-7.96	113.06	127.88
6	Q	101	07D	CAA-C2A-C3A	-7.96	113.06	127.88
6	M	403	07D	CMA-C3A-C4A	-7.95	110.70	124.71
6	6	102	07D	CMA-C3A-C4A	-7.94	110.71	124.71
6	J	102	07D	CMA-C3A-C4A	-7.94	110.72	124.71
6	V	102	07D	CAA-C2A-C3A	-7.92	113.13	127.88
6	1	101	07D	CAA-C2A-C3A	-7.91	113.15	127.88
6	3	101	07D	CMA-C3A-C4A	-7.89	110.80	124.71
6	E	102	07D	CAA-C2A-C3A	-7.89	113.19	127.88
6	0	102	07D	CMA-C3A-C4A	-7.88	110.83	124.71
6	T	102	07D	CAA-C2A-C3A	-7.87	113.22	127.88
6	X	102	07D	CAA-C2A-C3A	-7.86	113.23	127.88
6	1	101	07D	CMA-C3A-C4A	-7.84	110.89	124.71
6	I	101	07D	CMA-C3A-C4A	-7.82	110.94	124.71
6	5	202	07D	CAA-C2A-C3A	-7.78	113.38	127.88
6	K	101	07D	CMA-C3A-C4A	-7.78	111.00	124.71
6	B	101	07D	CMA-C3A-C4A	-7.75	111.05	124.71
6	N	102	07D	CAA-C2A-C3A	-7.75	113.44	127.88
6	7	101	07D	CMA-C3A-C4A	-7.70	111.15	124.71
6	M	404	07D	C1C-C2C-C3C	-7.69	101.65	107.00
6	D	101	07D	CMA-C3A-C4A	-7.68	111.17	124.71
6	O	101	07D	CMA-C3A-C4A	-7.67	111.19	124.71
6	S	101	07D	CMA-C3A-C4A	-7.67	111.20	124.71
6	W	101	07D	CMA-C3A-C4A	-7.65	111.22	124.71
6	0	102	07D	CAA-C2A-C3A	-7.64	113.64	127.88
6	L	307	07D	CAA-C2A-C3A	-7.64	113.65	127.88
6	Y	101	07D	CMA-C3A-C4A	-7.64	111.25	124.71
6	N	102	07D	CMA-C3A-C4A	-7.61	111.29	124.71
6	Q	102	07D	CAA-C2A-C3A	-7.60	113.73	127.88
6	Q	102	07D	CMA-C3A-C4A	-7.58	111.36	124.71
6	T	102	07D	CMA-C3A-C4A	-7.58	111.36	124.71
6	A	101	07D	CMA-C3A-C4A	-7.56	111.39	124.71
6	M	404	07D	CMC-C2C-C3C	-7.55	110.70	124.94
6	4	102	07D	CMA-C3A-C4A	-7.52	111.46	124.71
6	V	102	07D	CMA-C3A-C4A	-7.51	111.47	124.71
6	F	101	07D	CMA-C3A-C4A	-7.51	111.48	124.71
6	5	202	07D	CMA-C3A-C4A	-7.50	111.49	124.71
6	P	102	07D	CMA-C3A-C4A	-7.43	111.61	124.71
6	B	101	07D	CAA-C2A-C3A	-7.43	114.04	127.88
6	L	307	07D	CMA-C3A-C4A	-7.39	111.68	124.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	U	101	07D	CMA-C3A-C4A	-7.38	111.70	124.71
6	Z	102	07D	CMA-C3A-C4A	-7.35	111.76	124.71
6	M	404	07D	CMA-C3A-C4A	-7.28	111.88	124.71
6	E	102	07D	CMA-C3A-C4A	-7.26	111.92	124.71
6	L	307	07D	C1D-ND-C4D	-7.26	103.44	106.71
6	8	102	07D	CMA-C3A-C4A	-7.25	111.93	124.71
6	X	102	07D	CMA-C3A-C4A	-7.24	111.96	124.71
6	L	301	07D	C1C-C2C-C3C	-7.23	101.97	107.00
6	G	102	07D	CMA-C3A-C4A	-7.21	112.00	124.71
6	T	102	07D	C11-C10-C8	7.01	136.03	112.98
6	F	101	07D	C1D-ND-C4D	-6.91	103.60	106.71
7	M	405	08I	CMA-C3A-C2A	-6.87	111.98	124.94
6	1	101	07D	C1C-C2C-C3C	-6.78	102.28	107.00
7	L	302	08I	CMA-C3A-C2A	-6.76	112.20	124.94
6	2	102	07D	CMA-C3A-C4A	-6.74	112.84	124.71
6	A	101	07D	C1D-ND-C4D	-6.66	103.71	106.71
6	D	101	07D	C1D-ND-C4D	-6.56	103.76	106.71
6	I	101	07D	C1D-ND-C4D	-6.53	103.77	106.71
6	8	102	07D	C11-C10-C8	6.52	134.43	112.98
6	9	101	07D	C1D-ND-C4D	-6.52	103.78	106.71
6	8	102	07D	CMC-C2C-C3C	-6.50	112.68	124.94
6	7	101	07D	CAA-C2A-C1A	-6.48	110.25	128.11
6	J	102	07D	CAA-C2A-C1A	-6.46	110.31	128.11
6	6	102	07D	CAA-C2A-C1A	-6.45	110.36	128.11
6	U	101	07D	C1D-ND-C4D	-6.43	103.81	106.71
6	O	101	07D	C1D-ND-C4D	-6.43	103.82	106.71
6	M	403	07D	CMC-C2C-C3C	-6.42	112.84	124.94
6	F	101	07D	CMC-C2C-C3C	-6.39	112.89	124.94
6	6	102	07D	CMC-C2C-C3C	-6.39	112.89	124.94
6	Q	101	07D	CAA-C2A-C1A	-6.38	110.54	128.11
6	4	102	07D	C1C-C2C-C3C	-6.36	102.57	107.00
6	0	102	07D	CAA-C2A-C1A	-6.35	110.63	128.11
6	S	101	07D	C1D-ND-C4D	-6.33	103.86	106.71
6	J	102	07D	CMC-C2C-C3C	-6.33	113.01	124.94
6	W	101	07D	C1C-C2C-C3C	-6.33	102.59	107.00
6	5	202	07D	CMC-C2C-C3C	-6.33	113.02	124.94
6	1	101	07D	CMC-C2C-C3C	-6.31	113.05	124.94
6	Y	101	07D	C1C-C2C-C3C	-6.30	102.61	107.00
6	T	102	07D	C1C-C2C-C3C	-6.30	102.61	107.00
6	4	102	07D	C1D-ND-C4D	-6.30	103.87	106.71
6	M	403	07D	C1D-ND-C4D	-6.30	103.88	106.71
6	K	101	07D	CMC-C2C-C3C	-6.29	113.07	124.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	E	102	07D	CMC-C2C-C3C	-6.29	113.09	124.94
6	Z	102	07D	CMC-C2C-C3C	-6.29	113.09	124.94
6	6	102	07D	C1D-ND-C4D	-6.27	103.89	106.71
6	D	101	07D	C1C-C2C-C3C	-6.26	102.64	107.00
6	7	101	07D	CMC-C2C-C3C	-6.26	113.14	124.94
6	Q	101	07D	C1D-ND-C4D	-6.26	103.89	106.71
6	L	301	07D	CMC-C2C-C3C	-6.25	113.17	124.94
6	O	101	07D	CMC-C2C-C3C	-6.24	113.17	124.94
6	7	101	07D	C1D-ND-C4D	-6.24	103.90	106.71
6	M	404	07D	C1D-ND-C4D	-6.24	103.90	106.71
6	2	102	07D	C1C-C2C-C3C	-6.23	102.66	107.00
6	N	102	07D	CMC-C2C-C3C	-6.23	113.20	124.94
6	Y	101	07D	C1D-ND-C4D	-6.22	103.91	106.71
6	5	202	07D	C1C-C2C-C3C	-6.21	102.67	107.00
6	9	101	07D	C1C-C2C-C3C	-6.20	102.68	107.00
6	Q	102	07D	C1C-C2C-C3C	-6.19	102.69	107.00
6	B	101	07D	CAA-C2A-C1A	-6.18	111.08	128.11
6	K	101	07D	C1D-ND-C4D	-6.18	103.93	106.71
6	3	101	07D	C1D-ND-C4D	-6.17	103.93	106.71
6	Z	102	07D	CAA-C2A-C1A	-6.16	111.14	128.11
6	X	102	07D	CMC-C2C-C3C	-6.16	113.33	124.94
6	A	101	07D	CMC-C2C-C3C	-6.16	113.33	124.94
6	O	101	07D	C1C-C2C-C3C	-6.15	102.72	107.00
6	4	102	07D	CMC-C2C-C3C	-6.14	113.36	124.94
6	3	101	07D	CAA-C2A-C1A	-6.13	111.24	128.11
6	F	101	07D	C1C-C2C-C3C	-6.12	102.74	107.00
6	V	102	07D	CMC-C2C-C3C	-6.12	113.40	124.94
6	8	102	07D	C1D-ND-C4D	-6.12	103.96	106.71
6	G	102	07D	C1C-C2C-C3C	-6.11	102.75	107.00
6	U	101	07D	C1C-C2C-C3C	-6.10	102.75	107.00
6	L	307	07D	CMC-C2C-C3C	-6.10	113.44	124.94
6	A	101	07D	C1C-C2C-C3C	-6.10	102.75	107.00
6	Q	101	07D	C1C-C2C-C3C	-6.09	102.76	107.00
6	Y	101	07D	CAA-C2A-C1A	-6.08	111.38	128.11
6	E	102	07D	C1C-C2C-C3C	-6.08	102.77	107.00
6	0	102	07D	C1C-C2C-C3C	-6.07	102.77	107.00
6	U	101	07D	CMC-C2C-C3C	-6.07	113.49	124.94
6	E	102	07D	C1D-ND-C4D	-6.07	103.98	106.71
6	2	102	07D	CMC-C2C-C3C	-6.06	113.51	124.94
6	M	403	07D	C1C-C2C-C3C	-6.06	102.78	107.00
6	8	102	07D	C1C-C2C-C3C	-6.05	102.79	107.00
6	N	102	07D	CAA-C2A-C1A	-6.05	111.45	128.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	S	101	07D	CMC-C2C-C3C	-6.05	113.54	124.94
6	P	102	07D	CMC-C2C-C3C	-6.05	113.54	124.94
6	B	101	07D	C1C-C2C-C3C	-6.05	102.79	107.00
6	5	202	07D	C1D-ND-C4D	-6.02	104.00	106.71
6	J	102	07D	C1C-C2C-C3C	-6.02	102.81	107.00
6	P	102	07D	C1D-ND-C4D	-6.01	104.00	106.71
6	0	102	07D	CMC-C2C-C3C	-6.01	113.61	124.94
6	D	101	07D	CMC-C2C-C3C	-6.01	113.62	124.94
6	Q	102	07D	CAA-C2A-C1A	-6.00	111.58	128.11
6	I	101	07D	C1C-C2C-C3C	-6.00	102.82	107.00
6	Q	102	07D	CMC-C2C-C3C	-5.99	113.64	124.94
6	X	102	07D	C1C-C2C-C3C	-5.99	102.83	107.00
6	S	101	07D	C1C-C2C-C3C	-5.99	102.83	107.00
7	M	405	08I	CMC-C2C-C3C	-5.99	113.65	124.94
6	Z	102	07D	C1C-C2C-C3C	-5.99	102.83	107.00
6	L	301	07D	C1D-ND-C4D	-5.98	104.02	106.71
6	T	102	07D	CMC-C2C-C3C	-5.97	113.69	124.94
6	X	102	07D	CAA-C2A-C1A	-5.97	111.68	128.11
6	6	102	07D	C1C-C2C-C3C	-5.96	102.85	107.00
13	T	101	CRT	C5-C6-C7	-5.96	116.88	125.89
6	V	102	07D	C1D-ND-C4D	-5.96	104.03	106.71
6	V	102	07D	CAA-C2A-C1A	-5.96	111.71	128.11
6	V	102	07D	C1C-C2C-C3C	-5.95	102.86	107.00
6	B	101	07D	C1D-ND-C4D	-5.95	104.03	106.71
6	3	101	07D	CMC-C2C-C3C	-5.93	113.76	124.94
6	0	102	07D	C1D-ND-C4D	-5.93	104.04	106.71
6	9	101	07D	CMC-C2C-C3C	-5.92	113.78	124.94
6	K	101	07D	C1C-C2C-C3C	-5.92	102.88	107.00
6	G	102	07D	C1D-ND-C4D	-5.91	104.05	106.71
6	G	102	07D	CMC-C2C-C3C	-5.91	113.80	124.94
6	P	102	07D	C1C-C2C-C3C	-5.91	102.89	107.00
6	Z	102	07D	C1D-ND-C4D	-5.90	104.05	106.71
6	J	102	07D	C1D-ND-C4D	-5.89	104.06	106.71
6	N	102	07D	C1C-C2C-C3C	-5.88	102.91	107.00
6	X	102	07D	C1D-ND-C4D	-5.88	104.06	106.71
6	Q	102	07D	C1D-ND-C4D	-5.87	104.07	106.71
6	3	101	07D	C1C-C2C-C3C	-5.87	102.91	107.00
6	N	102	07D	C1D-ND-C4D	-5.87	104.07	106.71
6	T	102	07D	C1D-ND-C4D	-5.86	104.07	106.71
6	B	101	07D	C16-C15-C13	5.84	132.18	112.98
6	I	101	07D	CMC-C2C-C3C	-5.83	113.95	124.94
6	G	102	07D	CAA-C2A-C1A	-5.83	112.06	128.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	W	101	07D	C1D-ND-C4D	-5.81	104.09	106.71
6	7	101	07D	C1C-C2C-C3C	-5.81	102.95	107.00
6	2	102	07D	C1D-ND-C4D	-5.81	104.09	106.71
6	8	102	07D	C6-C7-C8	5.79	141.60	127.66
6	Q	101	07D	CMC-C2C-C3C	-5.78	114.04	124.94
6	E	102	07D	CAA-C2A-C1A	-5.78	112.20	128.11
6	B	101	07D	CMC-C2C-C3C	-5.75	114.09	124.94
6	I	101	07D	C16-C15-C13	5.75	131.91	112.98
6	L	301	07D	CAA-C2A-C1A	-5.74	112.30	128.11
6	Y	101	07D	CMC-C2C-C3C	-5.72	114.16	124.94
6	9	101	07D	CAA-C2A-C1A	-5.69	112.44	128.11
6	1	101	07D	C1D-ND-C4D	-5.69	104.15	106.71
6	8	102	07D	CAA-C2A-C1A	-5.69	112.45	128.11
6	P	102	07D	CAA-C2A-C1A	-5.68	112.46	128.11
6	5	202	07D	CAA-C2A-C1A	-5.68	112.48	128.11
6	W	101	07D	CMC-C2C-C3C	-5.56	114.45	124.94
6	O	101	07D	CAA-C2A-C1A	-5.55	112.82	128.11
6	5	202	07D	CMA-C3A-C2A	-5.52	111.14	126.12
6	M	404	07D	CAA-C2A-C1A	-5.49	112.98	128.11
6	L	307	07D	CAA-C2A-C1A	-5.49	112.99	128.11
6	F	101	07D	CAA-C2A-C1A	-5.48	113.01	128.11
12	M	406	RQ0	C54-C56-N04	5.48	128.15	114.38
6	K	101	07D	CAA-C2A-C1A	-5.47	113.04	128.11
13	M	407	CRT	C3-C1-C2	5.47	120.66	110.37
6	S	101	07D	CAA-C2A-C1A	-5.41	113.20	128.11
6	6	102	07D	CMA-C3A-C2A	-5.41	111.44	126.12
6	E	102	07D	CMA-C3A-C2A	-5.39	111.48	126.12
6	8	102	07D	CMA-C3A-C2A	-5.39	111.50	126.12
6	6	102	07D	C1A-C2A-C3A	-5.38	101.31	106.97
6	J	102	07D	C1A-C2A-C3A	-5.37	101.31	106.97
6	O	101	07D	CMA-C3A-C2A	-5.37	111.54	126.12
7	L	302	08I	CMC-C2C-C3C	-5.37	114.82	124.94
6	T	102	07D	CAA-C2A-C1A	-5.35	113.36	128.11
6	L	307	07D	CMA-C3A-C2A	-5.35	111.59	126.12
6	I	101	07D	CAA-C2A-C1A	-5.35	113.39	128.11
6	B	101	07D	CMA-C3A-C2A	-5.34	111.62	126.12
6	D	101	07D	CAA-C2A-C1A	-5.33	113.44	128.11
6	Y	101	07D	CMA-C3A-C2A	-5.33	111.66	126.12
6	P	102	07D	C1A-C2A-C3A	-5.33	101.36	106.97
7	L	302	08I	CAA-C2A-C3A	-5.31	111.99	127.25
6	2	102	07D	CAA-C2A-C1A	-5.31	113.49	128.11
6	W	101	07D	CAA-C2A-C1A	-5.29	113.53	128.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	V	102	07D	CMA-C3A-C2A	-5.29	111.77	126.12
6	7	101	07D	CMA-C3A-C2A	-5.29	111.77	126.12
6	9	101	07D	CMA-C3A-C2A	-5.29	111.77	126.12
6	Z	102	07D	C1A-C2A-C3A	-5.27	101.42	106.97
6	M	404	07D	CMA-C3A-C2A	-5.27	111.80	126.12
6	0	102	07D	CMA-C3A-C2A	-5.27	111.82	126.12
6	A	101	07D	CMA-C3A-C2A	-5.27	111.82	126.12
6	P	102	07D	CMA-C3A-C2A	-5.26	111.84	126.12
6	S	101	07D	CMA-C3A-C2A	-5.25	111.86	126.12
6	M	403	07D	CMA-C3A-C2A	-5.25	111.87	126.12
6	K	101	07D	CMA-C3A-C2A	-5.25	111.87	126.12
6	T	102	07D	CMA-C3A-C2A	-5.25	111.87	126.12
6	X	102	07D	C1A-C2A-C3A	-5.25	101.44	106.97
6	Q	102	07D	CMA-C3A-C2A	-5.24	111.90	126.12
6	W	101	07D	CMA-C3A-C2A	-5.24	111.90	126.12
6	L	301	07D	CMA-C3A-C2A	-5.23	111.92	126.12
6	2	102	07D	CMA-C3A-C2A	-5.23	111.93	126.12
6	5	202	07D	C11-C10-C8	5.20	130.10	112.98
6	J	102	07D	CMA-C3A-C2A	-5.20	112.00	126.12
6	4	102	07D	CMA-C3A-C2A	-5.20	112.01	126.12
6	1	101	07D	CMA-C3A-C2A	-5.19	112.02	126.12
6	X	102	07D	CMA-C3A-C2A	-5.19	112.02	126.12
6	3	101	07D	CMA-C3A-C2A	-5.19	112.04	126.12
6	U	101	07D	CMA-C3A-C2A	-5.16	112.10	126.12
13	M	407	CRT	C21-C22-C23	-5.16	119.94	127.31
6	F	101	07D	CMA-C3A-C2A	-5.16	112.11	126.12
6	Z	102	07D	CMA-C3A-C2A	-5.15	112.14	126.12
6	N	102	07D	CMA-C3A-C2A	-5.14	112.15	126.12
12	M	406	RQ0	O02-C52-C46	-5.14	112.53	121.55
6	G	102	07D	CMA-C3A-C2A	-5.14	112.16	126.12
14	H	304	CDL	OB6-CB5-C51	5.12	120.51	111.09
6	Q	101	07D	CMA-C3A-C2A	-5.11	112.25	126.12
6	M	403	07D	CAA-C2A-C1A	-5.10	114.05	128.11
7	M	405	08I	CAA-C2A-C3A	-5.05	112.73	127.25
6	E	102	07D	C1A-C2A-C3A	-5.05	101.65	106.97
6	I	101	07D	CMA-C3A-C2A	-5.04	112.42	126.12
6	A	101	07D	CAA-C2A-C1A	-5.04	114.24	128.11
6	0	102	07D	C1A-C2A-C3A	-5.02	101.69	106.97
6	D	101	07D	CMA-C3A-C2A	-5.00	112.54	126.12
6	2	102	07D	C1A-C2A-C3A	-5.00	101.70	106.97
6	8	102	07D	C1A-C2A-C3A	-4.99	101.72	106.97
13	M	407	CRT	C20-C19-C17	-4.97	120.21	127.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	4	102	07D	CAA-C2A-C1A	-4.95	114.49	128.11
6	M	403	07D	C1A-C2A-C3A	-4.95	101.76	106.97
6	L	307	07D	C11-C10-C8	4.91	129.14	112.98
6	M	404	07D	CBD-CHA-C4D	-4.88	103.05	108.54
6	7	101	07D	C1A-C2A-C3A	-4.84	101.87	106.97
6	Q	101	07D	C1A-C2A-C3A	-4.80	101.91	106.97
6	G	102	07D	C1A-C2A-C3A	-4.76	101.95	106.97
6	L	301	07D	CBD-CHA-C4D	-4.76	103.18	108.54
13	M	407	CRT	C8-C7-C6	4.74	125.55	118.08
6	L	301	07D	C1A-C2A-C3A	-4.74	101.98	106.97
6	B	101	07D	C1-C2-C3	-4.68	117.94	126.04
6	4	102	07D	CBD-CHA-C4D	-4.68	103.27	108.54
13	M	407	CRT	C5-C6-C7	4.65	132.92	125.89
6	Q	102	07D	C1A-C2A-C3A	-4.65	102.07	106.97
13	X	101	CRT	C10-C9-C7	-4.64	120.69	127.31
9	L	304	PGV	O01-C1-C2	4.60	121.41	111.50
14	H	303	CDL	OA6-CA5-C11	4.58	119.51	111.09
13	G	101	CRT	C15-C14-C12	-4.56	120.81	127.31
6	U	101	07D	CAA-C2A-C1A	-4.55	115.58	128.11
12	M	406	RQ0	C57-C50-C46	-4.50	117.06	124.40
13	2	101	CRT	C21-C22-C23	-4.50	120.89	127.31
13	V	101	CRT	C21-C22-C23	-4.49	120.90	127.31
7	L	302	08I	C1-C2-C3	-4.49	118.28	126.04
13	G	101	CRT	C21-C22-C23	-4.49	120.91	127.31
6	5	202	07D	C1A-C2A-C3A	-4.48	102.25	106.97
14	H	301	CDL	OB6-CB5-C51	4.43	121.05	111.50
6	L	307	07D	C11-C12-C13	-4.43	116.99	127.66
6	W	101	07D	CBD-CHA-C4D	-4.43	103.55	108.54
13	Z	101	CRT	C21-C22-C23	-4.42	121.00	127.31
6	N	102	07D	C11-C10-C8	-4.42	98.44	112.98
6	J	102	07D	CBD-CHA-C4D	-4.42	103.57	108.54
6	1	101	07D	CBD-CHA-C4D	-4.41	103.57	108.54
6	1	101	07D	CAA-C2A-C1A	-4.41	115.98	128.11
13	P	101	CRT	C10-C9-C7	-4.40	121.03	127.31
6	3	101	07D	CBD-CHA-C4D	-4.39	103.59	108.54
6	2	102	07D	CBD-CHA-C4D	-4.39	103.60	108.54
13	E	101	CRT	C21-C22-C23	-4.39	121.05	127.31
6	X	102	07D	CBD-CHA-C4D	-4.38	103.61	108.54
6	F	101	07D	C15-C16-C17	4.37	126.23	111.88
6	P	102	07D	CBD-CHA-C4D	-4.35	103.64	108.54
6	T	102	07D	C1A-C2A-C3A	-4.35	102.39	106.97
6	D	101	07D	C11-C10-C8	4.35	127.28	112.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	L	307	07D	C1A-C2A-C3A	-4.34	102.40	106.97
6	B	101	07D	C1A-C2A-C3A	-4.34	102.40	106.97
6	B	101	07D	C15-C16-C17	4.34	126.15	111.88
9	H	302	PGV	O01-C1-C2	4.33	120.83	111.50
6	D	101	07D	CBD-CHA-C4D	-4.32	103.67	108.54
6	V	102	07D	CBD-CHA-C4D	-4.32	103.67	108.54
6	6	102	07D	CBD-CHA-C4D	-4.32	103.68	108.54
6	N	102	07D	CBD-CHA-C4D	-4.31	103.68	108.54
6	2	102	07D	C11-C10-C8	4.30	127.13	112.98
6	I	101	07D	CBD-CHA-C4D	-4.30	103.70	108.54
6	G	102	07D	CBD-CHA-C4D	-4.30	103.70	108.54
13	8	101	CRT	C21-C22-C23	-4.29	121.19	127.31
6	Z	102	07D	CBD-CHA-C4D	-4.29	103.71	108.54
6	O	101	07D	C1A-C2A-C3A	-4.29	102.46	106.97
14	M	408	CDL	OA6-CA5-C11	4.27	120.70	111.50
13	N	101	CRT	C10-C9-C7	-4.25	121.24	127.31
6	V	102	07D	C1A-C2A-C3A	-4.23	102.51	106.97
13	X	101	CRT	C20-C19-C17	-4.22	121.29	127.31
6	A	101	07D	CBD-CHA-C4D	-4.21	103.80	108.54
13	J	101	CRT	C21-C22-C23	-4.20	121.31	127.31
14	H	303	CDL	OB6-CB5-C51	4.20	120.55	111.50
6	B	101	07D	CBD-CHA-C4D	-4.19	103.82	108.54
6	5	202	07D	C16-C15-C13	4.19	126.75	112.98
6	U	101	07D	CBD-CHA-C4D	-4.19	103.82	108.54
12	M	406	RQ0	C07-C19-C27	4.19	125.36	118.94
6	T	102	07D	CBD-CHA-C4D	-4.18	103.83	108.54
6	Q	101	07D	CBD-CHA-C4D	-4.18	103.83	108.54
15	K	103	PEF	O2-C10-C11	4.17	120.48	111.50
6	K	101	07D	CBD-CHA-C4D	-4.16	103.86	108.54
6	F	101	07D	CBD-CHA-C4D	-4.14	103.87	108.54
6	E	102	07D	CBD-CHA-C4D	-4.13	103.89	108.54
6	Y	101	07D	CBD-CHA-C4D	-4.12	103.90	108.54
6	0	102	07D	CBD-CHA-C4D	-4.12	103.90	108.54
6	L	307	07D	CBD-CHA-C4D	-4.12	103.90	108.54
6	8	102	07D	CBD-CHA-C4D	-4.11	103.91	108.54
6	3	101	07D	C1A-C2A-C3A	-4.10	102.65	106.97
6	Q	102	07D	CBD-CHA-C4D	-4.10	103.92	108.54
13	4	101	CRT	C21-C22-C23	-4.10	121.46	127.31
13	A	102	CRT	C21-C22-C23	-4.10	121.46	127.31
6	M	403	07D	CBD-CHA-C4D	-4.09	103.93	108.54
15	K	102	PEF	O2-C10-C11	4.08	120.29	111.50
14	H	301	CDL	OA6-CA5-C11	4.06	120.25	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	O	101	07D	CBD-CHA-C4D	-4.05	103.98	108.54
6	9	101	07D	C1A-C2A-C3A	-4.04	102.72	106.97
13	X	101	CRT	C5-C6-C7	-4.02	119.82	125.89
13	G	101	CRT	C20-C19-C17	-4.01	121.58	127.31
6	9	101	07D	CBD-CHA-C4D	-4.01	104.02	108.54
6	7	101	07D	CBD-CHA-C4D	-4.00	104.03	108.54
6	S	101	07D	CBD-CHA-C4D	-4.00	104.03	108.54
13	N	101	CRT	C21-C22-C23	-4.00	121.60	127.31
13	P	101	CRT	C20-C19-C17	-4.00	121.60	127.31
6	1	101	07D	C16-C15-C13	3.99	126.10	112.98
6	Y	101	07D	C1A-C2A-C3A	-3.99	102.77	106.97
14	M	409	CDL	OB6-CB5-C51	3.97	120.06	111.50
12	M	406	RQ0	C11-C07-C19	-3.95	115.32	126.42
7	L	302	08I	CBA-CAA-C2A	-3.93	105.98	112.60
6	S	101	07D	C1A-C2A-C3A	-3.93	102.83	106.97
13	P	101	CRT	C15-C14-C12	-3.92	121.71	127.31
6	5	202	07D	CBD-CHA-C4D	-3.91	104.13	108.54
6	K	101	07D	C1A-C2A-C3A	-3.91	102.85	106.97
13	2	101	CRT	C20-C19-C17	-3.90	121.74	127.31
13	V	101	CRT	C15-C14-C12	-3.90	121.74	127.31
13	R	101	CRT	C21-C22-C23	-3.89	121.76	127.31
13	T	101	CRT	C20-C19-C17	-3.89	121.76	127.31
9	L	304	PGV	C02-O01-C1	-3.86	108.28	117.79
13	4	101	CRT	C26-C27-C28	-3.85	121.81	127.31
13	X	101	CRT	C21-C22-C23	-3.84	121.83	127.31
13	A	102	CRT	C10-C9-C7	-3.84	121.83	127.31
6	U	101	07D	C1A-C2A-C3A	-3.83	102.94	106.97
13	0	101	CRT	C21-C22-C23	-3.83	121.85	127.31
6	5	202	07D	C15-C16-C17	3.81	124.41	111.88
13	T	101	CRT	C10-C9-C7	-3.81	121.88	127.31
12	M	406	RQ0	C39-C19-C27	-3.80	117.60	122.92
13	4	101	CRT	C15-C14-C12	-3.79	121.90	127.31
6	N	102	07D	C1A-C2A-C3A	-3.78	102.99	106.97
14	M	408	CDL	OB6-CB5-C51	3.77	119.62	111.50
6	I	101	07D	C1A-C2A-C3A	-3.74	103.03	106.97
6	F	101	07D	C1A-C2A-C3A	-3.69	103.08	106.97
13	N	101	CRT	C5-C6-C7	-3.69	120.32	125.89
12	M	406	RQ0	C56-C54-C50	3.65	125.46	118.84
6	L	307	07D	C15-C16-C17	3.64	123.85	111.88
12	M	406	RQ0	O03-C54-C56	-3.64	112.98	118.29
6	1	101	07D	C15-C16-C17	3.63	123.82	111.88
6	D	101	07D	C16-C15-C13	3.63	124.91	112.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	6	101	CRT	C5-C6-C7	-3.62	120.42	125.89
13	4	101	CRT	C20-C19-C17	-3.62	122.15	127.31
14	H	304	CDL	CB4-OB6-CB5	-3.62	111.16	117.90
13	6	101	CRT	C21-C22-C23	-3.61	122.15	127.31
6	T	102	07D	C11-C12-C13	-3.61	118.96	127.66
13	M	407	CRT	C14-C15-C16	-3.60	111.97	123.22
13	E	101	CRT	C8-C7-C6	3.58	123.72	118.08
13	Z	101	CRT	C20-C19-C17	-3.56	122.23	127.31
6	Q	101	07D	C6-C7-C8	3.54	136.19	127.66
13	6	101	CRT	C10-C9-C7	-3.54	122.26	127.31
6	A	101	07D	C1A-C2A-C3A	-3.54	103.24	106.97
6	X	102	07D	C1-C2-C3	-3.53	119.94	126.04
13	A	102	CRT	C20-C19-C17	-3.52	122.28	127.31
13	V	101	CRT	C10-C9-C7	-3.52	122.29	127.31
6	Y	101	07D	C6-C7-C8	-3.52	119.19	127.66
6	2	102	07D	C11-C12-C13	-3.50	119.24	127.66
13	V	101	CRT	C5-C6-C7	-3.46	120.66	125.89
6	D	101	07D	C1A-C2A-C3A	-3.44	103.34	106.97
6	Q	102	07D	C16-C15-C13	3.44	124.28	112.98
6	1	101	07D	C1A-C2A-C3A	-3.43	103.35	106.97
14	H	304	CDL	OA6-CA5-C11	3.43	120.35	110.80
6	J	102	07D	C11-C12-C13	-3.41	119.45	127.66
6	N	102	07D	C15-C16-C17	-3.39	100.73	111.88
13	J	101	CRT	C20-C19-C17	-3.39	122.47	127.31
6	4	102	07D	C1A-C2A-C3A	-3.39	103.40	106.97
13	J	101	CRT	C5-C6-C7	-3.38	120.79	125.89
10	N	103	LMT	O1B-C4'-C3'	3.37	116.25	107.28
6	Q	102	07D	C11-C12-C13	-3.37	119.54	127.66
14	M	409	CDL	OA6-CA5-C11	3.37	118.76	111.50
6	5	202	07D	C6-C7-C8	-3.36	119.56	127.66
14	M	408	CDL	OB8-CB7-C71	3.36	122.45	111.91
13	P	101	CRT	C5-C6-C7	-3.34	120.84	125.89
6	M	404	07D	C1A-C2A-C3A	-3.32	103.48	106.97
7	L	302	08I	C11-C10-C8	-3.28	102.18	112.98
6	M	403	07D	CHD-C1D-ND	-3.28	119.23	124.20
13	8	101	CRT	C15-C14-C12	-3.28	122.63	127.31
13	E	101	CRT	C32-C31-C30	-3.28	113.00	123.22
6	I	101	07D	C1-C2-C3	-3.26	120.41	126.04
6	M	403	07D	C4A-C3A-C2A	-3.24	102.20	106.94
13	T	101	CRT	C15-C14-C12	-3.23	122.70	127.31
13	G	101	CRT	C5-C6-C7	-3.23	121.01	125.89
13	P	101	CRT	C21-C22-C23	-3.22	122.71	127.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	J	102	07D	C4A-C3A-C2A	-3.21	102.25	106.94
6	7	101	07D	C4A-C3A-C2A	-3.21	102.26	106.94
7	M	405	08I	OBD-CAD-CBD	-3.21	121.12	125.82
6	6	102	07D	C11-C10-C8	3.20	123.51	112.98
6	W	101	07D	C1A-C2A-C3A	-3.20	103.60	106.97
6	N	102	07D	C16-C15-C13	3.20	123.50	112.98
6	P	102	07D	C4A-C3A-C2A	-3.18	102.30	106.94
13	8	101	CRT	C32-C31-C30	-3.17	113.32	123.22
13	8	101	CRT	C5-C6-C7	-3.16	121.11	125.89
6	6	102	07D	C4A-C3A-C2A	-3.16	102.32	106.94
6	Z	102	07D	C4A-C3A-C2A	-3.16	102.33	106.94
6	L	301	07D	C4A-C3A-C2A	-3.15	102.34	106.94
13	0	101	CRT	C32-C31-C30	-3.15	113.39	123.22
13	0	101	CRT	C15-C14-C12	-3.15	122.82	127.31
12	M	406	RQ0	C06-C09-C22	3.15	122.22	111.88
13	4	101	CRT	C10-C9-C7	-3.14	122.82	127.31
6	J	102	07D	C14-C13-C15	-3.14	110.00	115.27
6	L	307	07D	CHD-C1D-ND	-3.12	119.47	124.20
6	4	102	07D	C1-C2-C3	-3.11	120.67	126.04
13	X	101	CRT	C15-C14-C12	-3.09	122.90	127.31
7	L	302	08I	OBD-CAD-CBD	-3.09	121.29	125.82
6	0	102	07D	C4A-C3A-C2A	-3.08	102.44	106.94
13	2	101	CRT	C5-C6-C7	-3.08	121.24	125.89
7	M	405	08I	C15-C16-C17	3.08	122.00	111.88
10	V	103	LMT	C1B-O1B-C4'	-3.08	110.35	117.96
13	Z	101	CRT	C26-C27-C28	-3.06	122.94	127.31
10	L	305	LMT	C1B-O1B-C4'	-3.06	110.40	117.96
6	8	102	07D	C4A-C3A-C2A	-3.05	102.48	106.94
6	X	102	07D	C4A-C3A-C2A	-3.05	102.49	106.94
13	R	101	CRT	C15-C14-C12	-3.05	122.96	127.31
6	Q	101	07D	CHD-C1D-ND	-3.05	119.58	124.20
6	K	101	07D	C6-C7-C8	3.04	134.99	127.66
13	V	101	CRT	C20-C19-C17	-3.04	122.97	127.31
13	X	101	CRT	C32-C31-C30	-3.04	113.74	123.22
6	E	102	07D	C4A-C3A-C2A	-3.03	102.51	106.94
6	L	307	07D	C4A-C3A-C2A	-3.01	102.54	106.94
13	E	101	CRT	C9-C10-C11	-3.00	113.84	123.22
6	B	101	07D	C14-C13-C15	-3.00	110.22	115.27
13	G	101	CRT	C10-C9-C7	-3.00	123.02	127.31
6	Q	101	07D	C4A-C3A-C2A	-2.99	102.58	106.94
13	G	101	CRT	C32-C31-C30	-2.99	113.90	123.22
6	K	101	07D	CHD-C1D-ND	-2.98	119.68	124.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	W	101	07D	C15-C16-C17	2.98	121.67	111.88
6	9	101	07D	CHD-C1D-ND	-2.98	119.69	124.20
13	R	101	CRT	C32-C31-C30	-2.97	113.94	123.22
6	7	101	07D	C6-C7-C8	-2.97	120.50	127.66
13	0	101	CRT	C10-C9-C7	-2.97	123.07	127.31
13	V	101	CRT	C32-C31-C30	-2.95	114.00	123.22
6	3	101	07D	CHD-C1D-ND	-2.95	119.73	124.20
6	0	102	07D	CHD-C1D-ND	-2.95	119.73	124.20
6	S	101	07D	CHD-C1D-ND	-2.95	119.73	124.20
6	A	101	07D	CHD-C1D-ND	-2.95	119.73	124.20
6	B	101	07D	CHD-C1D-ND	-2.94	119.74	124.20
12	M	406	RQ0	C08-C12-C26	2.94	121.56	111.88
13	E	101	CRT	C20-C19-C17	-2.94	123.11	127.31
6	W	101	07D	C4A-NA-C1A	2.94	108.42	106.33
6	5	202	07D	C4A-C3A-C2A	-2.94	102.65	106.94
9	H	302	PGV	O03-C19-C20	2.94	121.12	111.91
6	U	101	07D	CHD-C1D-ND	-2.94	119.75	124.20
13	R	101	CRT	C10-C9-C7	-2.93	123.12	127.31
6	D	101	07D	CHD-C1D-ND	-2.93	119.75	124.20
14	M	408	CDL	OA8-CA7-C31	2.93	121.11	111.91
6	I	101	07D	C15-C16-C17	2.93	121.51	111.88
6	O	101	07D	CHD-C1D-ND	-2.93	119.76	124.20
6	F	101	07D	C4A-NA-C1A	2.93	108.42	106.33
6	G	102	07D	C4A-C3A-C2A	-2.93	102.67	106.94
6	I	101	07D	CHD-C1D-ND	-2.93	119.76	124.20
13	6	101	CRT	C15-C14-C12	-2.93	123.14	127.31
6	F	101	07D	CHD-C1D-ND	-2.92	119.77	124.20
6	4	102	07D	C4A-CHB-C1B	2.92	132.34	126.06
6	8	102	07D	C11-C12-C13	-2.91	120.65	127.66
13	J	101	CRT	C32-C31-C30	-2.91	114.13	123.22
6	Z	102	07D	CHD-C1D-ND	-2.91	119.80	124.20
6	G	102	07D	CHD-C1D-ND	-2.90	119.80	124.20
6	M	404	07D	C4A-CHB-C1B	2.90	132.31	126.06
6	M	404	07D	C4A-NA-C1A	2.90	108.39	106.33
6	P	102	07D	CHD-C1D-ND	-2.90	119.81	124.20
6	5	202	07D	CHD-C1D-ND	-2.89	119.81	124.20
6	4	102	07D	CHA-C1A-NA	-2.89	119.07	124.60
6	8	102	07D	CHD-C1D-ND	-2.88	119.83	124.20
6	T	102	07D	CHD-C1D-ND	-2.87	119.84	124.20
6	2	102	07D	C4A-C3A-C2A	-2.87	102.75	106.94
6	Q	102	07D	CHD-C1D-ND	-2.87	119.85	124.20
6	S	101	07D	C11-C12-C13	-2.87	120.75	127.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	4	102	07D	C11-C12-C13	-2.86	120.77	127.66
12	M	406	RQ0	C18-C14-C23	-2.86	118.37	126.42
6	7	101	07D	CHD-C1D-ND	-2.86	119.86	124.20
13	T	101	CRT	C21-C22-C23	-2.86	123.23	127.31
13	Z	101	CRT	C8-C7-C6	2.86	122.58	118.08
6	0	102	07D	C6-C7-C8	-2.85	120.79	127.66
6	V	102	07D	CHD-C1D-ND	-2.85	119.87	124.20
14	H	301	CDL	OB8-CB7-C71	2.85	120.86	111.91
6	M	404	07D	CHD-C1D-ND	-2.85	119.88	124.20
6	Y	101	07D	CHD-C1D-ND	-2.85	119.88	124.20
6	A	101	07D	C4A-CHB-C1B	2.85	132.20	126.06
6	E	102	07D	CHD-C1D-ND	-2.85	119.88	124.20
6	M	404	07D	C16-C15-C13	2.85	122.34	112.98
6	V	102	07D	C4A-C3A-C2A	-2.84	102.80	106.94
6	J	102	07D	CHD-C1D-ND	-2.83	119.90	124.20
6	2	102	07D	CHD-C1D-ND	-2.83	119.91	124.20
6	L	307	07D	C6-C7-C8	-2.83	120.84	127.66
6	V	102	07D	C1-C2-C3	-2.83	121.15	126.04
6	Z	102	07D	C11-C12-C13	-2.83	120.85	127.66
6	J	102	07D	C11-C10-C8	2.82	122.25	112.98
6	Z	102	07D	CHA-C1A-NA	-2.82	119.20	124.60
15	K	103	PEF	O3-C30-C31	2.82	120.75	111.91
9	H	302	PGV	C02-O01-C1	-2.82	110.85	117.79
6	9	101	07D	C4A-CHB-C1B	2.81	132.13	126.06
13	P	101	CRT	C31-C32-C33	-2.81	123.30	127.31
6	T	102	07D	C4A-C3A-C2A	-2.81	102.84	106.94
6	4	102	07D	CHD-C1D-ND	-2.80	119.95	124.20
13	2	101	CRT	C10-C9-C7	-2.80	123.31	127.31
6	X	102	07D	CHD-C1D-ND	-2.80	119.95	124.20
6	J	102	07D	CHA-C1A-NA	-2.80	119.23	124.60
6	F	101	07D	C4A-CHB-C1B	2.80	132.09	126.06
6	D	101	07D	C4A-NA-C1A	2.79	108.32	106.33
13	M	407	CRT	C32-C31-C30	-2.79	114.52	123.22
6	N	102	07D	CHD-C1D-ND	-2.79	119.98	124.20
6	9	101	07D	C4A-C3A-C2A	-2.79	102.87	106.94
6	D	101	07D	C4A-CHB-C1B	2.78	132.06	126.06
6	I	101	07D	C4A-CHB-C1B	2.78	132.05	126.06
13	6	101	CRT	C20-C19-C17	-2.78	123.34	127.31
6	P	102	07D	C11-C10-C8	2.78	122.12	112.98
13	8	101	CRT	C10-C9-C7	-2.78	123.34	127.31
6	X	102	07D	C11-C12-C13	-2.78	120.97	127.66
6	B	101	07D	C4A-C3A-C2A	-2.77	102.90	106.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	U	101	07D	C4A-CHB-C1B	2.76	132.02	126.06
6	N	102	07D	C4A-CHB-C1B	2.76	132.01	126.06
6	S	101	07D	C4A-CHB-C1B	2.76	132.01	126.06
6	2	102	07D	C4A-CHB-C1B	2.76	132.01	126.06
6	M	404	07D	CHA-C1A-NA	-2.76	119.31	124.60
6	Q	102	07D	C4A-C3A-C2A	-2.75	102.92	106.94
6	K	101	07D	C4A-CHB-C1B	2.75	132.00	126.06
6	2	102	07D	CHA-C1A-NA	-2.75	119.32	124.60
6	K	101	07D	C4A-C3A-C2A	-2.74	102.93	106.94
6	6	102	07D	CHD-C1D-ND	-2.74	120.04	124.20
6	Y	101	07D	C4A-CHB-C1B	2.74	131.97	126.06
6	N	102	07D	C4A-NA-C1A	2.74	108.28	106.33
6	X	102	07D	CHA-C1A-NA	-2.74	119.35	124.60
6	Q	101	07D	CHA-C1A-NA	-2.73	119.36	124.60
6	K	101	07D	C1-C2-C3	-2.73	121.32	126.04
6	1	101	07D	CHA-C1A-NA	-2.73	119.36	124.60
6	W	101	07D	CHD-C1D-ND	-2.73	120.06	124.20
6	L	301	07D	CHD-C1D-ND	-2.73	120.07	124.20
13	N	101	CRT	C32-C31-C30	-2.72	114.72	123.22
12	M	406	RQ0	C05-C10-C24	2.72	120.82	111.88
6	X	102	07D	C6-C7-C8	2.72	134.21	127.66
6	W	101	07D	CHA-C1A-NA	-2.72	119.39	124.60
13	0	101	CRT	C20-C19-C17	-2.72	123.43	127.31
6	L	301	07D	C4A-CHB-C1B	2.71	131.91	126.06
6	Y	101	07D	C4A-C3A-C2A	-2.71	102.98	106.94
6	P	102	07D	C4A-CHB-C1B	2.71	131.90	126.06
15	K	102	PEF	O3-C30-C31	2.71	120.41	111.91
6	D	101	07D	CHA-C1A-NA	-2.71	119.41	124.60
6	O	101	07D	CHA-C1A-NA	-2.71	119.41	124.60
6	W	101	07D	C4A-CHB-C1B	2.70	131.89	126.06
13	T	101	CRT	C32-C31-C30	-2.70	114.78	123.22
6	U	101	07D	CHA-C1A-NA	-2.70	119.42	124.60
6	T	102	07D	C4A-CHB-C1B	2.70	131.88	126.06
6	O	101	07D	C4A-CHB-C1B	2.70	131.88	126.06
6	Q	102	07D	CHA-C1A-NA	-2.70	119.43	124.60
6	5	202	07D	CHA-C1A-NA	-2.70	119.43	124.60
6	M	403	07D	C11-C10-C8	2.69	121.83	112.98
14	M	409	CDL	OB8-CB7-C71	2.69	120.33	111.91
6	6	102	07D	CHA-C1A-NA	-2.68	119.46	124.60
13	N	101	CRT	C20-C19-C17	-2.68	123.49	127.31
6	S	101	07D	C4A-C3A-C2A	-2.68	103.03	106.94
6	N	102	07D	CHA-C1A-NA	-2.67	119.47	124.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	Q	101	07D	C4A-CHB-C1B	2.67	131.82	126.06
12	M	406	RQ0	C29-C28-C33	2.67	120.66	111.88
6	E	102	07D	C4A-CHB-C1B	2.67	131.82	126.06
6	8	102	07D	C4A-CHB-C1B	2.67	131.81	126.06
6	4	102	07D	C4A-NA-C1A	2.67	108.23	106.33
6	V	102	07D	C4A-CHB-C1B	2.67	131.81	126.06
13	M	407	CRT	C34-C33-C35	2.66	122.27	118.08
6	Y	101	07D	C4A-NA-C1A	2.66	108.22	106.33
13	J	101	CRT	C10-C9-C7	-2.66	123.51	127.31
6	S	101	07D	C4A-NA-C1A	2.66	108.22	106.33
6	G	102	07D	CHA-C1A-NA	-2.66	119.50	124.60
6	B	101	07D	C4A-CHB-C1B	2.65	131.78	126.06
10	0	103	LMT	C1B-O1B-C4'	-2.65	111.40	117.96
6	1	101	07D	C4A-CHB-C1B	2.65	131.78	126.06
6	P	102	07D	CHA-C1A-NA	-2.65	119.52	124.60
6	A	101	07D	C4A-NA-C1A	2.65	108.22	106.33
6	T	102	07D	CHA-C1A-NA	-2.64	119.53	124.60
6	5	202	07D	C4A-CHB-C1B	2.64	131.75	126.06
6	3	101	07D	CHA-C1A-NA	-2.64	119.54	124.60
6	F	101	07D	CHA-C1A-NA	-2.64	119.54	124.60
6	G	102	07D	C4A-CHB-C1B	2.64	131.75	126.06
6	O	101	07D	C4A-C3A-C2A	-2.64	103.09	106.94
6	1	101	07D	CHD-C1D-ND	-2.64	120.20	124.20
6	J	102	07D	C4A-CHB-C1B	2.63	131.74	126.06
13	Z	101	CRT	C32-C31-C30	-2.63	115.00	123.22
6	A	101	07D	CHA-C1A-NA	-2.63	119.56	124.60
13	M	407	CRT	C13-C12-C11	2.63	122.22	118.08
6	Z	102	07D	C4A-CHB-C1B	2.63	131.72	126.06
6	8	102	07D	CHA-C1A-NA	-2.63	119.56	124.60
6	1	101	07D	C4A-NA-C1A	2.63	108.20	106.33
6	Q	102	07D	C4A-CHB-C1B	2.62	131.72	126.06
13	E	101	CRT	C6-C7-C9	-2.62	114.92	118.94
10	M	410	LMT	C2'-C3'-C4'	2.62	115.66	109.68
10	N	103	LMT	C1'-C2'-C3'	2.61	115.44	110.00
13	A	102	CRT	C5-C6-C7	-2.61	121.94	125.89
6	3	101	07D	C4A-CHB-C1B	2.61	131.69	126.06
6	3	101	07D	C4A-C3A-C2A	-2.61	103.13	106.94
13	J	101	CRT	C26-C27-C28	-2.61	123.59	127.31
6	7	101	07D	CHA-C1A-NA	-2.61	119.60	124.60
6	X	102	07D	C4A-CHB-C1B	2.61	131.68	126.06
6	7	101	07D	C4A-CHB-C1B	2.60	131.67	126.06
6	I	101	07D	CHA-C1A-NA	-2.60	119.61	124.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	H	301	CDL	OA8-CA7-C31	2.60	120.06	111.91
6	0	102	07D	C4A-CHB-C1B	2.60	131.66	126.06
6	0	102	07D	CHA-C1A-NA	-2.60	119.62	124.60
6	V	102	07D	CHA-C1A-NA	-2.59	119.63	124.60
6	E	102	07D	CHA-C1A-NA	-2.59	119.64	124.60
13	R	101	CRT	C5-C6-C7	-2.59	121.98	125.89
6	6	102	07D	C4A-CHB-C1B	2.58	131.61	126.06
13	T	101	CRT	C34-C33-C35	2.57	122.13	118.08
13	E	101	CRT	C5-C6-C7	2.57	129.77	125.89
6	V	102	07D	C16-C15-C13	2.56	121.41	112.98
13	8	101	CRT	C20-C19-C17	-2.56	123.66	127.31
6	O	101	07D	C6-C7-C8	-2.56	121.50	127.66
13	M	407	CRT	C6-C7-C9	-2.56	115.02	118.94
6	S	101	07D	CHA-C1A-NA	-2.55	119.70	124.60
14	H	303	CDL	OA8-CA7-C31	2.55	119.92	111.91
12	M	406	RQ0	C15-C20-C32	2.55	120.25	111.88
13	V	101	CRT	C36-C35-C33	-2.54	122.05	125.89
6	U	101	07D	C4A-C3A-C2A	-2.54	103.23	106.94
6	I	101	07D	C4A-NA-C1A	2.54	108.14	106.33
13	E	101	CRT	C27-C26-C25	-2.54	115.30	123.22
6	9	101	07D	CHA-C1A-NA	-2.54	119.74	124.60
6	5	202	07D	C14-C13-C15	-2.53	111.01	115.27
13	6	101	CRT	C26-C27-C28	-2.53	123.69	127.31
13	A	102	CRT	C14-C15-C16	-2.53	115.32	123.22
6	B	101	07D	CHA-C1A-NA	-2.53	119.75	124.60
14	M	409	CDL	OA8-CA7-C31	2.53	119.85	111.91
6	N	102	07D	C4A-C3A-C2A	-2.53	103.25	106.94
6	6	102	07D	C6-C5-C3	2.53	121.28	112.98
13	M	407	CRT	C8-C7-C9	-2.52	119.40	122.92
6	I	101	07D	C4A-C3A-C2A	-2.51	103.27	106.94
13	2	101	CRT	C15-C14-C12	-2.51	123.72	127.31
13	V	101	CRT	C27-C26-C25	-2.51	115.38	123.22
6	M	403	07D	CHA-C1A-NA	-2.51	119.79	124.60
13	A	102	CRT	C31-C32-C33	-2.51	123.73	127.31
14	M	409	CDL	CB4-OB6-CB5	-2.51	111.62	117.79
13	Z	101	CRT	C10-C9-C7	-2.51	123.73	127.31
6	A	101	07D	C11-C10-C8	2.51	121.22	112.98
7	L	302	08I	CMB-C2B-C3B	2.50	129.36	124.68
6	M	403	07D	C4A-NA-C1A	2.50	108.11	106.33
6	W	101	07D	C3A-C4A-NA	2.50	111.94	110.10
13	A	102	CRT	C27-C26-C25	-2.49	115.44	123.22
6	Y	101	07D	CHA-C1A-NA	-2.48	119.84	124.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	Q	101	07D	C1-C2-C3	2.48	130.33	126.04
13	M	407	CRT	C9-C10-C11	-2.48	115.48	123.22
6	Y	101	07D	C11-C10-C8	2.47	121.11	112.98
6	8	102	07D	C10-C8-C7	-2.47	116.12	121.12
6	L	307	07D	C4A-NA-C1A	2.46	108.08	106.33
6	1	101	07D	C3A-C4A-NA	2.46	111.92	110.10
13	G	101	CRT	C26-C27-C28	-2.44	123.82	127.31
6	K	101	07D	CHA-C1A-NA	-2.44	119.93	124.60
7	M	405	08I	CMD-C2D-C3D	2.44	129.23	124.68
13	G	101	CRT	C29-C28-C30	2.43	121.91	118.08
6	3	101	07D	C1-C2-C3	2.42	130.23	126.04
6	Y	101	07D	O2A-CGA-O1A	-2.42	117.48	123.59
6	U	101	07D	C15-C16-C17	2.42	119.83	111.88
6	L	301	07D	CHA-C1A-NA	-2.42	119.96	124.60
6	J	102	07D	C15-C13-C12	2.42	126.01	121.12
7	L	302	08I	C16-C15-C13	2.41	120.92	112.98
6	9	101	07D	O2A-C1-C2	-2.41	102.29	108.64
13	G	101	CRT	C34-C33-C35	2.41	121.88	118.08
13	P	101	CRT	C32-C31-C30	-2.41	115.69	123.22
13	R	101	CRT	C34-C33-C35	2.41	121.88	118.08
13	R	101	CRT	C27-C26-C25	-2.41	115.70	123.22
10	5	201	LMT	O1B-C4'-C3'	2.41	113.69	107.28
6	1	101	07D	CAA-CBA-CGA	2.41	120.43	113.43
6	1	101	07D	C6-C7-C8	-2.41	121.87	127.66
13	4	101	CRT	C32-C31-C30	-2.41	115.71	123.22
6	Q	101	07D	OBB-CAB-CBB	-2.40	114.41	119.73
6	F	101	07D	C4A-C3A-C2A	-2.40	103.44	106.94
13	N	101	CRT	C34-C33-C35	2.40	121.85	118.08
6	O	101	07D	C11-C12-C13	-2.40	121.89	127.66
13	A	102	CRT	C21-C20-C19	-2.39	118.57	123.47
15	K	103	PEF	C2-O2-C10	-2.39	111.90	117.79
12	M	406	RQ0	O01-C55-C52	2.39	124.65	116.56
6	Y	101	07D	OBB-CAB-CBB	-2.39	114.43	119.73
6	4	102	07D	C11-C10-C8	-2.39	105.12	112.98
13	V	101	CRT	C29-C28-C30	2.39	121.84	118.08
9	L	304	PGV	O03-C19-C20	2.38	119.39	111.91
12	M	406	RQ0	C29-C35-C42	2.38	125.93	121.12
6	O	101	07D	C4A-NA-C1A	2.38	108.02	106.33
6	T	102	07D	C4A-NA-C1A	2.38	108.02	106.33
6	L	307	07D	CHA-C1A-NA	-2.38	120.05	124.60
13	T	101	CRT	C27-C26-C25	-2.37	115.81	123.22
13	P	101	CRT	C36-C35-C33	-2.37	122.31	125.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	F	101	07D	C11-C10-C8	2.37	120.78	112.98
10	V	103	LMT	C1'-C2'-C3'	2.37	114.93	110.00
6	4	102	07D	C1-O2A-CGA	2.37	122.66	116.44
12	M	406	RQ0	C44-C23-C33	-2.37	118.95	123.59
6	A	101	07D	C4A-C3A-C2A	-2.37	103.48	106.94
6	U	101	07D	C4A-NA-C1A	2.36	108.02	106.33
6	V	102	07D	C6-C7-C8	-2.36	121.97	127.66
13	E	101	CRT	C21-C20-C19	-2.36	118.64	123.47
13	0	101	CRT	C34-C33-C35	2.36	121.79	118.08
6	V	102	07D	C4A-NA-C1A	2.36	108.01	106.33
6	W	101	07D	OBB-CAB-CBB	-2.36	114.51	119.73
6	N	102	07D	C6-C7-C8	-2.35	122.00	127.66
6	U	101	07D	C3A-C4A-NA	2.35	111.84	110.10
6	M	404	07D	CMB-C2B-C1B	-2.35	121.46	125.04
13	6	101	CRT	C36-C35-C33	-2.34	122.36	125.89
7	L	302	08I	OBB-CAB-CBB	-2.33	114.92	120.17
6	B	101	07D	C16-C17-C18	-2.33	119.79	127.75
13	V	101	CRT	C21-C20-C19	-2.33	118.71	123.47
13	2	101	CRT	C26-C27-C28	-2.33	123.99	127.31
6	9	101	07D	OBB-CAB-CBB	-2.33	114.58	119.73
6	F	101	07D	OBB-CAB-CBB	-2.32	114.58	119.73
6	G	102	07D	C4A-NA-C1A	2.32	107.99	106.33
6	P	102	07D	C16-C15-C13	2.32	120.61	112.98
12	M	406	RQ0	C46-C50-C54	2.32	121.02	119.18
6	B	101	07D	C15-C13-C12	2.32	125.81	121.12
6	L	301	07D	C16-C15-C13	2.31	120.58	112.98
6	G	102	07D	C11-C12-C13	-2.31	122.10	127.66
13	A	102	CRT	C32-C31-C30	-2.31	116.01	123.22
13	J	101	CRT	C21-C20-C19	-2.31	118.75	123.47
6	N	102	07D	C15-C13-C12	-2.31	116.45	121.12
13	Z	101	CRT	C8-C7-C9	-2.30	119.69	122.92
6	K	101	07D	C4A-NA-C1A	2.30	107.97	106.33
6	9	101	07D	C15-C13-C12	2.30	125.77	121.12
13	0	101	CRT	C27-C26-C25	-2.30	116.05	123.22
10	T	103	LMT	O3'-C3'-C2'	-2.29	105.05	110.35
6	I	101	07D	OBB-CAB-CBB	-2.29	114.65	119.73
14	M	408	CDL	OB8-CB7-OB9	-2.29	117.81	123.59
6	B	101	07D	C4A-NA-C1A	2.29	107.96	106.33
6	D	101	07D	C4A-C3A-C2A	-2.29	103.60	106.94
6	A	101	07D	C3A-C4A-NA	2.29	111.79	110.10
7	L	302	08I	CMD-C2D-C3D	2.28	128.95	124.68
6	L	307	07D	C14-C13-C15	-2.28	111.43	115.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	Z	101	CRT	C15-C14-C12	-2.28	124.05	127.31
13	2	101	CRT	C34-C33-C35	2.28	121.67	118.08
14	M	408	CDL	CA4-OA6-CA5	-2.28	112.18	117.79
7	L	302	08I	C15-C13-C12	-2.28	116.51	121.12
6	0	102	07D	C1-C2-C3	-2.28	122.11	126.04
10	N	103	LMT	O3'-C3'-C2'	-2.28	105.09	110.35
6	N	102	07D	C1-C2-C3	-2.27	122.11	126.04
6	O	101	07D	OBB-CAB-CBB	-2.27	114.69	119.73
13	G	101	CRT	C27-C26-C25	-2.27	116.13	123.22
13	M	407	CRT	C26-C27-C28	-2.27	124.07	127.31
13	E	101	CRT	C35-C33-C32	-2.27	115.46	118.94
10	V	103	LMT	O5'-C1'-C2'	2.27	115.14	110.35
6	8	102	07D	C6-C5-C3	2.26	120.42	112.98
6	E	102	07D	C11-C10-C8	2.26	120.40	112.98
10	X	103	LMT	C1B-O1B-C4'	-2.25	112.39	117.96
13	8	101	CRT	C34-C33-C35	2.25	121.62	118.08
6	K	101	07D	OBB-CAB-CBB	-2.24	114.76	119.73
6	L	301	07D	C4A-NA-C1A	2.24	107.93	106.33
6	6	102	07D	C16-C15-C13	2.24	120.34	112.98
6	M	404	07D	C6-C7-C8	-2.24	122.27	127.66
13	N	101	CRT	C27-C26-C25	-2.24	116.23	123.22
6	5	202	07D	C1-O2A-CGA	2.24	122.32	116.44
13	0	101	CRT	C29-C28-C30	2.24	121.60	118.08
6	M	404	07D	OBB-CAB-CBB	-2.23	114.78	119.73
13	6	101	CRT	C31-C32-C33	-2.23	124.12	127.31
6	U	101	07D	OBB-CAB-CBB	-2.23	114.79	119.73
6	D	101	07D	C11-C12-C13	-2.23	122.29	127.66
6	S	101	07D	C15-C16-C17	2.23	119.21	111.88
13	M	407	CRT	C11-C12-C14	-2.23	115.52	118.94
6	9	101	07D	C4A-NA-C1A	2.23	107.92	106.33
13	N	101	CRT	C21-C20-C19	-2.23	118.91	123.47
13	X	101	CRT	C8-C7-C9	-2.23	119.81	122.92
6	9	101	07D	C14-C13-C15	-2.22	111.53	115.27
6	Q	102	07D	C4A-NA-C1A	2.22	107.91	106.33
13	E	101	CRT	C34-C33-C35	2.22	121.58	118.08
14	H	303	CDL	OB8-CB7-C71	2.22	118.88	111.91
6	7	101	07D	OBB-CAB-CBB	-2.22	114.81	119.73
13	V	101	CRT	C18-C17-C16	2.22	121.58	118.08
10	8	103	LMT	O1B-C4'-C3'	2.22	113.19	107.28
6	L	307	07D	C15-C13-C12	2.22	125.61	121.12
6	5	202	07D	O2A-C1-C2	-2.22	102.81	108.64
6	A	101	07D	CMB-C2B-C1B	-2.22	121.66	125.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	L	301	07D	OBB-CAB-CBB	-2.22	114.82	119.73
13	E	101	CRT	C29-C28-C30	2.22	121.57	118.08
6	D	101	07D	OBB-CAB-CBB	-2.21	114.83	119.73
6	K	101	07D	C11-C10-C8	2.21	120.26	112.98
12	M	406	RQ0	C48-C31-C32	-2.21	118.00	123.68
14	H	303	CDL	CB6-CB4-CB3	-2.21	106.56	111.79
6	5	202	07D	OBB-CAB-CBB	-2.21	114.84	119.73
6	T	102	07D	C14-C13-C15	-2.20	111.56	115.27
13	J	101	CRT	C14-C15-C16	-2.20	116.36	123.22
6	A	101	07D	OBB-CAB-CBB	-2.19	114.87	119.73
13	0	101	CRT	C20-C21-C22	-2.19	118.98	123.47
12	M	406	RQ0	C30-C34-C43	2.19	119.09	111.88
6	S	101	07D	OBB-CAB-CBB	-2.19	114.87	119.73
6	2	102	07D	C4A-NA-C1A	2.19	107.89	106.33
10	T	103	LMT	O1B-C4'-C3'	2.19	113.10	107.28
6	5	202	07D	C15-C13-C12	2.18	125.53	121.12
6	1	101	07D	C4A-C3A-C2A	-2.18	103.75	106.94
10	L	306	LMT	C1B-O1B-C4'	-2.18	112.57	117.96
7	M	405	08I	C16-C15-C13	2.18	120.14	112.98
10	R	102	LMT	O1B-C4'-C3'	2.18	113.07	107.28
6	M	404	07D	C4A-C3A-C2A	-2.18	103.76	106.94
13	A	102	CRT	C34-C33-C35	2.18	121.51	118.08
6	W	101	07D	C4A-C3A-C2A	-2.18	103.77	106.94
6	W	101	07D	C6-C7-C8	-2.17	122.43	127.66
13	Z	101	CRT	C36-C35-C33	-2.17	122.61	125.89
6	L	307	07D	C4A-CHB-C1B	2.17	130.74	126.06
13	Z	101	CRT	C21-C20-C19	-2.17	119.03	123.47
6	S	101	07D	CMB-C2B-C1B	-2.17	121.74	125.04
13	X	101	CRT	C27-C26-C25	-2.17	116.46	123.22
13	2	101	CRT	C32-C31-C30	-2.16	116.46	123.22
10	5	201	LMT	C1B-O5B-C5B	2.16	117.94	113.69
6	Q	101	07D	C11-C12-C13	-2.16	122.47	127.66
13	4	101	CRT	C13-C12-C14	-2.15	119.91	122.92
6	0	102	07D	C4A-NA-C1A	2.15	107.86	106.33
10	B	102	LMT	O1B-C4'-C3'	2.15	113.00	107.28
6	6	102	07D	C11-C12-C13	-2.15	122.49	127.66
14	H	304	CDL	CA6-CA4-CA3	-2.15	106.71	111.79
6	W	101	07D	CMB-C2B-C1B	-2.15	121.77	125.04
13	Z	101	CRT	C13-C12-C11	2.14	121.45	118.08
14	M	408	CDL	OA8-CA7-OA9	-2.14	118.18	123.59
12	M	406	RQ0	C12-C08-C17	2.14	120.03	112.98
6	L	307	07D	C16-C15-C13	2.14	120.02	112.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	V	102	07D	C11-C10-C8	2.14	120.01	112.98
6	Q	101	07D	C11-C10-C8	2.14	120.00	112.98
15	K	103	PEF	O3-C30-O5	-2.13	118.21	123.59
10	J	103	LMT	C1B-C2B-C3B	2.13	114.44	110.00
6	4	102	07D	OBB-CAB-CBB	-2.13	115.01	119.73
6	J	102	07D	C15-C16-C17	-2.13	104.89	111.88
6	M	404	07D	C16-C17-C18	-2.12	120.49	127.75
6	2	102	07D	C14-C13-C15	-2.12	111.70	115.27
13	R	101	CRT	C29-C28-C30	2.12	121.42	118.08
6	3	101	07D	OBB-CAB-CBB	-2.12	115.04	119.73
10	2	103	LMT	C1B-O1B-C4'	-2.11	112.73	117.96
13	P	101	CRT	C13-C12-C14	-2.11	119.96	122.92
13	4	101	CRT	C5-C6-C7	-2.11	122.70	125.89
6	6	102	07D	C14-C13-C15	-2.11	111.72	115.27
12	M	406	RQ0	C41-C46-C52	-2.11	115.94	118.48
6	U	101	07D	CMB-C2B-C1B	-2.11	121.83	125.04
13	T	101	CRT	C26-C27-C28	-2.11	124.30	127.31
6	5	202	07D	C4A-NA-C1A	2.11	107.83	106.33
6	Q	101	07D	CMB-C2B-C1B	-2.11	121.83	125.04
13	2	101	CRT	C31-C32-C33	-2.11	124.31	127.31
13	4	101	CRT	C36-C35-C33	-2.10	122.72	125.89
13	A	102	CRT	C13-C12-C11	2.10	121.38	118.08
13	J	101	CRT	C9-C10-C11	-2.10	116.67	123.22
13	0	101	CRT	C18-C17-C16	2.10	121.38	118.08
6	U	101	07D	CBA-CAA-C2A	-2.09	106.83	112.63
6	U	101	07D	CAA-CBA-CGA	2.09	119.49	113.43
6	B	101	07D	C11-C12-C13	-2.08	122.64	127.66
13	E	101	CRT	C13-C12-C11	2.08	121.36	118.08
13	A	102	CRT	C15-C14-C12	-2.08	124.35	127.31
6	9	101	07D	C11-C10-C8	2.08	119.80	112.98
13	8	101	CRT	C27-C26-C25	-2.07	116.75	123.22
6	P	102	07D	C15-C16-C17	-2.07	105.07	111.88
6	K	101	07D	CMB-C2B-C1B	-2.07	121.89	125.04
13	A	102	CRT	C26-C27-C28	-2.07	124.36	127.31
9	H	302	PGV	O01-C1-O02	-2.07	118.71	123.70
6	7	101	07D	CMB-C2B-C1B	-2.07	121.89	125.04
10	V	103	LMT	O5'-C5'-C4'	-2.07	105.40	109.75
6	D	101	07D	C3A-C4A-NA	2.07	111.63	110.10
6	G	102	07D	C6-C7-C8	-2.06	122.69	127.66
10	P	103	LMT	O1B-C4'-C3'	2.06	112.77	107.28
6	E	102	07D	C15-C16-C17	-2.06	105.12	111.88
13	0	101	CRT	C5-C6-C7	-2.06	122.79	125.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	2	101	CRT	C18-C17-C19	-2.05	120.05	122.92
12	M	406	RQ0	C49-C35-C42	-2.05	118.41	123.68
13	R	101	CRT	C20-C19-C17	-2.05	124.38	127.31
6	8	102	07D	C5-C6-C7	-2.05	105.14	111.88
13	Z	101	CRT	C14-C15-C16	-2.05	116.82	123.22
13	T	101	CRT	C18-C17-C19	-2.05	120.05	122.92
6	8	102	07D	C4A-NA-C1A	2.05	107.79	106.33
13	V	101	CRT	C8-C7-C9	-2.05	120.05	122.92
13	6	101	CRT	C32-C31-C30	-2.05	116.82	123.22
6	D	101	07D	CMB-C2B-C1B	-2.05	121.92	125.04
9	L	304	PGV	O01-C1-O02	-2.05	118.76	123.70
6	F	101	07D	C16-C15-C13	2.04	119.70	112.98
6	4	102	07D	C4A-C3A-C2A	-2.04	103.96	106.94
6	5	202	07D	CMB-C2B-C1B	-2.04	121.93	125.04
7	M	405	08I	O2A-C1-C2	-2.04	103.27	108.64
13	P	101	CRT	C20-C21-C22	-2.04	119.29	123.47
12	M	406	RQ0	C47-C51-C58	2.04	118.59	111.88
13	0	101	CRT	C35-C33-C32	-2.04	115.81	118.94
6	P	102	07D	OBB-CAB-CBB	-2.04	115.21	119.73
6	E	102	07D	C4A-NA-C1A	2.04	107.78	106.33
13	P	101	CRT	C27-C26-C25	-2.04	116.86	123.22
13	T	101	CRT	C20-C21-C22	-2.03	119.31	123.47
6	X	102	07D	C10-C8-C7	-2.03	117.00	121.12
13	8	101	CRT	C21-C20-C19	-2.03	119.31	123.47
6	Y	101	07D	O2A-C1-C2	-2.03	103.29	108.64
10	H	306	LMT	C1'-C2'-C3'	2.03	114.23	110.00
13	A	102	CRT	C9-C10-C11	-2.03	116.88	123.22
14	M	408	CDL	OA6-CA5-OA7	-2.03	118.80	123.70
6	2	102	07D	C15-C13-C12	2.03	125.22	121.12
13	E	101	CRT	C14-C15-C16	-2.03	116.89	123.22
13	V	101	CRT	C14-C15-C16	-2.03	116.89	123.22
13	X	101	CRT	C29-C28-C30	2.03	121.27	118.08
13	0	101	CRT	C9-C10-C11	-2.02	116.91	123.22
6	4	102	07D	C3A-C4A-NA	2.02	111.59	110.10
7	L	302	08I	C1-O2A-CGA	2.02	121.75	116.44
13	Z	101	CRT	C31-C32-C33	-2.02	124.43	127.31
6	E	102	07D	C16-C15-C13	2.02	119.61	112.98
6	I	101	07D	CMB-C2B-C1B	-2.02	121.97	125.04
10	R	102	LMT	C1-O1'-C1'	-2.01	110.50	113.84
12	M	406	RQ0	C38-C17-C24	-2.01	118.52	123.68
6	3	101	07D	C3A-C4A-NA	2.01	111.58	110.10
6	Y	101	07D	O2A-CGA-CBA	2.01	118.21	111.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	M	406	RQ0	C40-C21-C26	-2.01	118.53	123.68
6	7	101	07D	O2A-C1-C2	-2.01	103.36	108.64
6	3	101	07D	CMB-C2B-C1B	-2.00	121.99	125.04
6	9	101	07D	CMB-C2B-C1B	-2.00	121.99	125.04

