Full wwPDB X-ray Structure Validation Report ⓘ

Dec 1, 2025 – 03:34 pm GMT

PDB ID	:	2UUN / pdb_00002uun
Title	:	Crystal structure of C-phycocyanin from Phormidium, Lyngbya spp. (Marine) and Spirulina sp. (Fresh water) shows two different ways of energy transfer between two hexamers.
Authors	:	Satyanarayana, L.; Patel, A.; Mishra, S.; K Ghosh, P.; Suresh, C.G.
Deposited on	:	2007-03-05
Resolution	:	3.00 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

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

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

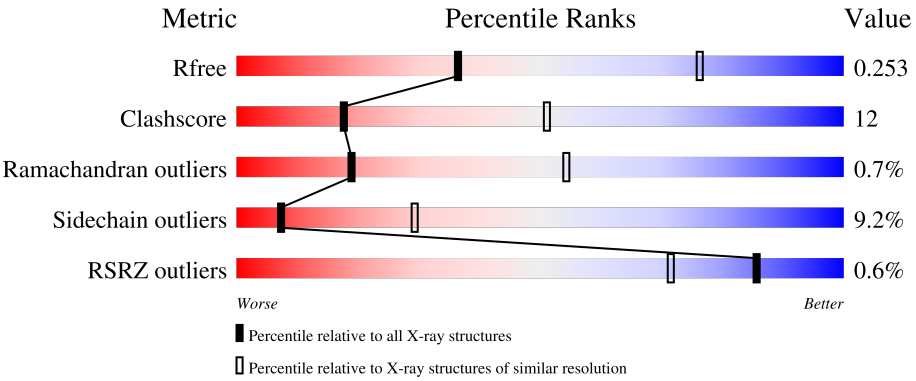
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.46

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	2511 (3.00-3.00)
Clashscore	180529	2866 (3.00-3.00)
Ramachandran outliers	177936	2778 (3.00-3.00)
Sidechain outliers	177891	2781 (3.00-3.00)
RSRZ outliers	164620	2523 (3.00-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	162	75% 23%
1	C	162	76% 20%
1	E	162	81% 15%
1	G	162	82% 14%

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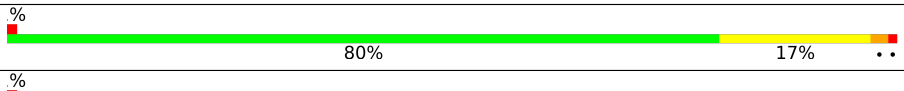
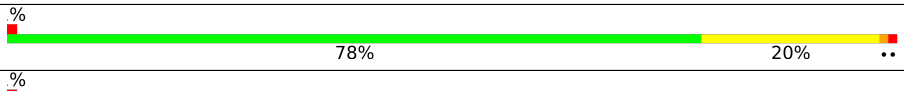
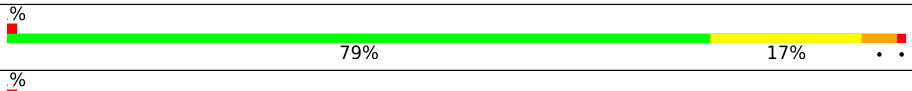
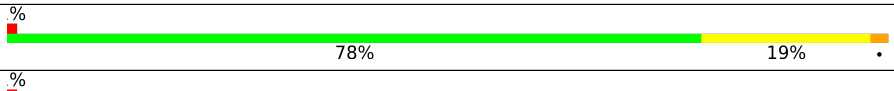
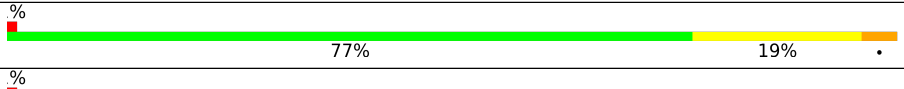
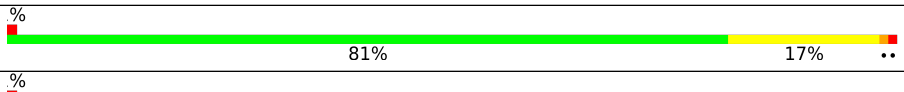
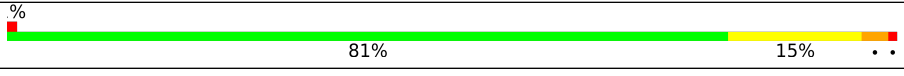
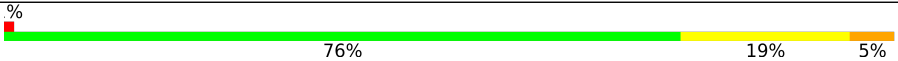
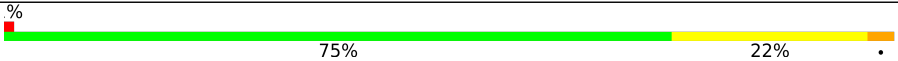
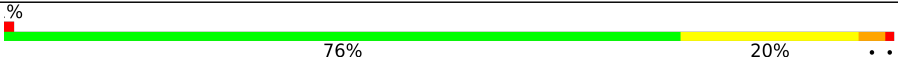
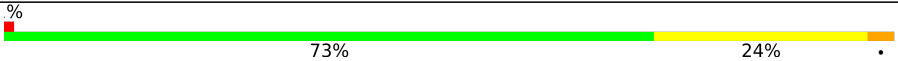
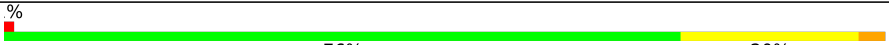
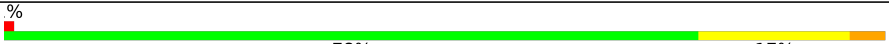
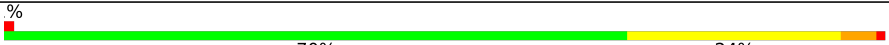
Mol	Chain	Length	Quality of chain
1	I	162	
1	K	162	
1	M	162	
1	O	162	
1	Q	162	
1	S	162	
1	U	162	
1	W	162	
2	B	172	
2	F	172	
2	H	172	
2	J	172	
2	L	172	
2	N	172	
2	P	172	
2	R	172	
2	T	172	
2	V	172	
2	X	172	
3	D	172	

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 31361 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called C-PHYCOCYANIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	C	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	E	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	G	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	I	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	K	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	M	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	O	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	Q	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	S	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	U	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			
1	W	162	Total	C	N	O	S	0	0	0
			1211	761	203	240	7			

- Molecule 2 is a protein called C-PHYCOCYANIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	F	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			

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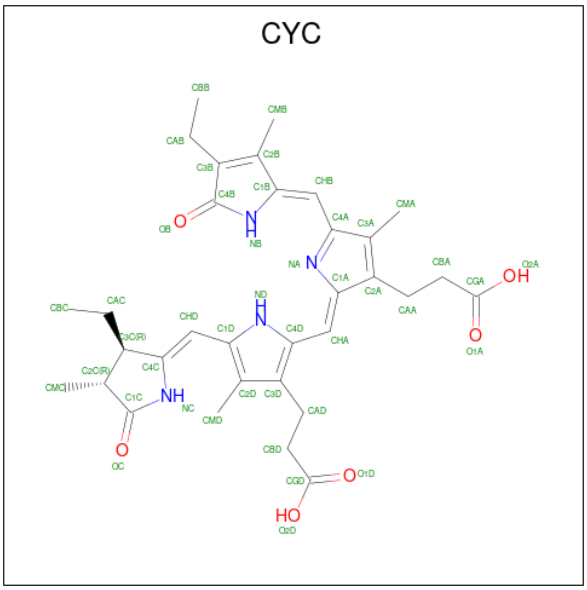
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	J	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	L	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	N	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	P	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	R	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	T	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	V	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			
2	X	172	Total	C	N	O	S	0	0	0
			1242	768	218	247	9			

- Molecule 3 is a protein called C-PHYCOCYANIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	172	Total	C	N	O	S	0	0	0
			1244	770	218	247	9			

- Molecule 4 is PHYCOCYANOBILIN (CCD ID: CYC) (formula: $C_{33}H_{40}N_4O_6$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	0
			43	33	4	6		
4	B	1	Total	C	N	O	0	0
			43	33	4	6		
4	B	1	Total	C	N	O	0	0
			43	33	4	6		
4	C	1	Total	C	N	O	0	0
			43	33	4	6		
4	D	1	Total	C	N	O	0	0
			43	33	4	6		
4	D	1	Total	C	N	O	0	0
			43	33	4	6		
4	E	1	Total	C	N	O	0	0
			43	33	4	6		
4	F	1	Total	C	N	O	0	0
			43	33	4	6		
4	F	1	Total	C	N	O	0	0
			43	33	4	6		
4	G	1	Total	C	N	O	0	0
			43	33	4	6		
4	H	1	Total	C	N	O	0	0
			43	33	4	6		
4	H	1	Total	C	N	O	0	0
			43	33	4	6		
4	I	1	Total	C	N	O	0	0
			43	33	4	6		
4	J	1	Total	C	N	O	0	0
			43	33	4	6		
4	J	1	Total	C	N	O	0	0
			43	33	4	6		
4	K	1	Total	C	N	O	0	0
			43	33	4	6		
4	L	1	Total	C	N	O	0	0
			43	33	4	6		
4	L	1	Total	C	N	O	0	0
			43	33	4	6		
4	M	1	Total	C	N	O	0	0
			43	33	4	6		
4	N	1	Total	C	N	O	0	0
			43	33	4	6		
4	N	1	Total	C	N	O	0	0
			43	33	4	6		
4	O	1	Total	C	N	O	0	0
			43	33	4	6		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	P	1	Total	C	N	O	0	0
			43	33	4	6		
4	P	1	Total	C	N	O	0	0
			43	33	4	6		
4	Q	1	Total	C	N	O	0	0
			43	33	4	6		
4	R	1	Total	C	N	O	0	0
			43	33	4	6		
4	R	1	Total	C	N	O	0	0
			43	33	4	6		
4	S	1	Total	C	N	O	0	0
			43	33	4	6		
4	T	1	Total	C	N	O	0	0
			43	33	4	6		
4	T	1	Total	C	N	O	0	0
			43	33	4	6		
4	U	1	Total	C	N	O	0	0
			43	33	4	6		
4	V	1	Total	C	N	O	0	0
			43	33	4	6		
4	V	1	Total	C	N	O	0	0
			43	33	4	6		
4	W	1	Total	C	N	O	0	0
			43	33	4	6		
4	X	1	Total	C	N	O	0	0
			43	33	4	6		
4	X	1	Total	C	N	O	0	0
			43	33	4	6		