There are no chirality outliers.

All (827) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
6	L	301	07D	C1A-C2A-CAA-CBA
6	L	301	07D	C4C-C3C-CAC-CBC
6	L	307	07D	C12-C13-C15-C16
6	L	307	07D	C14-C13-C15-C16
6	L	307	07D	C2B-C3B-CAB-CBB
6	L	307	07D	C2B-C3B-CAB-OBB
6	L	307	07D	C4B-C3B-CAB-CBB
6	L	307	07D	C4B-C3B-CAB-OBB
6	M	403	07D	C11-C10-C8-C9
6	M	403	07D	C4B-C3B-CAB-CBB
6	M	403	07D	C4B-C3B-CAB-OBB
6	M	403	07D	C2C-C3C-CAC-CBC
6	M	404	07D	C11-C10-C8-C7
6	M	404	07D	C11-C10-C8-C9
6	M	404	07D	C1A-C2A-CAA-CBA
6	M	404	07D	C4C-C3C-CAC-CBC
6	A	101	07D	C1A-C2A-CAA-CBA
6	A	101	07D	C4C-C3C-CAC-CBC
6	B	101	07D	C4B-C3B-CAB-CBB
6	B	101	07D	C4C-C3C-CAC-CBC
6	D	101	07D	C1A-C2A-CAA-CBA
6	D	101	07D	C4C-C3C-CAC-CBC
6	E	102	07D	C12-C13-C15-C16
6	E	102	07D	C14-C13-C15-C16
6	E	102	07D	C4B-C3B-CAB-CBB
6	E	102	07D	C2C-C3C-CAC-CBC
6	E	102	07D	C4C-C3C-CAC-CBC
6	E	102	07D	C2A-CAA-CBA-CGA
6	F	101	07D	C4C-C3C-CAC-CBC
6	G	102	07D	C4B-C3B-CAB-CBB
6	G	102	07D	C4C-C3C-CAC-CBC
6	I	101	07D	C8-C10-C11-C12
6	I	101	07D	C12-C13-C15-C16

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Mol	Chain	Res	Type	Atoms
6	I	101	07D	C14-C13-C15-C16
6	I	101	07D	C1A-C2A-CAA-CBA
6	I	101	07D	C4C-C3C-CAC-CBC
6	J	102	07D	C4B-C3B-CAB-CBB
6	J	102	07D	C4C-C3C-CAC-CBC
6	K	101	07D	C1A-C2A-CAA-CBA
6	K	101	07D	C4C-C3C-CAC-CBC
6	N	102	07D	C2C-C3C-CAC-CBC
6	N	102	07D	C4C-C3C-CAC-CBC
6	O	101	07D	C4C-C3C-CAC-CBC
6	O	101	07D	CHA-CBD-CGD-O1D
6	O	101	07D	CHA-CBD-CGD-O2D
6	P	102	07D	C12-C13-C15-C16
6	P	102	07D	C14-C13-C15-C16
6	P	102	07D	C4C-C3C-CAC-CBC
6	Q	101	07D	C1A-C2A-CAA-CBA
6	Q	101	07D	C4C-C3C-CAC-CBC
6	Q	102	07D	C4-C3-C5-C6
6	Q	102	07D	C2-C3-C5-C6
6	Q	102	07D	C4B-C3B-CAB-CBB
6	Q	102	07D	C4B-C3B-CAB-OBB
6	Q	102	07D	C4C-C3C-CAC-CBC
6	S	101	07D	C15-C16-C17-C18
6	S	101	07D	C1A-C2A-CAA-CBA
6	S	101	07D	C4C-C3C-CAC-CBC
6	T	102	07D	C11-C10-C8-C7
6	T	102	07D	C11-C10-C8-C9
6	T	102	07D	C12-C13-C15-C16
6	T	102	07D	C14-C13-C15-C16
6	T	102	07D	C1A-C2A-CAA-CBA
6	T	102	07D	C4B-C3B-CAB-CBB
6	T	102	07D	C4B-C3B-CAB-OBB
6	T	102	07D	C4C-C3C-CAC-CBC
6	U	101	07D	C1A-C2A-CAA-CBA
6	U	101	07D	C4C-C3C-CAC-CBC
6	V	102	07D	C4B-C3B-CAB-CBB
6	V	102	07D	C4C-C3C-CAC-CBC
6	W	101	07D	C4-C3-C5-C6
6	W	101	07D	C2-C3-C5-C6
6	W	101	07D	C1A-C2A-CAA-CBA
6	W	101	07D	C4C-C3C-CAC-CBC
6	X	102	07D	C14-C13-C15-C16

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Mol	Chain	Res	Type	Atoms
6	X	102	07D	C4B-C3B-CAB-CBB
6	X	102	07D	C4C-C3C-CAC-CBC
6	Y	101	07D	C1A-C2A-CAA-CBA
6	Y	101	07D	C4C-C3C-CAC-CBC
6	Y	101	07D	CBA-CGA-O2A-C1
6	Y	101	07D	O1A-CGA-O2A-C1
6	Z	102	07D	C4B-C3B-CAB-CBB
6	Z	102	07D	C4B-C3B-CAB-OBB
6	Z	102	07D	C2C-C3C-CAC-CBC
6	Z	102	07D	C4C-C3C-CAC-CBC
6	1	101	07D	C1A-C2A-CAA-CBA
6	1	101	07D	C2C-C3C-CAC-CBC
6	2	102	07D	C12-C13-C15-C16
6	2	102	07D	C14-C13-C15-C16
6	2	102	07D	C1A-C2A-CAA-CBA
6	2	102	07D	C4B-C3B-CAB-CBB
6	2	102	07D	C4B-C3B-CAB-OBB
6	2	102	07D	C4C-C3C-CAC-CBC
6	3	101	07D	O2A-C1-C2-C3
6	3	101	07D	C1A-C2A-CAA-CBA
6	3	101	07D	C4C-C3C-CAC-CBC
6	3	101	07D	CHA-CBD-CGD-O1D
6	3	101	07D	CHA-CBD-CGD-O2D
6	4	102	07D	C4-C3-C5-C6
6	4	102	07D	C1A-C2A-CAA-CBA
6	4	102	07D	C4C-C3C-CAC-CBC
6	5	202	07D	C1A-C2A-CAA-CBA
6	5	202	07D	C4C-C3C-CAC-CBC
6	6	102	07D	C4-C3-C5-C6
6	6	102	07D	C2-C3-C5-C6
6	6	102	07D	C14-C13-C15-C16
6	6	102	07D	C4B-C3B-CAB-CBB
6	6	102	07D	C4C-C3C-CAC-CBC
6	7	101	07D	C1A-C2A-CAA-CBA
6	7	101	07D	C2C-C3C-CAC-CBC
6	7	101	07D	C4C-C3C-CAC-CBC
6	8	102	07D	C11-C10-C8-C9
6	8	102	07D	C4B-C3B-CAB-CBB
6	8	102	07D	C4C-C3C-CAC-CBC
6	9	101	07D	C4C-C3C-CAC-CBC
6	0	102	07D	C4-C3-C5-C6
6	0	102	07D	C2-C3-C5-C6

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Mol	Chain	Res	Type	Atoms
6	0	102	07D	C12-C13-C15-C16
6	0	102	07D	C14-C13-C15-C16
6	0	102	07D	C4C-C3C-CAC-CBC
7	L	302	08I	C4-C3-C5-C6
7	L	302	08I	C2-C3-C5-C6
7	L	302	08I	C12-C13-C15-C16
7	L	302	08I	C14-C13-C15-C16
7	L	302	08I	C2C-C3C-CAC-CBC
7	M	405	08I	C2C-C3C-CAC-CBC
8	L	303	U10	C12-C11-C9-C10
8	L	303	U10	C15-C14-C16-C17
9	H	302	PGV	C03-O11-P-O14
9	H	302	PGV	O12-C04-C05-C06
9	H	302	PGV	O12-C04-C05-O05
10	H	306	LMT	O5'-C1'-O1'-C1
10	5	203	LMT	O5'-C1'-O1'-C1
12	M	406	RQ0	C09-C06-C16-C37
12	M	406	RQ0	C11-C07-C19-C27
12	M	406	RQ0	C11-C07-C19-C39
12	M	406	RQ0	C31-C30-C34-C43
13	M	407	CRT	C32-C33-C35-C36
13	M	407	CRT	C34-C33-C35-C36
13	M	407	CRT	C36-C37-C38-C39
13	M	407	CRT	C36-C37-C38-C40
13	E	101	CRT	C2-C1-C4-C5
13	E	101	CRT	C3-C1-C4-C5
13	E	101	CRT	C1-C4-C5-C6
13	E	101	CRT	C5-C6-C7-C8
13	E	101	CRT	C5-C6-C7-C9
13	E	101	CRT	C15-C16-C17-C18
13	E	101	CRT	C15-C16-C17-C19
13	G	101	CRT	C10-C11-C12-C13
13	G	101	CRT	C10-C11-C12-C14
13	G	101	CRT	C40-C38-O2-C2M
13	J	101	CRT	C10-C11-C12-C13
13	N	101	CRT	C10-C11-C12-C13
13	N	101	CRT	C10-C11-C12-C14
13	N	101	CRT	C15-C16-C17-C18
13	P	101	CRT	C10-C11-C12-C13
13	P	101	CRT	C10-C11-C12-C14
13	P	101	CRT	C32-C33-C35-C36
13	P	101	CRT	C34-C33-C35-C36

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Mol	Chain	Res	Type	Atoms
13	P	101	CRT	C36-C37-C38-C39
13	P	101	CRT	C36-C37-C38-C40
13	R	101	CRT	C2-C1-C4-C5
13	R	101	CRT	C3-C1-C4-C5
13	R	101	CRT	C10-C11-C12-C13
13	R	101	CRT	C10-C11-C12-C14
13	T	101	CRT	O1-C1-C4-C5
13	T	101	CRT	C2-C1-C4-C5
13	T	101	CRT	C3-C1-C4-C5
13	T	101	CRT	C10-C11-C12-C13
13	T	101	CRT	C10-C11-C12-C14
13	T	101	CRT	C15-C16-C17-C18
13	T	101	CRT	C15-C16-C17-C19
13	V	101	CRT	O1-C1-C4-C5
13	V	101	CRT	C2-C1-C4-C5
13	V	101	CRT	C3-C1-C4-C5
13	V	101	CRT	C10-C11-C12-C13
13	V	101	CRT	C10-C11-C12-C14
13	X	101	CRT	C2-C1-C4-C5
13	X	101	CRT	C3-C1-C4-C5
13	X	101	CRT	C10-C11-C12-C13
13	X	101	CRT	C10-C11-C12-C14
13	Z	101	CRT	C2-C1-C4-C5
13	Z	101	CRT	C1-C4-C5-C6
13	Z	101	CRT	C15-C16-C17-C18
13	2	101	CRT	C2-C1-C4-C5
13	2	101	CRT	C3-C1-C4-C5
13	2	101	CRT	C10-C11-C12-C13
13	2	101	CRT	C10-C11-C12-C14
13	2	101	CRT	C35-C36-C37-C38
13	6	101	CRT	O1-C1-C4-C5
13	6	101	CRT	C2-C1-C4-C5
13	6	101	CRT	C3-C1-C4-C5
13	6	101	CRT	C5-C6-C7-C8
13	6	101	CRT	C5-C6-C7-C9
13	6	101	CRT	C32-C33-C35-C36
13	6	101	CRT	C34-C33-C35-C36
13	6	101	CRT	C36-C37-C38-C39
13	6	101	CRT	C36-C37-C38-C40
13	6	101	CRT	C36-C37-C38-O2
13	8	101	CRT	O1-C1-C4-C5
13	8	101	CRT	C2-C1-C4-C5

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Mol	Chain	Res	Type	Atoms
13	8	101	CRT	C3-C1-C4-C5
13	8	101	CRT	C10-C11-C12-C13
13	8	101	CRT	C15-C16-C17-C18
13	8	101	CRT	C15-C16-C17-C19
14	M	408	CDL	CB2-OB2-PB2-OB5
14	M	408	CDL	CB3-OB5-PB2-OB3
14	M	409	CDL	CA2-OA2-PA1-OA3
14	M	409	CDL	CA2-OA2-PA1-OA4
14	H	301	CDL	CA2-OA2-PA1-OA4
14	H	301	CDL	CA3-OA5-PA1-OA3
14	H	301	CDL	CB2-OB2-PB2-OB5
14	H	301	CDL	CB3-OB5-PB2-OB3
14	H	301	CDL	C51-CB5-OB6-CB4
14	H	303	CDL	CA2-OA2-PA1-OA3
14	H	303	CDL	CA2-OA2-PA1-OA4
14	H	303	CDL	CA2-OA2-PA1-OA5
14	H	303	CDL	C51-CB5-OB6-CB4
14	H	304	CDL	CA3-OA5-PA1-OA2
14	H	304	CDL	CA3-OA5-PA1-OA3
14	H	304	CDL	CB2-OB2-PB2-OB3
15	H	305	PEF	C4-O4P-P-O1P
15	K	102	PEF	C4-O4P-P-O2P
15	K	103	PEF	C4-O4P-P-O1P
15	K	103	PEF	C4-O4P-P-O3P
14	H	303	CDL	C11-CA5-OA6-CA4
10	N	103	LMT	C3'-C4'-O1B-C1B
10	R	102	LMT	C3'-C4'-O1B-C1B
10	P	103	LMT	C3'-C4'-O1B-C1B
10	J	103	LMT	O5B-C1B-O1B-C4'
10	5	201	LMT	O5B-C1B-O1B-C4'
14	H	301	CDL	OB7-CB5-OB6-CB4
14	H	303	CDL	OB7-CB5-OB6-CB4
10	6	103	LMT	C3'-C4'-O1B-C1B
14	H	304	CDL	C51-CB5-OB6-CB4
6	F	101	07D	C14-C13-C15-C16
6	P	102	07D	C11-C10-C8-C9
6	Z	102	07D	C4-C3-C5-C6
6	8	102	07D	C4-C3-C5-C6
6	9	101	07D	C4-C3-C5-C6
6	M	403	07D	C11-C10-C8-C7
6	F	101	07D	C12-C13-C15-C16
6	8	102	07D	C2-C3-C5-C6

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Mol	Chain	Res	Type	Atoms
8	L	303	U10	C12-C11-C9-C8
10	B	102	LMT	C3'-C4'-O1B-C1B
14	H	303	CDL	OA7-CA5-OA6-CA4
6	B	101	07D	C1A-C2A-CAA-CBA
6	E	102	07D	C1A-C2A-CAA-CBA
6	F	101	07D	C1A-C2A-CAA-CBA
6	G	102	07D	C1A-C2A-CAA-CBA
6	J	102	07D	C1A-C2A-CAA-CBA
6	N	102	07D	C1A-C2A-CAA-CBA
6	P	102	07D	C1A-C2A-CAA-CBA
6	Q	102	07D	C1A-C2A-CAA-CBA
6	V	102	07D	C1A-C2A-CAA-CBA
6	X	102	07D	C1A-C2A-CAA-CBA
6	Z	102	07D	C1A-C2A-CAA-CBA
6	6	102	07D	C1A-C2A-CAA-CBA
6	8	102	07D	C1A-C2A-CAA-CBA
6	9	101	07D	C1A-C2A-CAA-CBA
6	0	102	07D	C1A-C2A-CAA-CBA
12	M	406	RQ0	C14-C18-C27-C19
14	H	301	CDL	O1-C1-CB2-OB2
14	H	304	CDL	O1-C1-CA2-OA2
14	M	408	CDL	C31-CA7-OA8-CA6
10	4	103	LMT	O5B-C1B-O1B-C4'
10	T	103	LMT	C3'-C4'-O1B-C1B
10	Z	103	LMT	C3'-C4'-O1B-C1B
6	5	202	07D	C2A-CAA-CBA-CGA
6	D	101	07D	C11-C10-C8-C9
6	J	102	07D	C4-C3-C5-C6
6	P	102	07D	C4-C3-C5-C6
6	Z	102	07D	C14-C13-C15-C16
6	8	102	07D	C14-C13-C15-C16
12	M	406	RQ0	C20-C15-C21-C40
12	M	406	RQ0	C34-C30-C31-C48
10	R	102	LMT	C4B-C5B-C6B-O6B
6	D	101	07D	C11-C10-C8-C7
6	J	102	07D	C2-C3-C5-C6
6	P	102	07D	C2-C3-C5-C6
6	X	102	07D	C12-C13-C15-C16
6	Z	102	07D	C12-C13-C15-C16
6	4	102	07D	C2-C3-C5-C6
6	6	102	07D	C12-C13-C15-C16
6	8	102	07D	C11-C10-C8-C7

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Mol	Chain	Res	Type	Atoms
6	8	102	07D	C12-C13-C15-C16
8	L	303	U10	C13-C14-C16-C17
12	M	406	RQ0	C09-C06-C16-C25
12	M	406	RQ0	C20-C15-C21-C26
12	M	406	RQ0	C34-C30-C31-C32
10	0	103	LMT	O5'-C5'-C6'-O6'
14	M	408	CDL	OA9-CA7-OA8-CA6
10	P	103	LMT	O5'-C1'-O1'-C1
7	L	302	08I	C8-C10-C11-C12
12	M	406	RQ0	C13-C05-C10-C24
12	M	406	RQ0	C16-C06-C09-C22
12	M	406	RQ0	C21-C15-C20-C32
10	H	306	LMT	O5B-C1B-O1B-C4'
6	O	101	07D	C1A-C2A-CAA-CBA
14	M	409	CDL	CB2-C1-CA2-OA2
14	M	409	CDL	CA2-C1-CB2-OB2
14	H	301	CDL	CA2-C1-CB2-OB2
14	H	303	CDL	CA2-C1-CB2-OB2
10	0	103	LMT	C4'-C5'-C6'-O6'
14	M	409	CDL	O1-C1-CA2-OA2
14	H	303	CDL	O1-C1-CB2-OB2
10	X	103	LMT	C3'-C4'-O1B-C1B
6	P	102	07D	C11-C10-C8-C7
6	Z	102	07D	C2-C3-C5-C6
6	9	101	07D	C2-C3-C5-C6
13	R	101	CRT	C15-C16-C17-C18
13	Z	101	CRT	C5-C6-C7-C8
13	2	101	CRT	C15-C16-C17-C18
13	2	101	CRT	C29-C28-C30-C31
13	4	101	CRT	C10-C11-C12-C13
13	0	101	CRT	C5-C6-C7-C8
13	Z	101	CRT	C5-C6-C7-C9
13	4	101	CRT	C10-C11-C12-C14
15	K	102	PEF	C11-C10-O2-C2
15	K	103	PEF	C11-C10-O2-C2
10	5	203	LMT	C4-C5-C6-C7
10	M	411	LMT	O5B-C1B-O1B-C4'
10	X	103	LMT	C5'-C4'-O1B-C1B
10	4	103	LMT	C5'-C4'-O1B-C1B
10	Z	103	LMT	C5'-C4'-O1B-C1B
15	K	102	PEF	O4-C10-O2-C2
10	4	103	LMT	C3'-C4'-O1B-C1B

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Mol	Chain	Res	Type	Atoms
6	O	101	07D	C2A-CAA-CBA-CGA
6	X	102	07D	C2A-CAA-CBA-CGA
10	L	306	LMT	O5'-C1'-O1'-C1
10	G	103	LMT	O5'-C1'-O1'-C1
10	Z	103	LMT	O1'-C1-C2-C3
14	M	409	CDL	O1-C1-CB2-OB2
10	P	103	LMT	O1'-C1-C2-C3
6	W	101	07D	C15-C16-C17-C18
9	H	302	PGV	C03-O11-P-O12
9	H	302	PGV	C04-O12-P-O11
14	M	409	CDL	CA2-OA2-PA1-OA5
14	H	301	CDL	CA2-OA2-PA1-OA5
14	H	301	CDL	CA3-OA5-PA1-OA2
14	H	303	CDL	CB2-OB2-PB2-OB5
14	H	304	CDL	CA2-OA2-PA1-OA5
14	H	304	CDL	CB3-OB5-PB2-OB2
15	K	102	PEF	C4-O4P-P-O3P
15	K	103	PEF	C1-O3P-P-O4P
10	B	102	LMT	C4'-C5'-C6'-O6'
15	K	103	PEF	O4-C10-O2-C2
6	L	307	07D	C11-C10-C8-C9
10	E	103	LMT	O5B-C5B-C6B-O6B
10	M	411	LMT	O1'-C1-C2-C3
10	T	103	LMT	C5'-C4'-O1B-C1B
10	2	103	LMT	C5'-C4'-O1B-C1B
10	5	201	LMT	O5'-C5'-C6'-O6'
10	H	306	LMT	C7-C8-C9-C10
6	Q	102	07D	C2B-C3B-CAB-CBB
6	T	102	07D	C2B-C3B-CAB-CBB
6	Z	102	07D	C2B-C3B-CAB-CBB
14	M	408	CDL	C11-CA5-OA6-CA4
10	R	102	LMT	O5B-C5B-C6B-O6B
10	N	103	LMT	C6-C7-C8-C9
14	H	301	CDL	CB6-CB4-OB6-CB5
14	M	408	CDL	OA7-CA5-OA6-CA4
10	M	410	LMT	C7-C8-C9-C10
14	M	408	CDL	O1-C1-CA2-OA2
15	H	305	PEF	O3P-C1-C2-O2
10	L	306	LMT	C2-C3-C4-C5
10	L	306	LMT	C2'-C1'-O1'-C1
10	M	410	LMT	C11-C10-C9-C8
10	0	103	LMT	O1'-C1-C2-C3

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Mol	Chain	Res	Type	Atoms
6	L	307	07D	C11-C10-C8-C7
14	M	409	CDL	CB5-C51-C52-C53
12	M	406	RQ0	C18-C14-C23-C44
13	2	101	CRT	C34-C33-C35-C36
10	5	201	LMT	C2-C3-C4-C5
12	M	406	RQ0	C18-C14-C23-C33
13	N	101	CRT	C15-C16-C17-C19
13	2	101	CRT	C32-C33-C35-C36
14	H	304	CDL	C11-CA5-OA6-CA4
9	L	304	PGV	C1-C2-C3-C4
15	K	102	PEF	C30-C31-C32-C33
14	H	304	CDL	OB7-CB5-OB6-CB4
10	M	410	LMT	O5B-C5B-C6B-O6B
14	H	303	CDL	C82-C83-C84-C85
10	6	103	LMT	O5B-C5B-C6B-O6B
10	5	201	LMT	C2-C1-O1'-C1'
14	H	303	CDL	C73-C74-C75-C76
6	Z	102	07D	O2A-C1-C2-C3
10	2	103	LMT	C3'-C4'-O1B-C1B
6	B	101	07D	C11-C10-C8-C9
6	A	101	07D	C11-C10-C8-C7
6	B	101	07D	C2-C3-C5-C6
6	B	101	07D	C11-C10-C8-C7
14	H	304	CDL	OA7-CA5-OA6-CA4
6	4	102	07D	C2-C1-O2A-CGA
10	T	103	LMT	O5B-C1B-O1B-C4'
14	H	303	CDL	C79-C80-C81-C82
10	T	103	LMT	O5'-C5'-C6'-O6'
10	B	102	LMT	C5'-C4'-O1B-C1B
6	P	102	07D	C2A-CAA-CBA-CGA
9	H	302	PGV	C1-C2-C3-C4
14	M	408	CDL	C75-C76-C77-C78
6	A	101	07D	C11-C10-C8-C9
6	B	101	07D	C4-C3-C5-C6
6	X	102	07D	C4-C3-C5-C6
6	1	101	07D	C4-C3-C5-C6
6	1	101	07D	C14-C13-C15-C16
6	O	101	07D	C2-C3-C5-C6
6	S	101	07D	C11-C10-C8-C7
6	V	102	07D	C11-C10-C8-C7
6	X	102	07D	C2-C3-C5-C6
6	1	101	07D	C12-C13-C15-C16

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Mol	Chain	Res	Type	Atoms
10	Z	103	LMT	O5B-C1B-O1B-C4'
10	X	103	LMT	O5'-C5'-C6'-O6'
14	M	409	CDL	C12-C13-C14-C15
9	L	304	PGV	C2-C1-O01-C02
15	K	103	PEF	C12-C13-C14-C15
10	P	103	LMT	C4B-C5B-C6B-O6B
10	J	103	LMT	O5B-C5B-C6B-O6B
14	H	301	CDL	C55-C56-C57-C58
6	O	101	07D	C4-C3-C5-C6
6	S	101	07D	C11-C10-C8-C9
6	V	102	07D	C11-C10-C8-C9
12	M	406	RQ0	C28-C29-C35-C42
10	J	103	LMT	O5'-C5'-C6'-O6'
10	P	103	LMT	O5B-C5B-C6B-O6B
13	J	101	CRT	C10-C11-C12-C14
10	V	103	LMT	O5'-C5'-C6'-O6'
9	L	304	PGV	O02-C1-O01-C02
12	M	406	RQ0	C07-C11-C25-C16
14	H	303	CDL	CB3-OB5-PB2-OB2
15	H	305	PEF	C4-O4P-P-O3P
9	H	302	PGV	C2-C3-C4-C5
10	V	103	LMT	C2-C3-C4-C5
10	6	103	LMT	C5'-C4'-O1B-C1B
10	N	103	LMT	O5B-C5B-C6B-O6B
10	Z	103	LMT	O5B-C5B-C6B-O6B
13	0	101	CRT	C1-C4-C5-C6
10	J	103	LMT	C2-C3-C4-C5
10	L	306	LMT	C1-C2-C3-C4
10	V	103	LMT	O5B-C5B-C6B-O6B
10	8	103	LMT	O5'-C5'-C6'-O6'
14	M	408	CDL	CB2-C1-CA2-OA2
6	1	101	07D	C11-C10-C8-C9
10	T	103	LMT	O5B-C5B-C6B-O6B
10	2	103	LMT	O5B-C5B-C6B-O6B
10	4	103	LMT	O5'-C5'-C6'-O6'
14	M	408	CDL	CB3-CB4-CB6-OB8
6	L	307	07D	C1A-C2A-CAA-CBA
10	2	103	LMT	O5'-C5'-C6'-O6'
10	5	201	LMT	C3'-C4'-O1B-C1B
6	M	403	07D	C2B-C3B-CAB-CBB
6	V	102	07D	C2B-C3B-CAB-CBB
6	2	102	07D	C2B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
6	8	102	07D	C2B-C3B-CAB-CBB
6	Q	102	07D	C2B-C3B-CAB-OBB
6	T	102	07D	C2B-C3B-CAB-OBB
6	Z	102	07D	C2B-C3B-CAB-OBB
10	M	411	LMT	O5'-C5'-C6'-O6'
10	H	306	LMT	O5'-C5'-C6'-O6'
10	5	203	LMT	O5'-C5'-C6'-O6'
6	3	101	07D	C14-C13-C15-C16
12	M	406	RQ0	C28-C29-C35-C49
6	3	101	07D	C12-C13-C15-C16
6	1	101	07D	C3A-C2A-CAA-CBA
6	7	101	07D	C3A-C2A-CAA-CBA
6	M	403	07D	C2-C1-O2A-CGA
10	5	201	LMT	C5'-C4'-O1B-C1B
13	M	407	CRT	C2-C1-O1-C1M
13	M	407	CRT	C3-C1-O1-C1M
13	G	101	CRT	C39-C38-O2-C2M
15	K	103	PEF	O2-C2-C3-O3
10	B	102	LMT	O5'-C5'-C6'-O6'
13	E	101	CRT	C36-C37-C38-C39
13	G	101	CRT	C3-C1-C4-C5
13	G	101	CRT	C36-C37-C38-C39
13	P	101	CRT	C3-C1-C4-C5
13	X	101	CRT	C36-C37-C38-C39
13	Z	101	CRT	C3-C1-C4-C5
13	0	101	CRT	C36-C37-C38-C39
14	H	301	CDL	CA5-C11-C12-C13
6	5	202	07D	C11-C10-C8-C9
6	1	101	07D	C2-C3-C5-C6
6	5	202	07D	C11-C10-C8-C7
10	P	103	LMT	C4-C5-C6-C7
14	M	408	CDL	C71-C72-C73-C74
13	P	101	CRT	C36-C37-C38-O2
13	M	407	CRT	C15-C16-C17-C18
13	P	101	CRT	C24-C23-C25-C26
13	Z	101	CRT	C34-C33-C35-C36
13	4	101	CRT	C34-C33-C35-C36
10	H	306	LMT	C5'-C4'-O1B-C1B
6	2	102	07D	C4-C3-C5-C6
14	M	408	CDL	CB7-C71-C72-C73
15	K	103	PEF	C30-C31-C32-C33
9	H	302	PGV	C20-C21-C22-C23