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	2	Total	O	0	0
			2	2		
5	C	31	Total	O	0	0
			31	31		
5	D	13	Total	O	0	0
			13	13		
5	E	8	Total	O	0	0
			8	8		
5	F	39	Total	O	0	0
			39	39		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	I	40	Total O 40 40	0	0
5	J	15	Total O 15 15	0	0
5	K	9	Total O 9 9	0	0
5	L	31	Total O 31 31	0	0
5	M	40	Total O 40 40	0	0
5	N	13	Total O 13 13	0	0
5	O	13	Total O 13 13	0	0
5	P	27	Total O 27 27	0	0
5	Q	2	Total O 2 2	0	0
5	R	3	Total O 3 3	0	0
5	S	6	Total O 6 6	0	0
5	T	30	Total O 30 30	0	0
5	W	34	Total O 34 34	0	0
5	X	19	Total O 19 19	0	0

3 Residue-property plots (i)

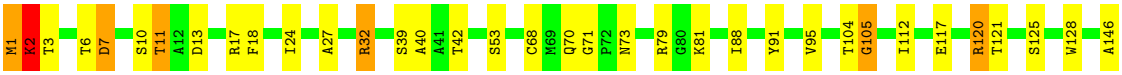
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

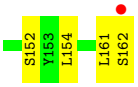
• Molecule 1: C-PHYCOCYANIN

Chain A:

• Molecule 1: C-PHYCOCYANIN

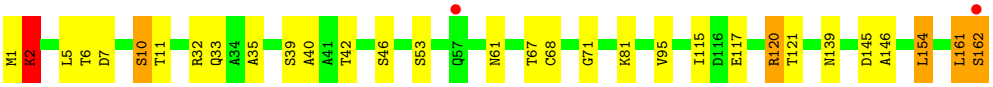
Chain C:





• Molecule 1: C-PHYCOCYANIN

Chain E:

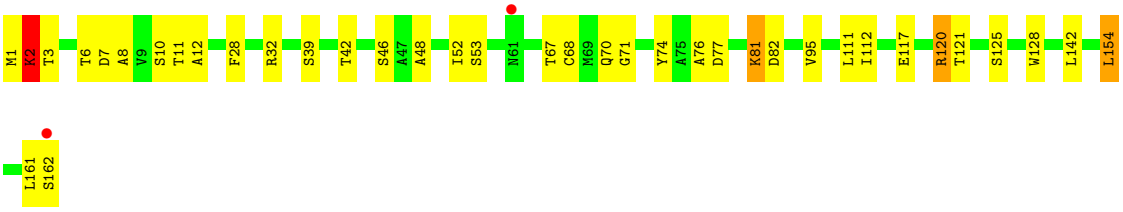


• Molecule 1: C-PHYCOCYANIN

Chain G:

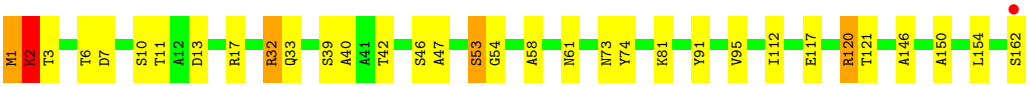
• Molecule 1: C-PHYCOCYANIN

Chain I:



• Molecule 1: C-PHYCOCYANIN

Chain K:

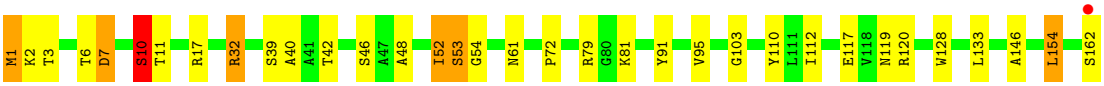


• Molecule 1: C-PHYCOCYANIN

Chain M:

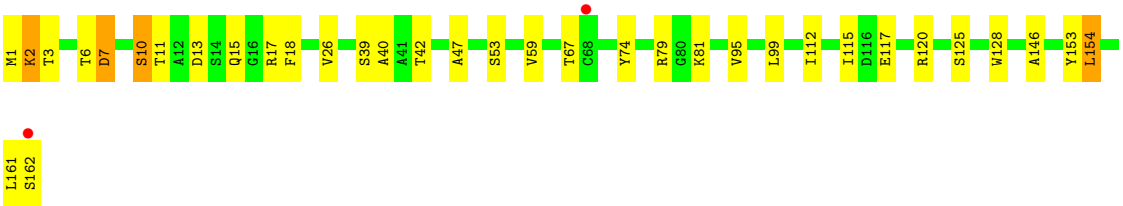
• Molecule 1: C-PHYCOCYANIN

Chain O:



• Molecule 1: C-PHYCOCYANIN

Chain Q:

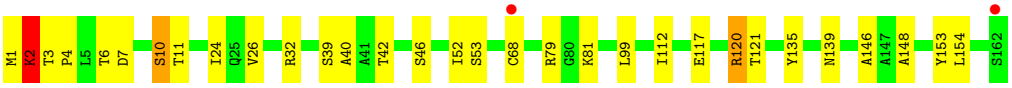


• Molecule 1: C-PHYCOCYANIN

Chain S:

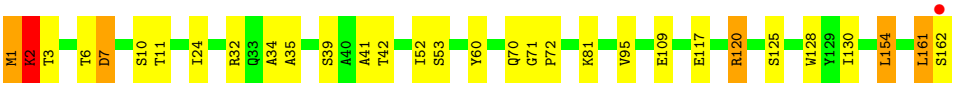
• Molecule 1: C-PHYCOCYANIN

Chain U:



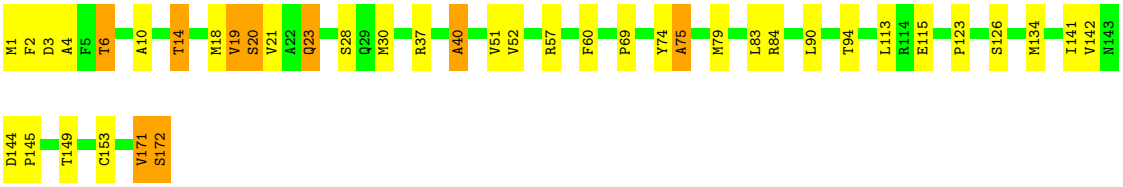
• Molecule 1: C-PHYCOCYANIN

Chain W:



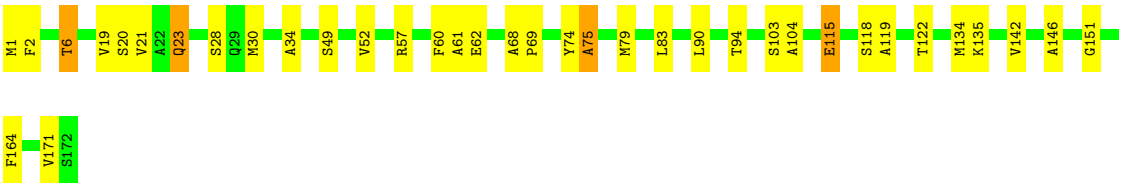
• Molecule 2: C-PHYCOCYANIN

Chain B:



• Molecule 2: C-PHYCOCYANIN

Chain F:

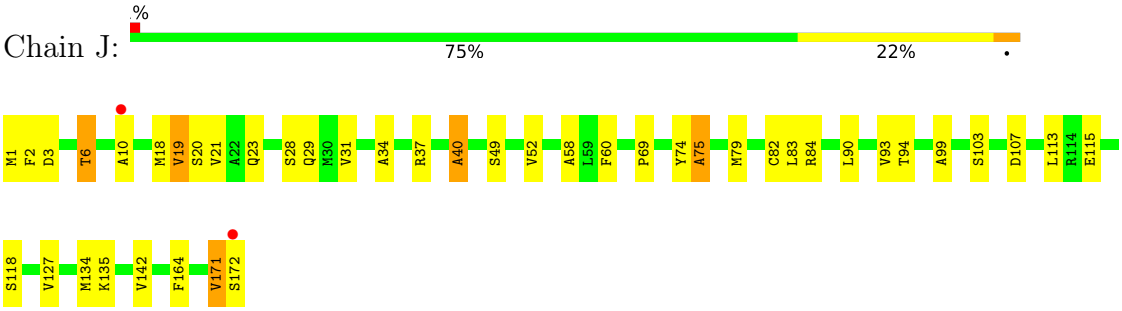


• Molecule 2: C-PHYCOCYANIN

Chain H:

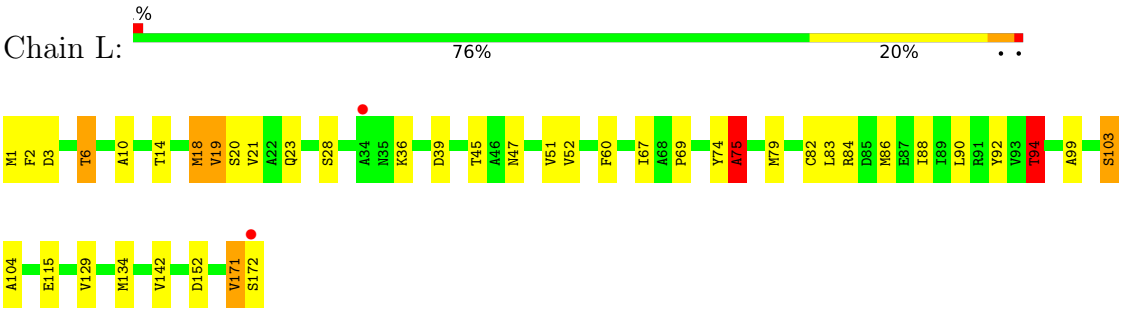
• Molecule 2: C-PHYCOCYANIN

Chain J:



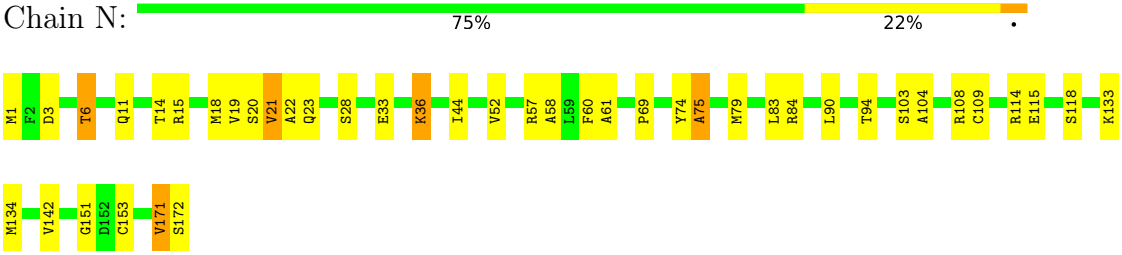
• Molecule 2: C-PHYCOCYANIN

Chain L:



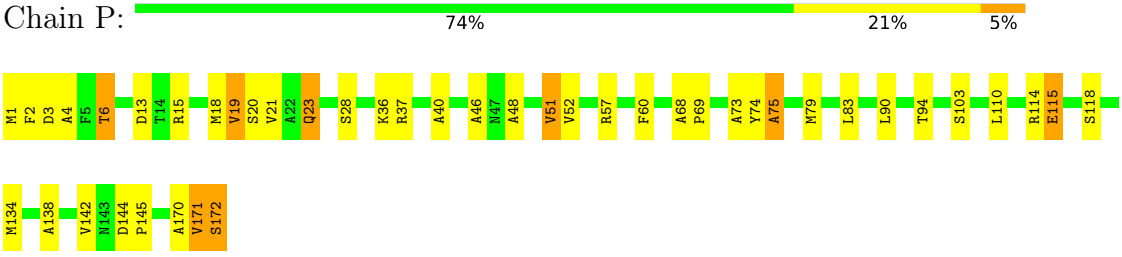
• Molecule 2: C-PHYCOCYANIN

Chain N:



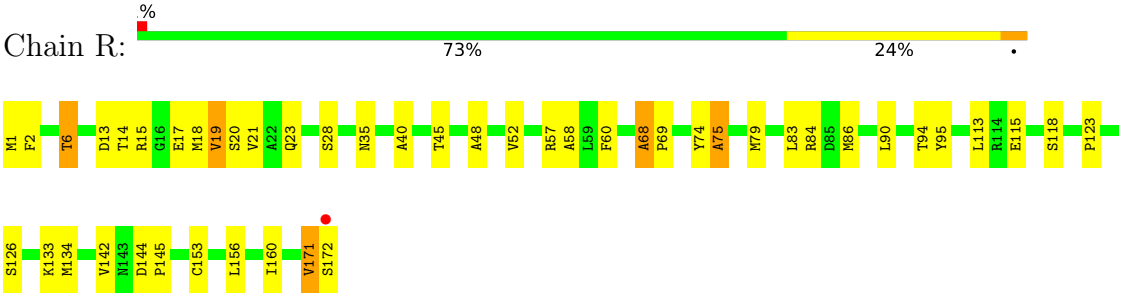
• Molecule 2: C-PHYCOCYANIN

Chain P:



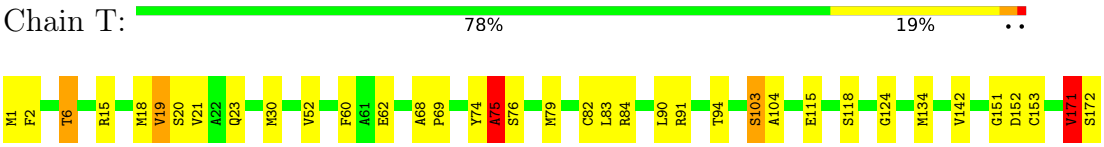
• Molecule 2: C-PHYCOCYANIN

Chain R:



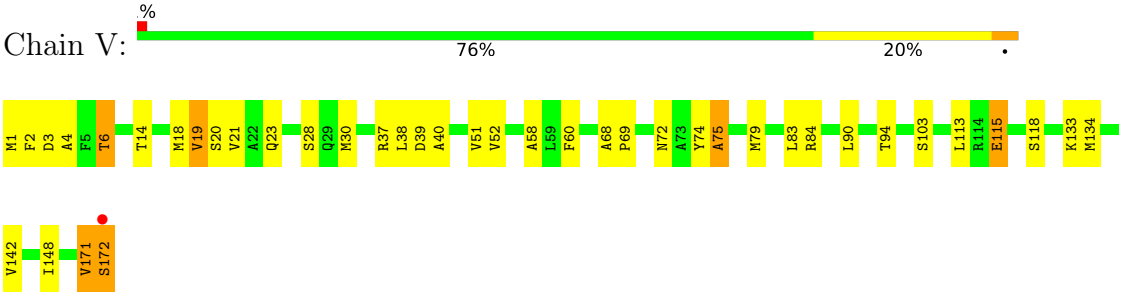
• Molecule 2: C-PHYCOCYANIN

Chain T:



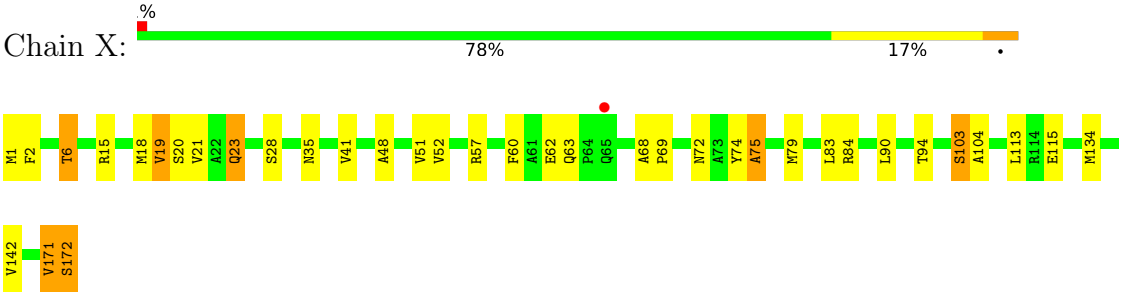
• Molecule 2: C-PHYCOCYANIN

Chain V:



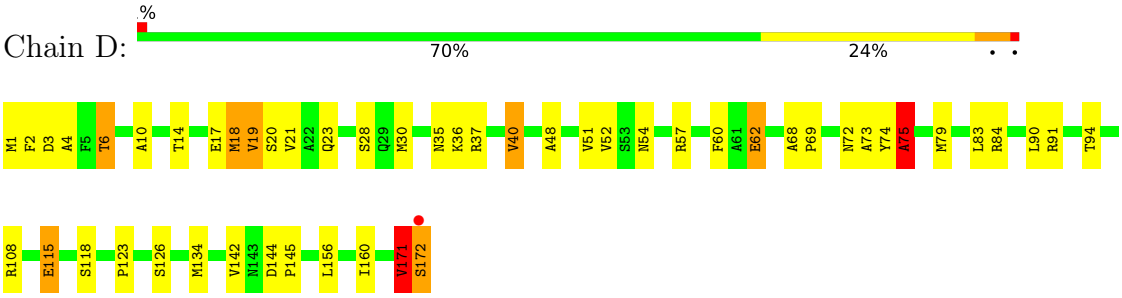
• Molecule 2: C-PHYCOCYANIN

Chain X:



• Molecule 3: C-PHYCOCYANIN

Chain D:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	107.46Å 115.33Å 183.37Å 90.00° 90.09° 90.00°	Depositor
Resolution (Å)	182.57 – 3.00 182.57 – 3.00	Depositor EDS
% Data completeness (in resolution range)	96.0 (182.57-3.00) 96.1 (182.57-3.00)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.15 (at 2.99Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.213 , 0.262 0.208 , 0.253	Depositor DCC
R_{free} test set	4359 reflections (4.84%)	wwPDB-VP
Wilson B-factor (Å^2)	15.0	Xtriage
Anisotropy	0.144	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 14.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	0.021 for h,-k,-l	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	31361	wwPDB-VP
Average B, all atoms (Å^2)	2.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.15% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: CYC

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	1.37	7/1234 (0.6%)	1.25	5/1676 (0.3%)
1	C	1.38	4/1234 (0.3%)	1.30	9/1676 (0.5%)
1	E	1.52	5/1234 (0.4%)	1.34	10/1676 (0.6%)
1	G	1.40	4/1234 (0.3%)	1.21	3/1676 (0.2%)
1	I	1.34	3/1234 (0.2%)	1.28	6/1676 (0.4%)
1	K	1.36	4/1234 (0.3%)	1.22	3/1676 (0.2%)
1	M	1.29	2/1234 (0.2%)	1.21	0/1676
1	O	1.34	3/1234 (0.2%)	1.25	4/1676 (0.2%)
1	Q	1.37	4/1234 (0.3%)	1.24	4/1676 (0.2%)
1	S	1.34	3/1234 (0.2%)	1.24	5/1676 (0.3%)
1	U	1.31	3/1234 (0.2%)	1.23	3/1676 (0.2%)
1	W	1.40	8/1234 (0.6%)	1.30	9/1676 (0.5%)
2	B	1.36	3/1256 (0.2%)	1.32	5/1704 (0.3%)
2	F	1.41	3/1256 (0.2%)	1.26	3/1704 (0.2%)
2	H	1.34	6/1256 (0.5%)	1.27	4/1704 (0.2%)
2	J	1.38	6/1256 (0.5%)	1.33	8/1704 (0.5%)
2	L	1.33	4/1256 (0.3%)	1.32	8/1704 (0.5%)
2	N	1.36	2/1256 (0.2%)	1.27	3/1704 (0.2%)
2	P	1.33	6/1256 (0.5%)	1.32	4/1704 (0.2%)
2	R	1.47	3/1256 (0.2%)	1.37	11/1704 (0.6%)
2	T	1.37	3/1256 (0.2%)	1.27	2/1704 (0.1%)
2	V	1.36	2/1256 (0.2%)	1.25	3/1704 (0.2%)
2	X	1.30	1/1256 (0.1%)	1.29	3/1704 (0.2%)
3	D	1.41	4/1258 (0.3%)	1.29	4/1707 (0.2%)
All	All	1.37	93/29882 (0.3%)	1.28	119/40563 (0.3%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	C	0	1
1	E	0	1
1	G	0	1
1	I	0	1
1	M	0	1
1	S	0	1
1	W	0	1
All	All	0	8