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Mol	Chain	Res	Type	Atoms
10	J	103	LMT	C3-C4-C5-C6
6	I	101	07D	C10-C11-C12-C13
10	H	306	LMT	C3'-C4'-O1B-C1B
6	T	102	07D	C2A-CAA-CBA-CGA
6	4	102	07D	C2A-CAA-CBA-CGA
6	8	102	07D	C2A-CAA-CBA-CGA
15	K	103	PEF	C1-C2-C3-O3
10	5	201	LMT	C1-C2-C3-C4
10	L	306	LMT	C5-C6-C7-C8
10	B	102	LMT	O5B-C1B-O1B-C4'
6	Y	101	07D	C11-C10-C8-C9
6	1	101	07D	C11-C10-C8-C7
10	5	201	LMT	C4-C5-C6-C7
6	5	202	07D	C3A-C2A-CAA-CBA
15	K	102	PEF	C32-C33-C34-C35
6	Q	102	07D	C8-C10-C11-C12
14	H	304	CDL	CB2-C1-CA2-OA2
6	Q	101	07D	C14-C13-C15-C16
6	2	102	07D	C2-C1-O2A-CGA
10	8	103	LMT	O5B-C1B-O1B-C4'
13	R	101	CRT	C15-C16-C17-C19
13	Z	101	CRT	C15-C16-C17-C19
13	8	101	CRT	C10-C11-C12-C14
6	Z	102	07D	C2A-CAA-CBA-CGA
6	3	101	07D	C2A-CAA-CBA-CGA
14	M	409	CDL	OB5-CB3-CB4-CB6
14	H	304	CDL	OA5-CA3-CA4-CA6
10	T	103	LMT	C4-C5-C6-C7
6	Q	101	07D	C12-C13-C15-C16
6	Y	101	07D	C11-C10-C8-C7
6	V	102	07D	C4B-C3B-CAB-OBB
6	X	102	07D	C4B-C3B-CAB-OBB
6	8	102	07D	C4B-C3B-CAB-OBB
13	M	407	CRT	C20-C21-C22-C23
13	P	101	CRT	C11-C10-C9-C7
6	M	403	07D	C2B-C3B-CAB-OBB
6	2	102	07D	C2B-C3B-CAB-OBB
6	U	101	07D	C3A-C2A-CAA-CBA
10	4	103	LMT	C4-C5-C6-C7
7	L	302	08I	CAD-CBD-CGD-O2D
10	M	410	LMT	O5'-C1'-O1'-C1
6	L	307	07D	C2C-C3C-CAC-CBC

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Mol	Chain	Res	Type	Atoms
6	Q	102	07D	C2C-C3C-CAC-CBC
6	6	102	07D	C2C-C3C-CAC-CBC
9	H	302	PGV	C02-C03-O11-P
9	H	302	PGV	C5-C6-C7-C8
15	K	103	PEF	C31-C30-O3-C3
6	1	101	07D	CHA-CBD-CGD-O1D
6	M	403	07D	C3A-C2A-CAA-CBA
10	H	306	LMT	C2'-C1'-O1'-C1
14	H	301	CDL	C54-C55-C56-C57
10	4	103	LMT	C9-C10-C11-C12
10	6	103	LMT	C4-C5-C6-C7
6	M	403	07D	C1A-C2A-CAA-CBA
13	P	101	CRT	C5-C6-C7-C8
13	V	101	CRT	C24-C23-C25-C26
13	6	101	CRT	C10-C11-C12-C13
13	6	101	CRT	C10-C11-C12-C14
13	0	101	CRT	C5-C6-C7-C9
10	4	103	LMT	C2-C3-C4-C5
14	M	408	CDL	CA3-OA5-PA1-OA2
14	H	304	CDL	CB2-OB2-PB2-OB5
15	K	102	PEF	C1-O3P-P-O4P
14	M	408	CDL	C14-C15-C16-C17
6	7	101	07D	C14-C13-C15-C16
15	K	103	PEF	O5-C30-O3-C3
9	H	302	PGV	C03-O11-P-O13
9	H	302	PGV	C04-O12-P-O13
14	M	408	CDL	CB2-OB2-PB2-OB4
14	H	301	CDL	CA3-OA5-PA1-OA4
14	H	301	CDL	CB2-OB2-PB2-OB4
14	H	303	CDL	CB2-OB2-PB2-OB3
14	H	304	CDL	CA2-OA2-PA1-OA3
14	H	304	CDL	CA2-OA2-PA1-OA4
14	H	304	CDL	CB3-OB5-PB2-OB3
15	H	305	PEF	C4-O4P-P-O2P
15	K	103	PEF	C1-O3P-P-O1P
15	K	103	PEF	C4-O4P-P-O2P
9	H	302	PGV	C01-C02-C03-O11
14	M	409	CDL	OA5-CA3-CA4-CA6
15	K	102	PEF	O3P-C1-C2-C3
14	M	409	CDL	CB7-C71-C72-C73
6	T	102	07D	C3A-C2A-CAA-CBA
6	M	404	07D	CAD-CBD-CGD-O1D

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Mol	Chain	Res	Type	Atoms
13	M	407	CRT	C1-C4-C5-C6
6	E	102	07D	C4-C3-C5-C6
6	S	101	07D	C4-C3-C5-C6
9	H	302	PGV	O01-C02-C03-O11
14	M	409	CDL	OA5-CA3-CA4-OA6
14	H	304	CDL	OA5-CA3-CA4-OA6
7	L	302	08I	C1A-C2A-CAA-CBA
7	M	405	08I	C1A-C2A-CAA-CBA
14	M	408	CDL	OA6-CA4-CA6-OA8
14	M	408	CDL	OB6-CB4-CB6-OB8
14	H	303	CDL	OA6-CA4-CA6-OA8
10	P	103	LMT	C5'-C4'-O1B-C1B
6	G	102	07D	C2A-CAA-CBA-CGA
10	8	103	LMT	C2B-C1B-O1B-C4'
6	X	102	07D	C2B-C3B-CAB-CBB
10	5	203	LMT	C5'-C4'-O1B-C1B
6	V	102	07D	C2B-C3B-CAB-OBB
6	8	102	07D	C2B-C3B-CAB-OBB
10	5	201	LMT	C4B-C5B-C6B-O6B
14	M	409	CDL	CA5-C11-C12-C13
14	H	303	CDL	CA6-CA4-OA6-CA5
14	H	303	CDL	CB3-CB4-OB6-CB5
14	H	304	CDL	CA6-CA4-OA6-CA5
10	M	410	LMT	C5'-C4'-O1B-C1B
15	K	102	PEF	O3P-C1-C2-O2
10	5	203	LMT	C3'-C4'-O1B-C1B
6	Q	102	07D	C11-C10-C8-C9
6	2	102	07D	C2-C3-C5-C6
15	K	102	PEF	O5-C30-O3-C3
6	L	307	07D	C3A-C2A-CAA-CBA
10	5	201	LMT	O5'-C1'-O1'-C1
9	L	304	PGV	C03-O11-P-O12
9	L	304	PGV	C04-O12-P-O11
14	M	408	CDL	CA2-OA2-PA1-OA5
14	M	408	CDL	CB3-OB5-PB2-OB2
14	M	409	CDL	CB2-OB2-PB2-OB5
14	M	409	CDL	CB3-OB5-PB2-OB2
14	H	301	CDL	CB3-OB5-PB2-OB2
14	H	303	CDL	CA3-OA5-PA1-OA2
13	E	101	CRT	C36-C37-C38-C40
13	G	101	CRT	C2-C1-C4-C5
13	N	101	CRT	C36-C37-C38-C39

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Mol	Chain	Res	Type	Atoms
13	P	101	CRT	C2-C1-C4-C5
6	7	101	07D	C12-C13-C15-C16
10	B	102	LMT	C3-C4-C5-C6
13	E	101	CRT	O1-C1-C4-C5
13	E	101	CRT	C36-C37-C38-O2
13	G	101	CRT	C36-C37-C38-O2
13	P	101	CRT	O1-C1-C4-C5
13	0	101	CRT	C36-C37-C38-O2
10	B	102	LMT	C2B-C1B-O1B-C4'
6	7	101	07D	C11-C10-C8-C9
6	M	403	07D	C5-C6-C7-C8
6	F	101	07D	C15-C16-C17-C18
6	Q	101	07D	C3A-C2A-CAA-CBA
15	K	103	PEF	C14-C15-C16-C17
15	K	102	PEF	C31-C30-O3-C3
10	5	201	LMT	C4'-C5'-C6'-O6'
13	6	101	CRT	C11-C10-C9-C7
10	P	103	LMT	O5B-C1B-O1B-C4'
14	H	301	CDL	OA7-CA5-OA6-CA4
6	4	102	07D	CAA-CBA-CGA-O2A
6	I	101	07D	C2-C1-O2A-CGA
6	8	102	07D	C2-C1-O2A-CGA
10	B	102	LMT	C2-C3-C4-C5
14	H	303	CDL	CB5-C51-C52-C53
8	M	401	U10	C5-C4-O4-C4M
10	R	102	LMT	C11-C10-C9-C8
6	O	101	07D	C14-C13-C15-C16
6	E	102	07D	C2B-C3B-CAB-CBB
14	H	303	CDL	CA3-CA4-CA6-OA8
14	H	303	CDL	CB3-CB4-CB6-OB8
14	H	303	CDL	C71-C72-C73-C74
13	2	101	CRT	C15-C16-C17-C19
6	Q	101	07D	C11-C10-C8-C9
14	H	304	CDL	C1-CA2-OA2-PA1
9	L	304	PGV	C2-C3-C4-C5
10	2	103	LMT	O1'-C1-C2-C3
6	G	102	07D	C11-C10-C8-C7
10	Z	103	LMT	C2B-C1B-O1B-C4'
10	M	410	LMT	C3'-C4'-O1B-C1B
6	N	102	07D	C10-C11-C12-C13
10	T	103	LMT	C2B-C1B-O1B-C4'
6	T	102	07D	C13-C15-C16-C17

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Mol	Chain	Res	Type	Atoms
6	X	102	07D	C8-C10-C11-C12
6	L	301	07D	C14-C13-C15-C16
6	M	404	07D	C4-C3-C5-C6
6	F	101	07D	C11-C10-C8-C9
6	J	102	07D	C2-C1-O2A-CGA
6	Q	101	07D	C2-C1-O2A-CGA
6	Q	101	07D	C11-C10-C8-C7
6	7	101	07D	C11-C10-C8-C7
14	H	301	CDL	C11-CA5-OA6-CA4
10	M	411	LMT	C2-C3-C4-C5
6	G	102	07D	C11-C10-C8-C9
6	I	101	07D	C11-C10-C8-C9
6	N	102	07D	C11-C10-C8-C9
13	P	101	CRT	C22-C23-C25-C26
13	2	101	CRT	C27-C28-C30-C31
13	4	101	CRT	C32-C33-C35-C36
14	M	409	CDL	C73-C74-C75-C76
14	M	409	CDL	OB5-CB3-CB4-OB6
6	M	404	07D	CAA-CBA-CGA-O2A
8	L	303	U10	C2-C3-O3-C3M
10	4	103	LMT	C3-C4-C5-C6
6	U	101	07D	C11-C10-C8-C9
6	Q	101	07D	C3-C5-C6-C7
6	Z	102	07D	C8-C10-C11-C12
6	B	101	07D	C4B-C3B-CAB-OBB
6	E	102	07D	C4B-C3B-CAB-OBB
6	G	102	07D	C4B-C3B-CAB-OBB
6	J	102	07D	C4B-C3B-CAB-OBB
6	1	101	07D	C4B-C3B-CAB-OBB
6	6	102	07D	C4B-C3B-CAB-OBB
6	0	102	07D	C4B-C3B-CAB-OBB
10	2	103	LMT	C1-C2-C3-C4
14	H	303	CDL	C75-C76-C77-C78
14	M	409	CDL	C12-C11-CA5-OA6
10	M	411	LMT	C1-C2-C3-C4
6	L	307	07D	C4C-C3C-CAC-CBC
6	M	403	07D	C4C-C3C-CAC-CBC
6	X	102	07D	C2B-C3B-CAB-OBB
7	L	302	08I	C4C-C3C-CAC-CBC
6	B	101	07D	C14-C13-C15-C16
6	O	101	07D	C11-C10-C8-C9
6	W	101	07D	C11-C10-C8-C9

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Mol	Chain	Res	Type	Atoms
7	L	302	08I	C11-C10-C8-C9
6	S	101	07D	C2-C3-C5-C6
14	M	408	CDL	C12-C11-CA5-OA6
14	H	303	CDL	C32-C31-CA7-OA8
14	M	409	CDL	CA6-CA4-OA6-CA5
6	U	101	07D	CAA-CBA-CGA-O2A
10	P	103	LMT	C2B-C1B-O1B-C4'
12	M	406	RQ0	C53-C45-C47-C51
6	B	101	07D	C12-C13-C15-C16
6	E	102	07D	C2-C3-C5-C6
13	P	101	CRT	C5-C6-C7-C9
13	V	101	CRT	C22-C23-C25-C26
13	Z	101	CRT	C32-C33-C35-C36
6	2	102	07D	C3-C5-C6-C7
6	M	404	07D	C2C-C3C-CAC-CBC
6	I	101	07D	C2C-C3C-CAC-CBC
6	K	101	07D	C2C-C3C-CAC-CBC
6	P	102	07D	C2C-C3C-CAC-CBC
6	X	102	07D	C2C-C3C-CAC-CBC
6	4	102	07D	C2C-C3C-CAC-CBC
6	8	102	07D	C2C-C3C-CAC-CBC
6	0	102	07D	C2C-C3C-CAC-CBC
6	E	102	07D	C5-C6-C7-C8
10	L	306	LMT	C6-C7-C8-C9
6	J	102	07D	O2A-C1-C2-C3
6	8	102	07D	O2A-C1-C2-C3
6	A	101	07D	CHA-CBD-CGD-O2D
6	F	101	07D	CHA-CBD-CGD-O2D
6	I	101	07D	CHA-CBD-CGD-O1D
6	I	101	07D	CHA-CBD-CGD-O2D
6	X	102	07D	CHA-CBD-CGD-O2D
6	Y	101	07D	CHA-CBD-CGD-O1D
6	Y	101	07D	CHA-CBD-CGD-O2D
6	1	101	07D	CHA-CBD-CGD-O2D
6	5	202	07D	CHA-CBD-CGD-O1D
6	5	202	07D	CHA-CBD-CGD-O2D
6	6	102	07D	CHA-CBD-CGD-O1D
6	6	102	07D	CHA-CBD-CGD-O2D
6	7	101	07D	CHA-CBD-CGD-O1D
6	7	101	07D	CHA-CBD-CGD-O2D
6	5	202	07D	C14-C13-C15-C16
10	H	306	LMT	C3-C4-C5-C6

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Mol	Chain	Res	Type	Atoms
13	R	101	CRT	C39-C38-O2-C2M
13	0	101	CRT	C3-C1-O1-C1M
10	H	306	LMT	C4-C5-C6-C7
7	L	302	08I	CHA-CBD-CGD-O1D
13	G	101	CRT	C36-C37-C38-C40
13	X	101	CRT	C36-C37-C38-C40
13	0	101	CRT	C36-C37-C38-C40
6	5	202	07D	C10-C11-C12-C13
10	E	103	LMT	C1-C2-C3-C4
6	O	101	07D	C11-C10-C8-C7
6	Q	102	07D	C11-C10-C8-C7
12	M	406	RQ0	C43-C45-C47-C51
9	L	304	PGV	C20-C21-C22-C23
10	M	410	LMT	O5B-C1B-O1B-C4'
6	L	301	07D	C15-C16-C17-C18
6	M	403	07D	C10-C11-C12-C13
6	D	101	07D	C10-C11-C12-C13
6	N	102	07D	C15-C16-C17-C18
6	V	102	07D	C15-C16-C17-C18
6	Z	102	07D	C10-C11-C12-C13
6	5	202	07D	C15-C16-C17-C18
12	M	406	RQ0	C06-C09-C22-C13
13	G	101	CRT	O1-C1-C4-C5
13	X	101	CRT	C36-C37-C38-O2
13	Z	101	CRT	O1-C1-C4-C5
14	M	408	CDL	C12-C11-CA5-OA7
6	U	101	07D	C11-C10-C8-C7
6	U	101	07D	CAA-CBA-CGA-O1A
10	H	306	LMT	C2-C3-C4-C5
6	7	101	07D	C2-C1-O2A-CGA
14	M	408	CDL	CA3-CA4-CA6-OA8
10	N	103	LMT	O5B-C1B-O1B-C4'
6	M	404	07D	C3A-C2A-CAA-CBA
14	M	409	CDL	C12-C11-CA5-OA7
14	H	303	CDL	C32-C31-CA7-OA9
6	B	101	07D	C2B-C3B-CAB-CBB
6	J	102	07D	C2B-C3B-CAB-CBB
10	E	103	LMT	C7-C8-C9-C10
8	L	303	U10	C6-C7-C8-C9
9	L	304	PGV	C03-O11-P-O13
9	L	304	PGV	C04-O12-P-O13
14	M	409	CDL	CB2-OB2-PB2-OB3

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Mol	Chain	Res	Type	Atoms
14	H	303	CDL	CB3-OB5-PB2-OB3
10	E	103	LMT	O5'-C1'-O1'-C1
6	B	101	07D	C2B-C3B-CAB-OBB
6	E	102	07D	C2B-C3B-CAB-OBB
6	G	102	07D	C2B-C3B-CAB-OBB
6	J	102	07D	C2B-C3B-CAB-OBB
6	6	102	07D	C2B-C3B-CAB-OBB
14	M	408	CDL	OA5-CA3-CA4-CA6
6	4	102	07D	C3-C5-C6-C7
12	M	406	RQ0	C45-C47-C51-C58
9	H	302	PGV	O01-C1-C2-C3
14	H	303	CDL	C51-C52-C53-C54
10	M	410	LMT	C2B-C1B-O1B-C4'
6	N	102	07D	C14-C13-C15-C16
6	Y	101	07D	C4-C3-C5-C6
6	9	101	07D	C14-C13-C15-C16
6	P	102	07D	C10-C11-C12-C13
6	7	101	07D	C15-C16-C17-C18
14	M	409	CDL	C51-C52-C53-C54
6	K	101	07D	CAD-CBD-CGD-O1D
6	Q	102	07D	CAD-CBD-CGD-O1D
6	6	102	07D	CAD-CBD-CGD-O1D
14	H	303	CDL	CB6-CB4-OB6-CB5
10	5	201	LMT	O5B-C5B-C6B-O6B
6	G	102	07D	CAA-CBA-CGA-O2A
10	G	103	LMT	C5'-C4'-O1B-C1B
6	P	102	07D	C5-C6-C7-C8
14	H	304	CDL	CA2-C1-CB2-OB2
6	Q	101	07D	C4-C3-C5-C6
6	O	101	07D	C12-C13-C15-C16
10	5	201	LMT	C5-C6-C7-C8
13	M	407	CRT	C15-C16-C17-C19
6	G	102	07D	CAA-CBA-CGA-O1A
9	H	302	PGV	O02-C1-C2-C3
7	L	302	08I	C5-C6-C7-C8
14	H	303	CDL	C72-C73-C74-C75
10	2	103	LMT	C4-C5-C6-C7
6	0	102	07D	CAA-CBA-CGA-O2A

There are no ring outliers.

53 monomers are involved in 185 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	L	303	U10	4	0
15	K	103	PEF	1	0
10	8	103	LMT	1	0
6	2	102	07D	3	0
6	G	102	07D	1	0
10	X	103	LMT	1	0
10	G	103	LMT	3	0
6	7	101	07D	1	0
13	P	101	CRT	4	0
13	G	101	CRT	6	0
10	H	306	LMT	6	0
13	Z	101	CRT	7	0
10	R	102	LMT	2	0
10	2	103	LMT	1	0
10	5	203	LMT	2	0
14	M	408	CDL	5	0
10	T	103	LMT	1	0
13	4	101	CRT	8	0
13	N	101	CRT	9	0
13	X	101	CRT	8	0
10	E	103	LMT	2	0
6	Y	101	07D	1	0
10	J	103	LMT	2	0
13	J	101	CRT	8	0
13	2	101	CRT	9	0
13	M	407	CRT	6	0
6	8	102	07D	2	0
13	E	101	CRT	7	0
10	0	103	LMT	1	0
10	M	410	LMT	4	0
9	H	302	PGV	6	0
10	5	201	LMT	2	0
13	0	101	CRT	5	0
15	H	305	PEF	3	0
13	A	102	CRT	3	0
6	E	102	07D	1	0
10	6	103	LMT	2	0
10	P	103	LMT	1	0
13	V	101	CRT	6	0
10	Z	103	LMT	2	0
8	M	401	U10	1	0
14	M	409	CDL	2	0
10	B	102	LMT	2	0

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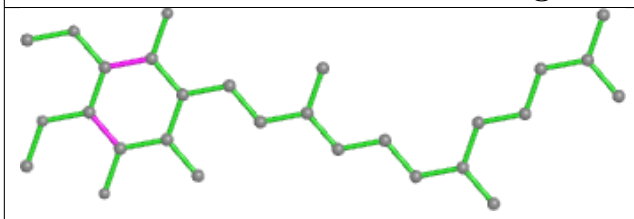
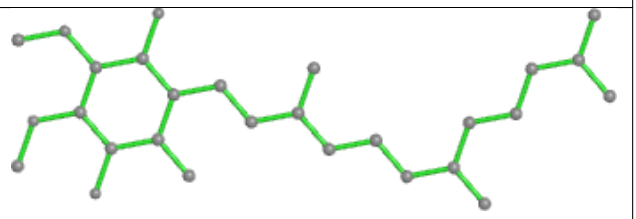
Mol	Chain	Res	Type	Clashes	Symm-Clashes
13	8	101	CRT	7	0
9	L	304	PGV	4	0
13	T	101	CRT	4	0
13	R	101	CRT	6	0
14	H	303	CDL	6	0
13	6	101	CRT	7	0
15	K	102	PEF	4	0
10	M	411	LMT	1	0
14	H	304	CDL	2	0
6	N	102	07D	1	0

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.

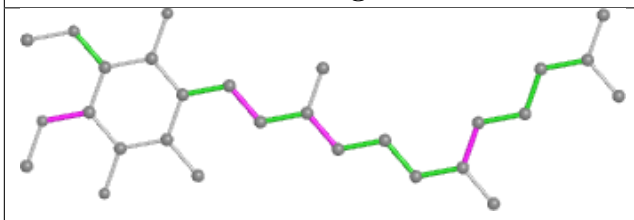
Ligand U10 L 303



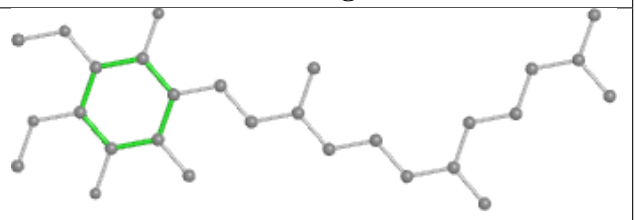
Bond lengths



Bond angles

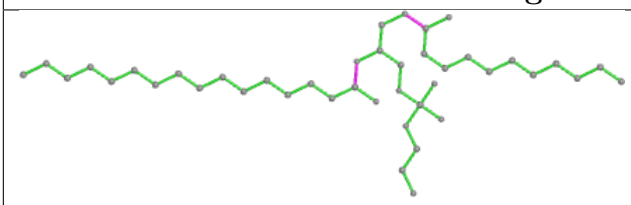


Torsions

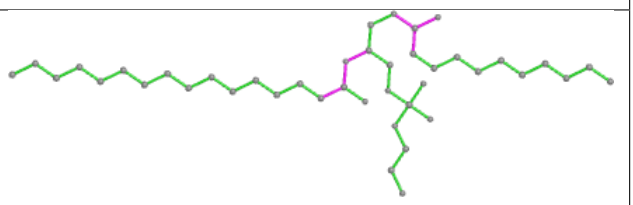


Rings

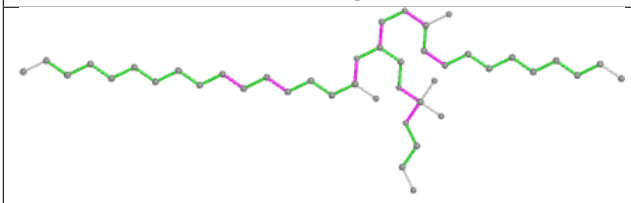
Ligand PEF K 103



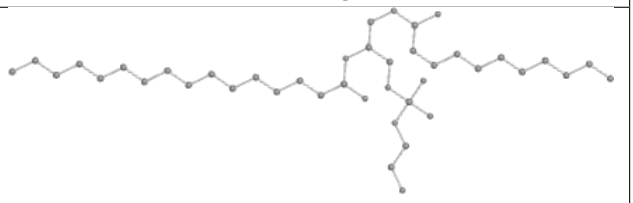
Bond lengths



Bond angles

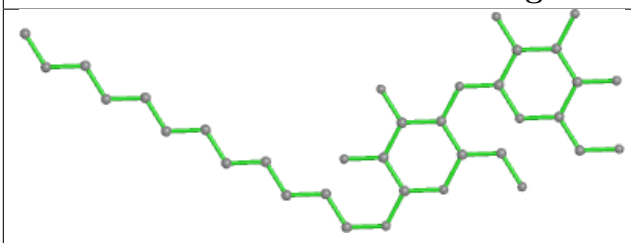


Torsions

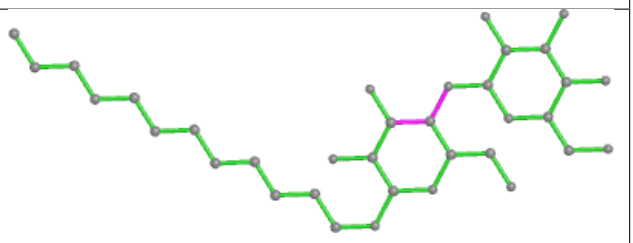


Rings

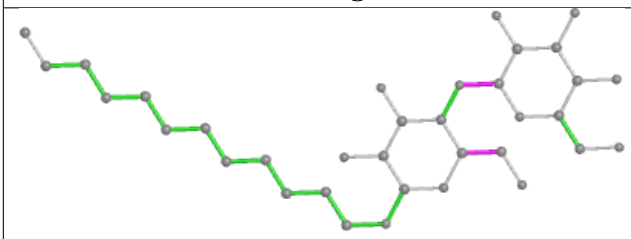
Ligand LMT 8 103



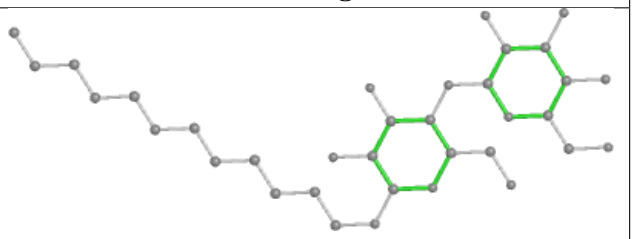
Bond lengths



Bond angles

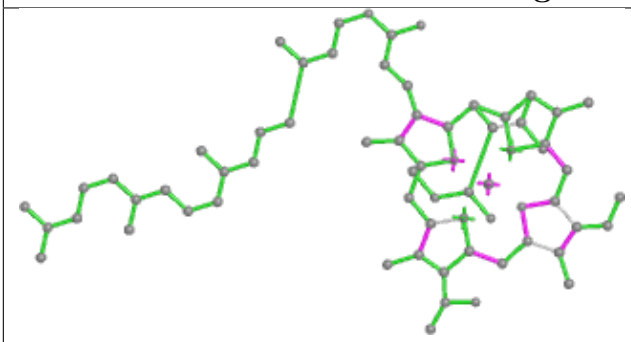


Torsions

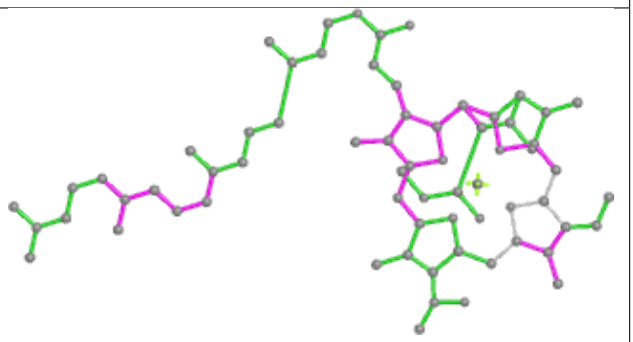


Rings

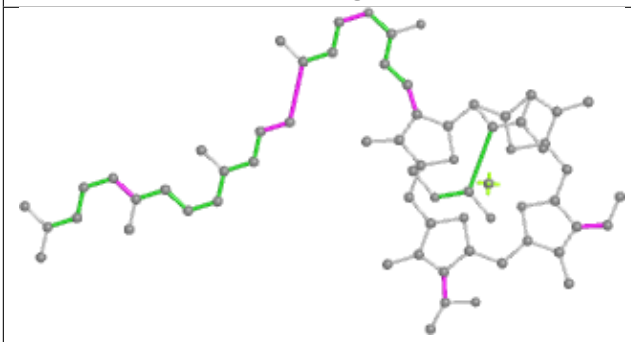
Ligand 07D 2 102



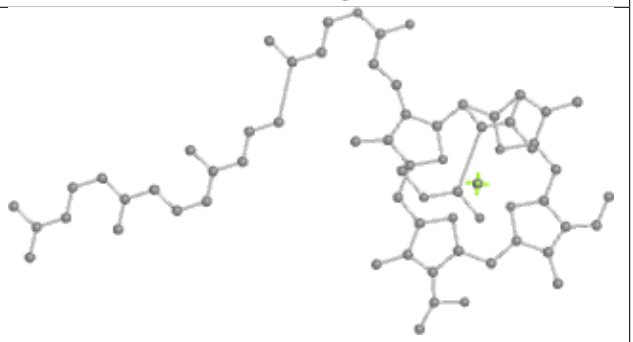
Bond lengths



Bond angles

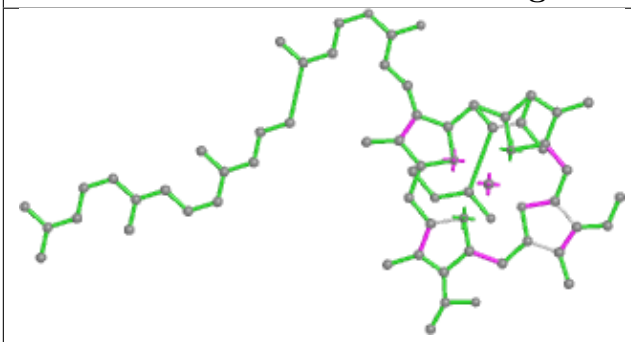


Torsions



Rings

Ligand 07D G 102



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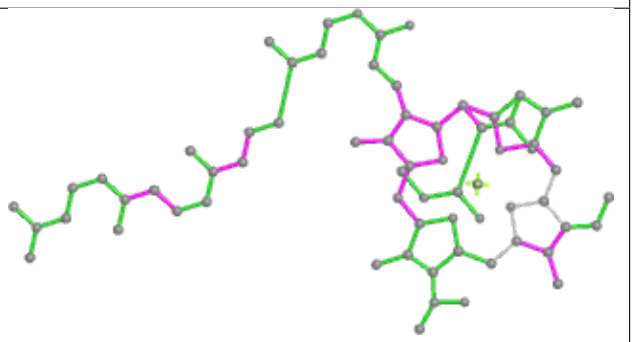
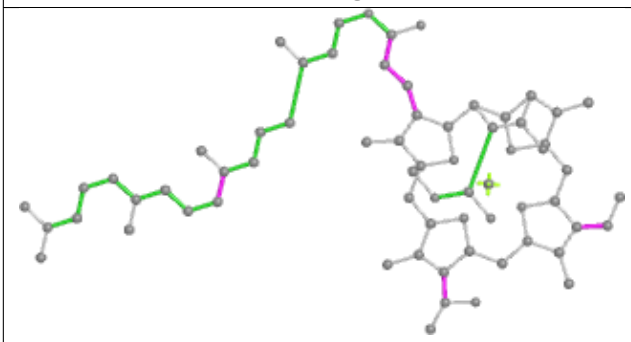


Bond angles



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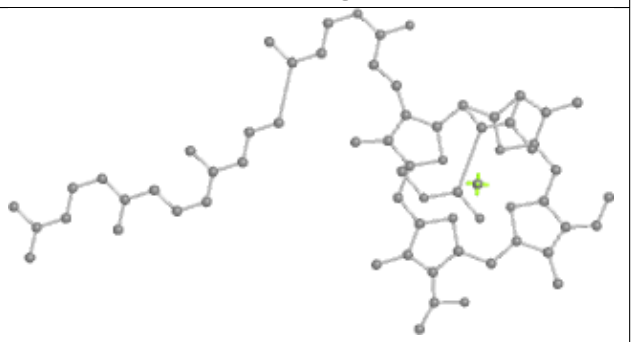
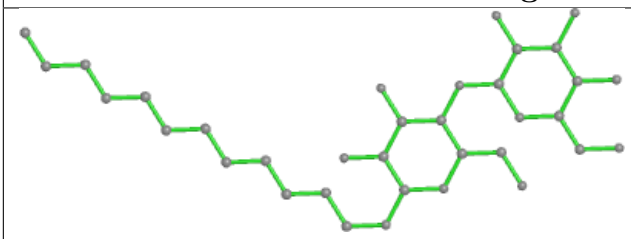
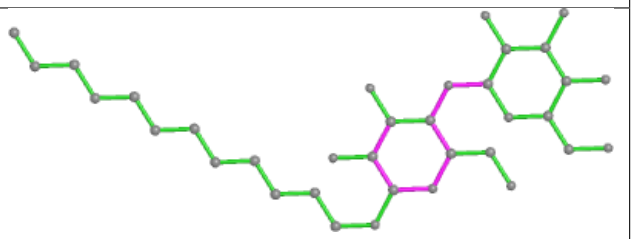


Rings

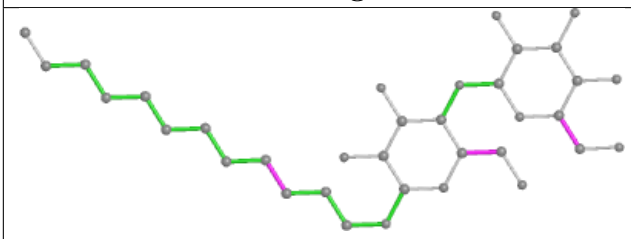
Ligand LMT V 103



Bond lengths



Bond angles



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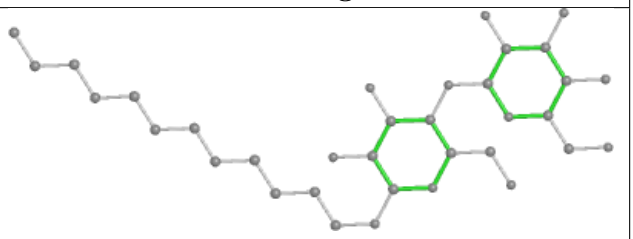
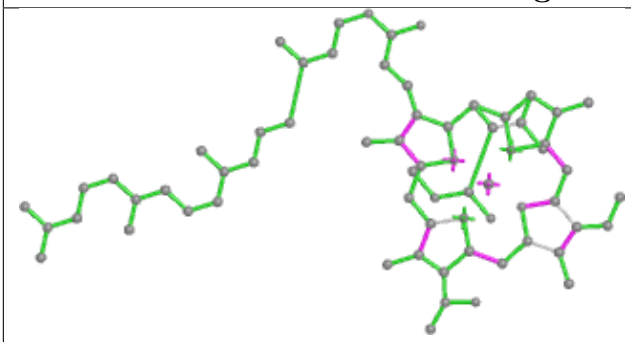
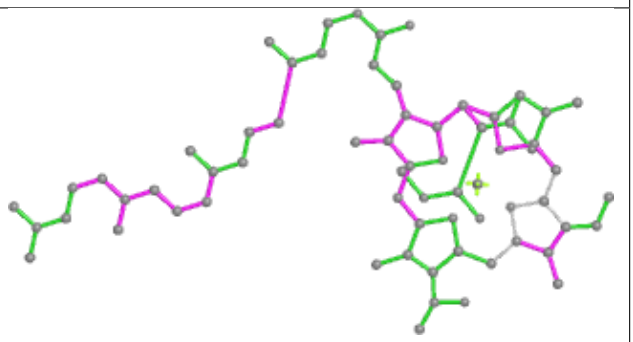


Rings

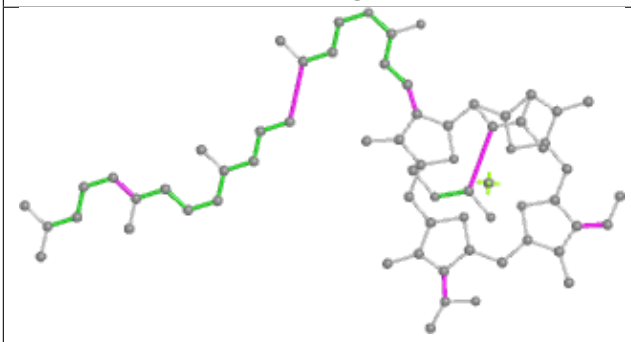
Ligand 07D 6 102



Bond lengths



Bond angles



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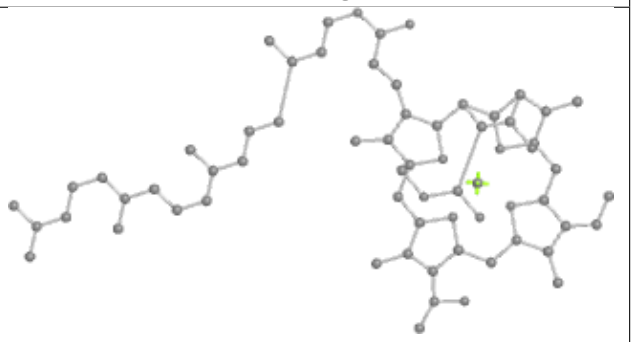
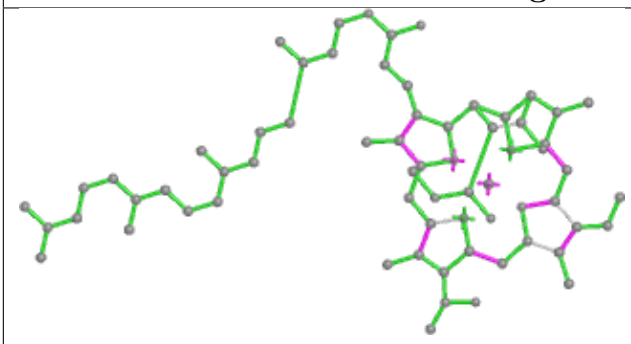


Rings

Ligand 07D V 102



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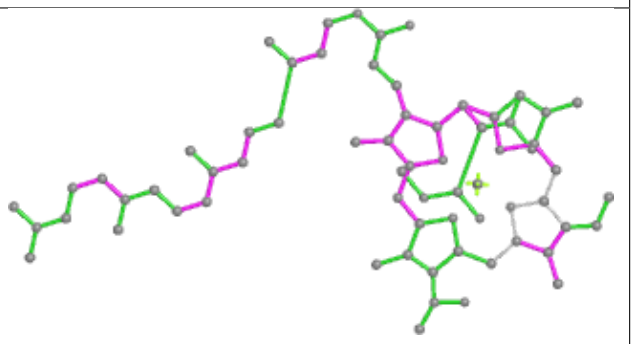
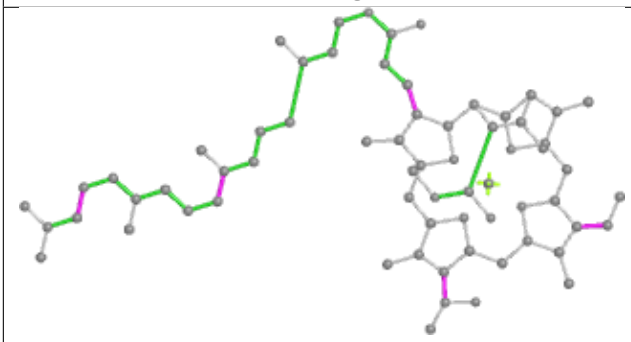
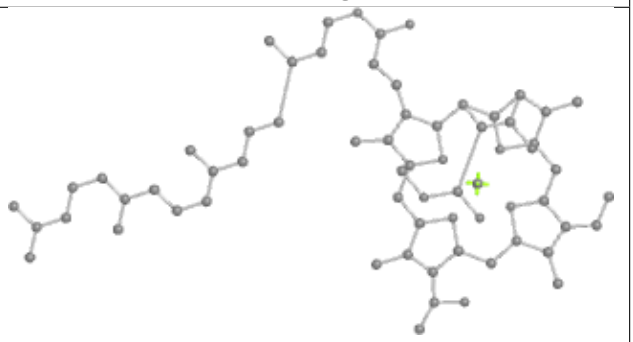


Bond angles

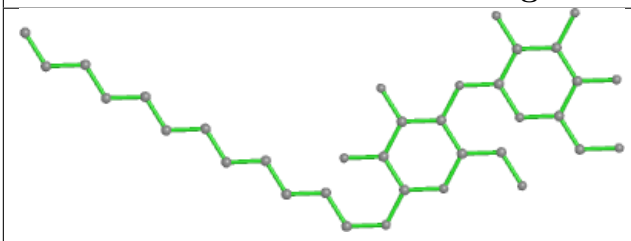


Torsions

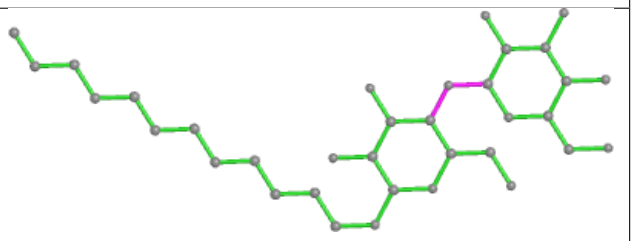


Rings

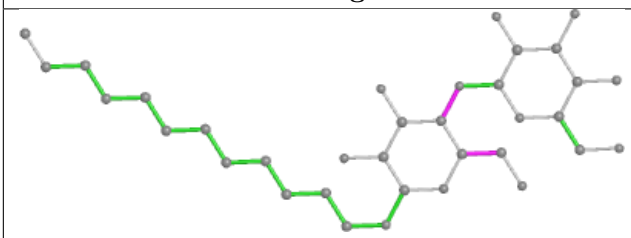
Ligand LMT X 103



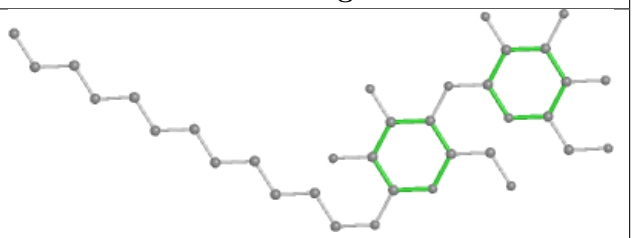
Bond lengths



Bond angles

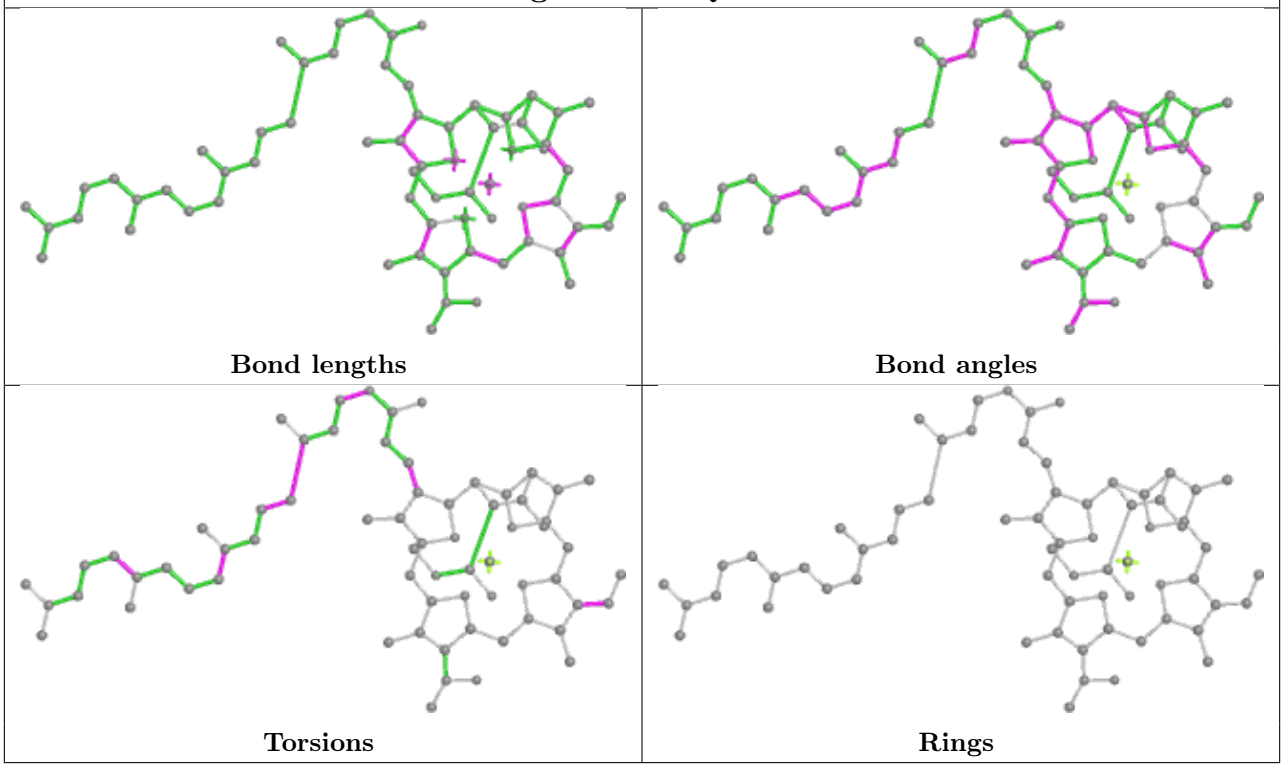


Torsions

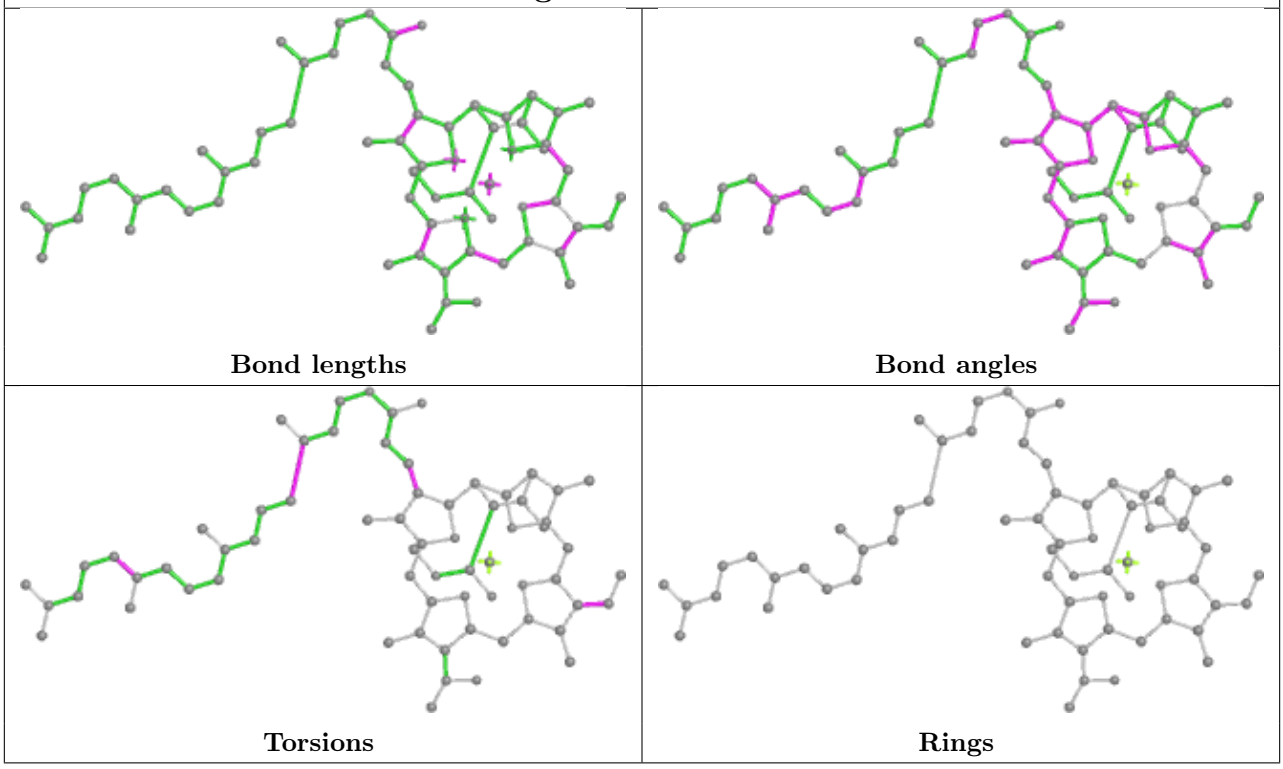


Rings

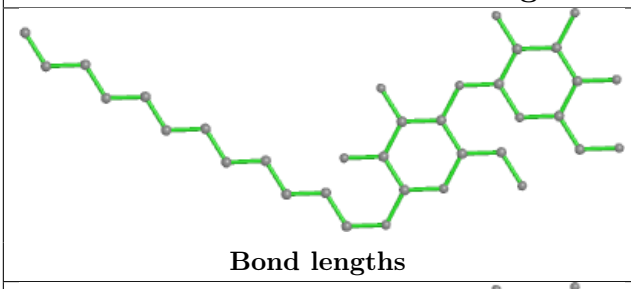
Ligand 07D Q 101



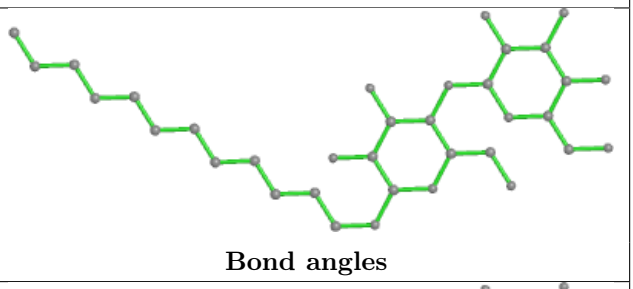
Ligand 07D 9 101



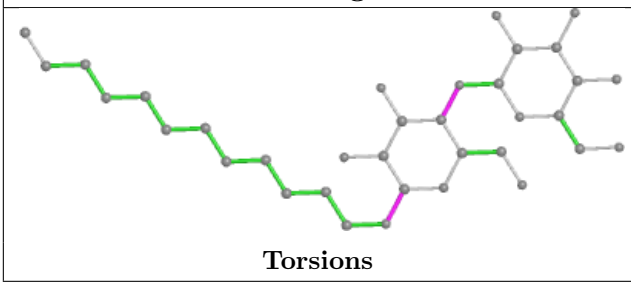
Ligand LMT G 103



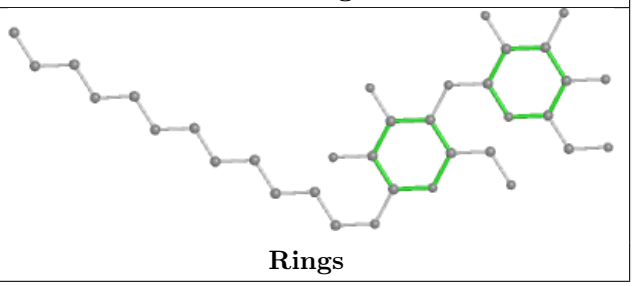
Bond lengths



Bond angles

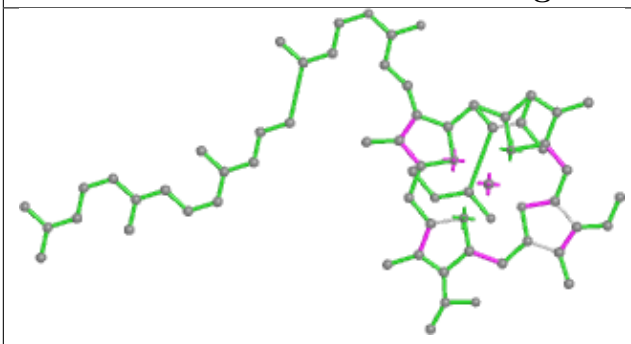


Torsions

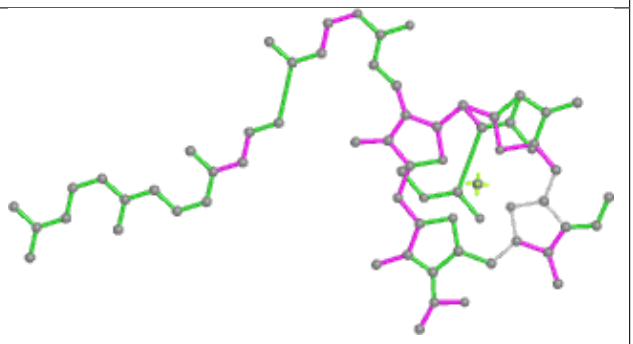


Rings

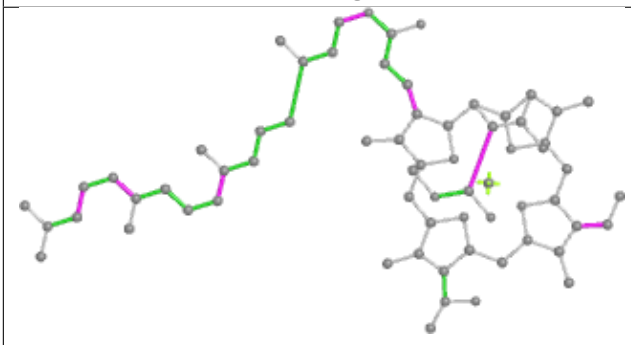
Ligand 07D 7 101



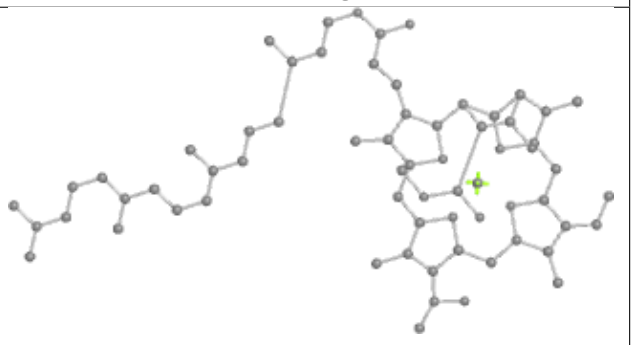
Bond lengths



Bond angles

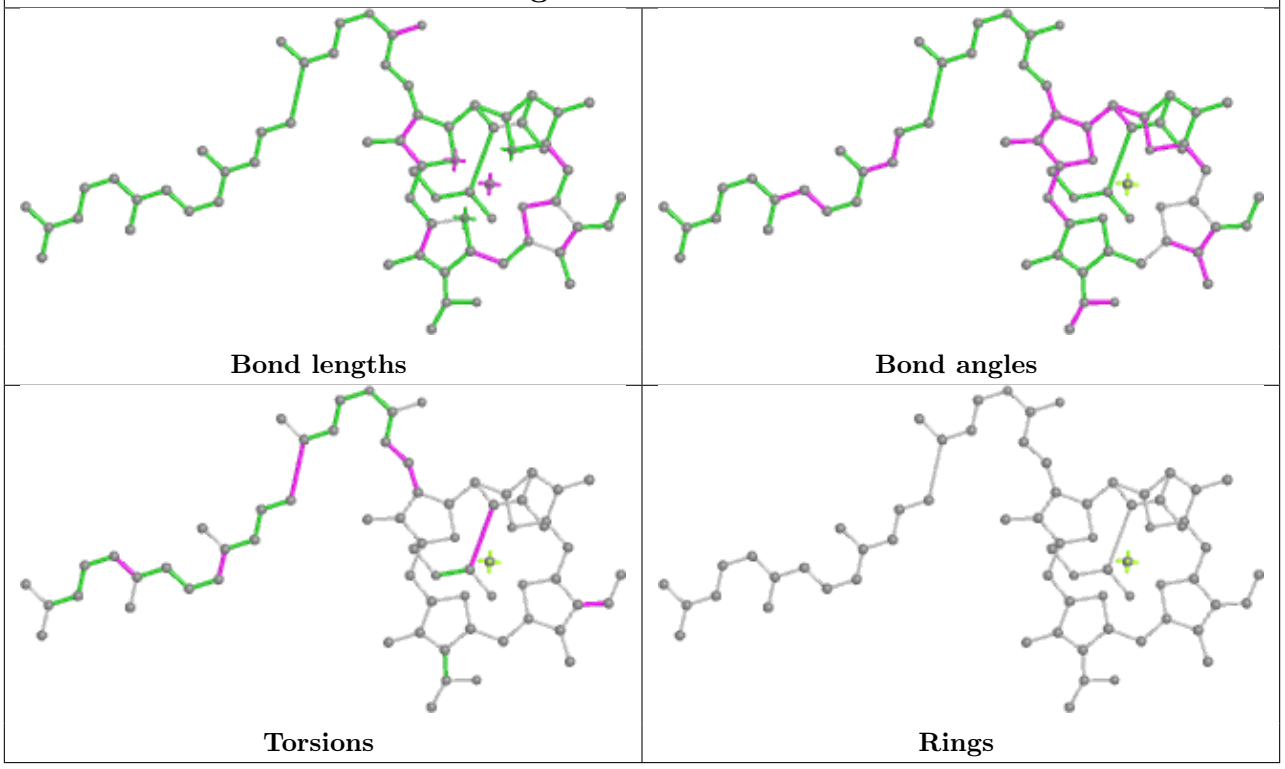


Torsions

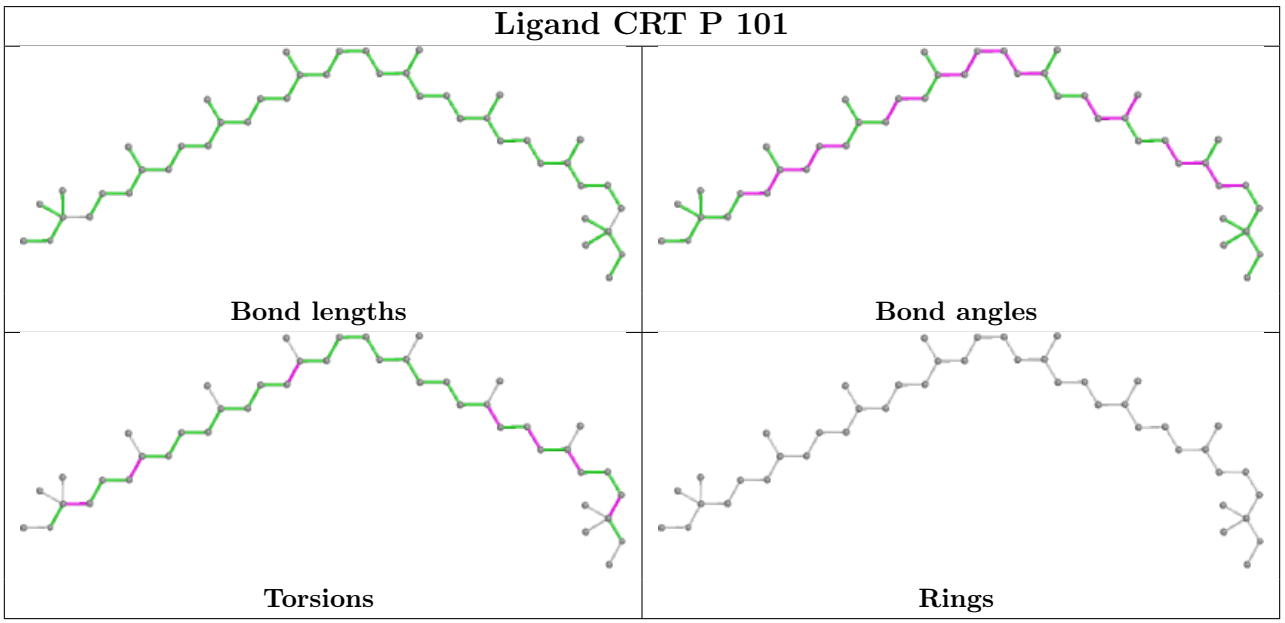


Rings

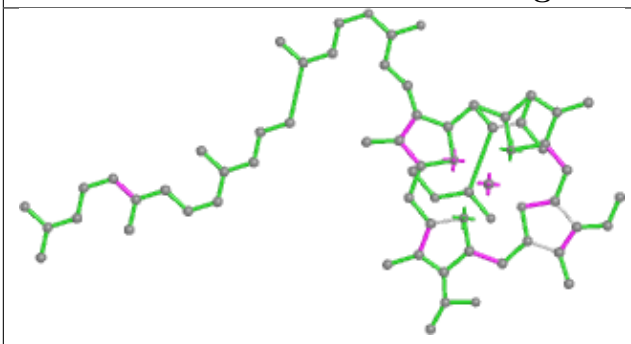
Ligand 07D O 101



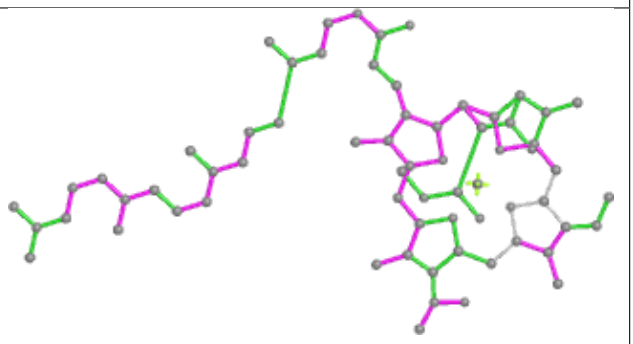
Ligand CRT P 101



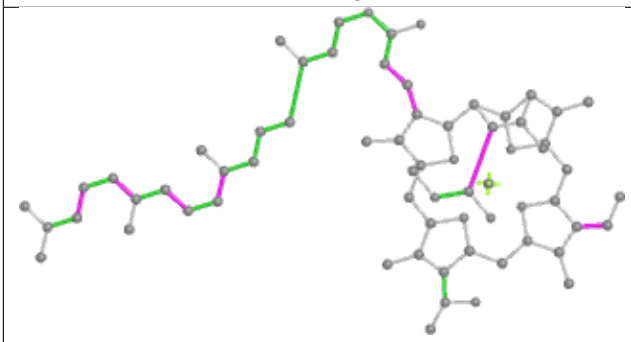
Ligand 07D 5 202



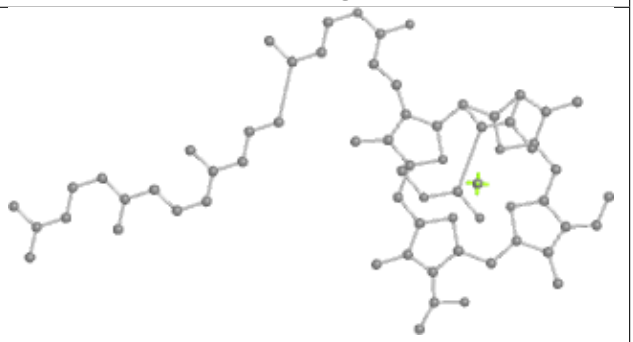
Bond lengths



Bond angles

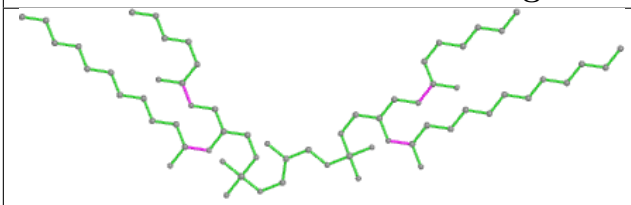


Torsions

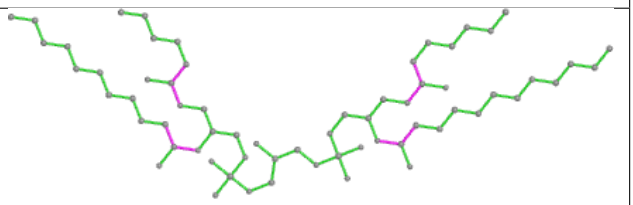


Rings

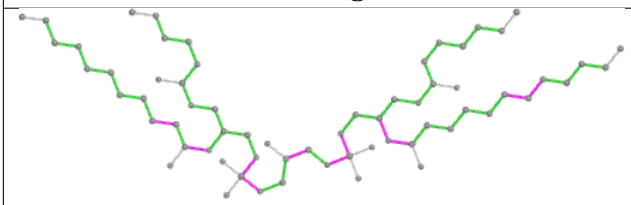
Ligand CDL H 301



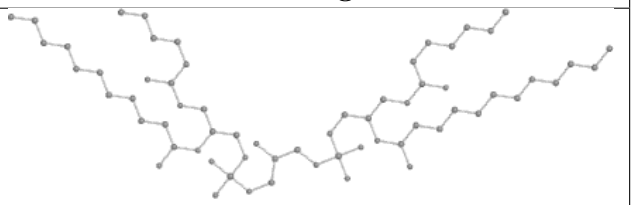
Bond lengths



Bond angles

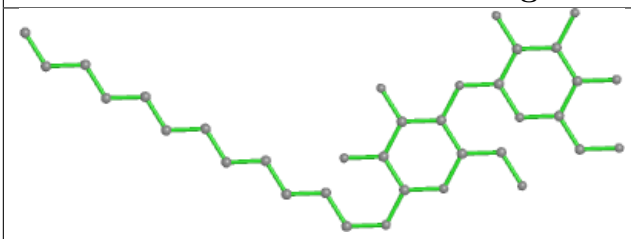


Torsions

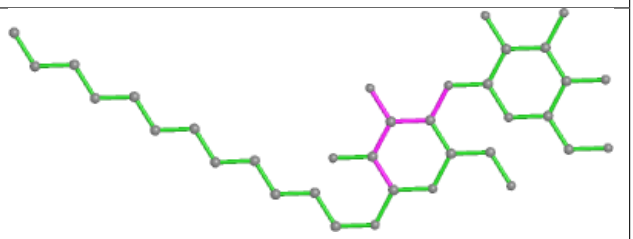


Rings

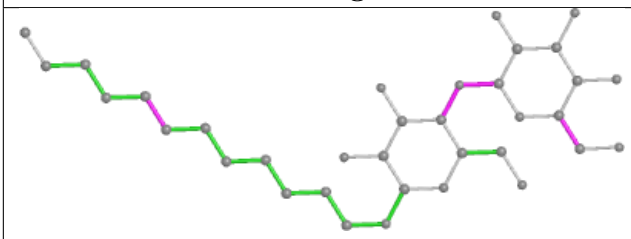
Ligand LMT N 103



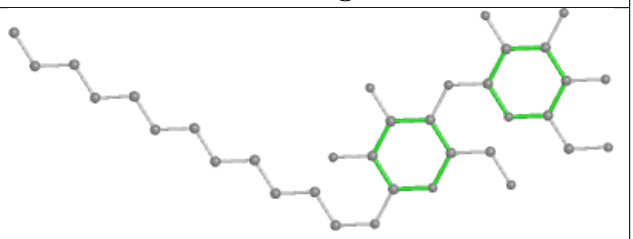
Bond lengths



Bond angles

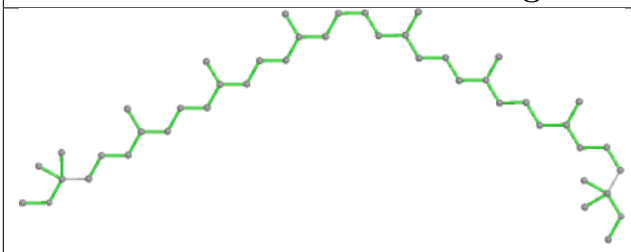


Torsions

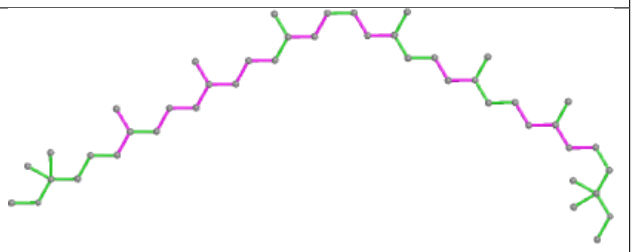


Rings

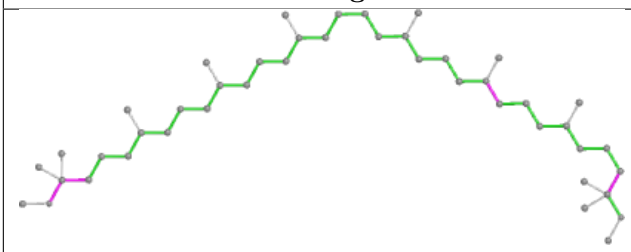
Ligand CRT G 101



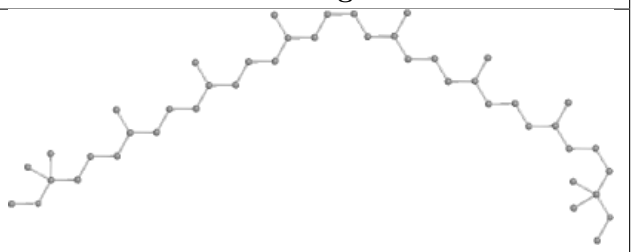
Bond lengths



Bond angles

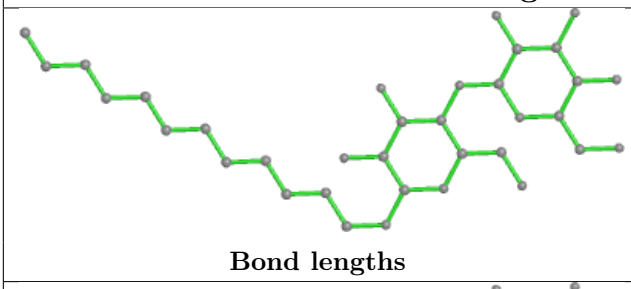


Torsions

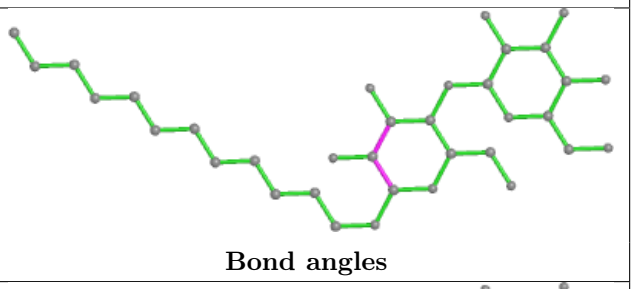


Rings

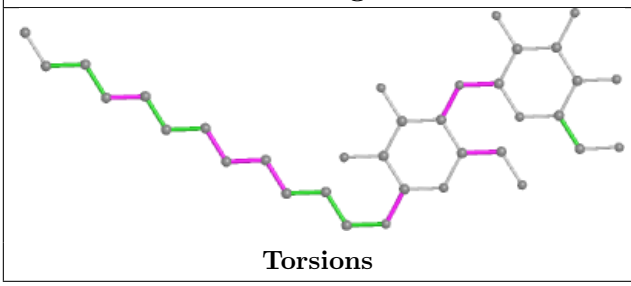
Ligand LMT H 306



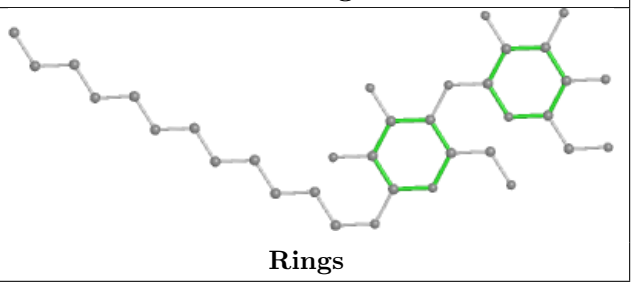
Bond lengths



Bond angles

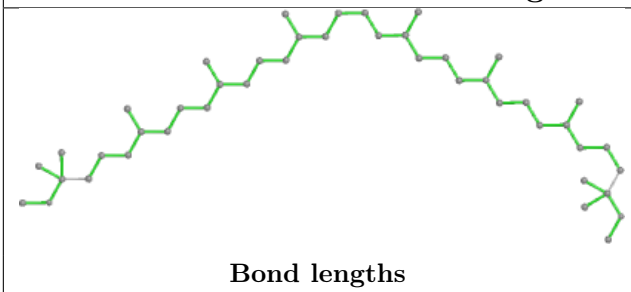


Torsions

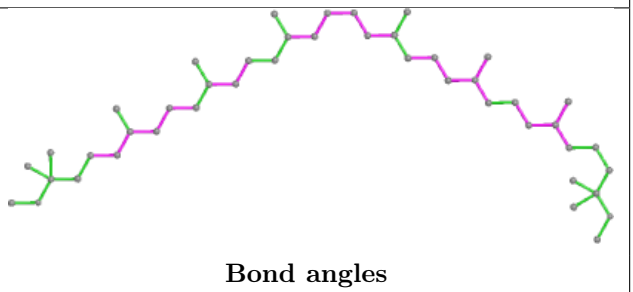


Rings

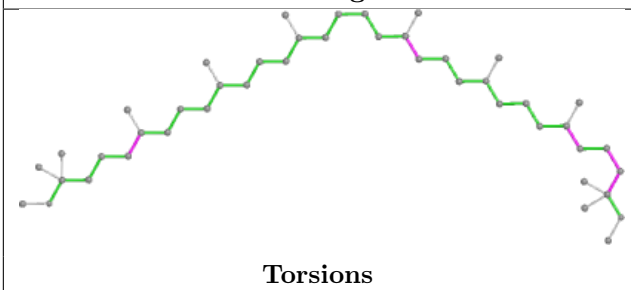
Ligand CRT Z 101



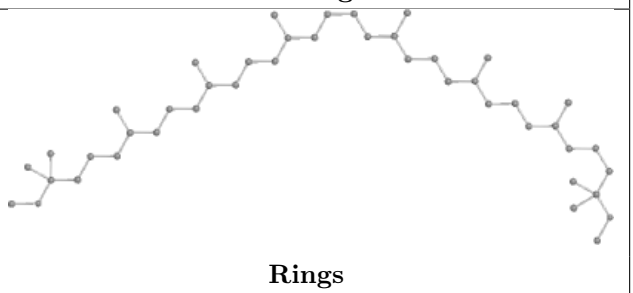
Bond lengths



Bond angles

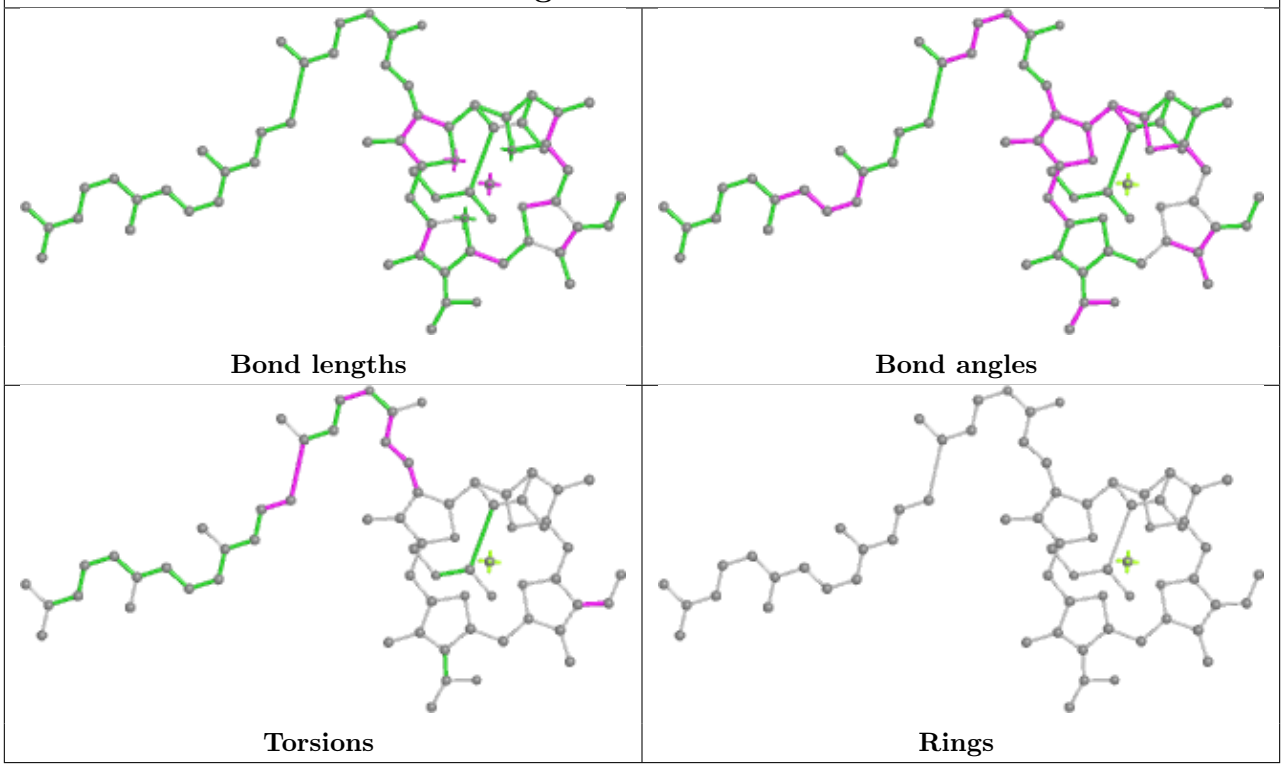


Torsions

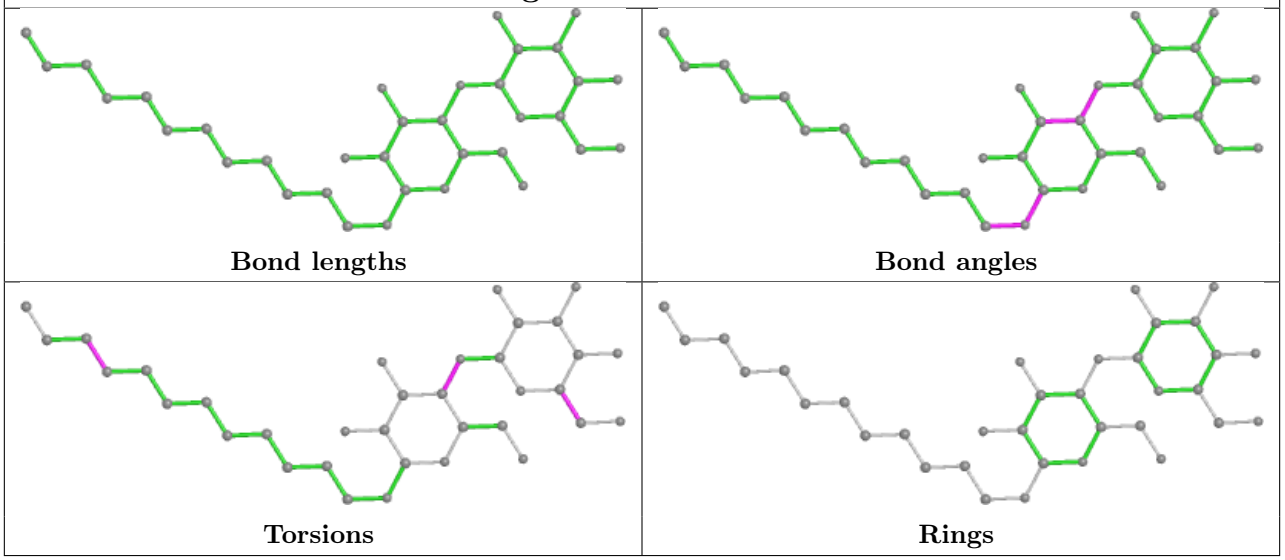


Rings

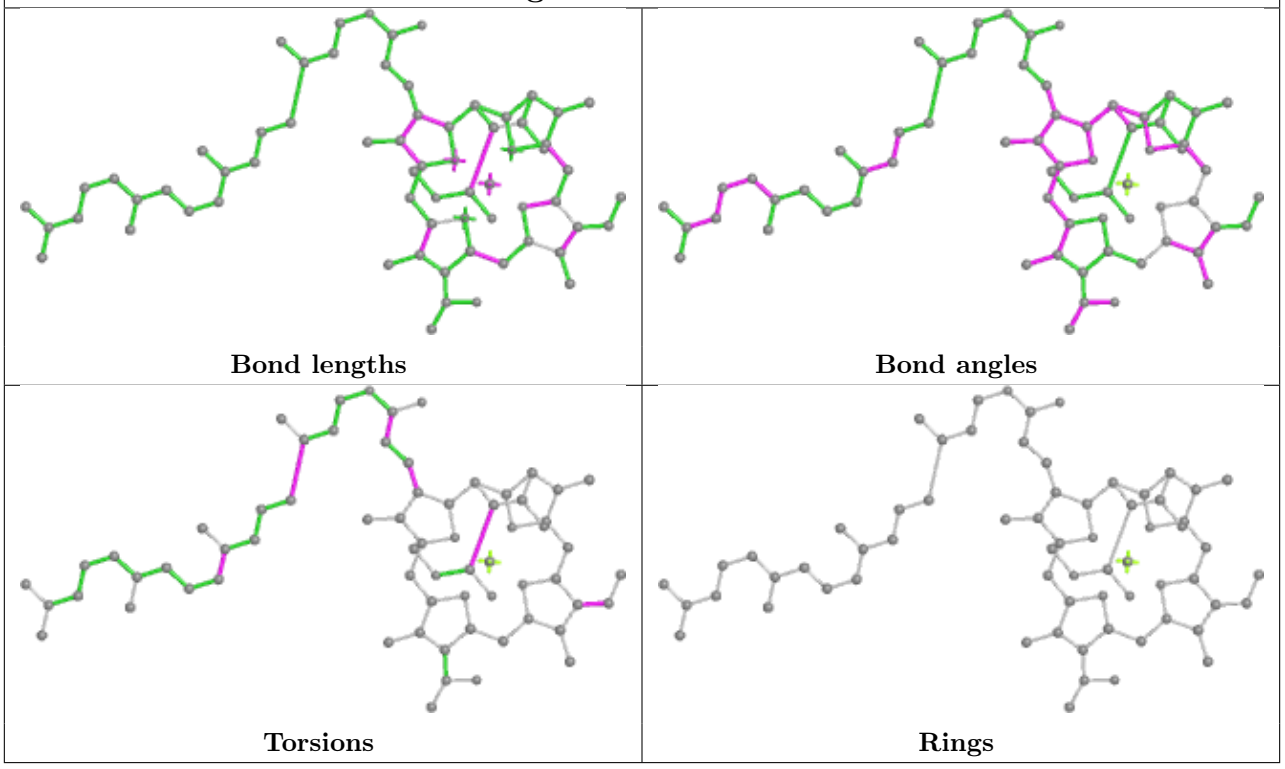
Ligand 07D 4 102



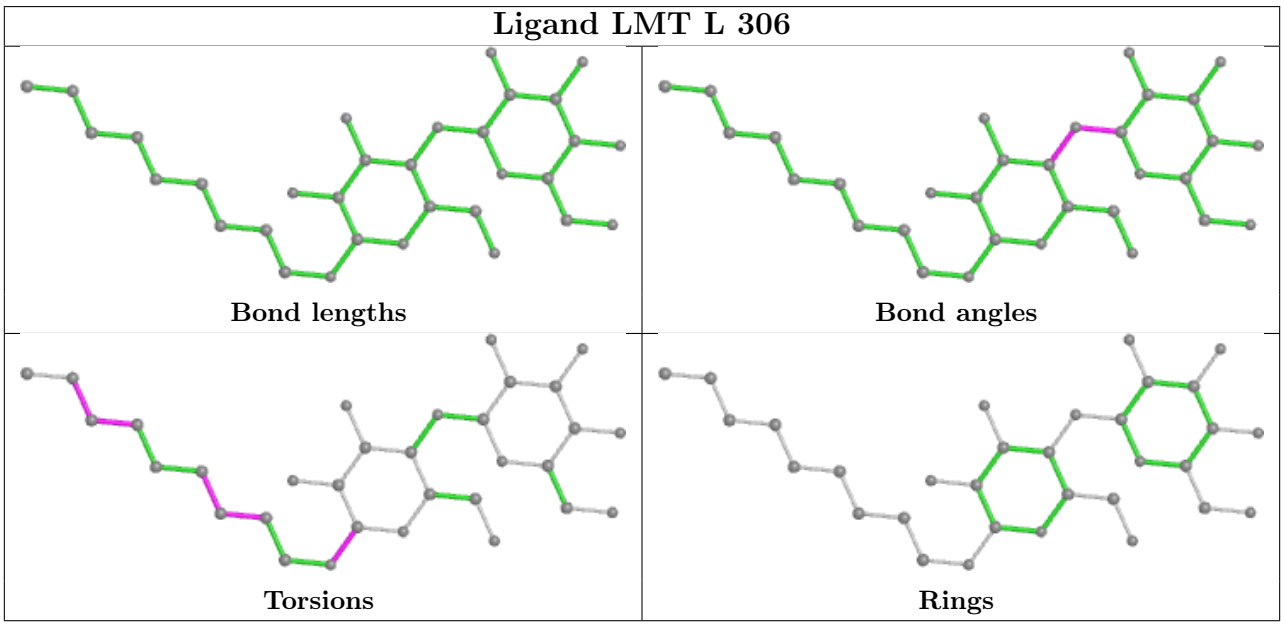
Ligand LMT R 102



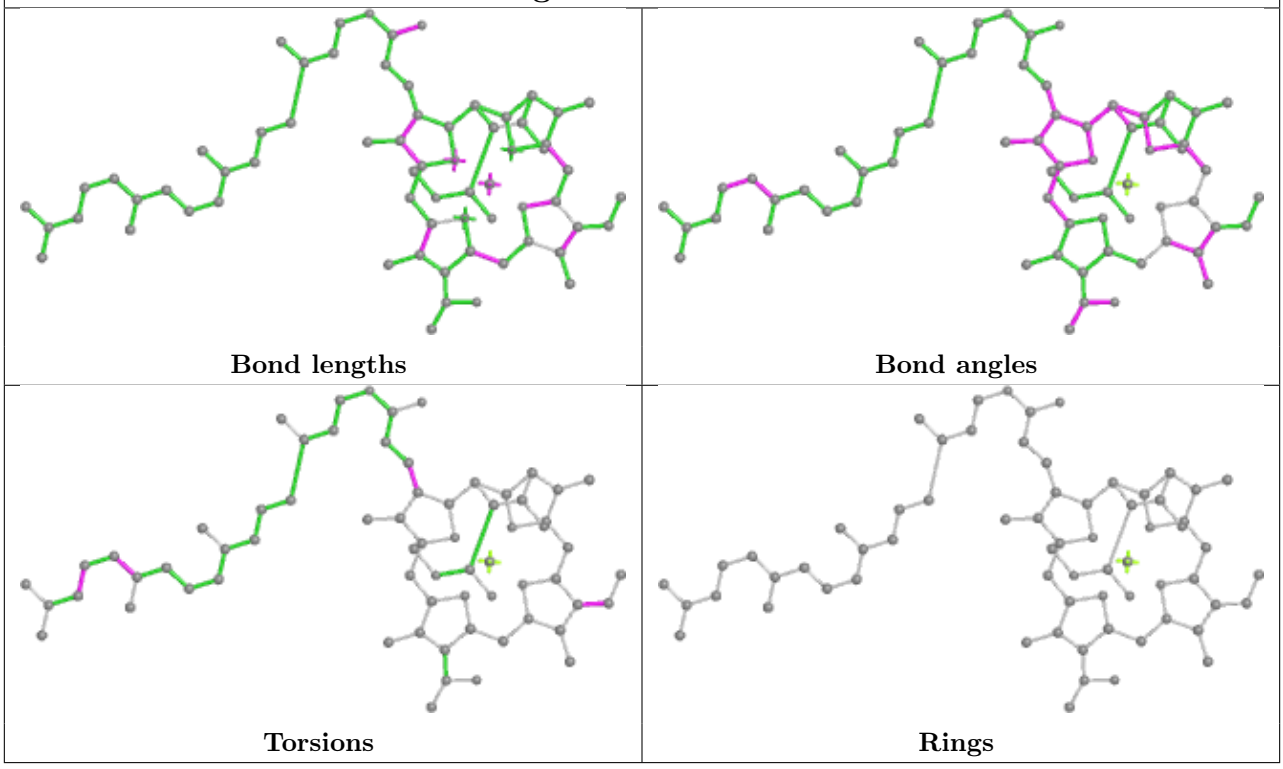
Ligand 07D M 404



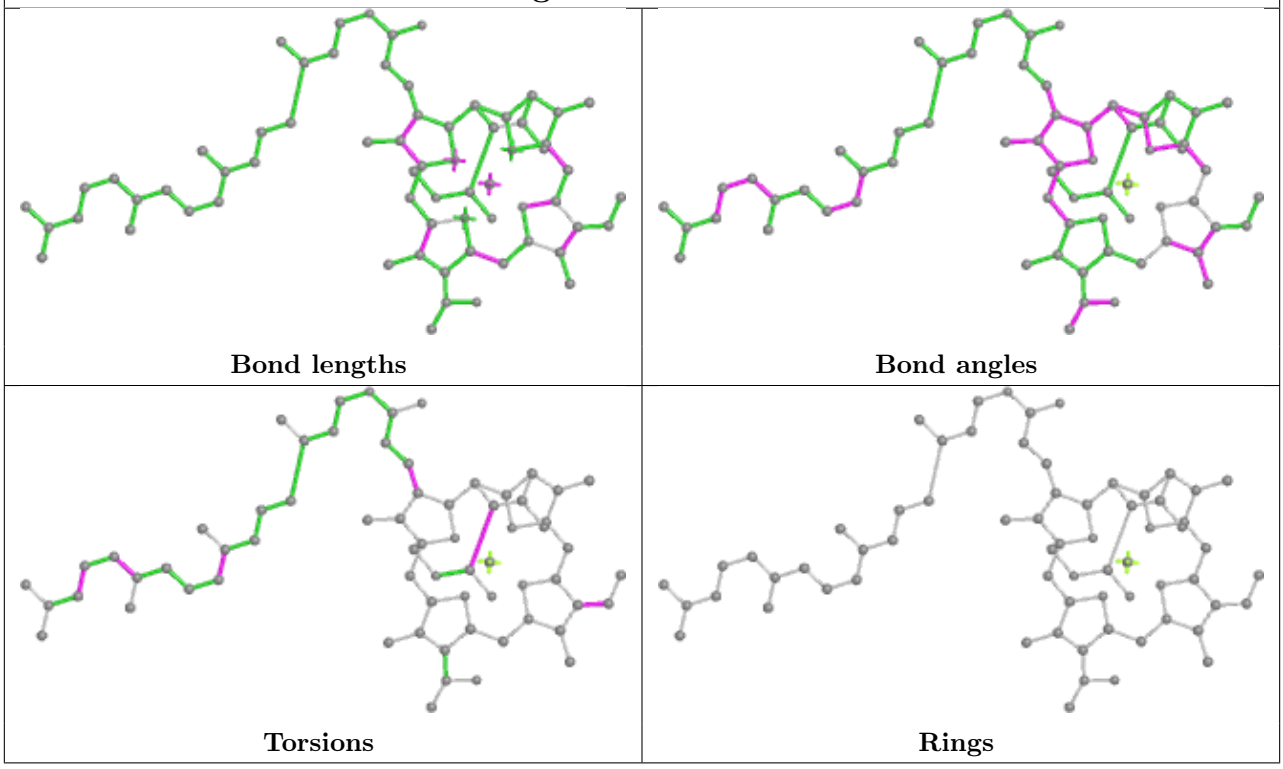
Ligand LMT L 306



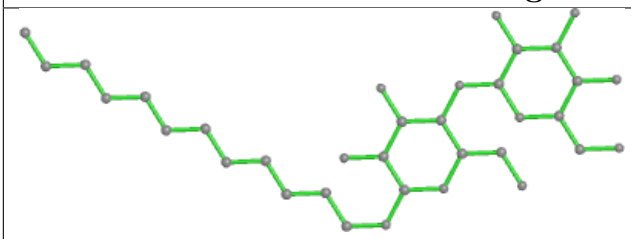
Ligand 07D L 301



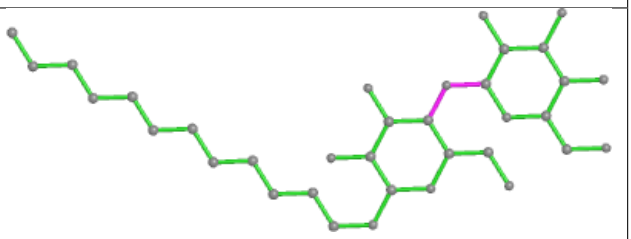
Ligand 07D F 101



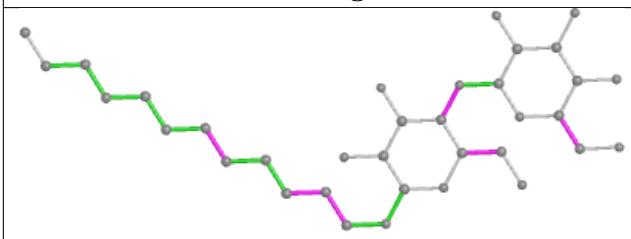
Ligand LMT 2 103



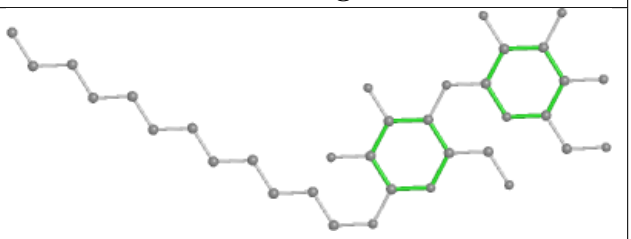
Bond lengths



Bond angles

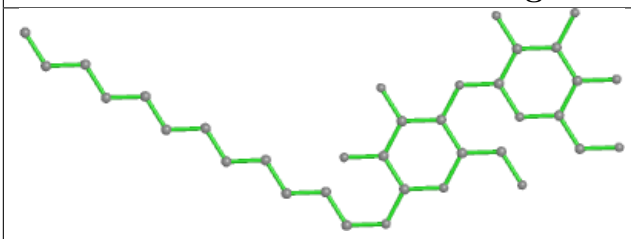


Torsions

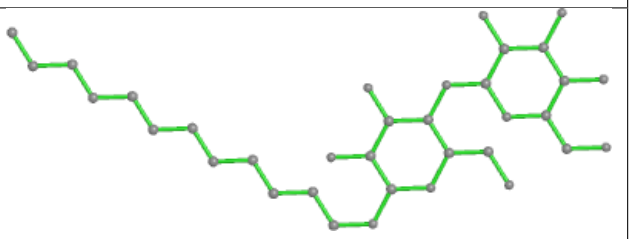


Rings

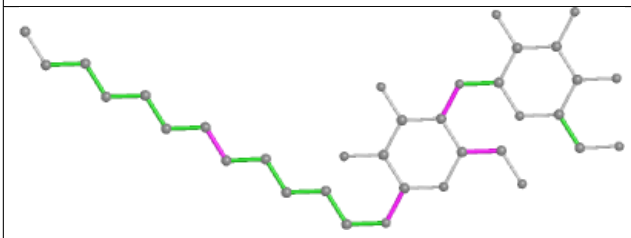
Ligand LMT 5 203



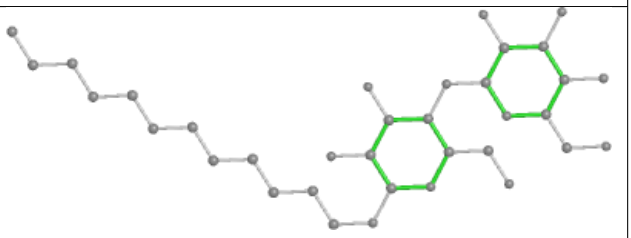
Bond lengths



Bond angles

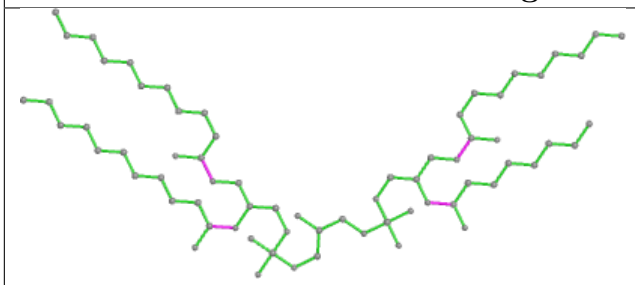


Torsions

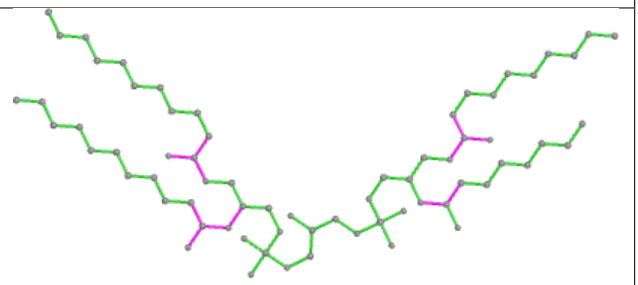


Rings

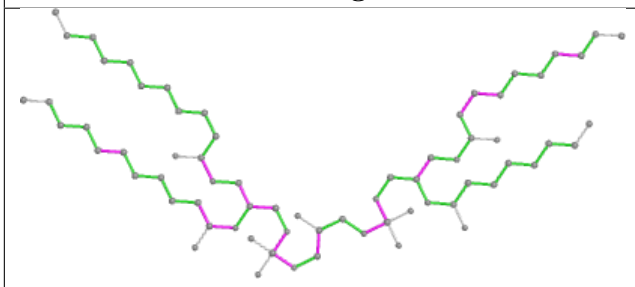
Ligand CDL M 408



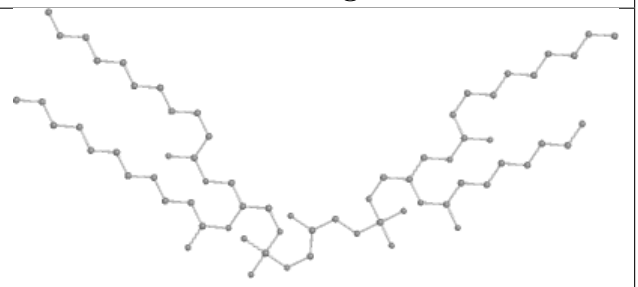
Bond lengths



Bond angles

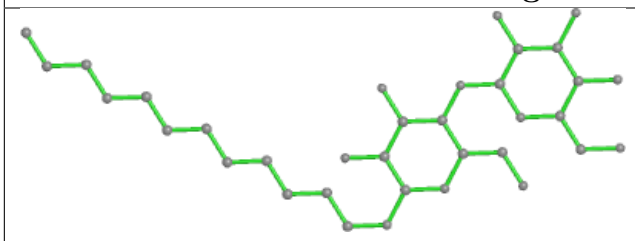


Torsions

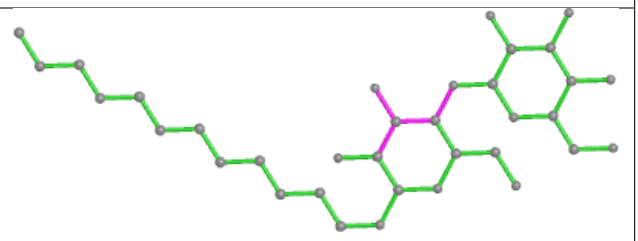


Rings

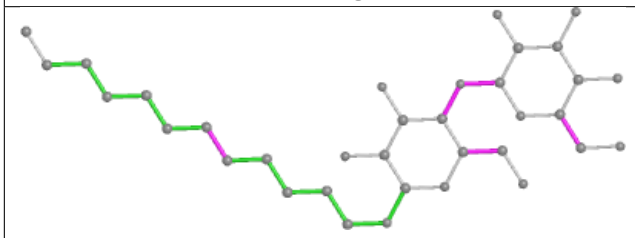
Ligand LMT T 103



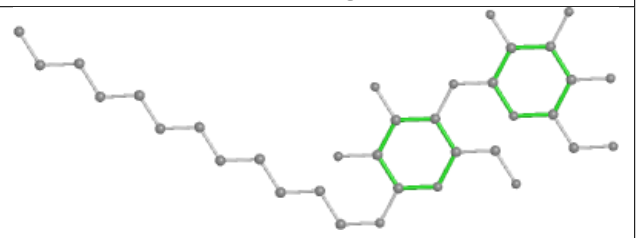
Bond lengths



Bond angles

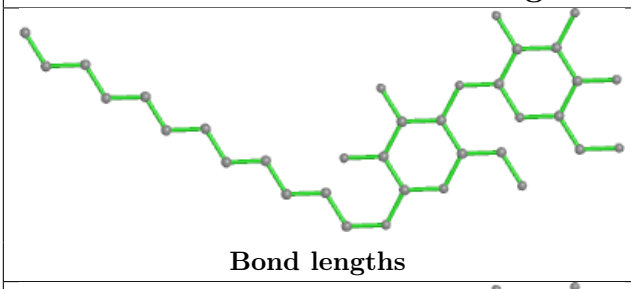


Torsions