All (93) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	161	LEU	C-O	-21.59	0.96	1.23
2	F	171	VAL	C-O	-15.81	1.00	1.24
2	R	171	VAL	C-O	-15.33	1.05	1.24
3	D	171	VAL	C-O	-11.20	1.10	1.24
2	J	19	VAL	CA-CB	10.17	1.64	1.54
1	C	42	THR	CA-CB	9.53	1.68	1.53
1	U	42	THR	CA-CB	9.06	1.67	1.53
1	C	161	LEU	C-O	-8.96	1.11	1.23
1	W	42	THR	CA-CB	8.65	1.67	1.53
2	H	19	VAL	CA-C	8.37	1.64	1.52
3	D	19	VAL	CA-CB	8.34	1.63	1.54
2	R	19	VAL	CA-CB	8.26	1.63	1.54
1	E	42	THR	CA-CB	8.26	1.66	1.53
1	W	161	LEU	CA-C	-8.22	1.43	1.53
1	M	42	THR	CA-CB	8.17	1.66	1.53
1	C	161	LEU	CA-C	-8.02	1.43	1.53
2	F	19	VAL	CA-CB	7.97	1.62	1.54
1	E	68	CYS	CB-SG	-7.75	1.55	1.81
1	Q	47	ALA	CA-CB	7.71	1.66	1.53
2	T	19	VAL	CA-CB	7.70	1.62	1.54
1	I	42	THR	CA-CB	7.69	1.65	1.53
2	B	171	VAL	C-O	-7.58	1.15	1.24
2	T	171	VAL	C-O	-7.49	1.15	1.24
2	L	19	VAL	CA-CB	7.43	1.61	1.54
1	K	42	THR	CA-CB	7.03	1.64	1.53
1	A	42	THR	CA-CB	6.79	1.63	1.53
2	H	19	VAL	CA-CB	6.78	1.62	1.54
1	K	47	ALA	CA-CB	6.78	1.63	1.53
2	B	19	VAL	CA-CB	6.71	1.61	1.54
1	E	161	LEU	CA-C	-6.68	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	G	42	THR	CA-CB	6.59	1.63	1.53
2	J	171	VAL	CA-C	-6.50	1.44	1.53
1	Q	42	THR	CA-CB	6.44	1.63	1.53
1	W	24	ILE	CA-CB	-6.44	1.46	1.54
2	V	171	VAL	C-O	-6.41	1.16	1.24
2	P	19	VAL	CA-CB	6.41	1.60	1.54
1	K	150	ALA	CA-CB	-6.32	1.43	1.53
1	W	161	LEU	C-O	-6.31	1.15	1.23
2	V	19	VAL	CA-CB	6.27	1.61	1.54
2	P	171	VAL	C-O	-6.23	1.15	1.23
2	X	19	VAL	CA-CB	6.19	1.61	1.54
2	P	171	VAL	CA-C	-6.18	1.45	1.52
1	S	35	ALA	CA-CB	6.09	1.63	1.53
2	L	171	VAL	C-O	-5.99	1.17	1.24
1	W	41	ALA	CA-CB	-5.96	1.44	1.53
1	O	103	GLY	C-O	-5.89	1.18	1.23
1	Q	47	ALA	CA-C	5.82	1.61	1.52
1	E	161	LEU	C-N	-5.82	1.25	1.33
2	P	51	VAL	CA-CB	5.76	1.60	1.54
2	H	171	VAL	C-O	-5.75	1.17	1.24
2	J	99	ALA	CA-CB	-5.69	1.44	1.53
1	A	47	ALA	CA-CB	5.68	1.62	1.53
1	O	72	PRO	N-CA	-5.67	1.39	1.47
2	J	171	VAL	C-O	-5.62	1.16	1.23
1	G	152	SER	CA-C	5.58	1.60	1.52
1	W	35	ALA	N-CA	5.56	1.52	1.46
2	J	10	ALA	N-CA	5.55	1.53	1.46
1	O	42	THR	CA-CB	5.50	1.61	1.53
1	A	47	ALA	CA-C	5.48	1.62	1.52
2	R	171	VAL	CA-C	-5.44	1.45	1.52
1	A	161	LEU	C-O	-5.43	1.16	1.23
2	L	99	ALA	CA-C	-5.39	1.45	1.52
1	I	12	ALA	CA-CB	-5.33	1.45	1.53
2	N	61	ALA	CA-CB	-5.32	1.45	1.53
3	D	75	ALA	CA-CB	5.30	1.62	1.53
1	A	145	ASP	CA-C	5.30	1.59	1.52
1	I	8	ALA	CA-CB	-5.28	1.45	1.53
2	B	171	VAL	CA-C	-5.26	1.46	1.52
3	D	73	ALA	CA-CB	-5.22	1.46	1.53
1	G	120	ARG	CZ-NH1	5.21	1.40	1.32
2	H	136	GLU	C-O	-5.21	1.18	1.24
1	U	2	LYS	N-CA	5.18	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	W	34	ALA	CA-CB	-5.17	1.45	1.53
1	Q	112	ILE	CA-CB	-5.16	1.48	1.54
2	F	61	ALA	CA-CB	-5.13	1.44	1.53
2	N	21	VAL	CA-CB	5.12	1.60	1.54
1	U	148	ALA	CA-CB	5.12	1.61	1.53
1	A	100	ILE	CA-CB	-5.12	1.48	1.54
1	G	123	GLU	CA-C	-5.11	1.46	1.53
2	H	9	ALA	CA-CB	5.10	1.61	1.53
1	K	58	ALA	CA-C	-5.10	1.46	1.52
1	S	79	ARG	CZ-NH1	5.09	1.39	1.32
1	S	40	ALA	CA-C	5.08	1.59	1.52
2	T	75	ALA	CA-CB	5.07	1.62	1.53
1	M	160	ALA	CA-CB	-5.05	1.45	1.53
2	P	15	ARG	NE-CZ	5.05	1.38	1.33
2	P	73	ALA	CA-CB	-5.04	1.46	1.53
1	C	27	ALA	C-O	-5.04	1.18	1.24
2	L	75	ALA	CA-CB	5.03	1.61	1.53
2	J	93	VAL	C-O	-5.03	1.18	1.24
1	W	109	GLU	N-CA	-5.02	1.39	1.46
1	A	161	LEU	CA-C	-5.02	1.45	1.52
2	H	136	GLU	CA-C	-5.01	1.46	1.52