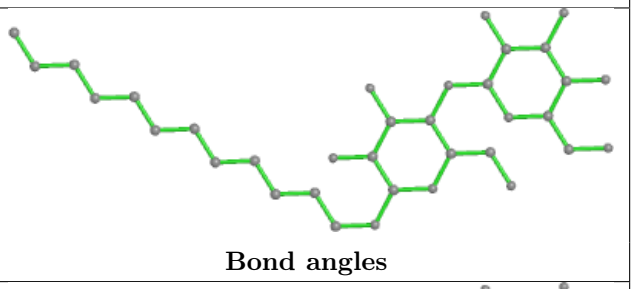


Rings

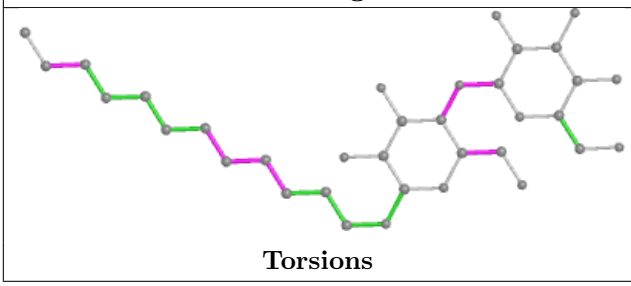
Ligand LMT 4 103



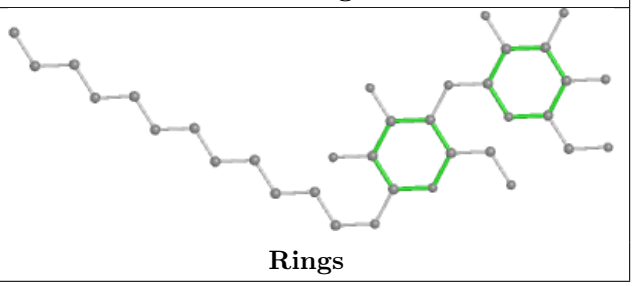
Bond lengths



Bond angles

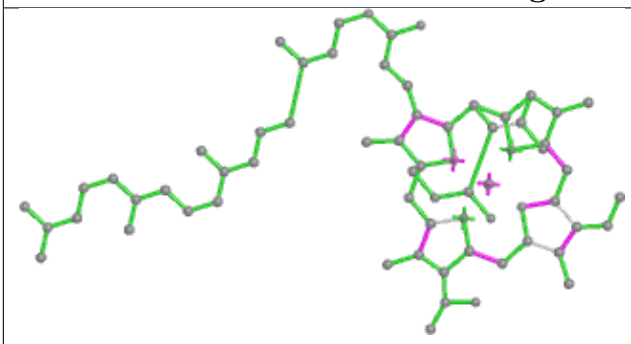


Torsions

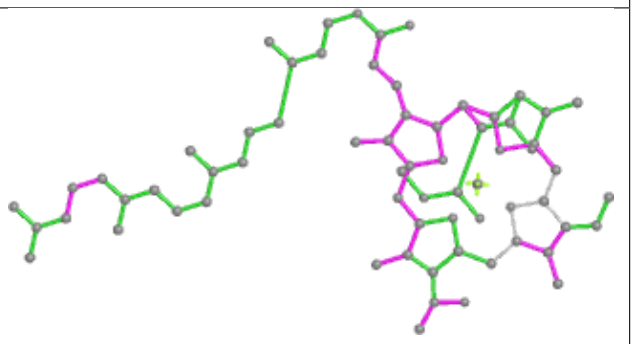


Rings

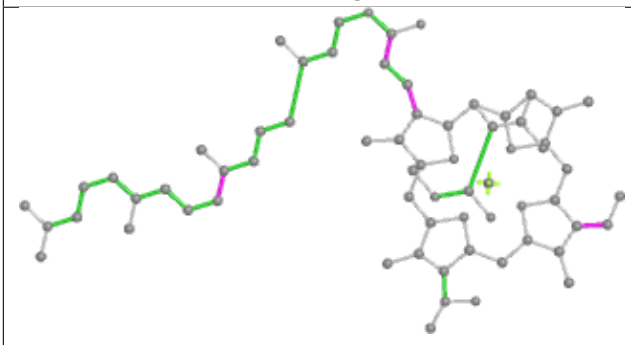
Ligand 07D U 101



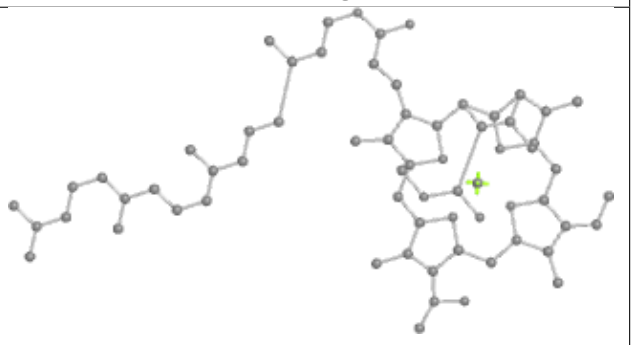
Bond lengths



Bond angles

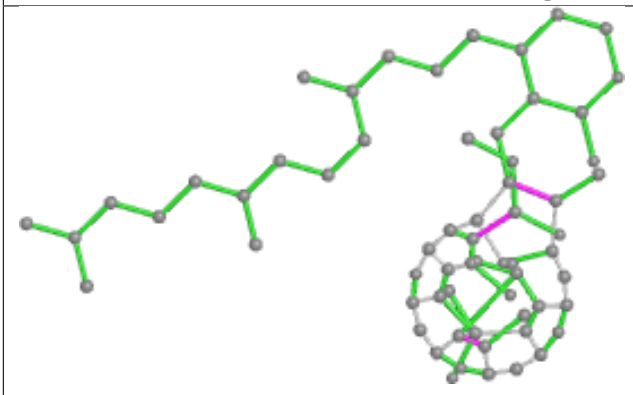


Torsions

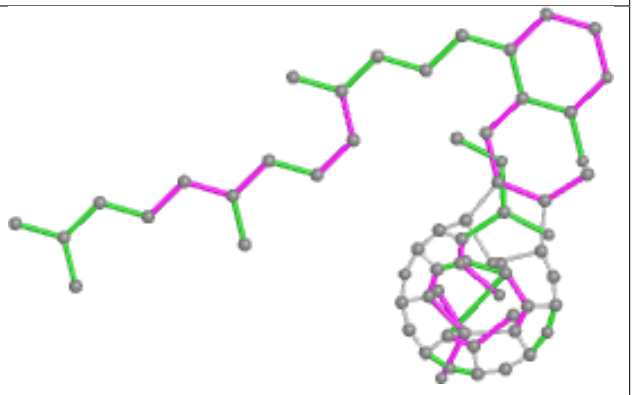


Rings

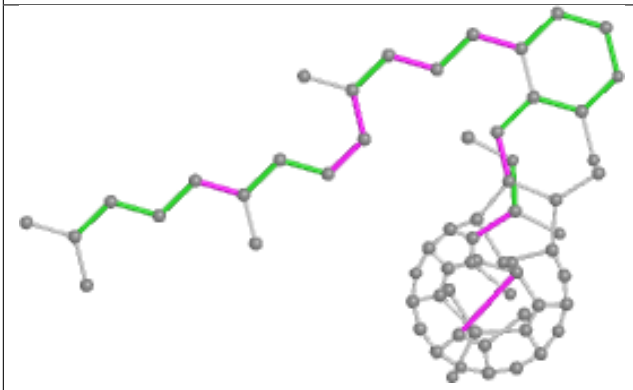
Ligand 08I L 302



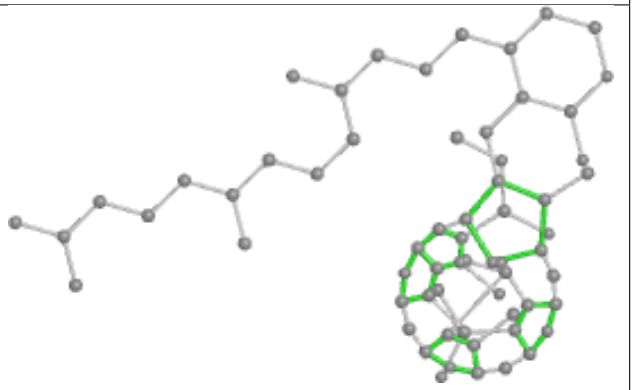
Bond lengths



Bond angles

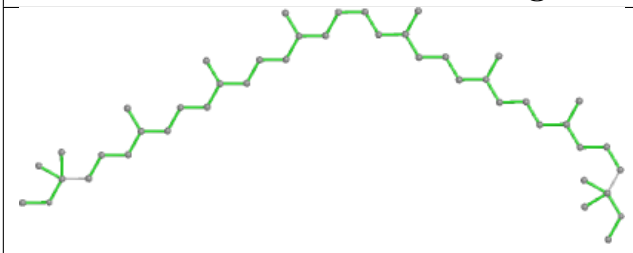


Torsions

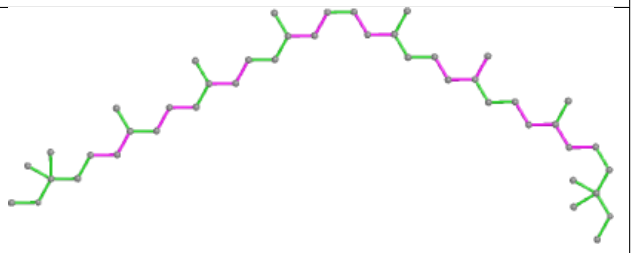


Rings

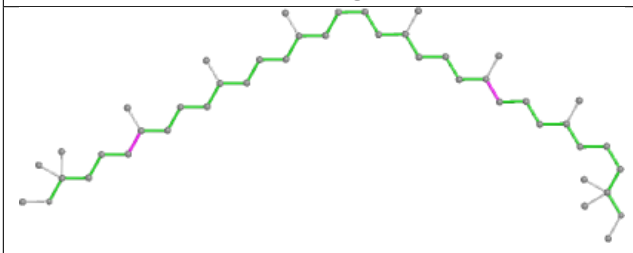
Ligand CRT 4 101



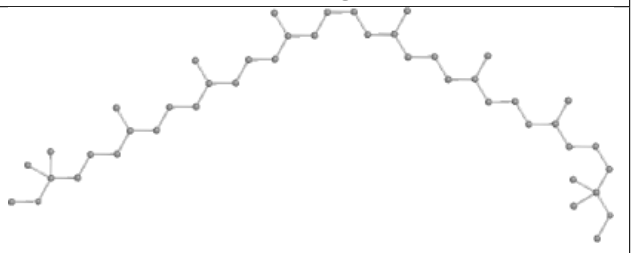
Bond lengths



Bond angles

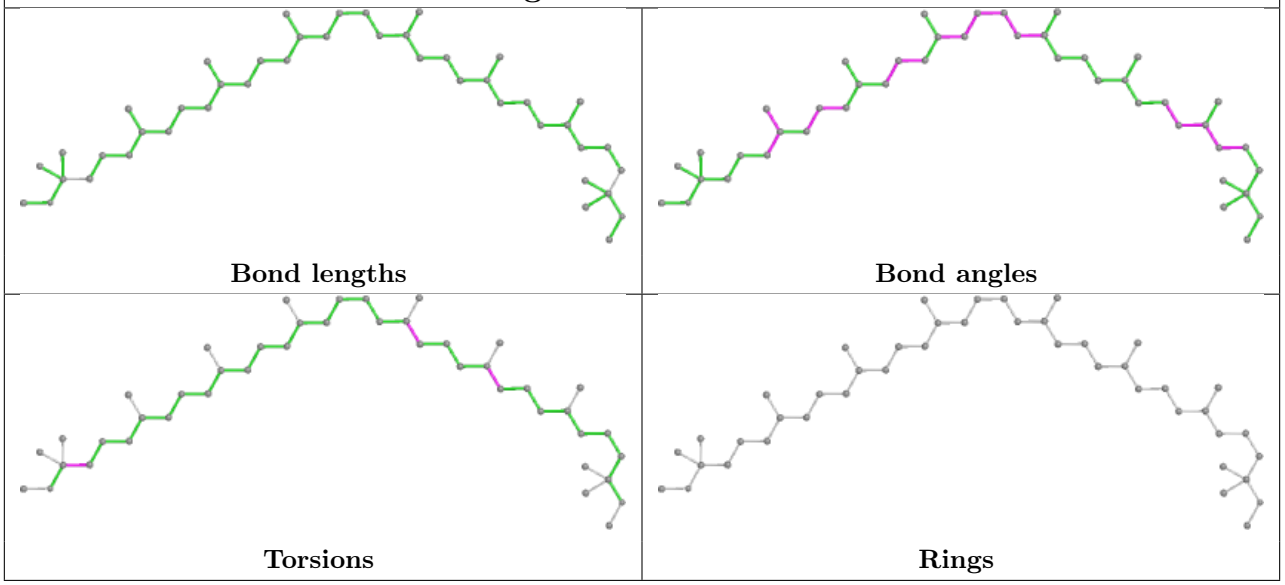


Torsions

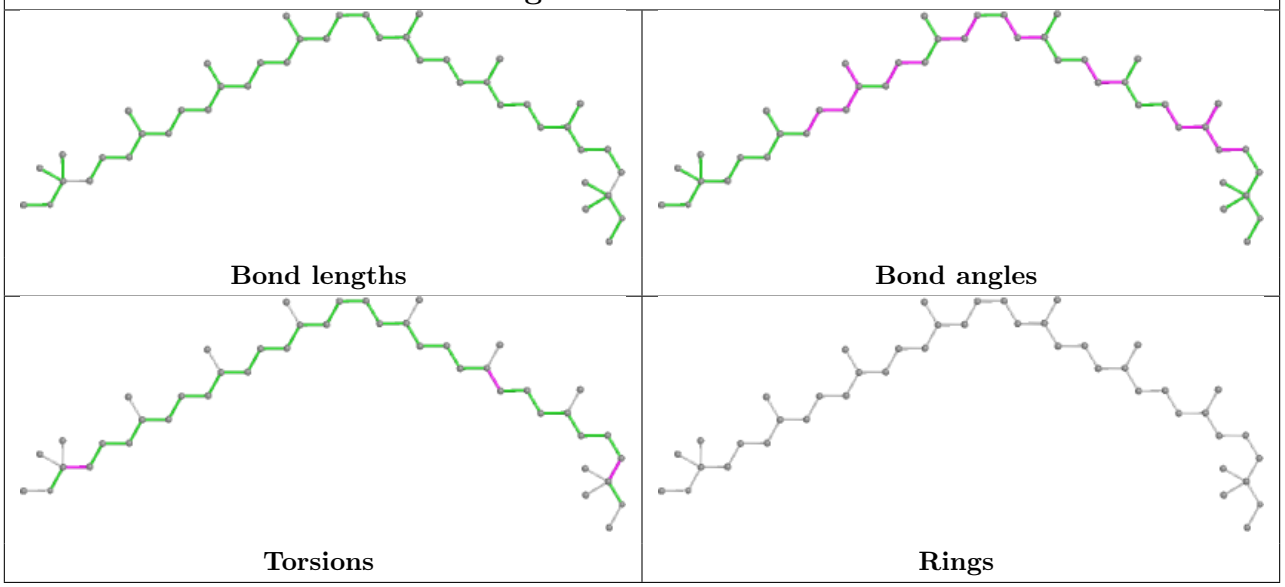


Rings

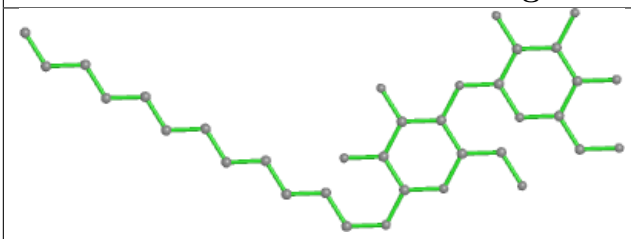
Ligand CRT N 101



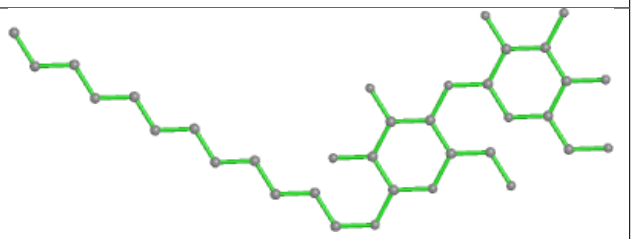
Ligand CRT X 101



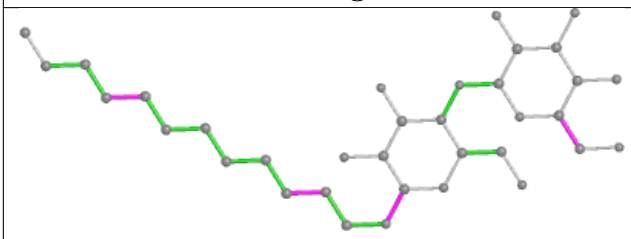
Ligand LMT E 103



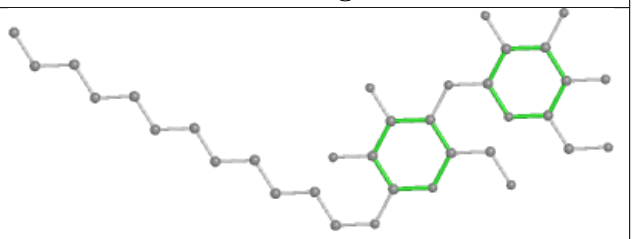
Bond lengths



Bond angles

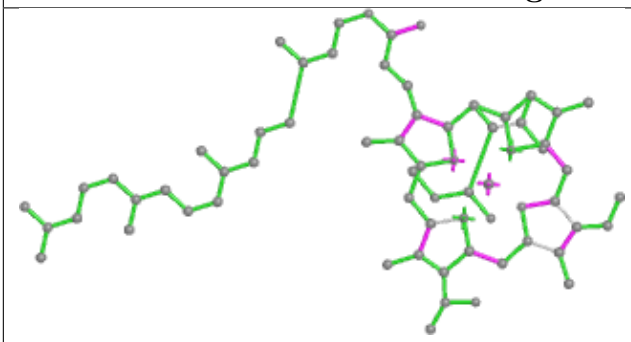


Torsions

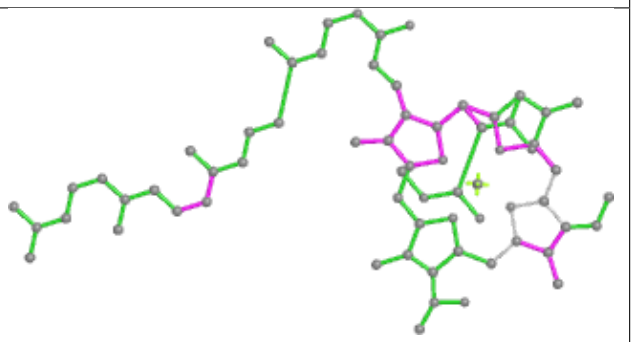


Rings

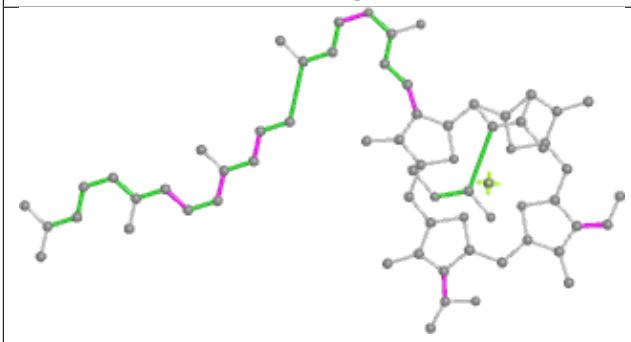
Ligand 07D M 403



Bond lengths



Bond angles



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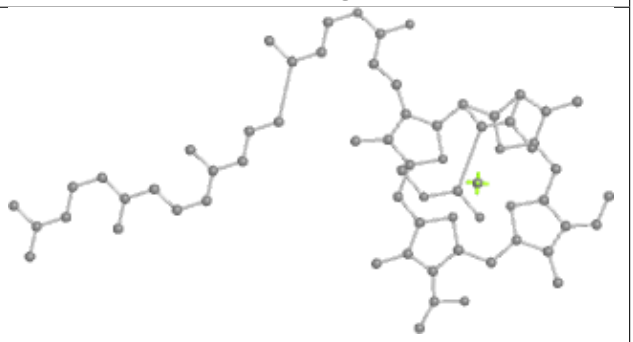
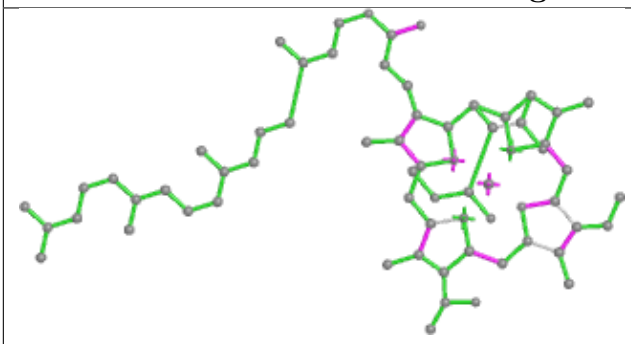
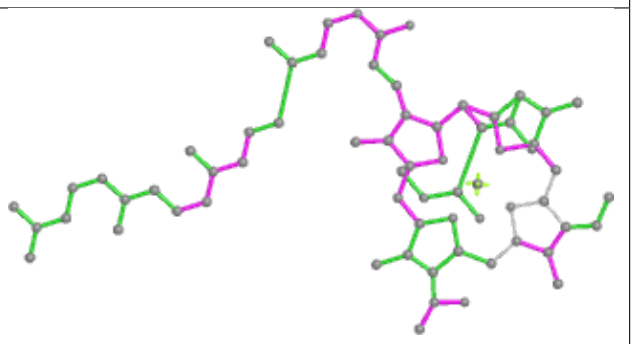


Rings

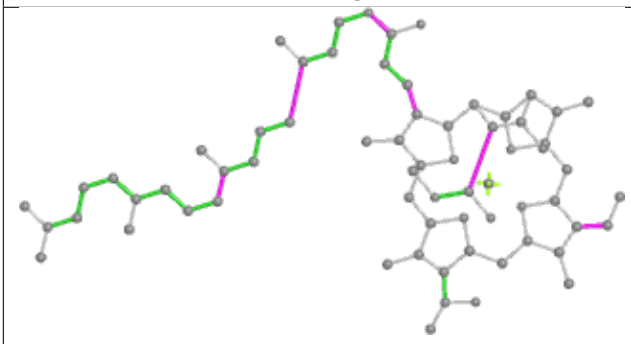
Ligand 07D Y 101



Bond lengths



Bond angles



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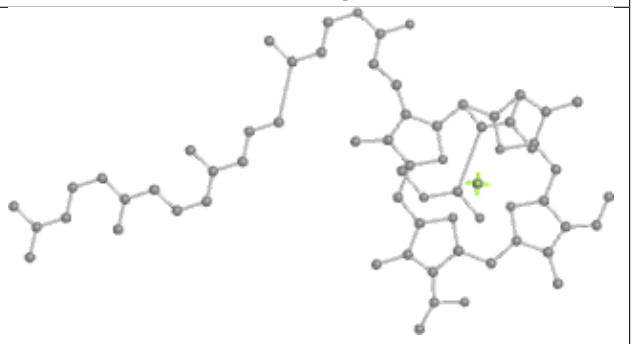
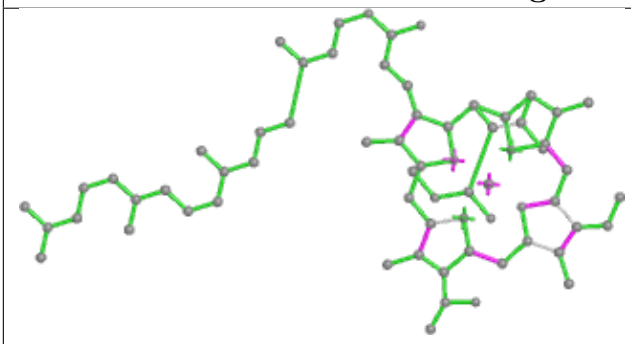


Rings

Ligand 07D Q 102



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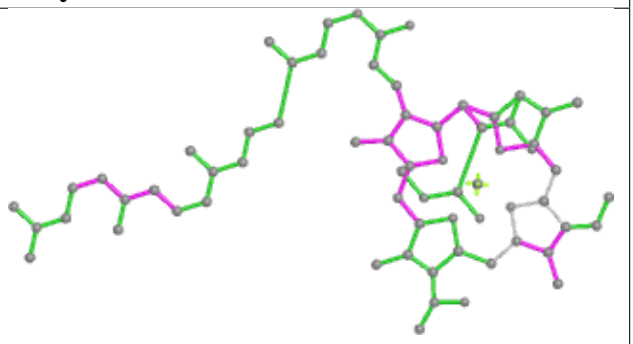
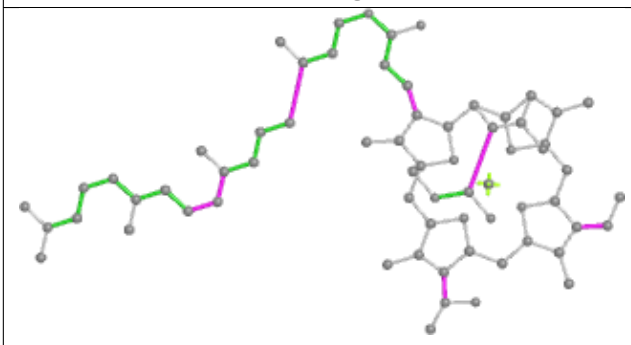
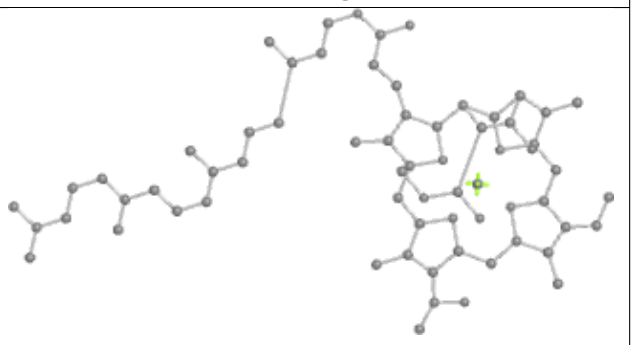


Bond angles

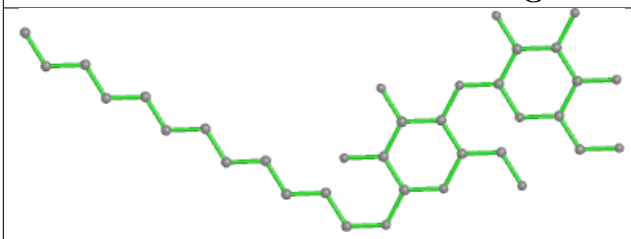


Torsions

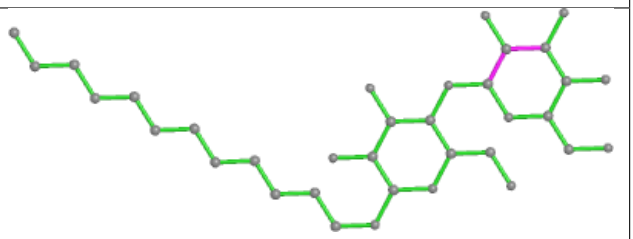


Rings

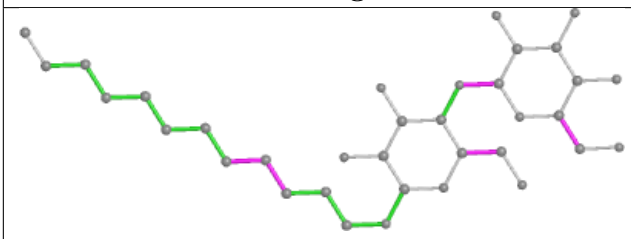
Ligand LMT J 103



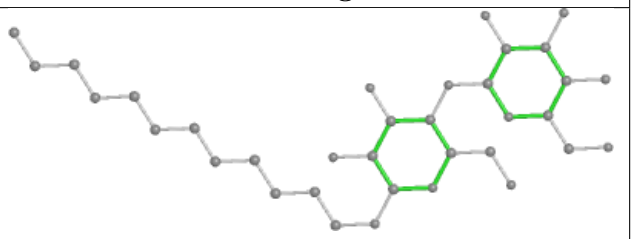
Bond lengths



Bond angles

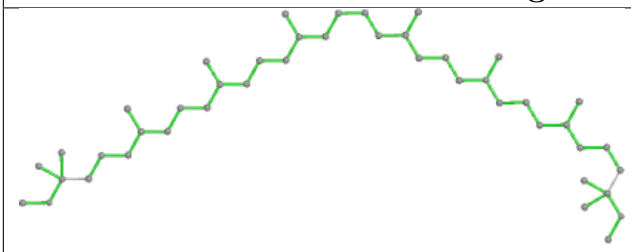


Torsions



Rings

Ligand CRT J 101



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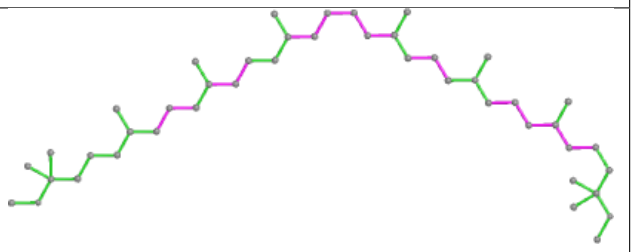
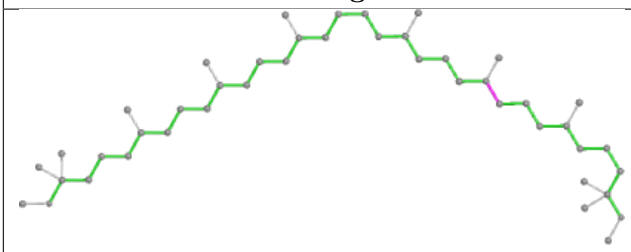
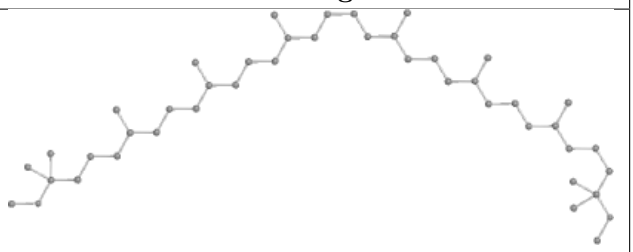


Bond angles

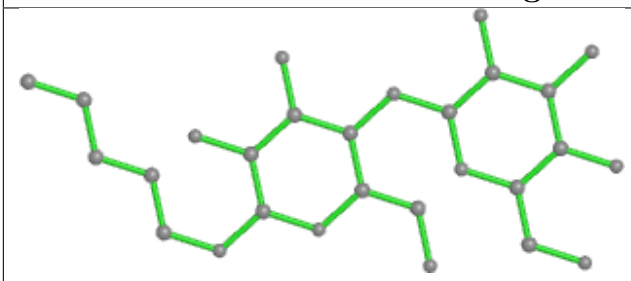


Torsions

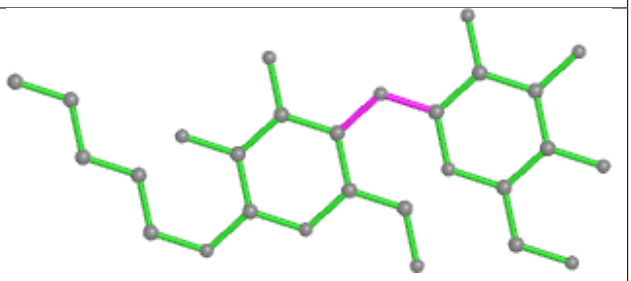


Rings

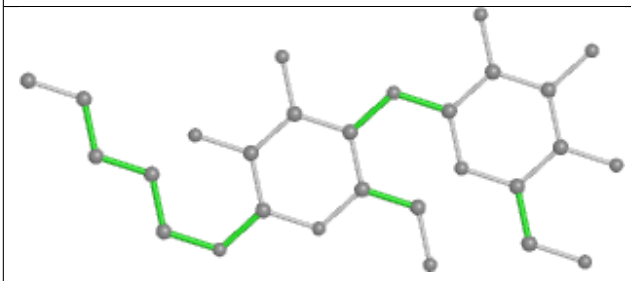
Ligand LMT L 305



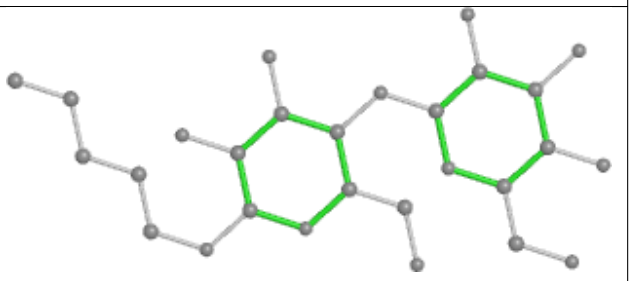
Bond lengths



Bond angles

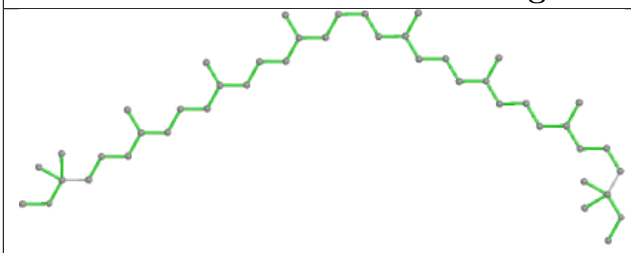


Torsions

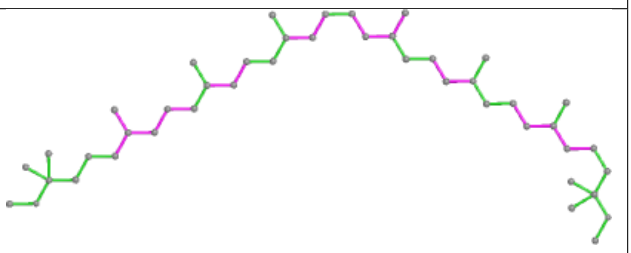


Rings

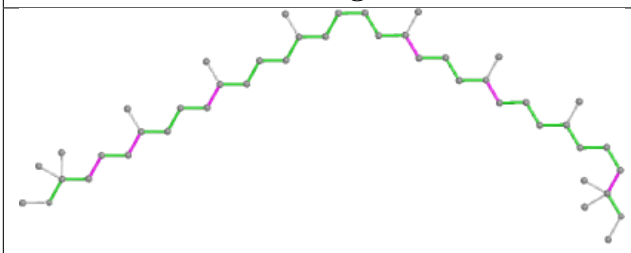
Ligand CRT 2 101



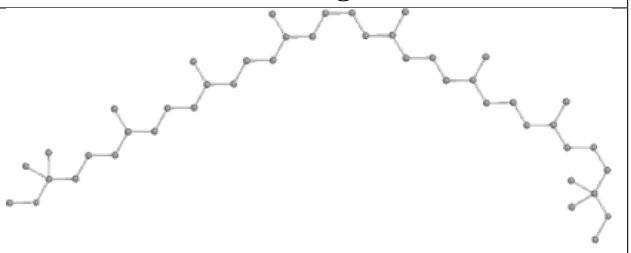
Bond lengths



Bond angles

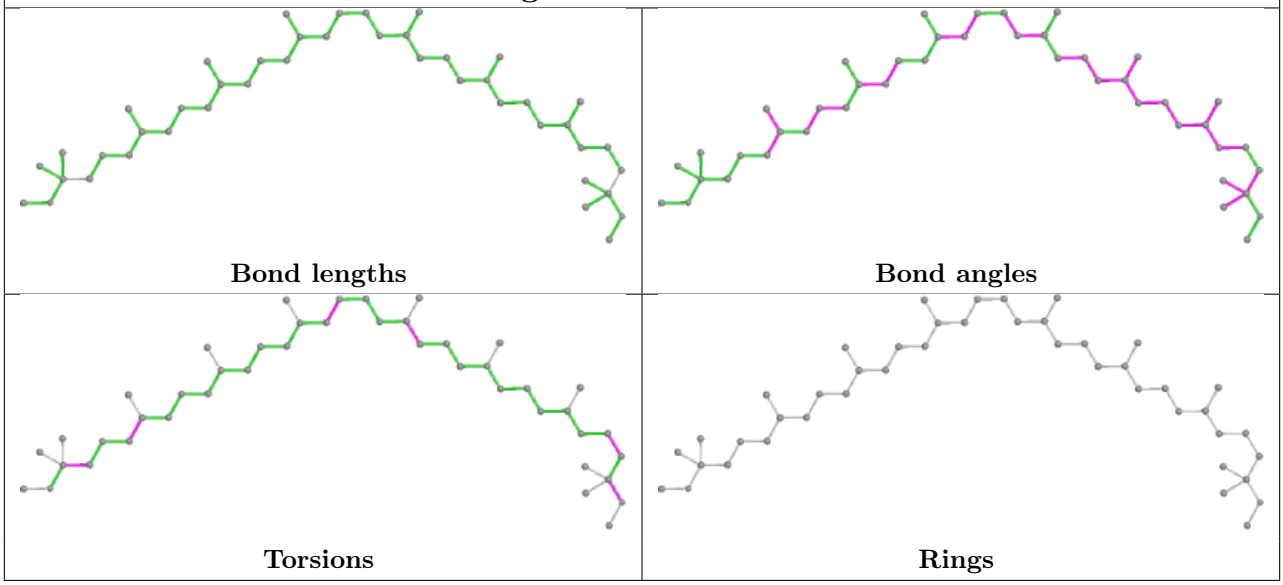


Torsions

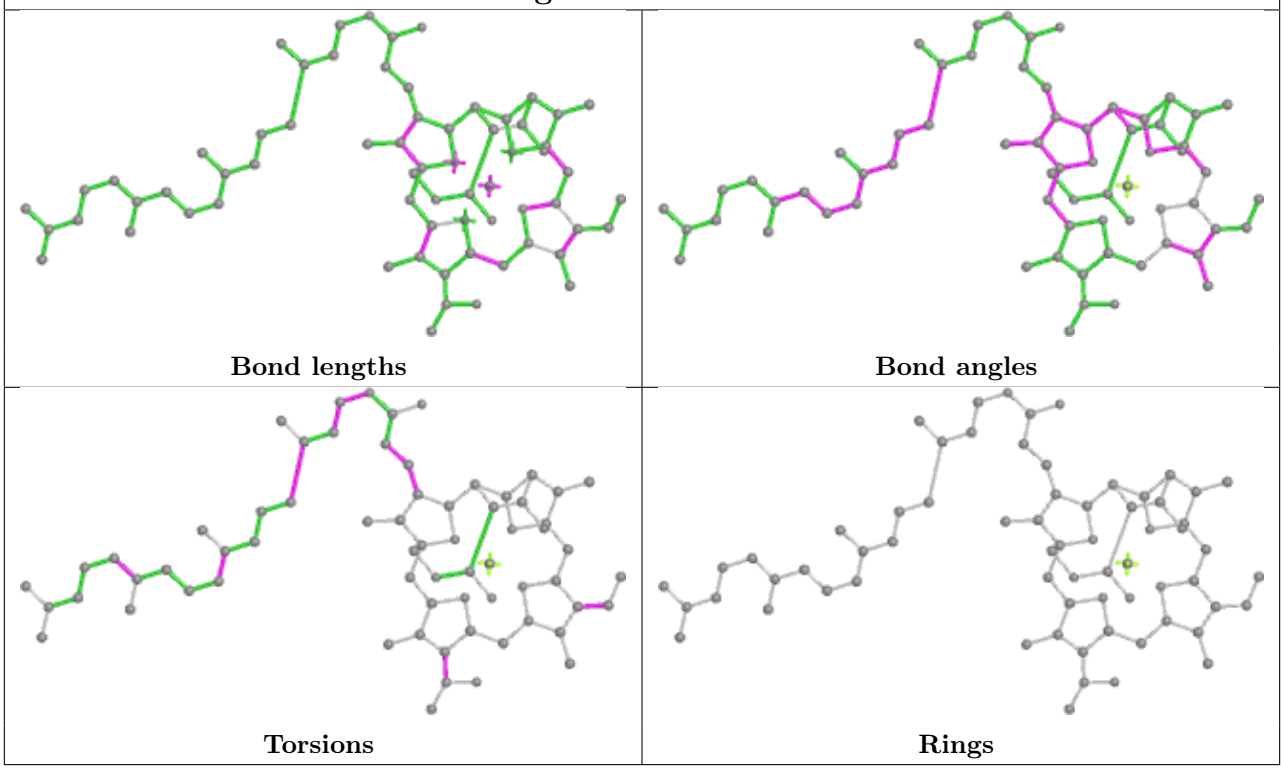


Rings

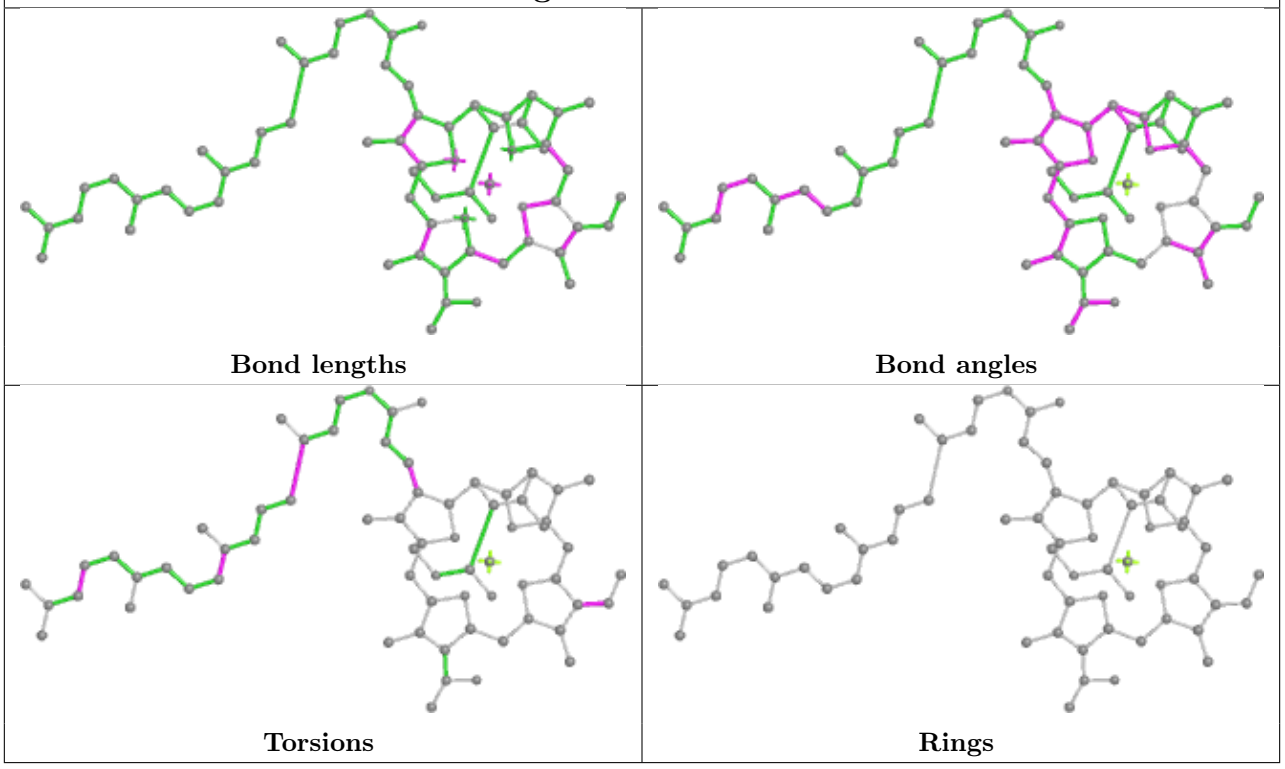
Ligand CRT M 407



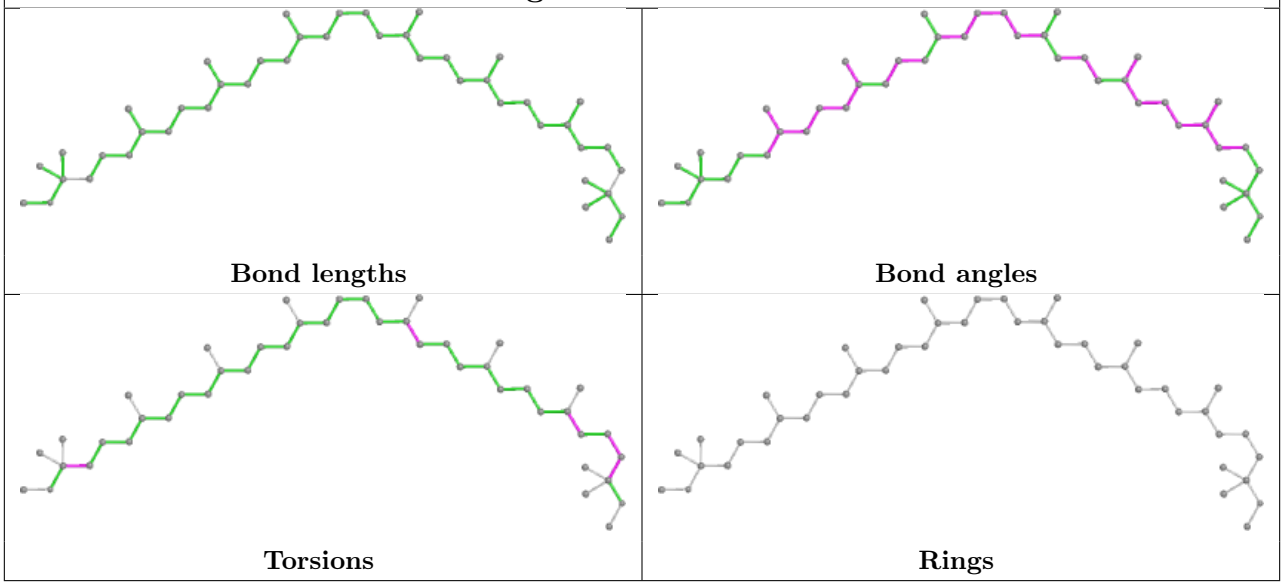
Ligand 07D 8 102



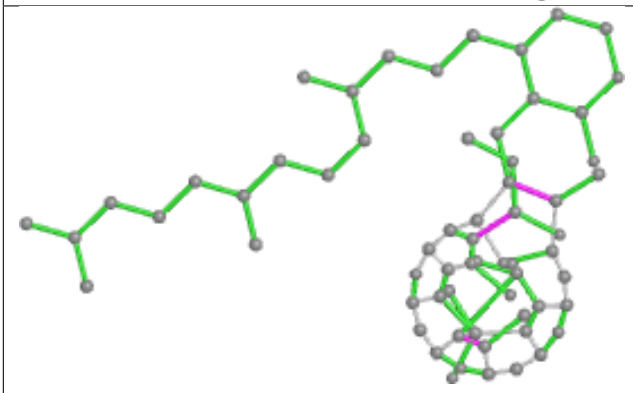
Ligand 07D S 101



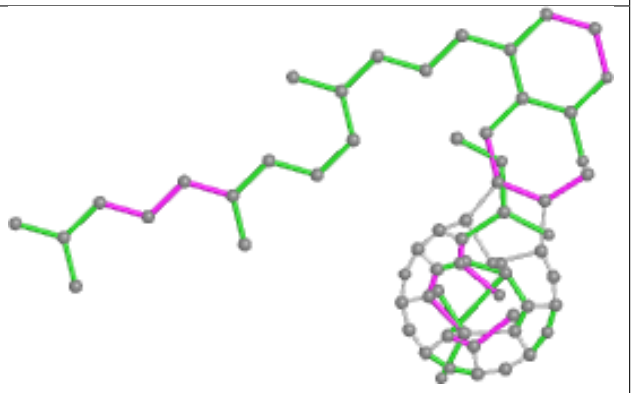
Ligand CRT E 101



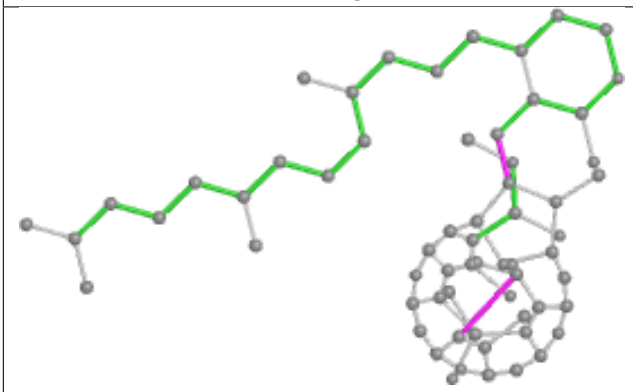
Ligand 08I M 405



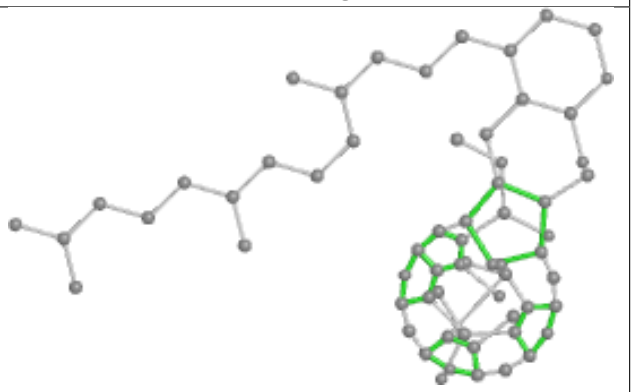
Bond lengths



Bond angles

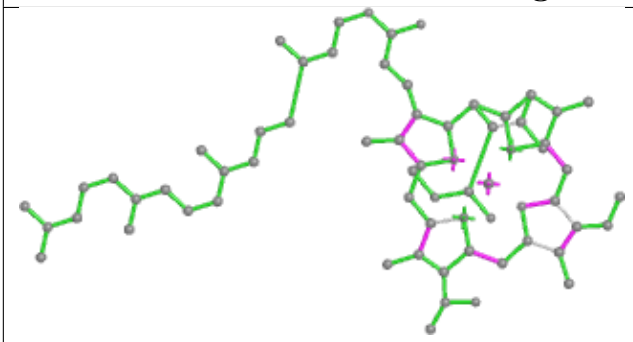


Torsions



Rings

Ligand 07D L 307



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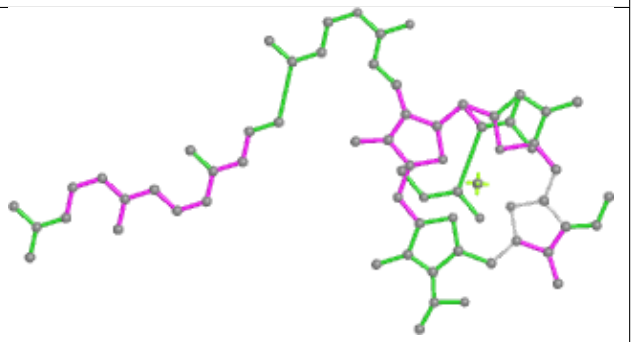
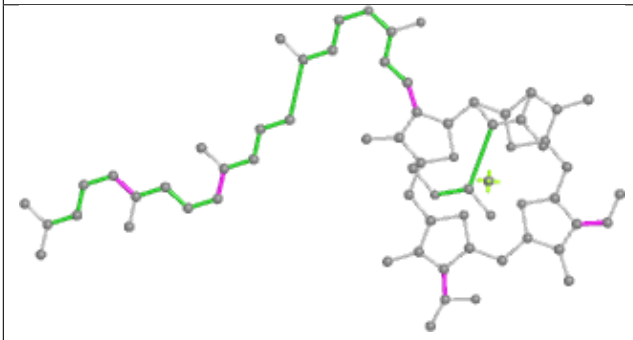


Bond angles



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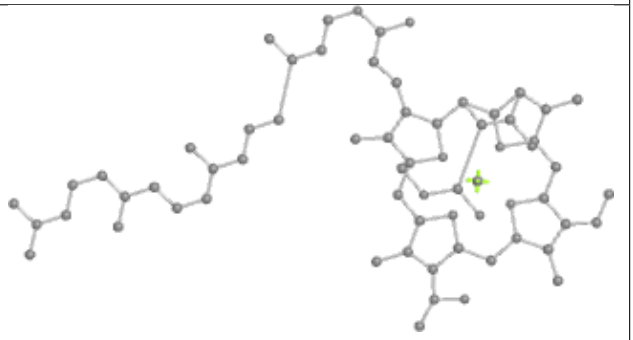
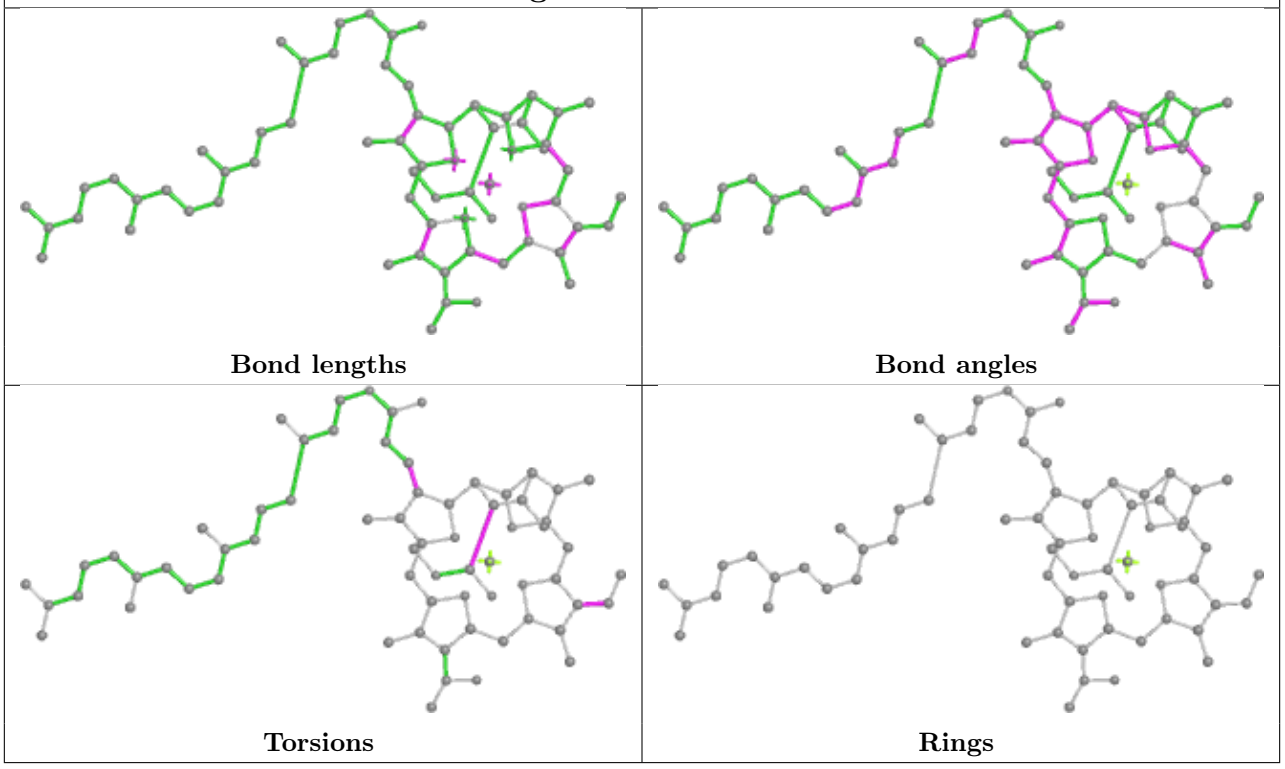
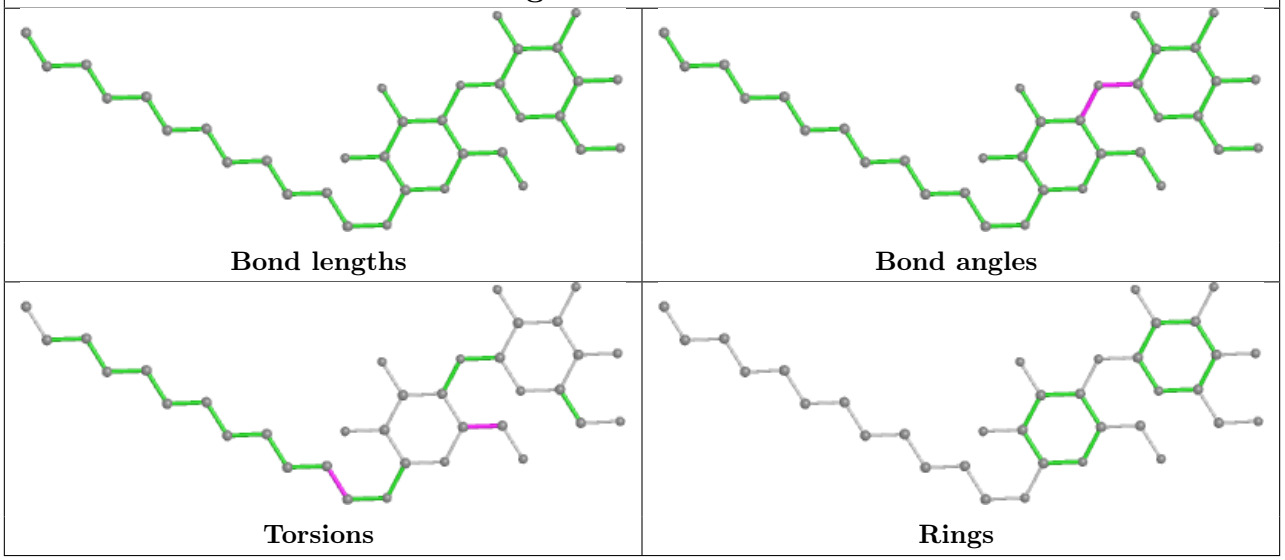


Rings

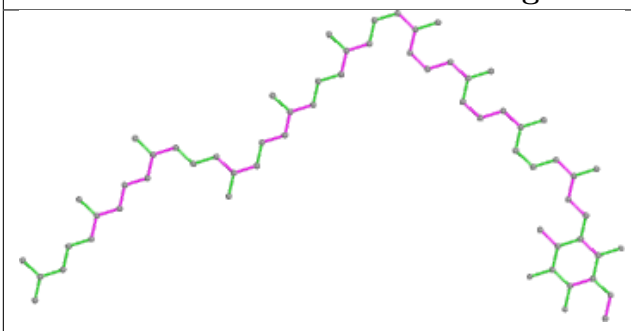
Ligand 07D K 101



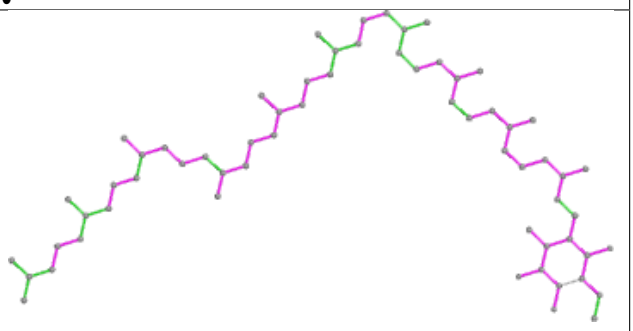
Ligand LMT 0 103



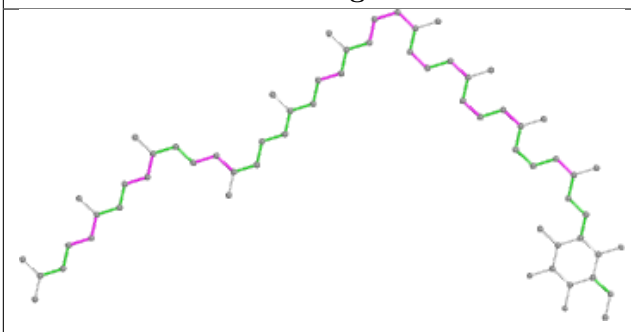
Ligand RQ0 M 406



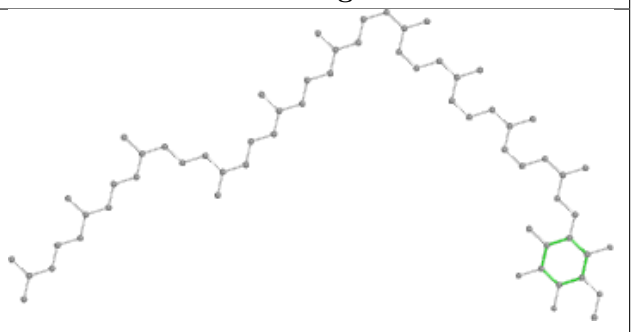
Bond lengths



Bond angles

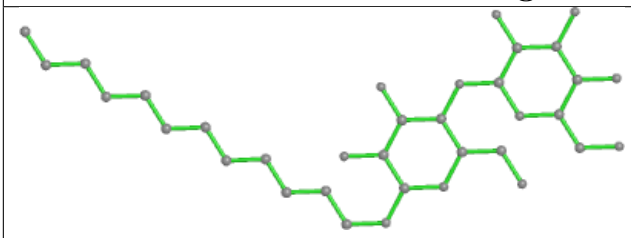


Torsions

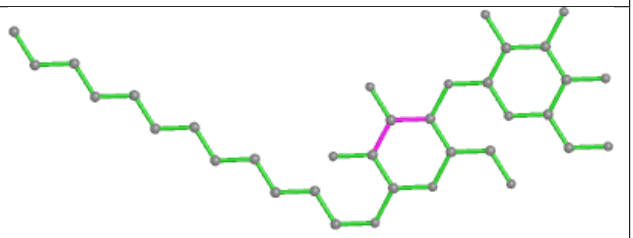


Rings

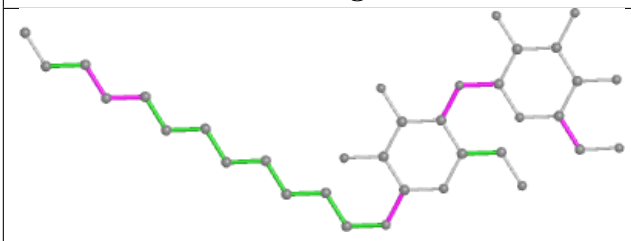
Ligand LMT M 410



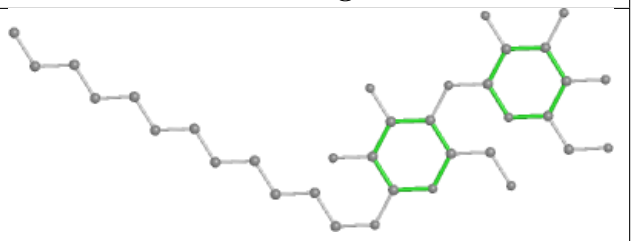
Bond lengths



Bond angles

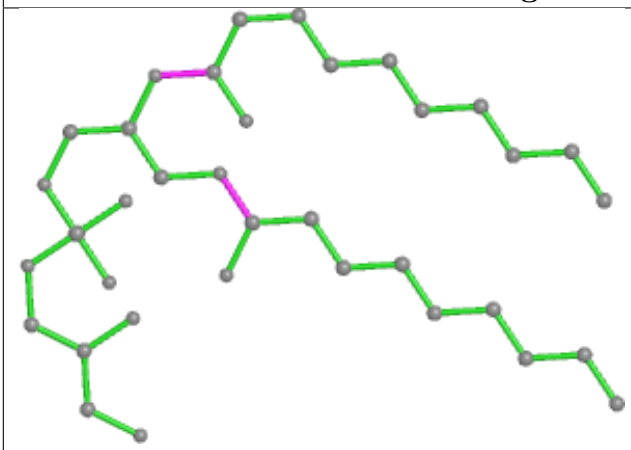


Torsions

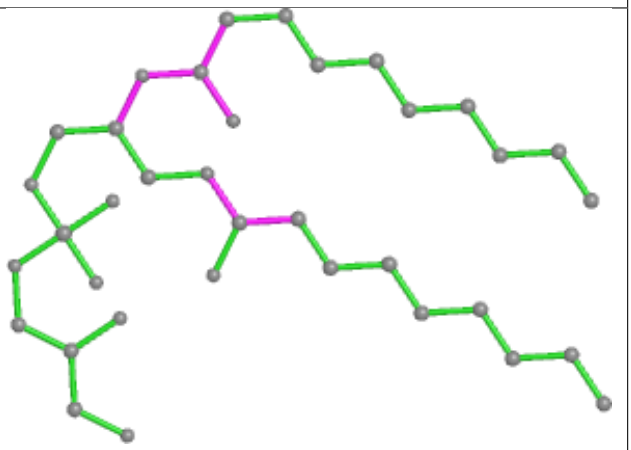


Rings

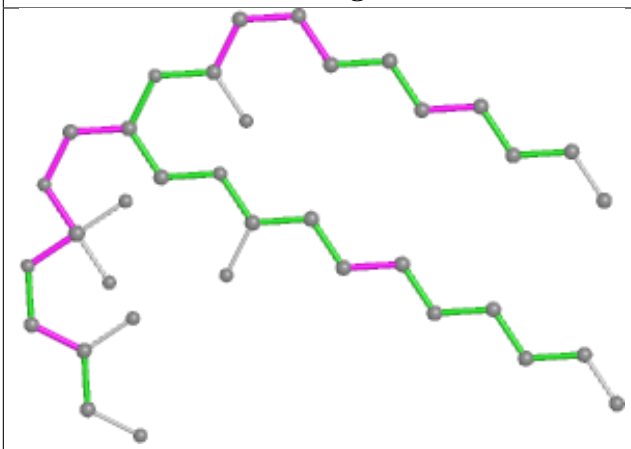
Ligand PGV H 302



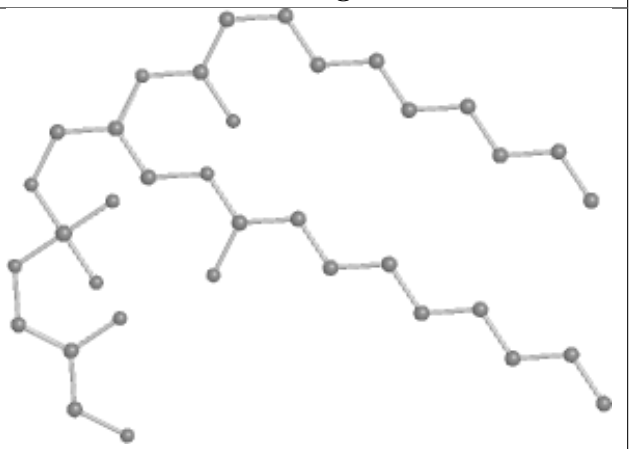
Bond lengths



Bond angles

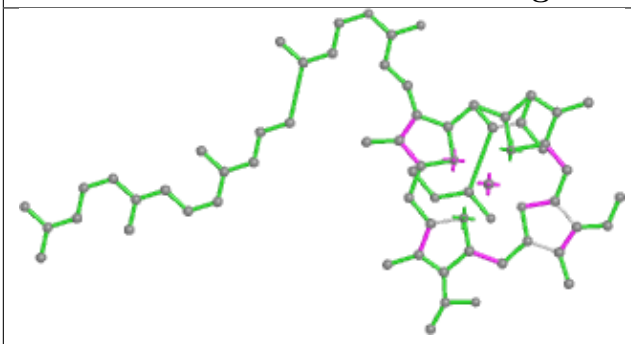


Torsions

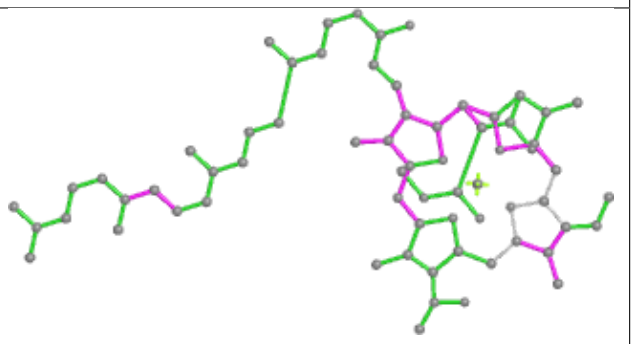


Rings

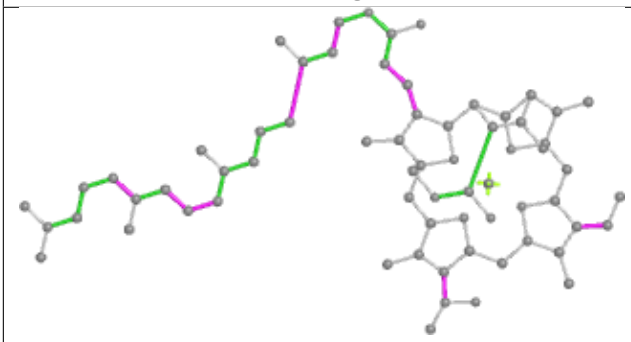
Ligand 07D Z 102



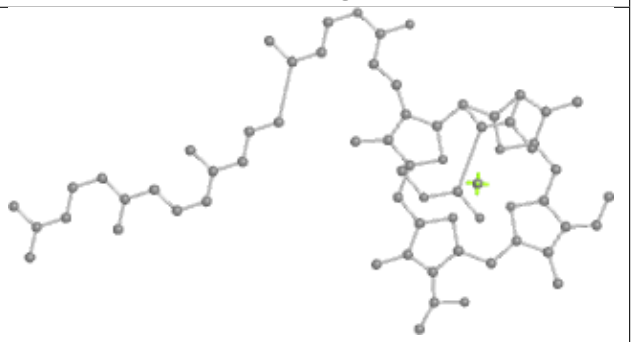
Bond lengths



Bond angles

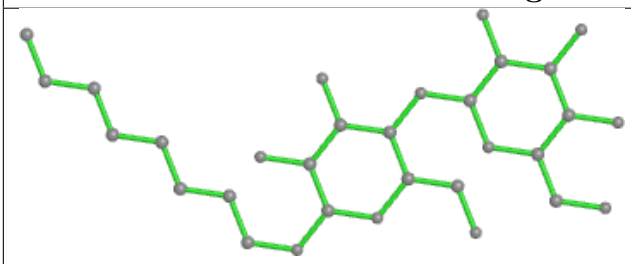


Torsions

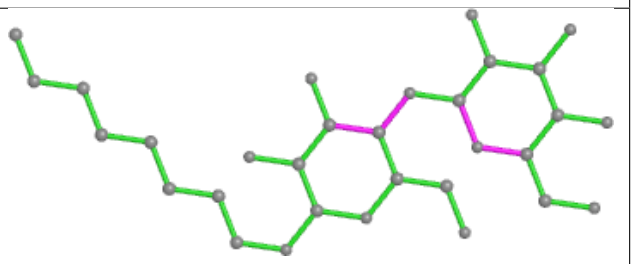


Rings

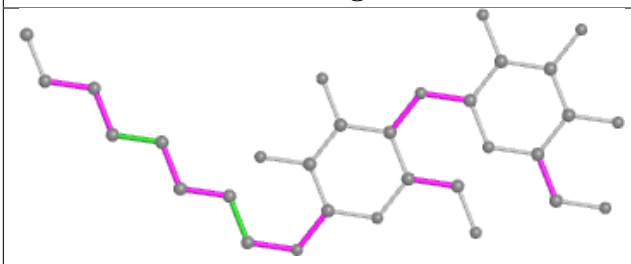
Ligand LMT 5 201



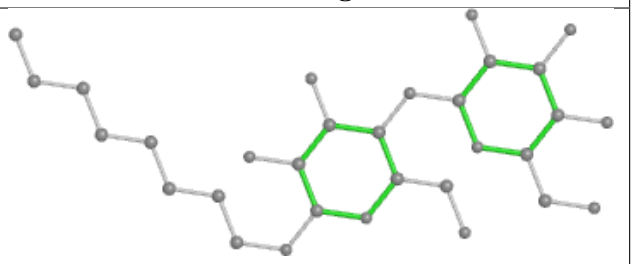
Bond lengths



Bond angles

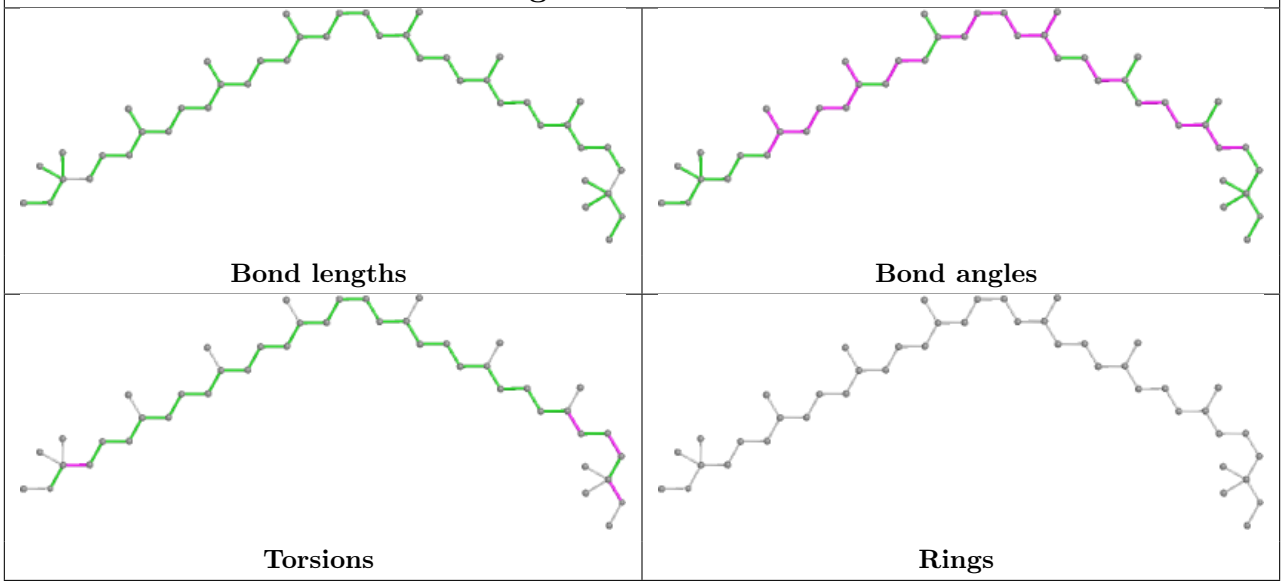


Torsions

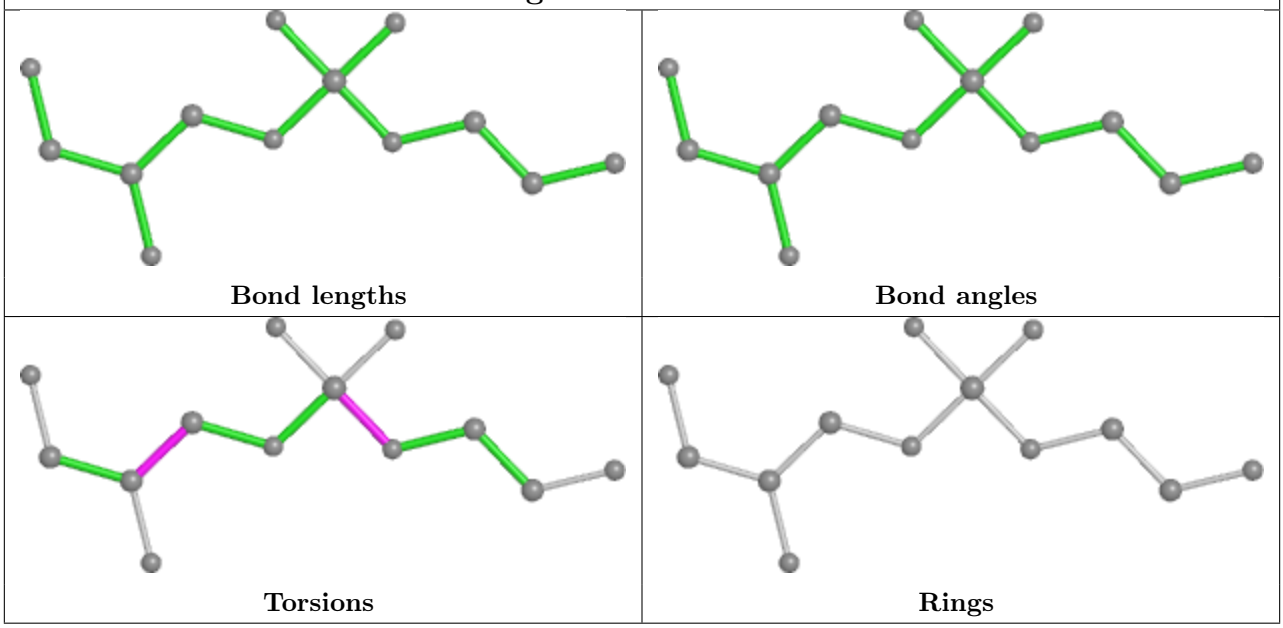


Rings

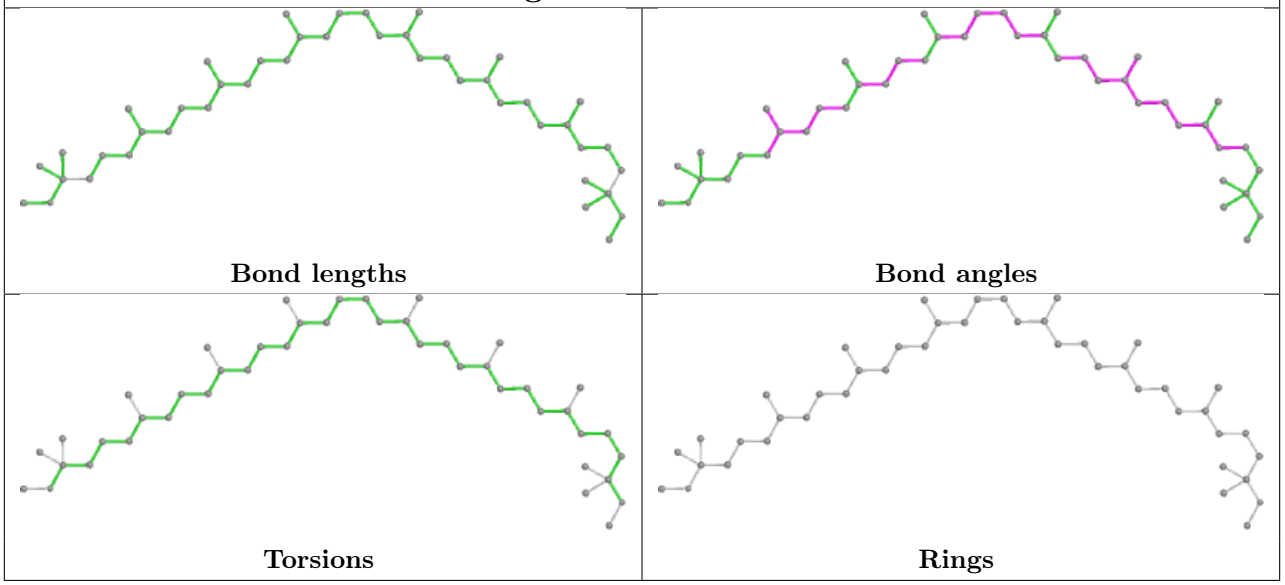
Ligand CRT 0 101



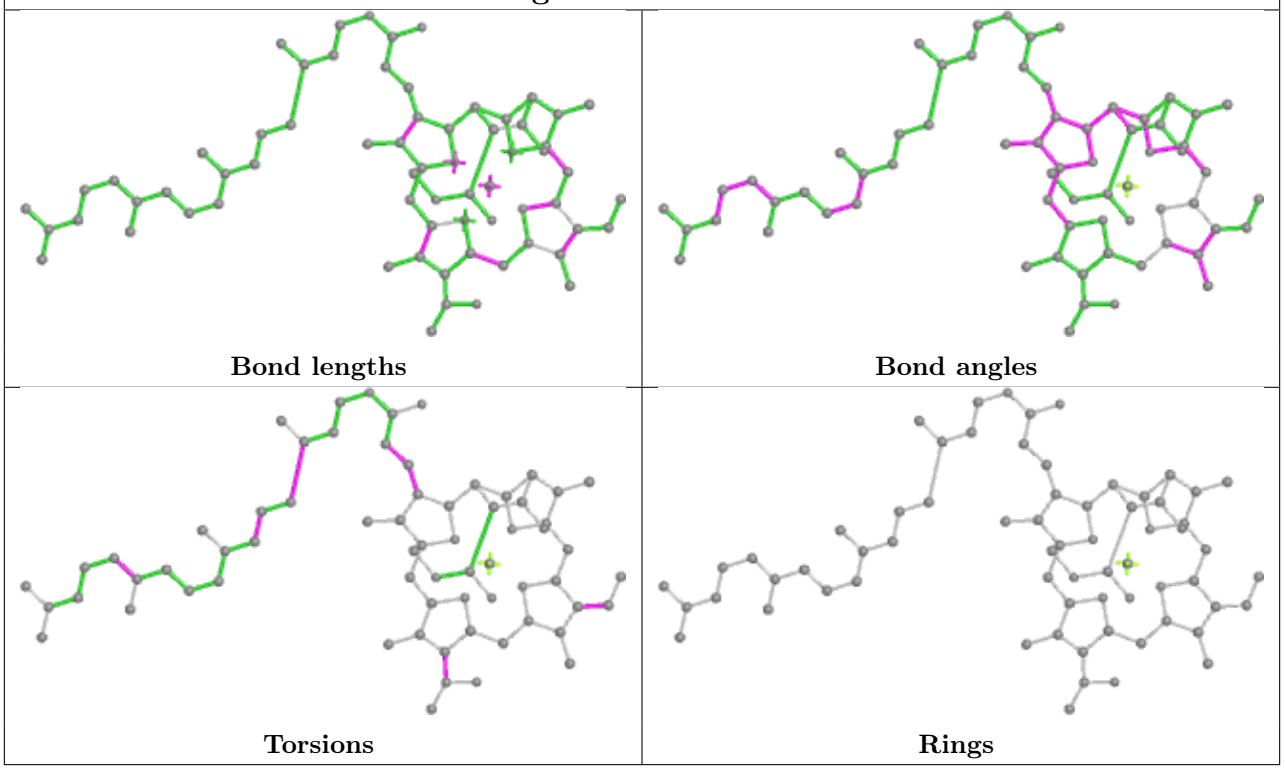
Ligand PEF H 305



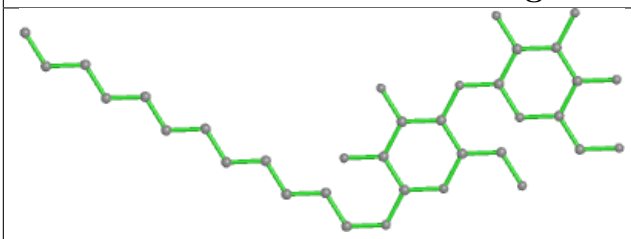
Ligand CRT A 102



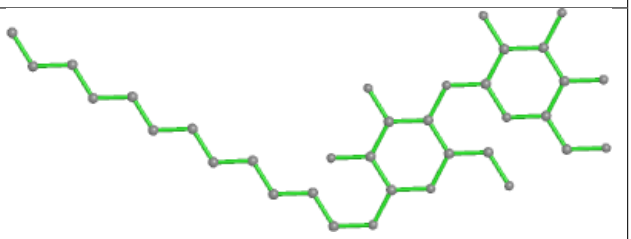
Ligand 07D E 102



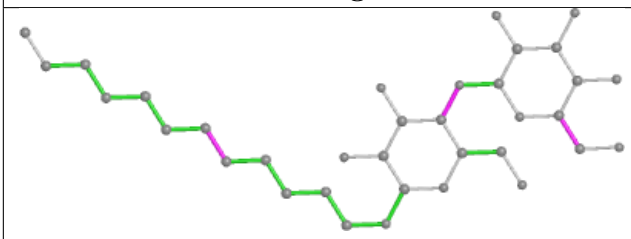
Ligand LMT 6 103



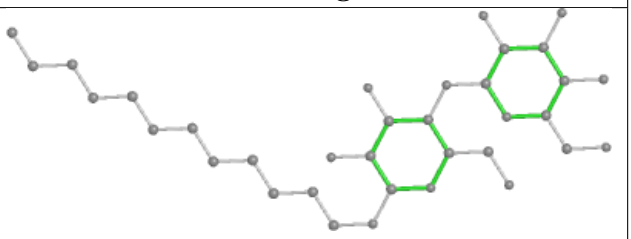
Bond lengths



Bond angles

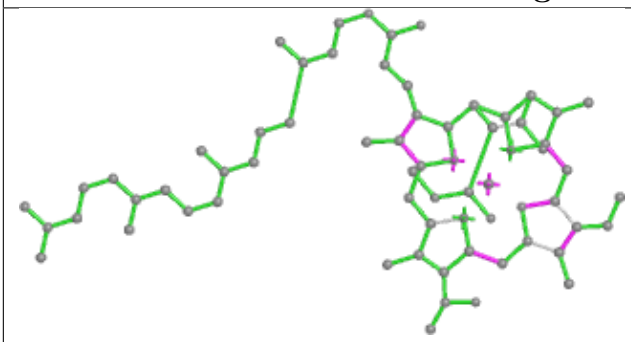


Torsions

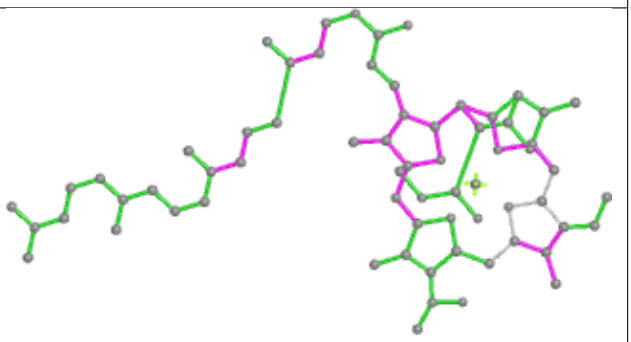


Rings

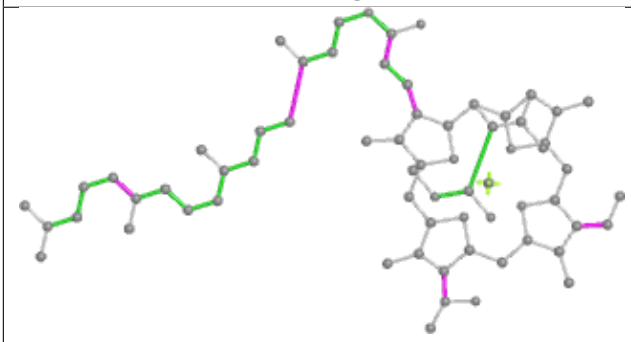
Ligand 07D 0 102



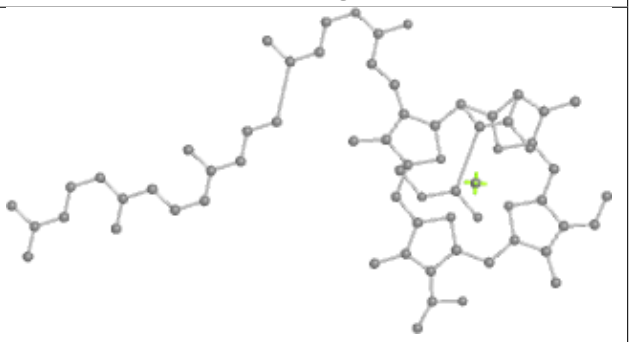
Bond lengths



Bond angles

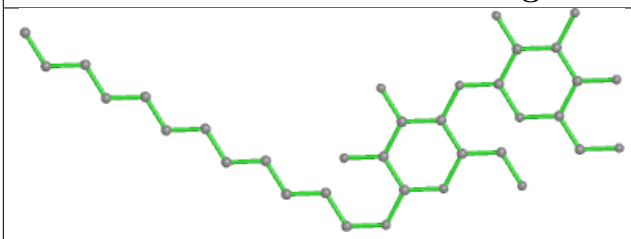


Torsions

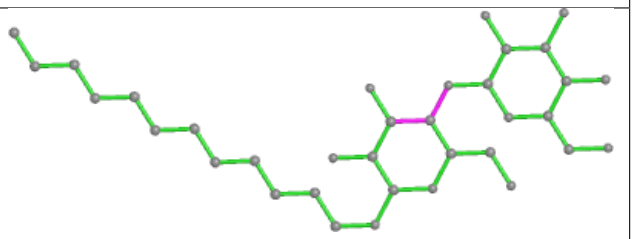


Rings

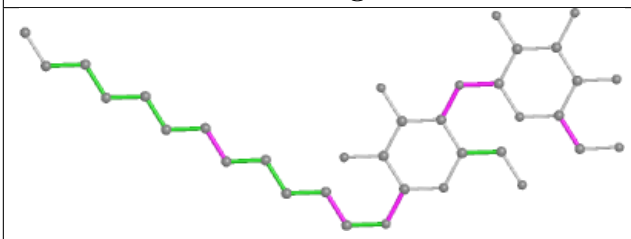
Ligand LMT P 103



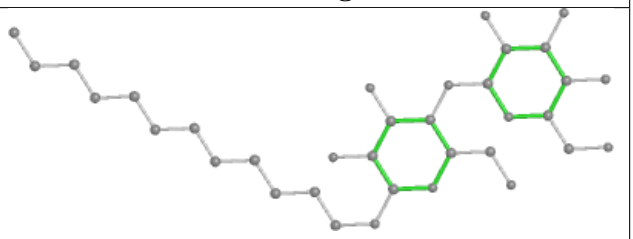
Bond lengths



Bond angles

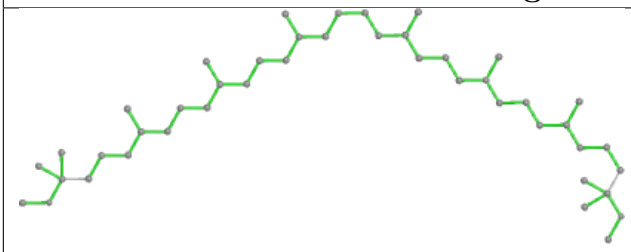


Torsions

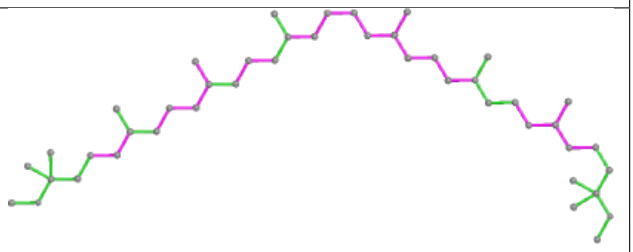


Rings

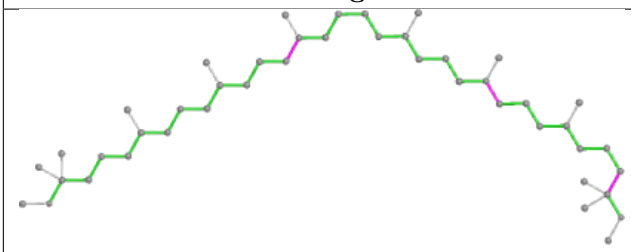
Ligand CRT V 101



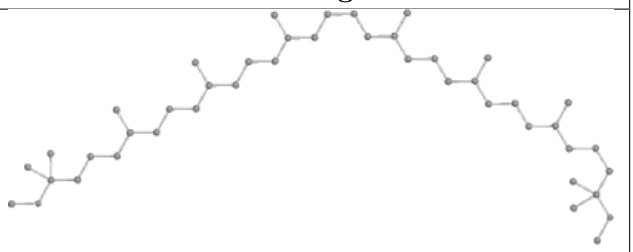
Bond lengths



Bond angles

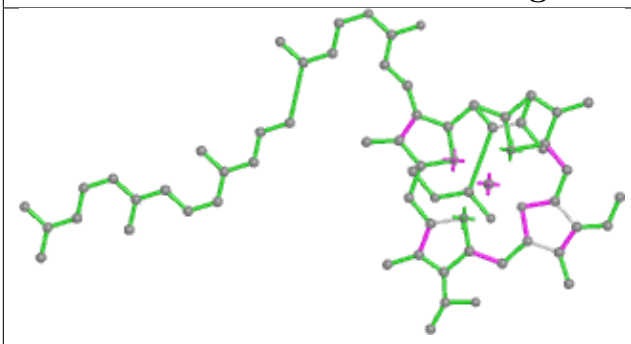


Torsions

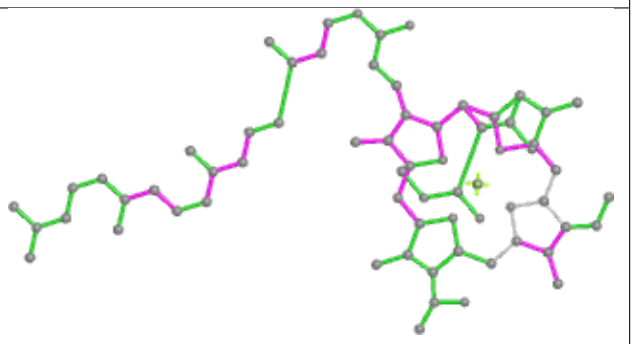


Rings

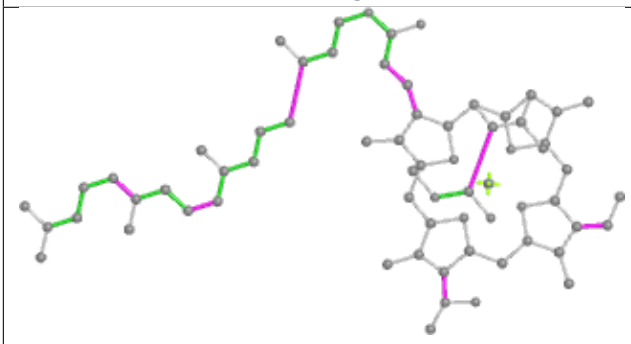
Ligand 07D X 102



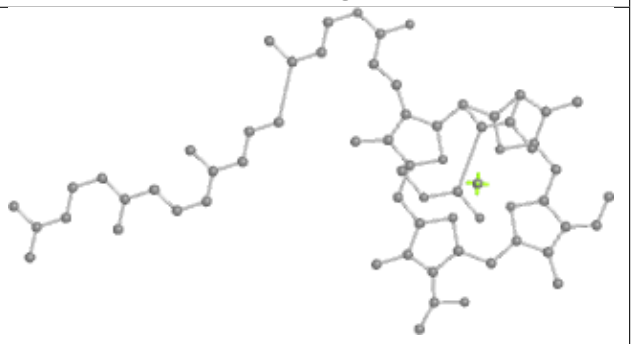
Bond lengths



Bond angles

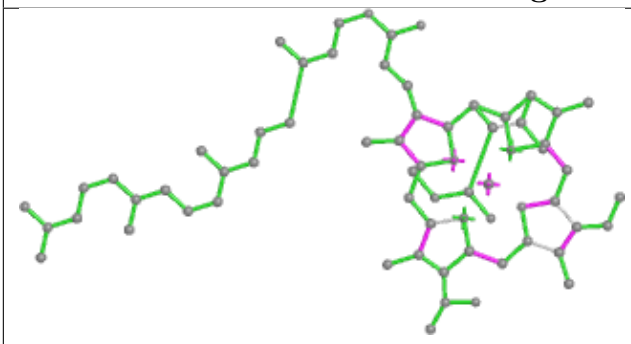


Torsions

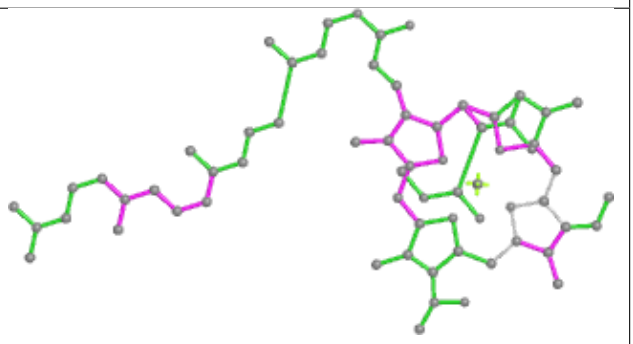


Rings

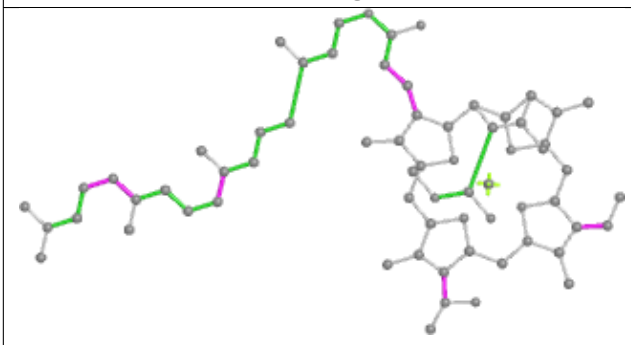
Ligand 07D T 102



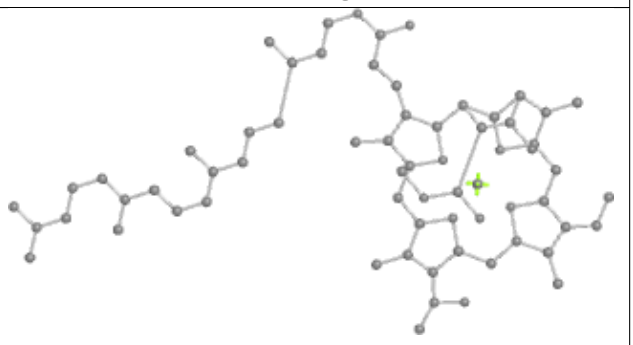
Bond lengths



Bond angles

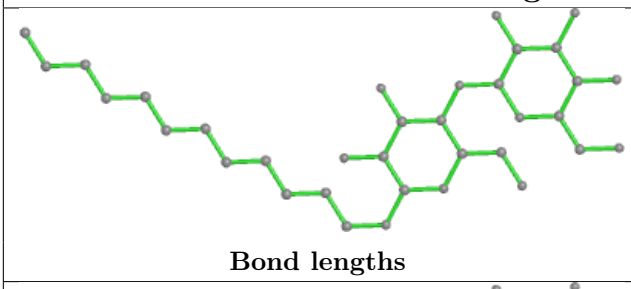


Torsions

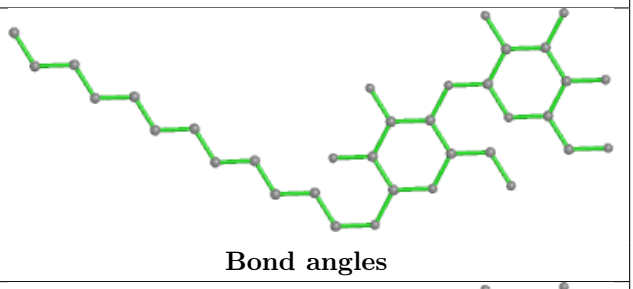


Rings

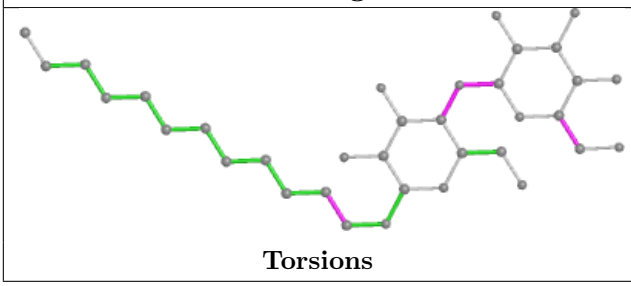
Ligand LMT Z 103



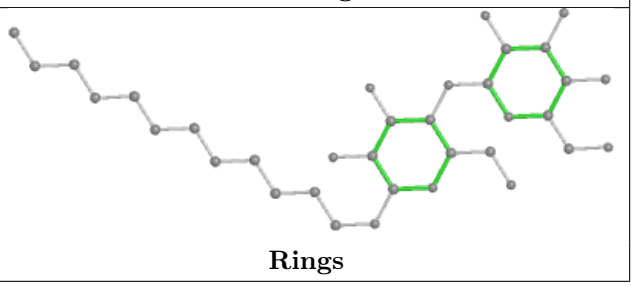
Bond lengths



Bond angles

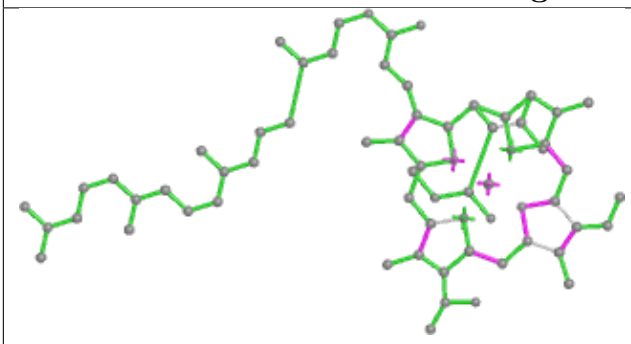


Torsions

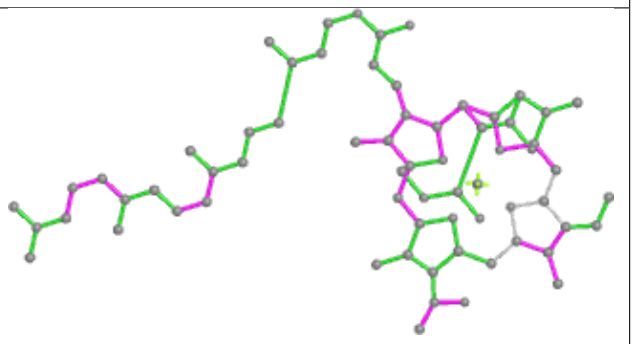


Rings

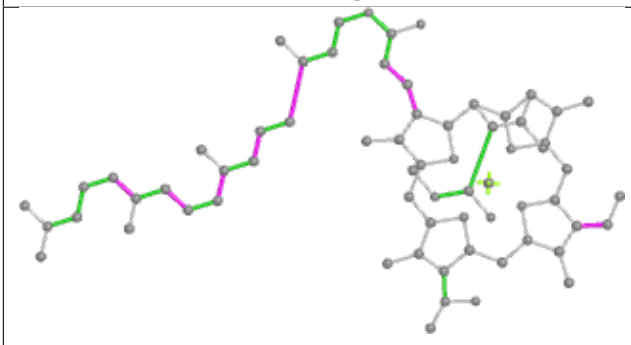
Ligand 07D P 102



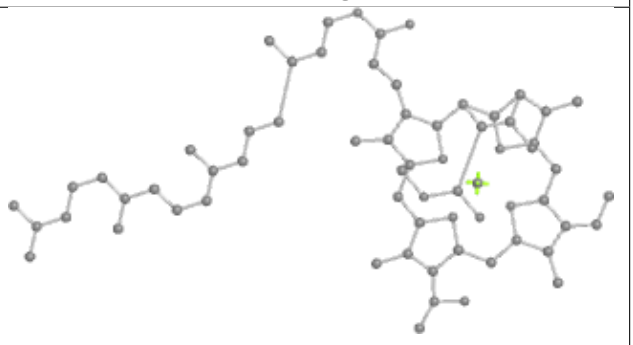
Bond lengths



Bond angles

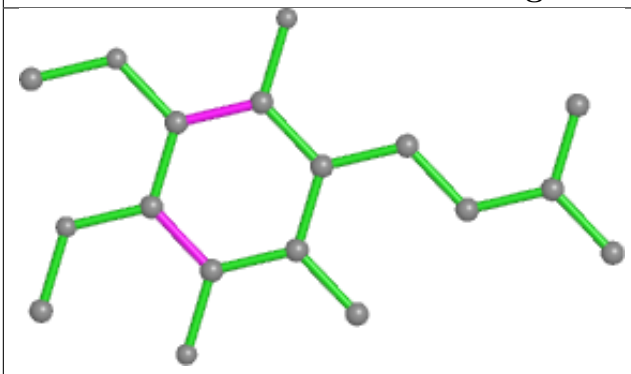


Torsions

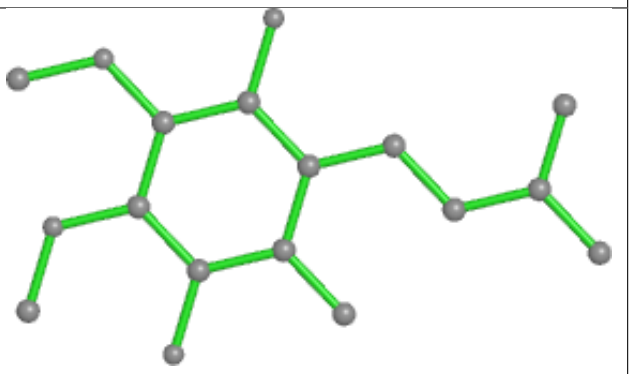


Rings

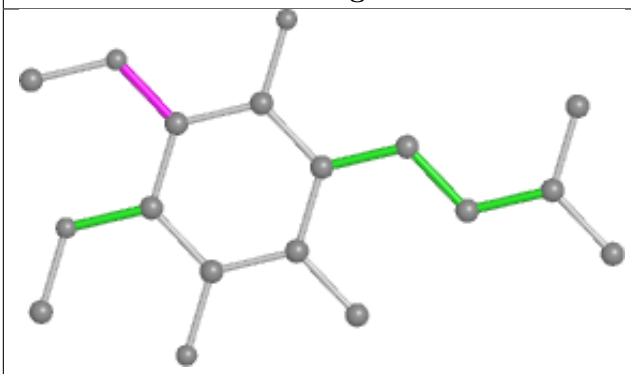
Ligand U10 M 401



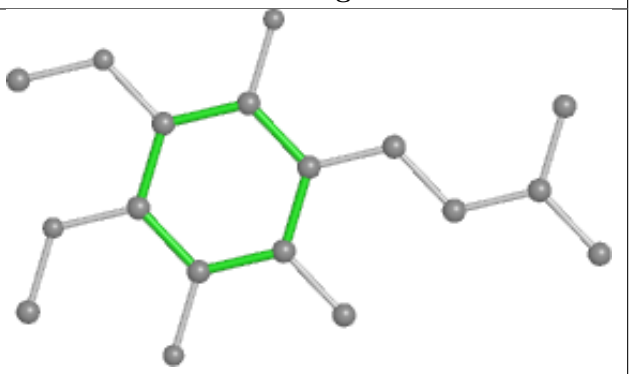
Bond lengths



Bond angles

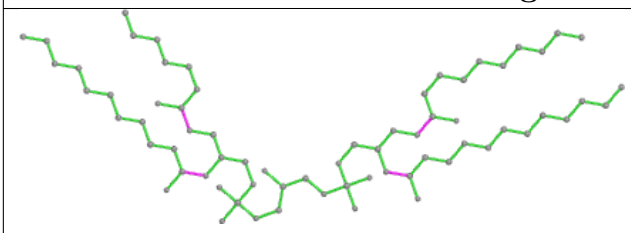


Torsions

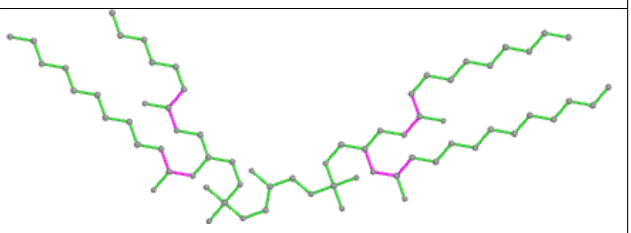


Rings

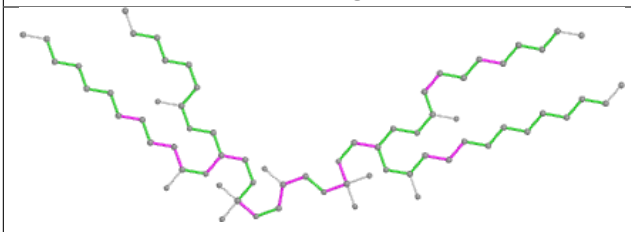
Ligand CDL M 409



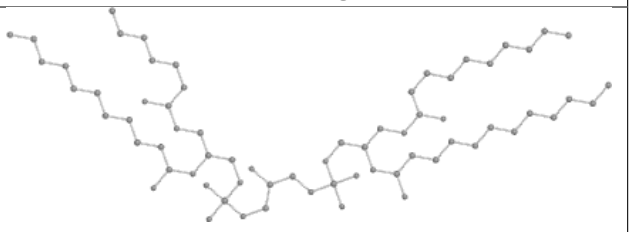
Bond lengths



Bond angles

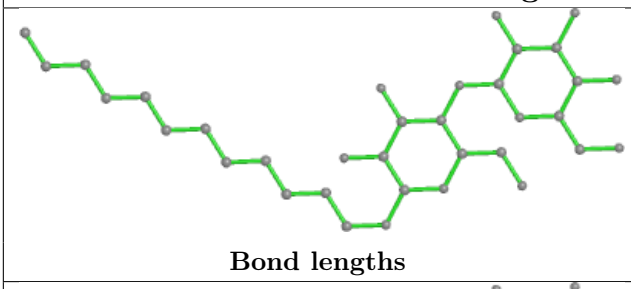


Torsions

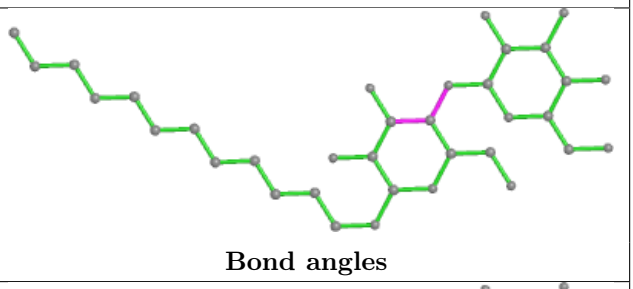


Rings

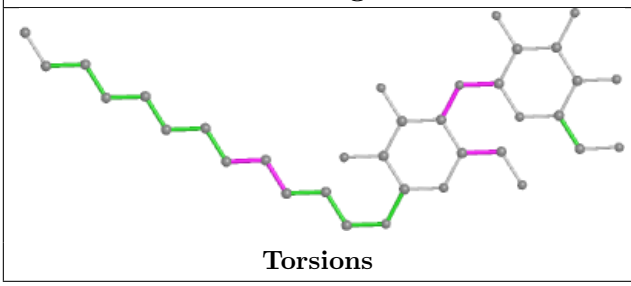
Ligand LMT B 102



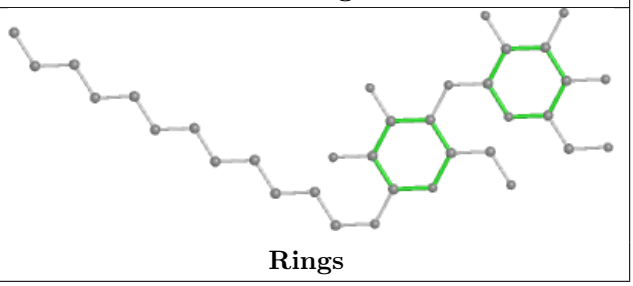
Bond lengths



Bond angles

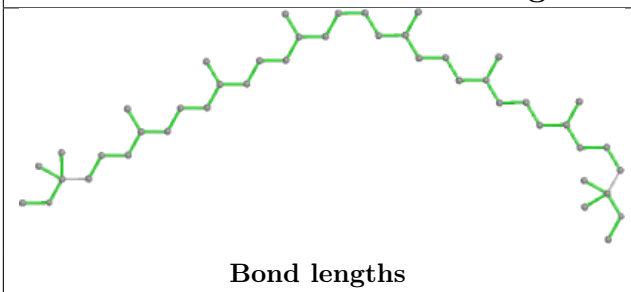


Torsions

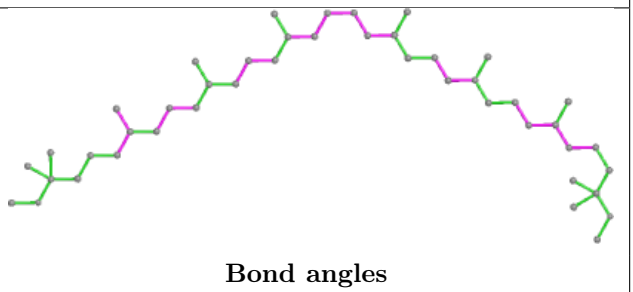


Rings

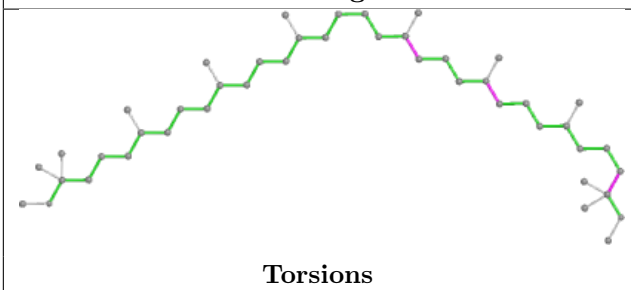
Ligand CRT 8 101



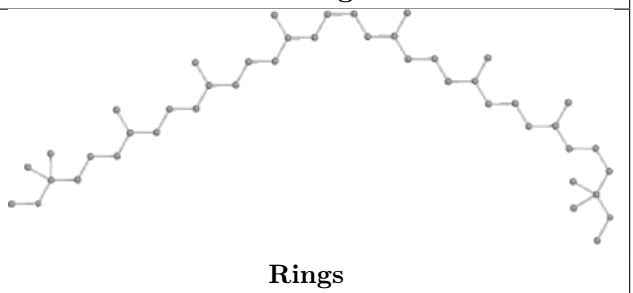
Bond lengths



Bond angles

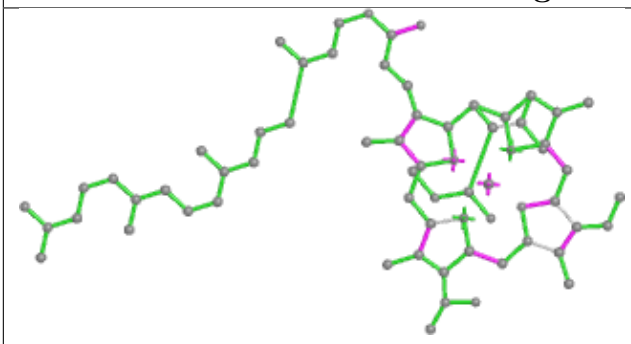


Torsions

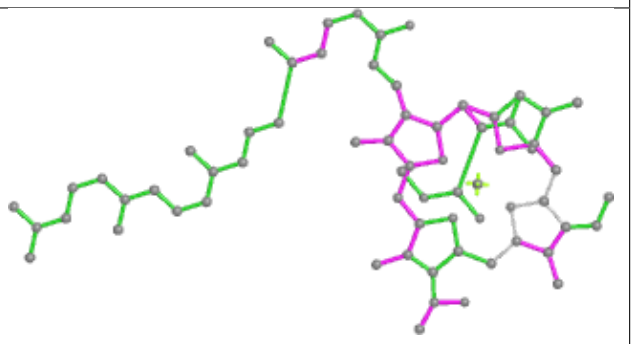


Rings

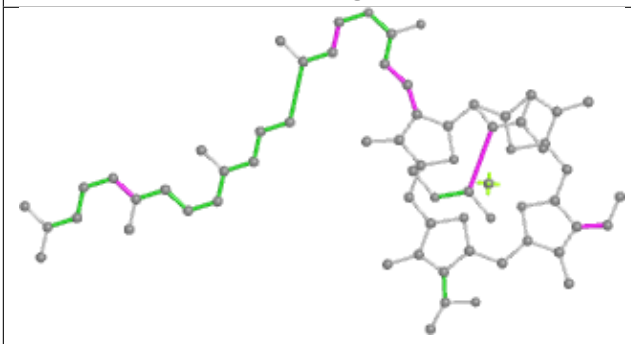
Ligand 07D 3 101



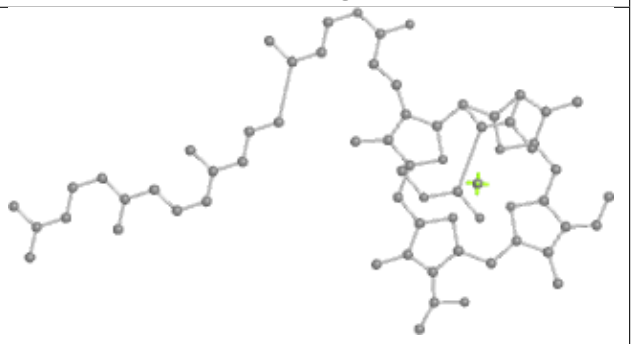
Bond lengths



Bond angles

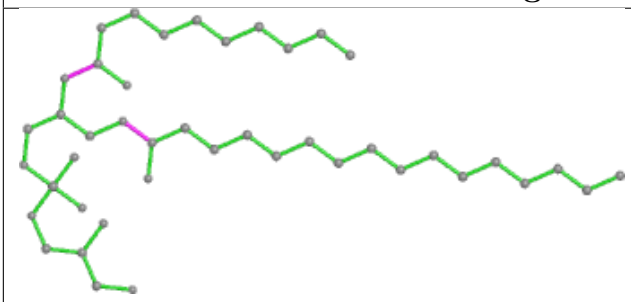


Torsions

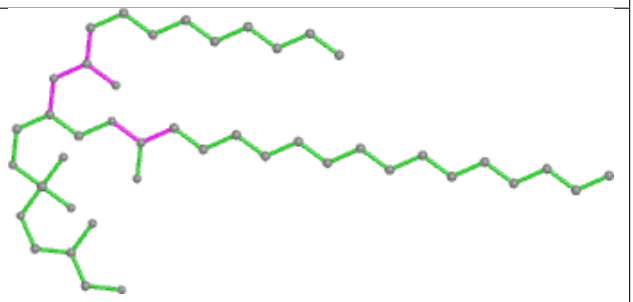


Rings

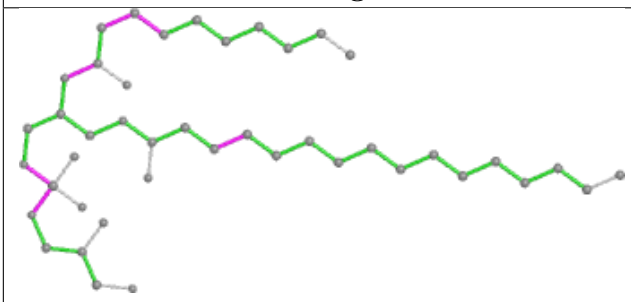
Ligand PGV L 304



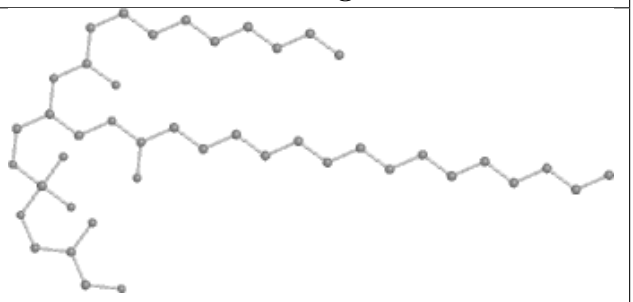
Bond lengths



Bond angles

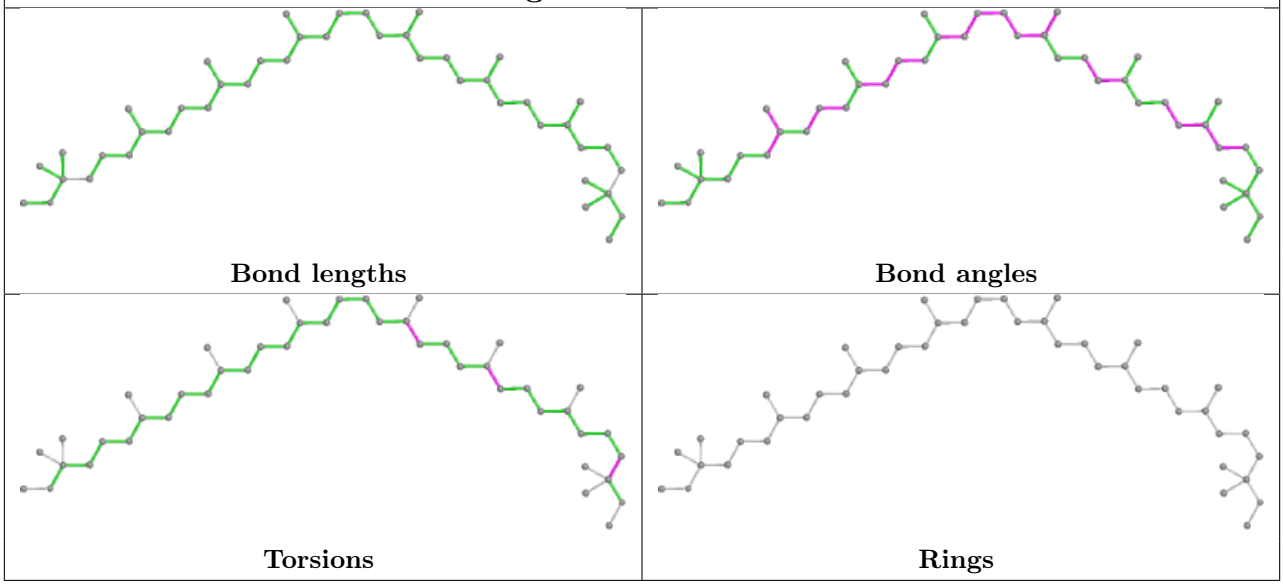


Torsions

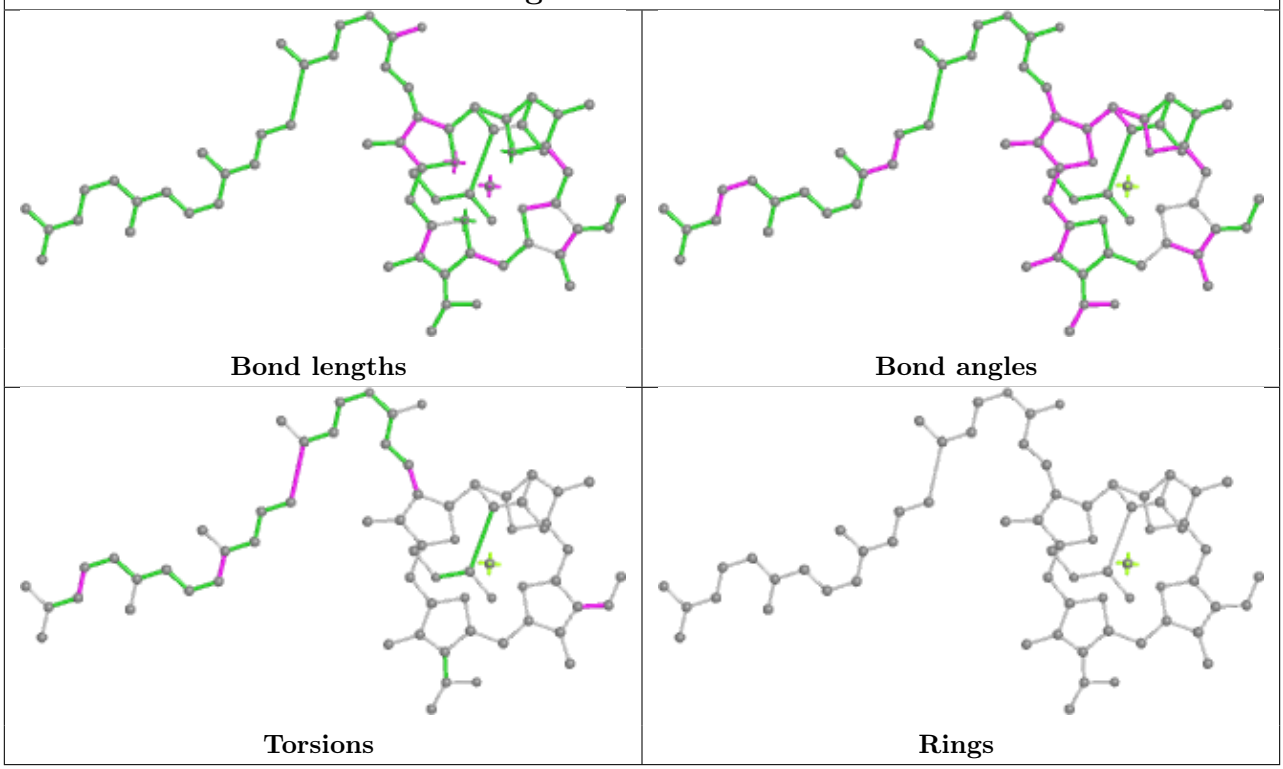


Rings

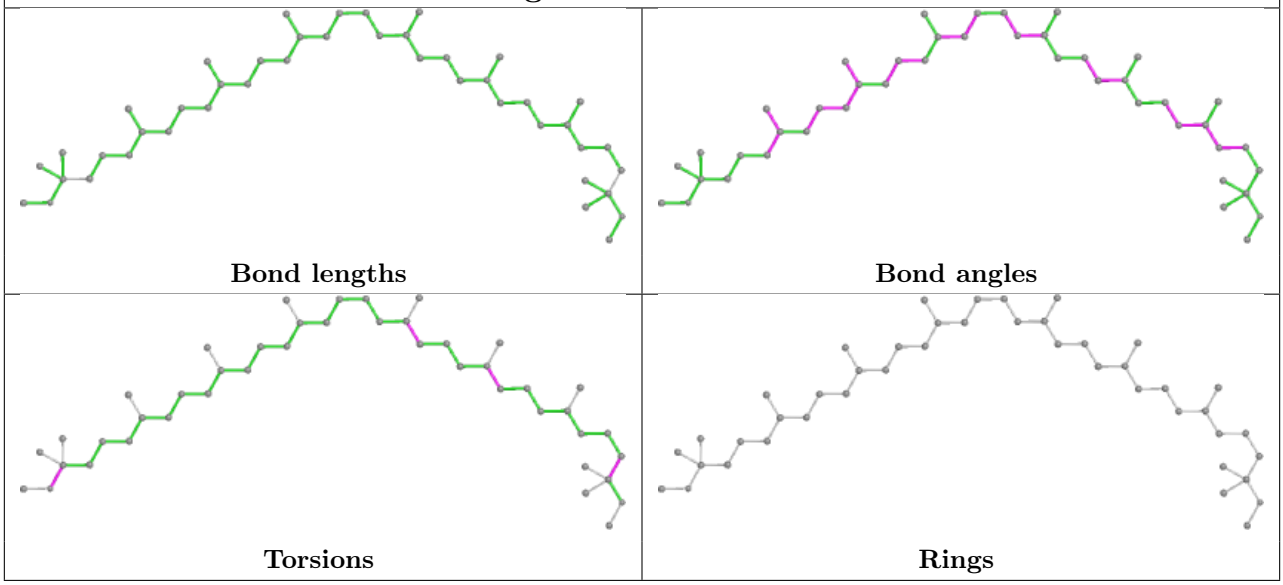
Ligand CRT T 101



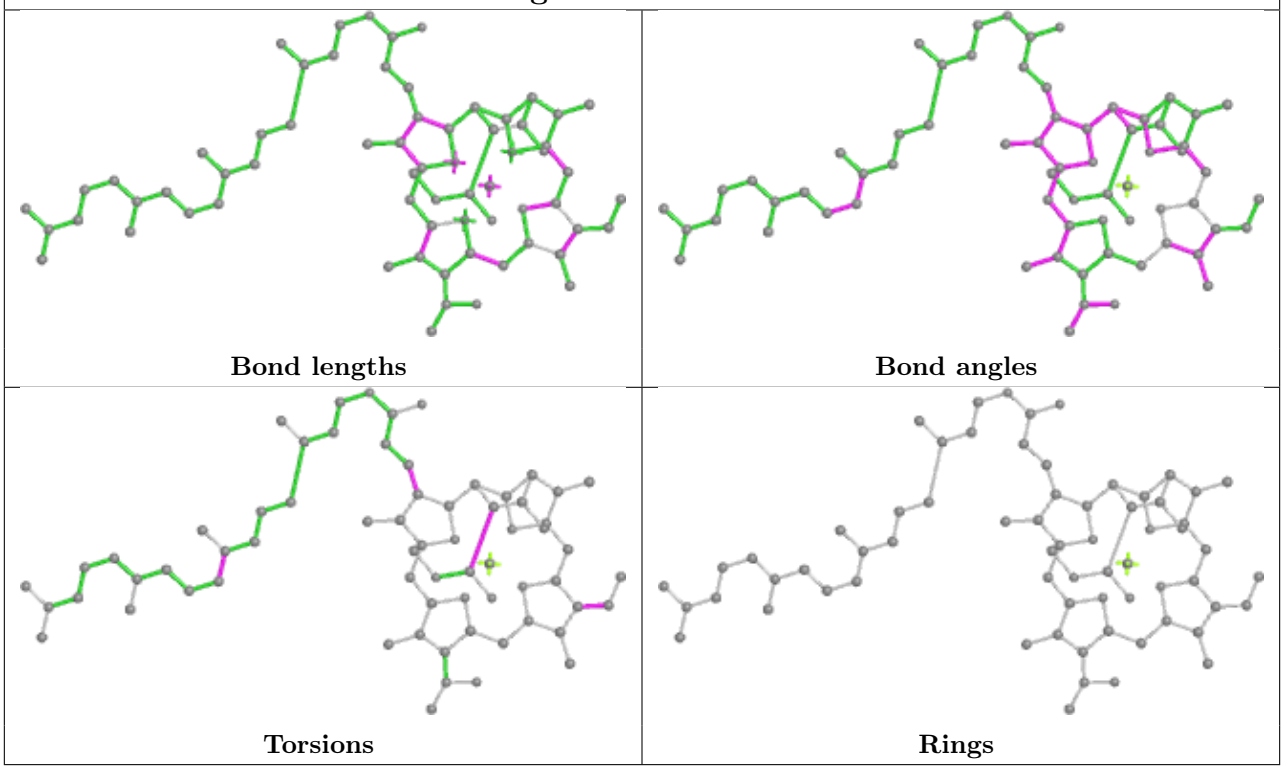
Ligand 07D W 101



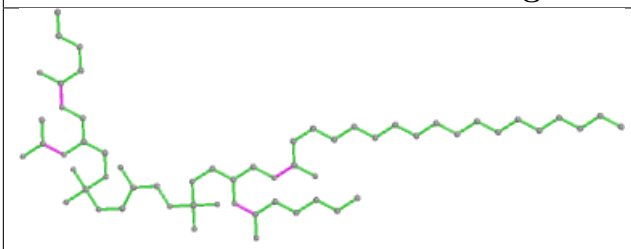
Ligand CRT R 101



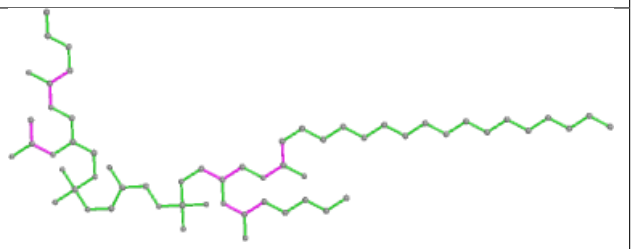
Ligand 07D A 101



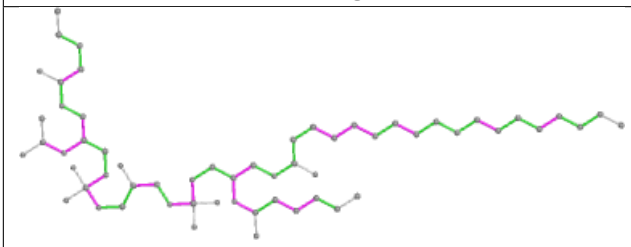
Ligand CDL H 303



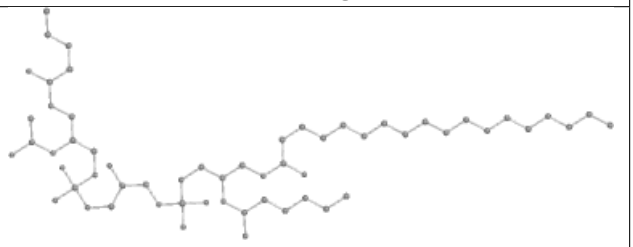
Bond lengths



Bond angles

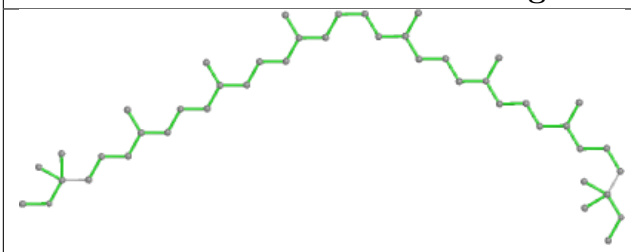


Torsions

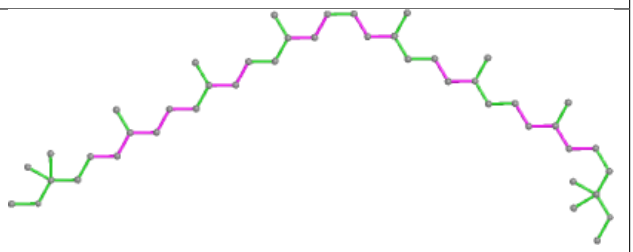


Rings

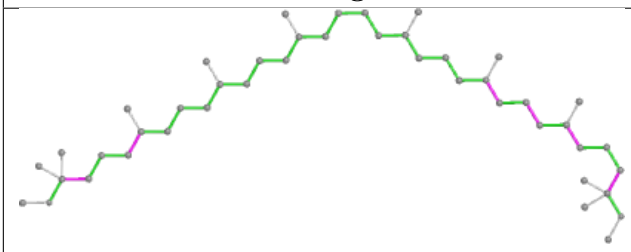
Ligand CRT 6 101



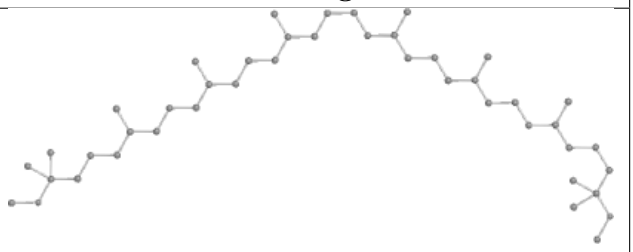
Bond lengths



Bond angles

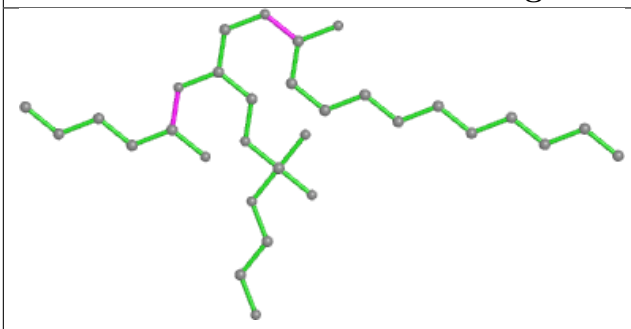


Torsions

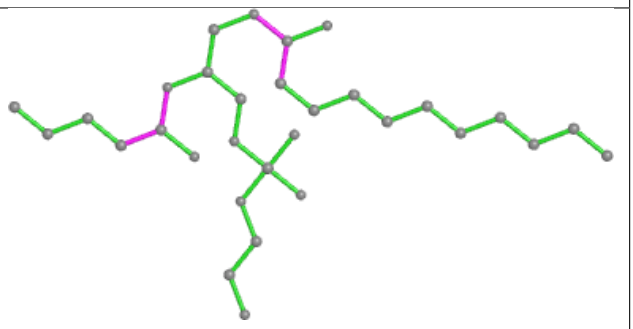


Rings

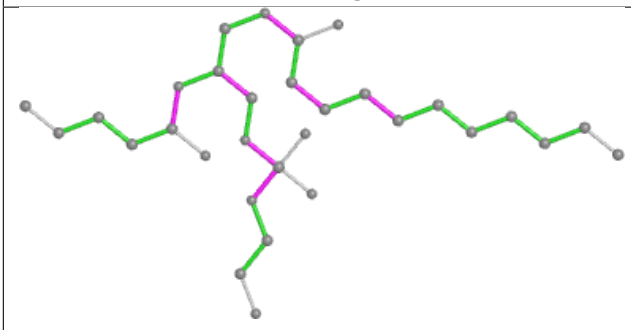
Ligand PEF K 102



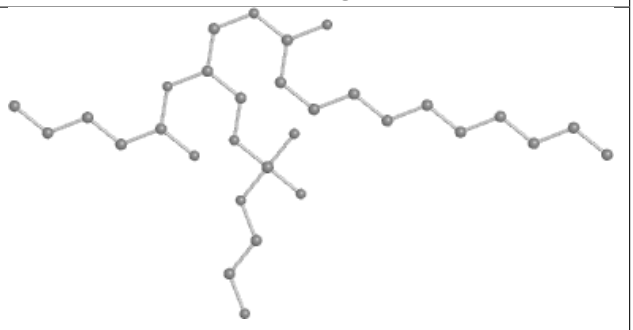
Bond lengths



Bond angles

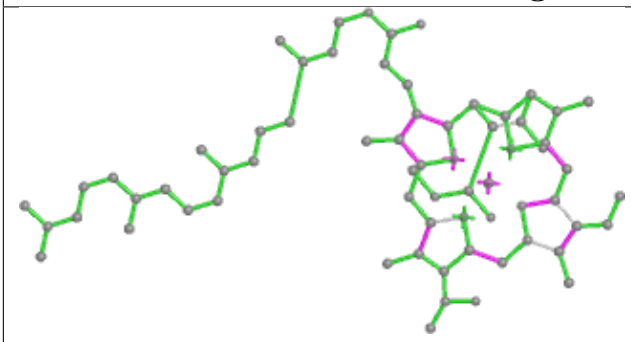


Torsions

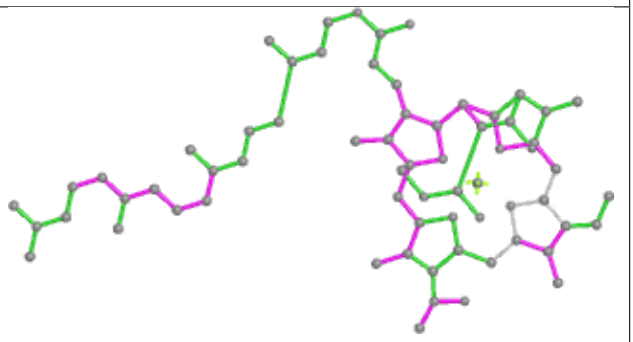


Rings

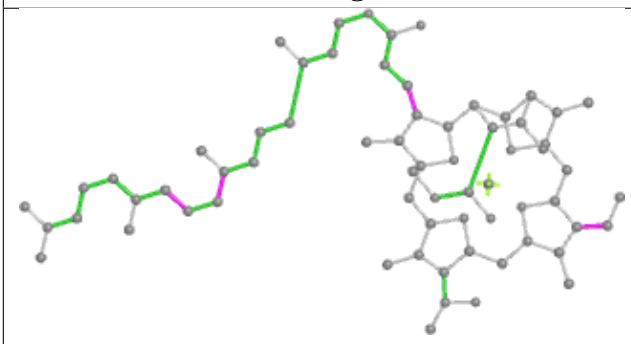
Ligand 07D D 101



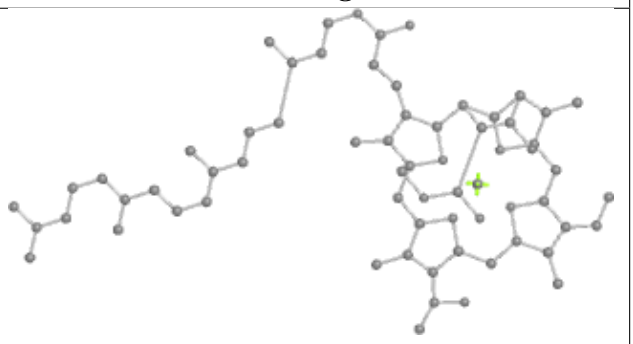
Bond lengths



Bond angles

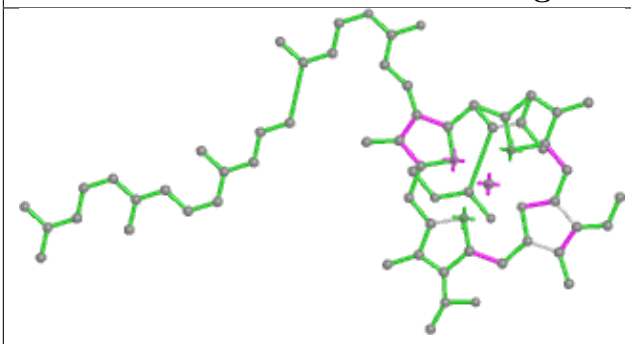


Torsions

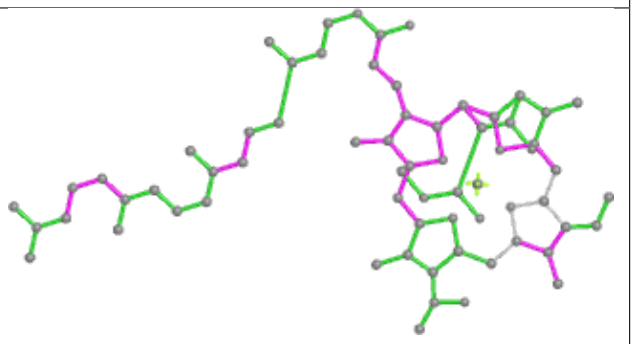


Rings

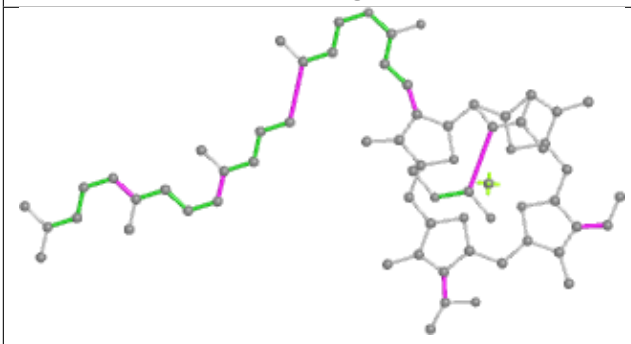
Ligand 07D 1 101



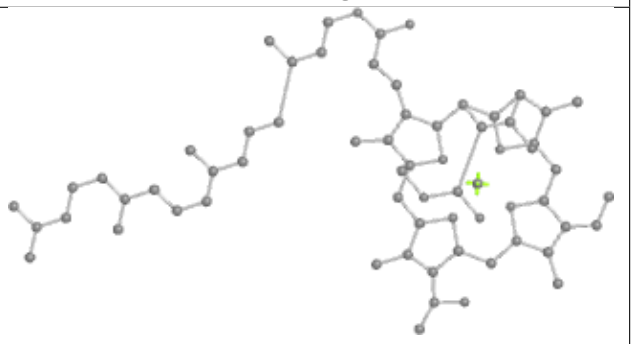
Bond lengths



Bond angles

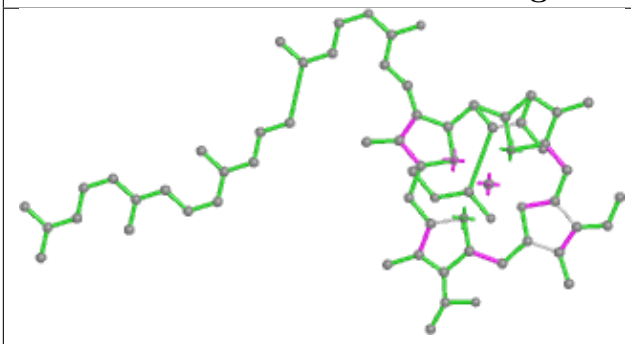


Torsions

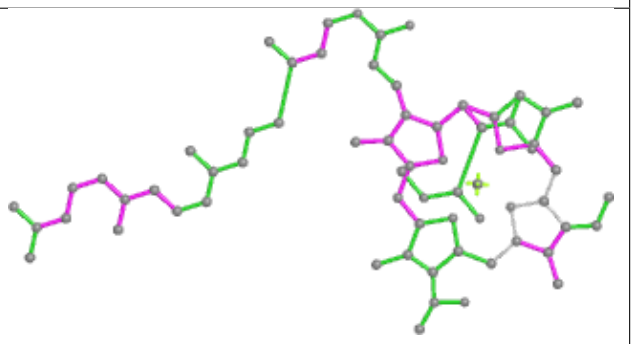


Rings

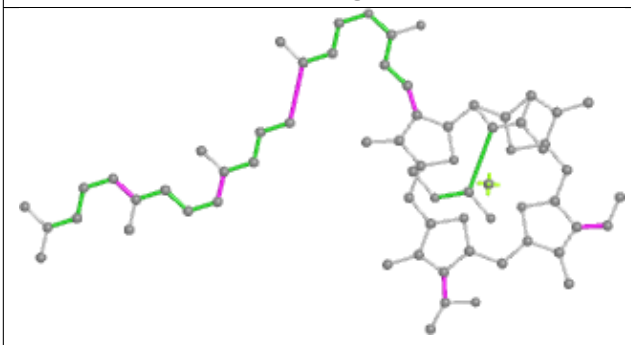
Ligand 07D B 101



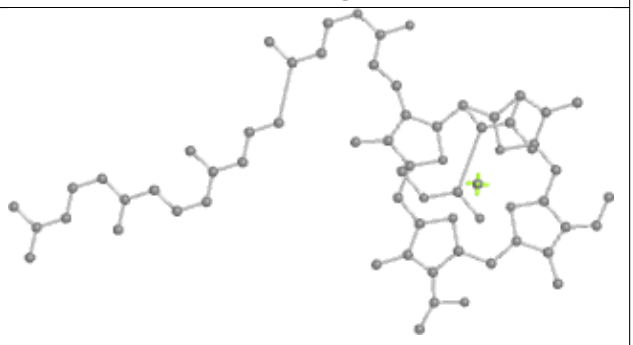
Bond lengths



Bond angles

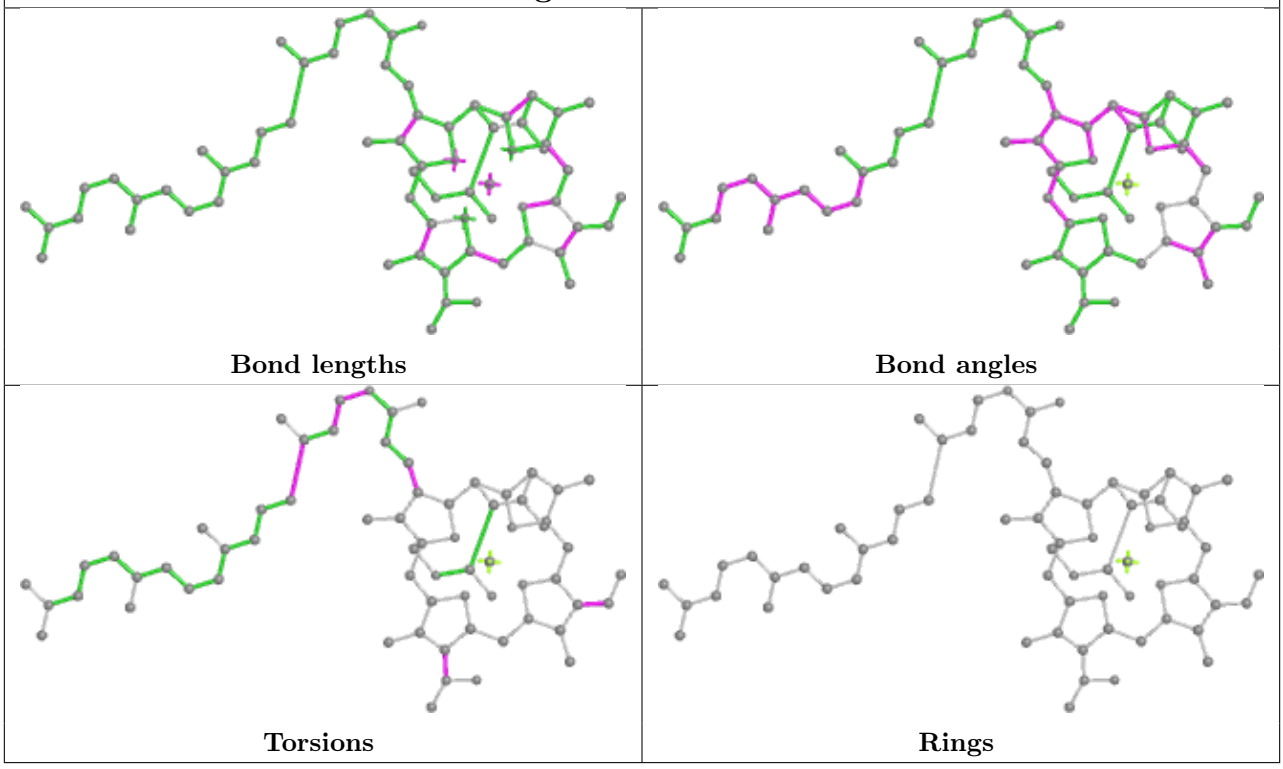


Torsions

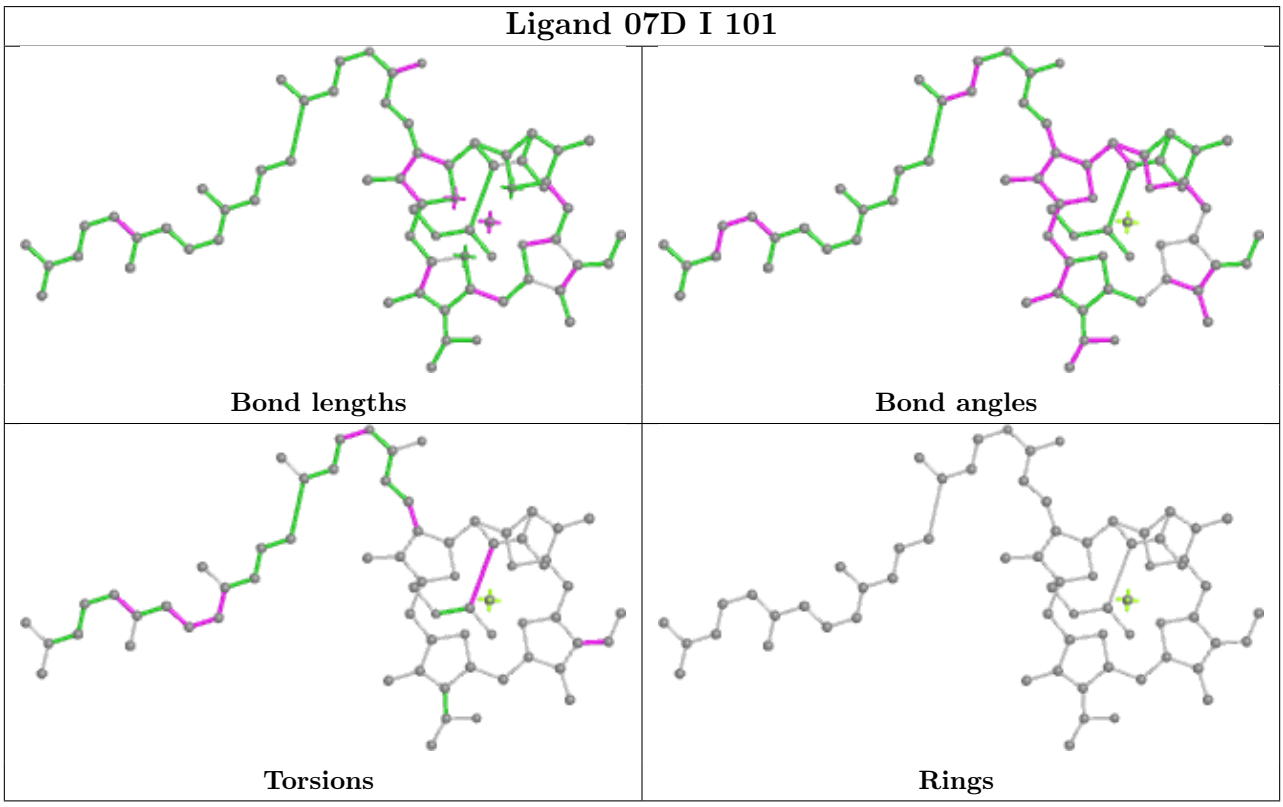


Rings

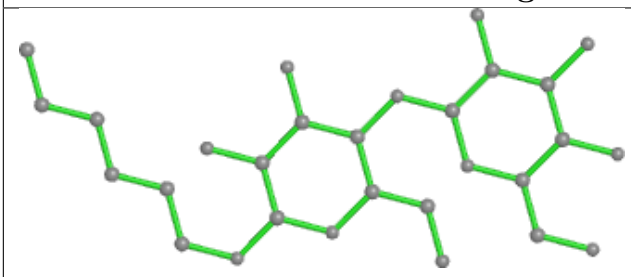
Ligand 07D J 102



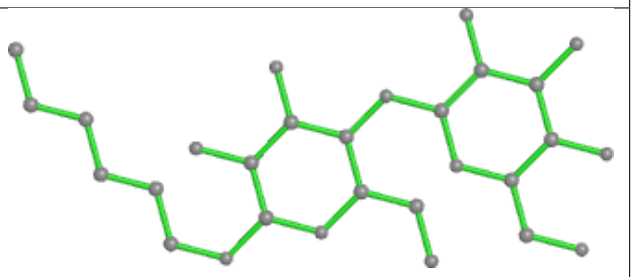
Ligand 07D I 101



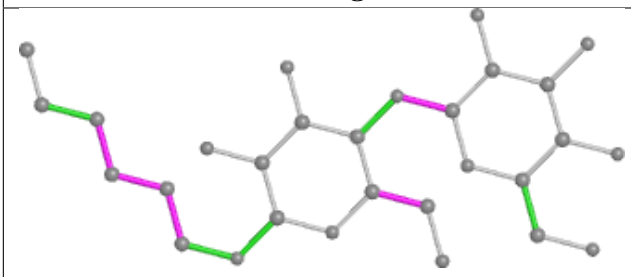
Ligand LMT M 411



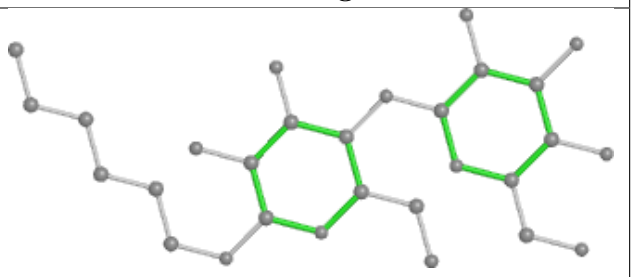
Bond lengths



Bond angles

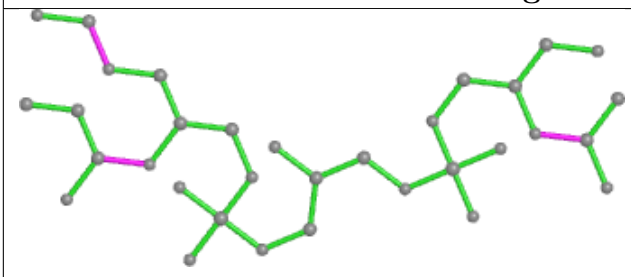


Torsions

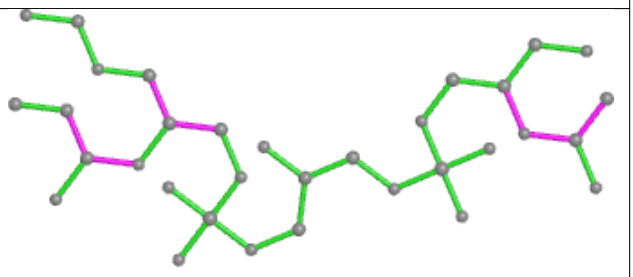


Rings

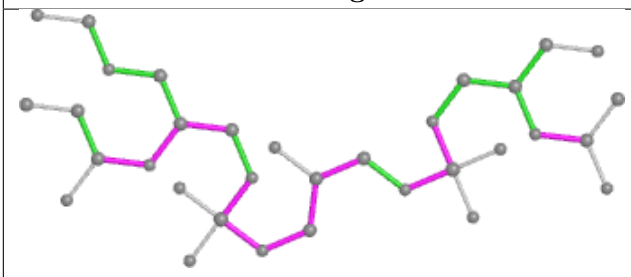
Ligand CDL H 304



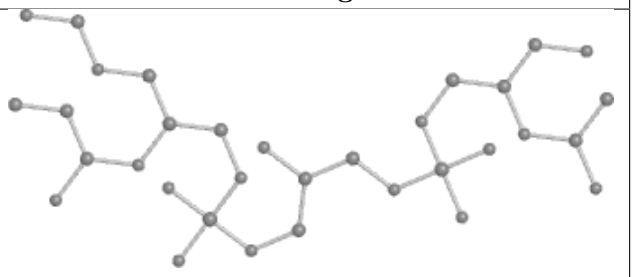
Bond lengths



Bond angles

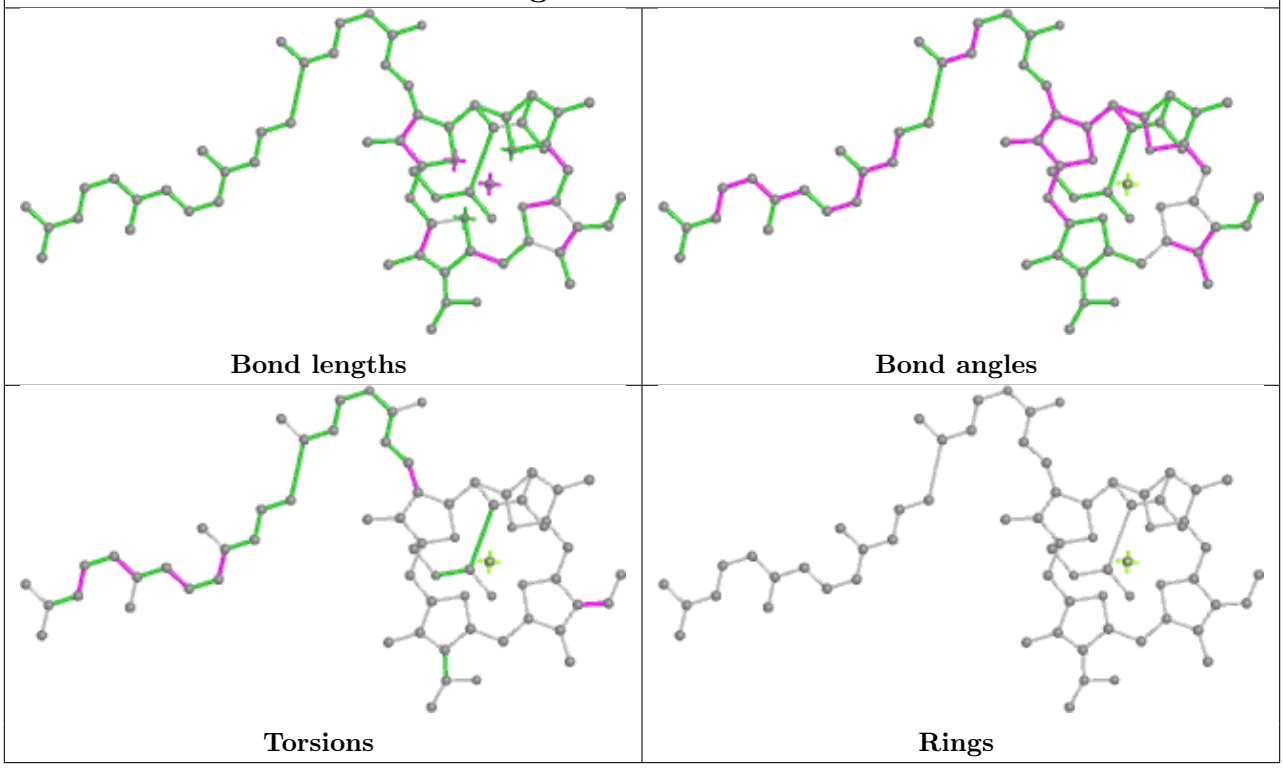


Torsions



Rings

Ligand 07D N 102



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.

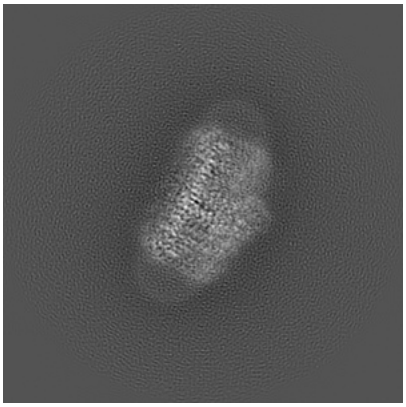
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-31258. These allow visual inspection of the internal detail of the map and identification of artifacts.

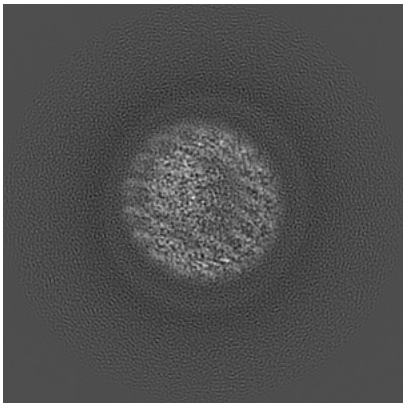
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

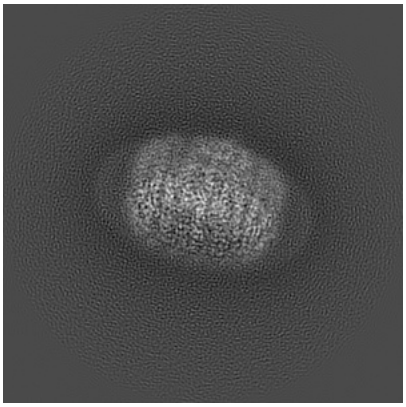
6.1.1 Primary map



X



Y

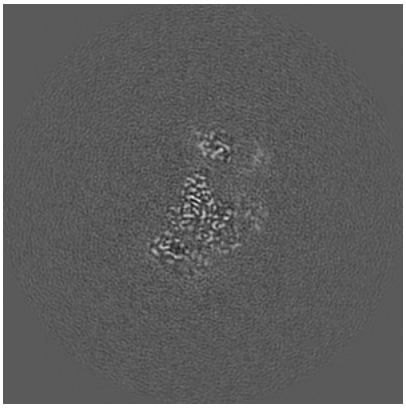


Z

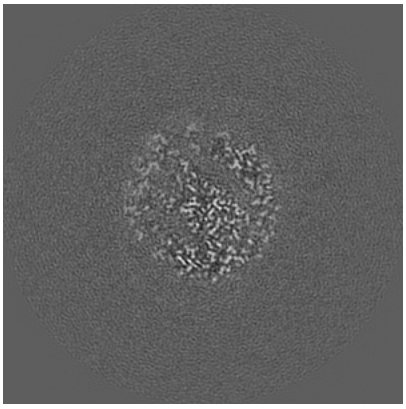
The images above show the map projected in three orthogonal directions.

6.2 Central slices

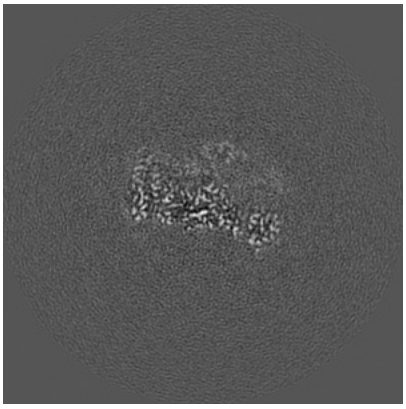
6.2.1 Primary map



X Index: 180



Y Index: 180

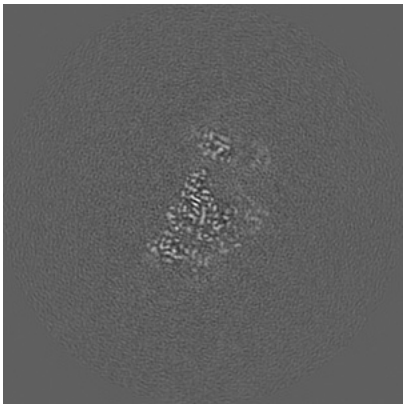


Z Index: 180

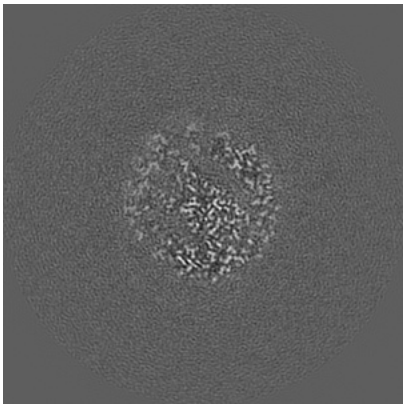
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

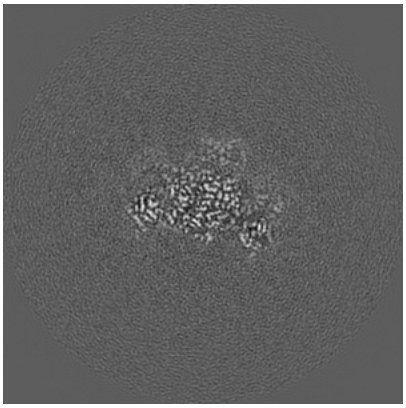
6.3.1 Primary map



X Index: 179



Y Index: 180

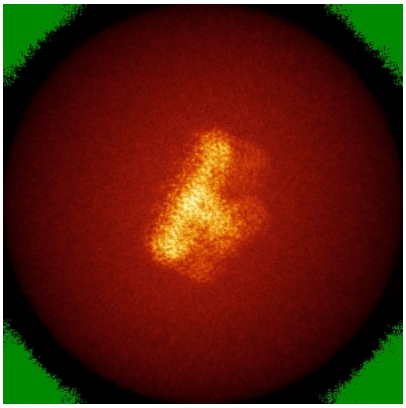


Z Index: 171

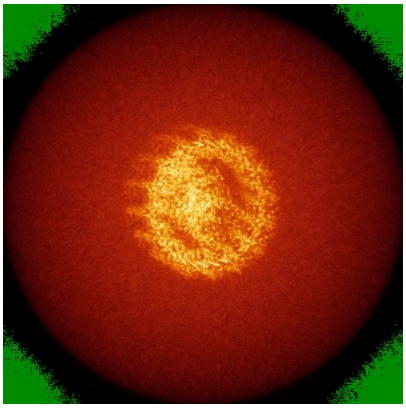
The images above show the largest variance slices of the map in three orthogonal directions.

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

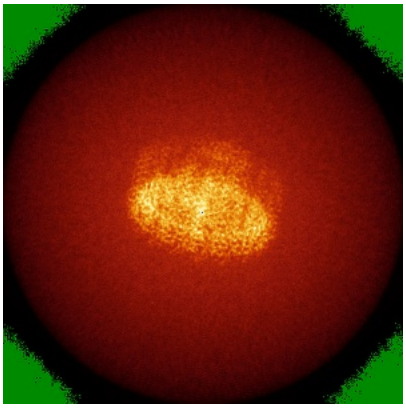
6.4.1 Primary map



X



Y

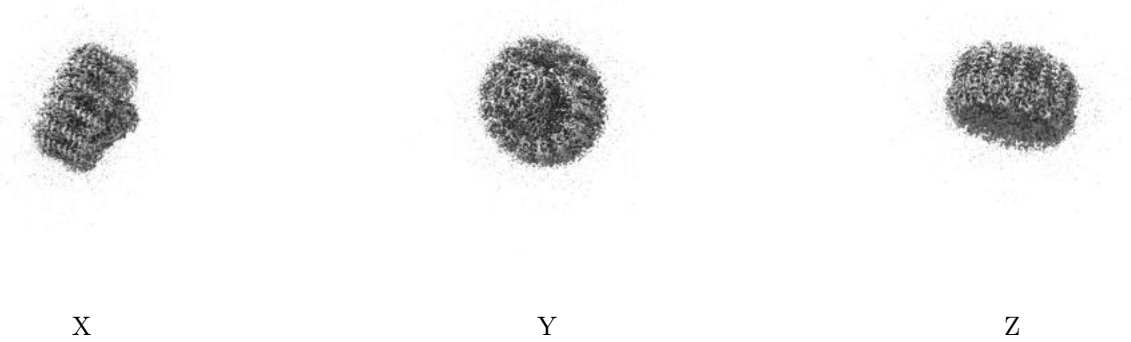


Z

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 0.033. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

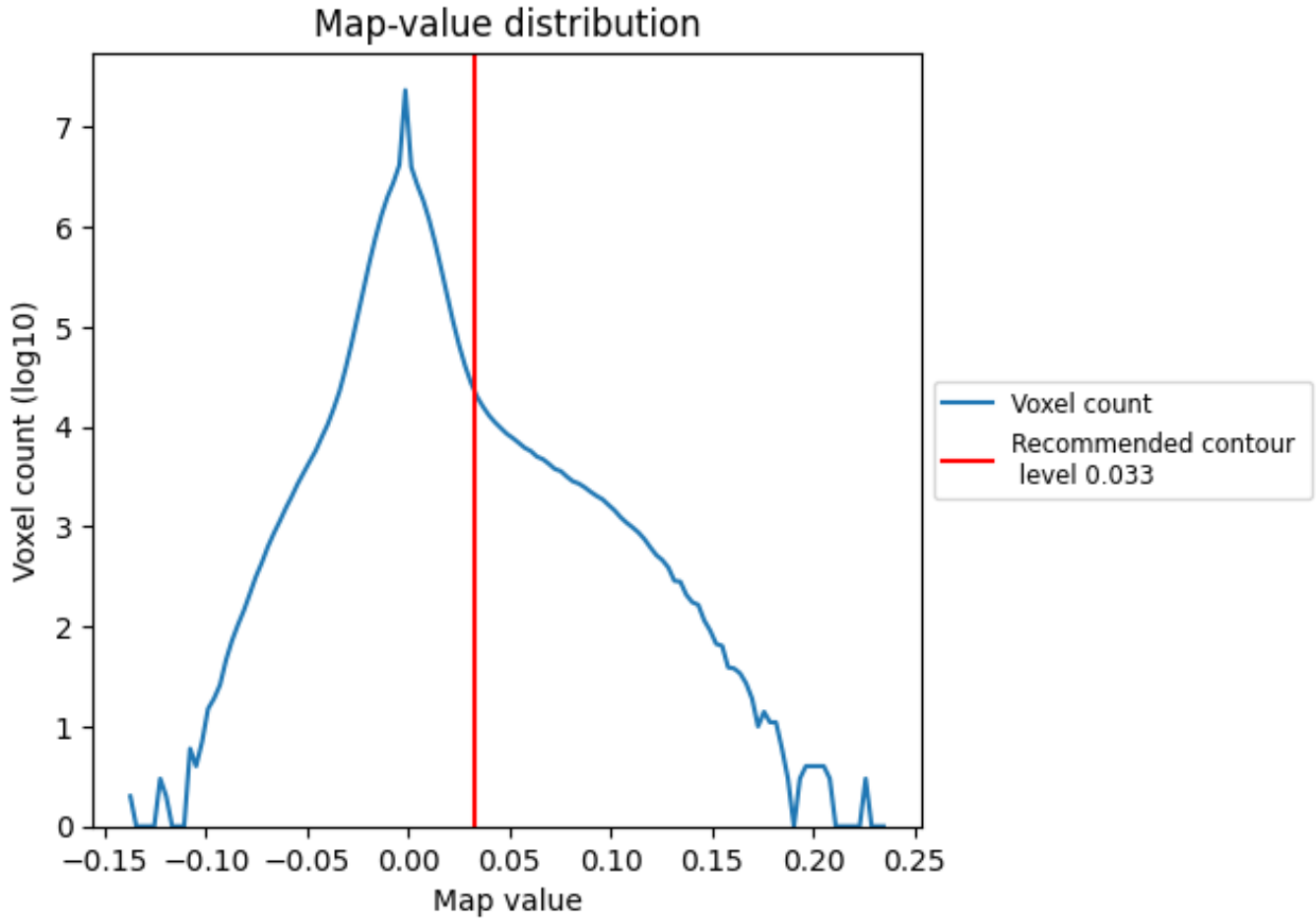
6.6 Mask visualisation (i)

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

7 Map analysis

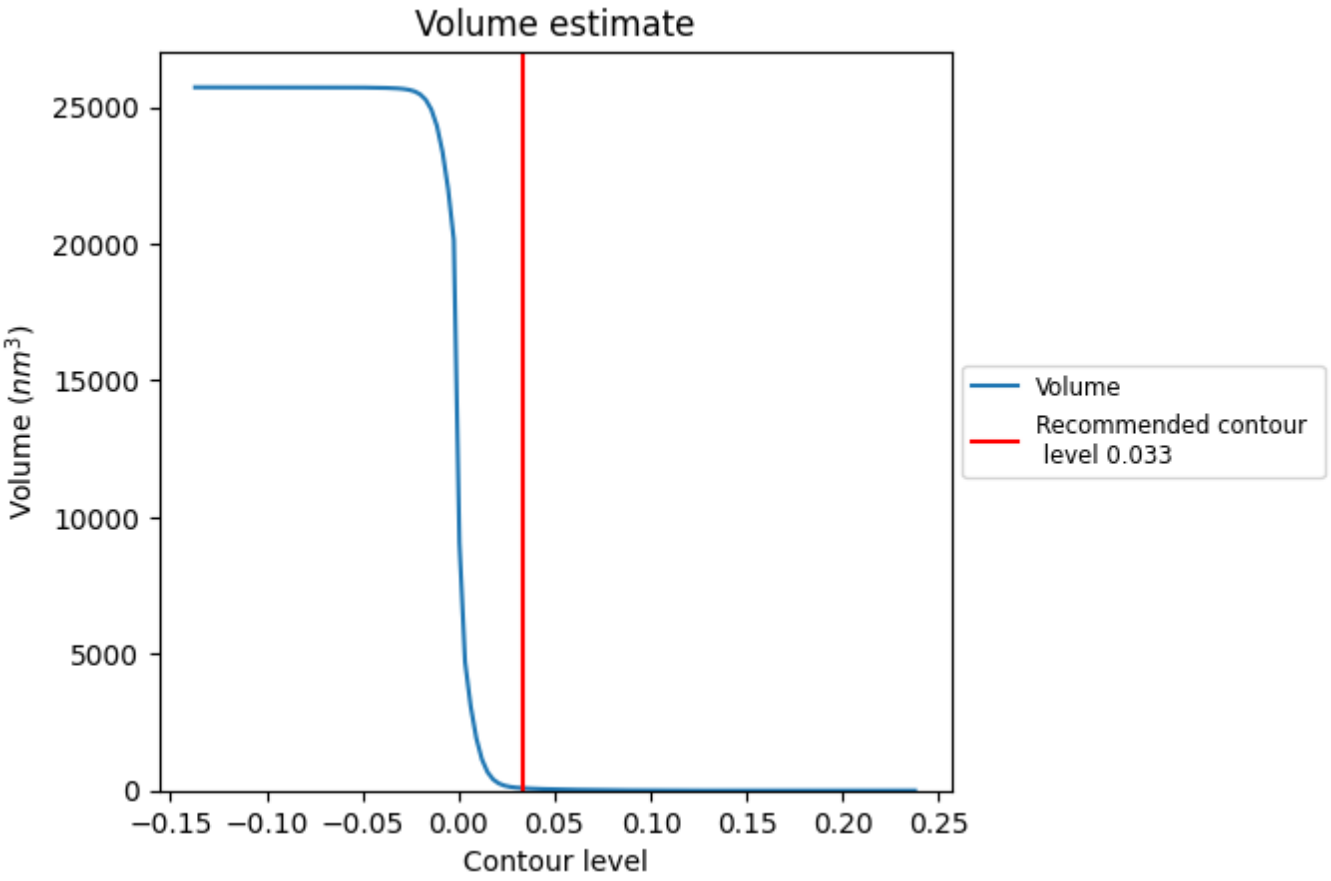
This section contains the results of statistical analysis of the map.

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.

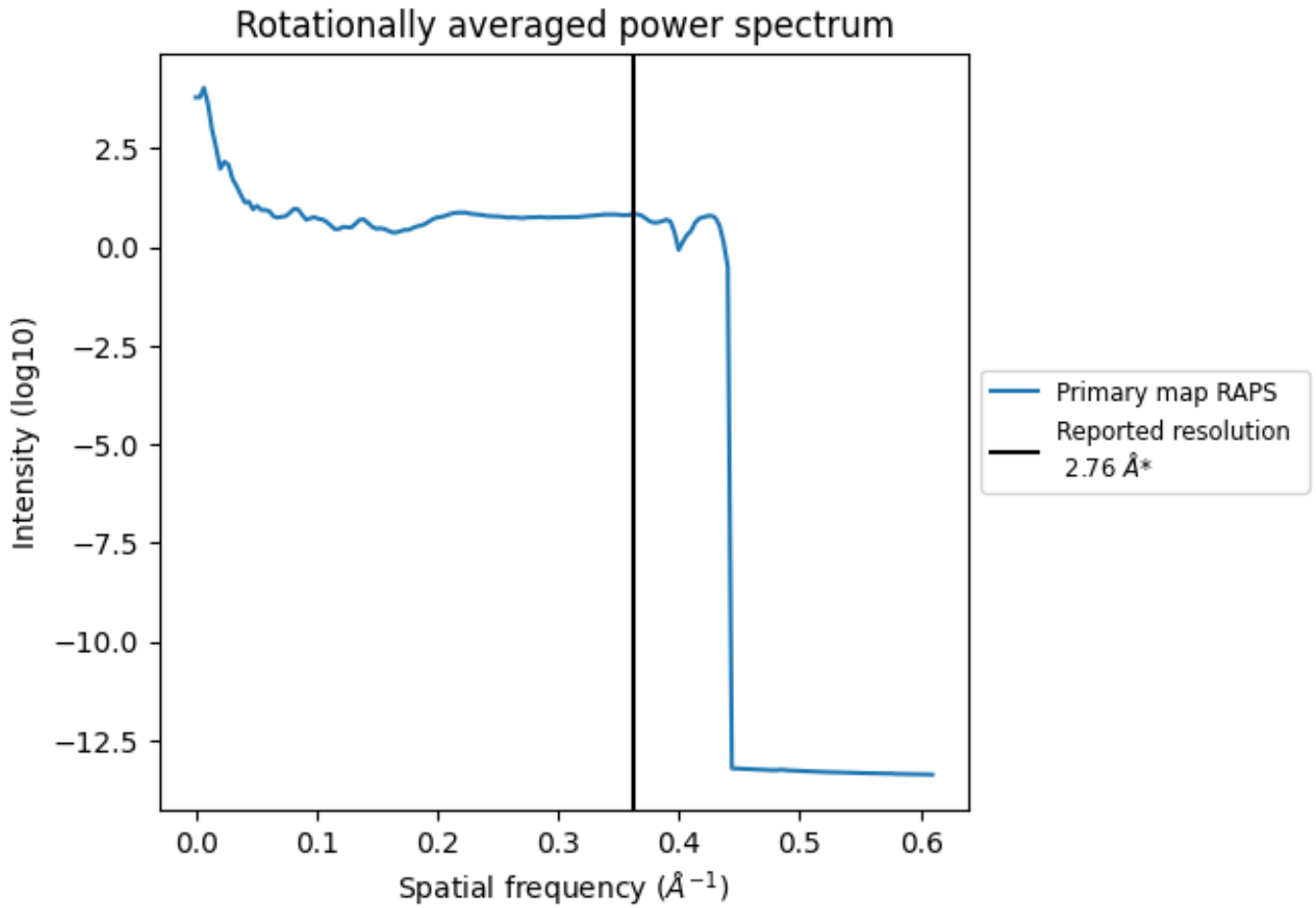
7.2 Volume estimate



The volume at the recommended contour level is 90 nm^3; this corresponds to an approximate mass of 81 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)

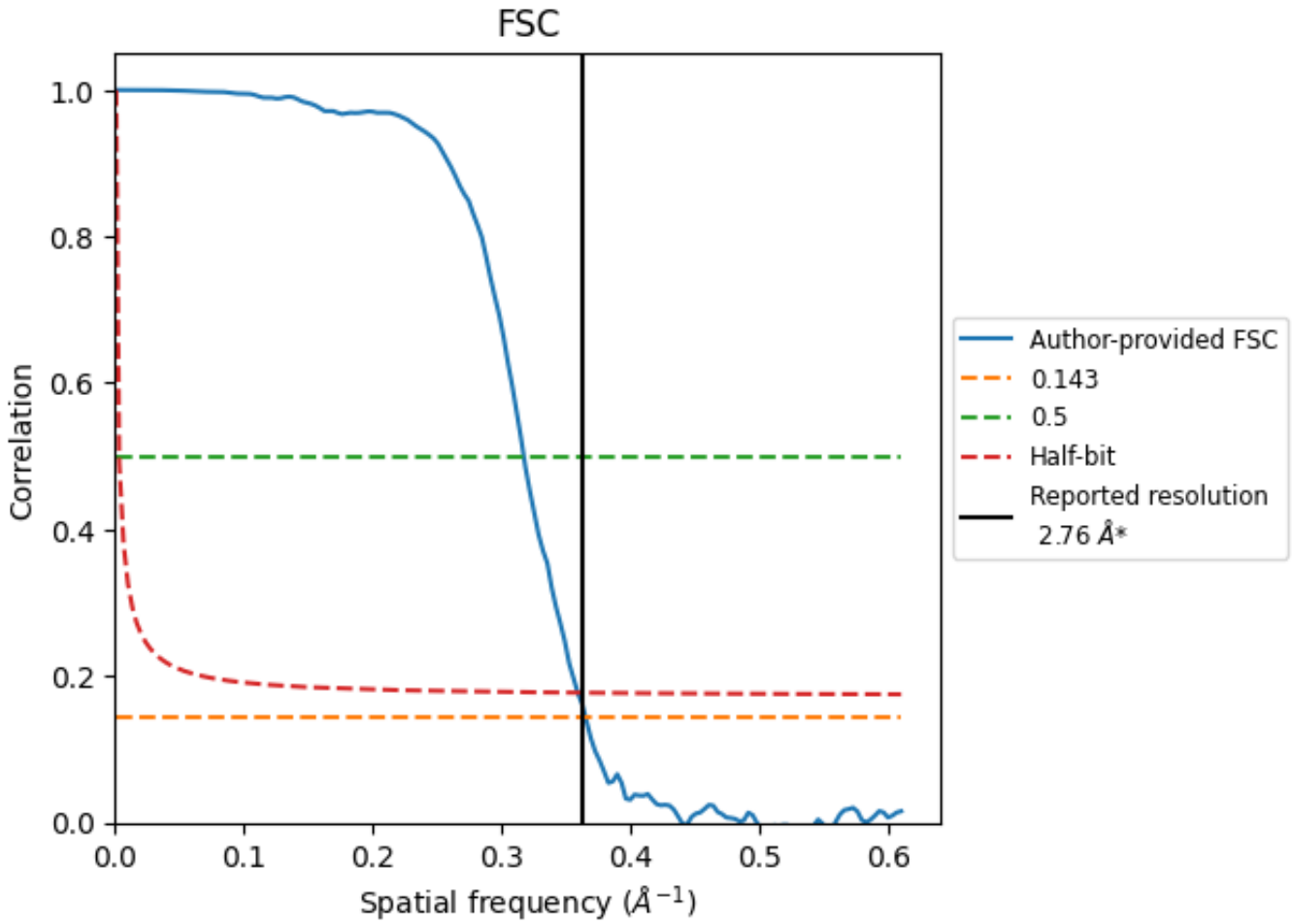


*Reported resolution corresponds to spatial frequency of 0.362 $Å^{-1}$

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 0.362 Å^{-1}

8.2 Resolution estimates (i)

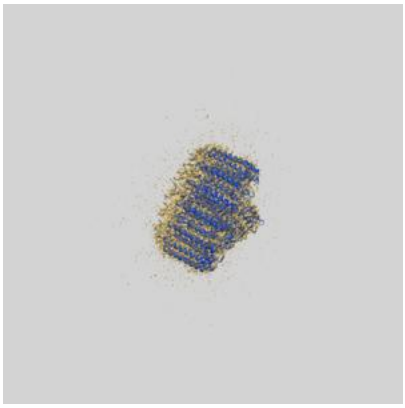
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.76	-	-
Author-provided FSC curve	2.74	3.15	2.79
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

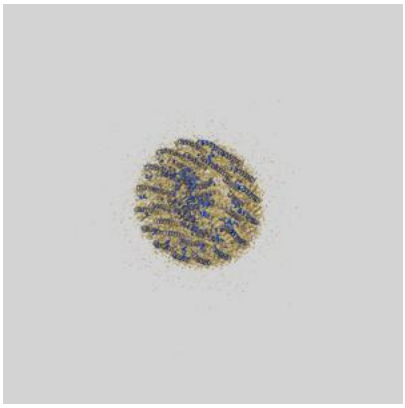
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-31258 and PDB model 7EQD. Per-residue inclusion information can be found in section 3 on page 17.

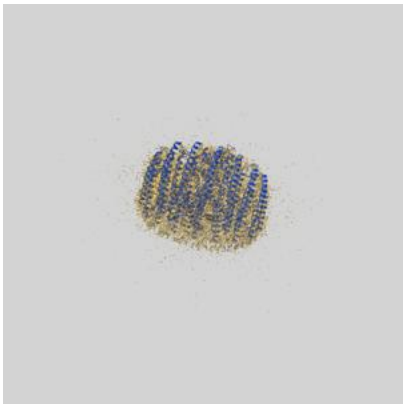
9.1 Map-model overlay



X



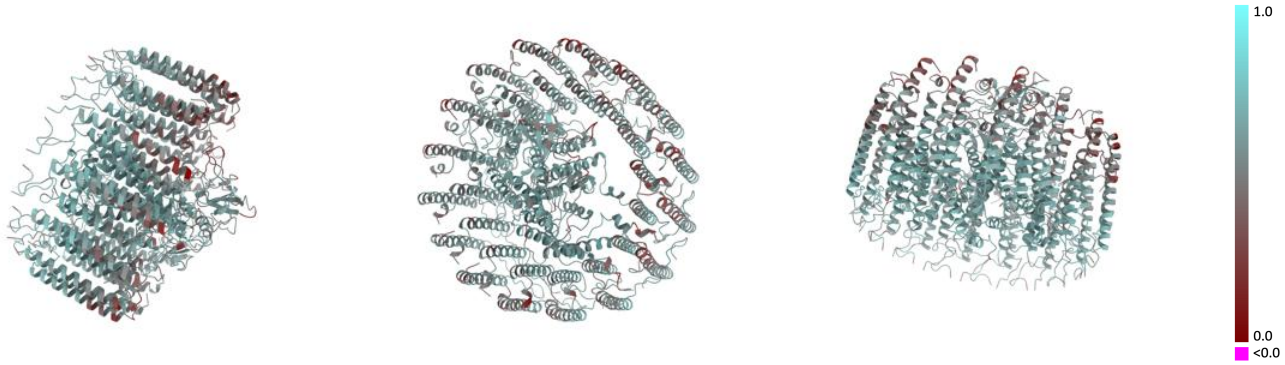
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.033 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.

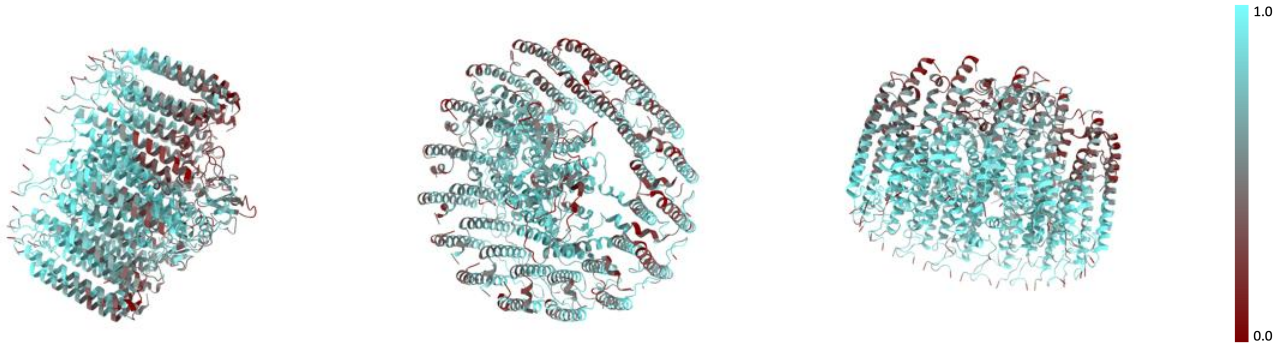
9.2 Q-score mapped to coordinate model



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.

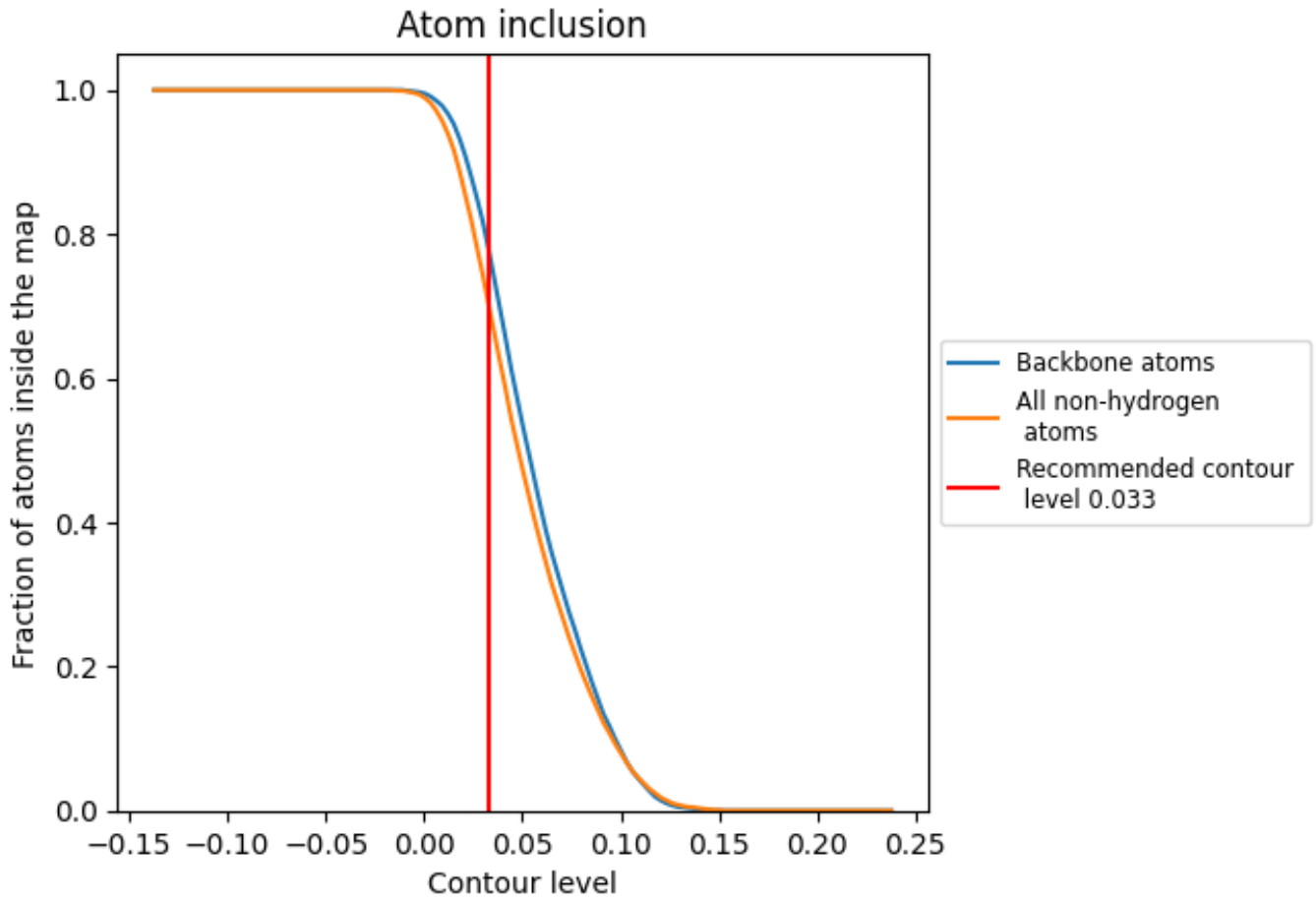
9.3 Atom inclusion mapped to coordinate model



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 (0.033).

9.4 Atom inclusion (i)



At the recommended contour level, 78% of all backbone atoms, 70% 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 (0.033) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7000	0.5770
0	0.6870	0.5780
1	0.6170	0.5370
2	0.5890	0.5370
3	0.5810	0.5370
4	0.5610	0.5020
5	0.5590	0.5320
6	0.5610	0.5080
7	0.6800	0.5750
8	0.6590	0.5560
9	0.7380	0.5940
A	0.7290	0.5910
B	0.6680	0.5540
D	0.7530	0.6020
E	0.7040	0.5670
F	0.7580	0.5990
G	0.7430	0.5960
H	0.6100	0.5460
I	0.7580	0.5970
J	0.7070	0.5900
K	0.7400	0.5920
L	0.8650	0.6400
M	0.7990	0.6240
N	0.6910	0.5730
O	0.7350	0.5830
P	0.6270	0.5550
Q	0.7280	0.6010
R	0.7130	0.5660
S	0.6760	0.5680
T	0.6560	0.5560
U	0.6660	0.5600
V	0.5990	0.5250
W	0.6690	0.5650
X	0.5860	0.5350
Y	0.6370	0.5270
Z	0.6220	0.5290