All (119) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	161	LEU	O-C-N	-12.05	109.41	123.03
2	F	171	VAL	O-C-N	-10.45	111.08	122.05
1	E	161	LEU	N-CA-C	-10.17	94.65	110.42
2	J	171	VAL	CA-C-O	-9.73	112.38	121.72
2	J	171	VAL	N-CA-C	-9.45	95.87	109.29
2	B	171	VAL	N-CA-C	-8.63	95.77	108.89
2	P	171	VAL	N-CA-C	-8.47	96.12	109.17
1	K	42	THR	N-CA-C	-8.28	102.26	111.28
1	E	68	CYS	CB-CA-C	-8.25	95.80	109.65
2	R	171	VAL	O-C-N	-7.94	112.65	122.57
2	R	171	VAL	CB-CA-C	-7.68	98.70	111.29
1	O	112	ILE	N-CA-C	7.66	117.73	110.53
1	Q	112	ILE	N-CA-C	7.62	117.69	110.53
1	E	162	SER	N-CA-C	-7.19	90.86	111.00
1	O	52	ILE	N-CA-C	7.19	117.32	110.42
2	L	86	MET	N-CA-C	-7.10	103.48	111.07
1	A	112	ILE	N-CA-C	7.08	117.87	110.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	161	LEU	CA-C-N	-7.05	109.00	121.70
1	C	161	LEU	C-N-CA	-7.05	109.00	121.70
1	O	10	SER	N-CA-C	6.98	119.48	111.11
1	C	161	LEU	N-CA-C	-6.78	95.53	107.73
1	W	161	LEU	CA-C-N	-6.71	109.62	121.70
1	W	161	LEU	C-N-CA	-6.71	109.62	121.70
1	C	161	LEU	O-C-N	-6.66	115.58	122.64
2	L	171	VAL	N-CA-C	-6.65	95.51	109.34
1	E	161	LEU	CA-C-O	-6.57	113.64	121.66
2	P	171	VAL	CA-C-O	-6.54	114.60	121.93
2	P	138	ALA	N-CA-C	-6.51	104.10	111.14
2	F	171	VAL	CB-CA-C	-6.41	103.71	111.85
2	R	86	MET	N-CA-C	-6.34	104.28	111.07
1	W	161	LEU	CB-CA-C	-6.30	100.52	111.23
2	B	171	VAL	CB-CA-C	-6.23	100.92	110.95
2	F	122	THR	N-CA-C	-6.18	102.26	109.93
2	J	40	ALA	N-CA-C	-6.15	104.49	111.07
2	J	103	SER	N-CA-C	6.14	118.48	111.11
1	U	112	ILE	N-CA-C	5.99	116.16	110.53
2	H	19	VAL	CB-CA-C	5.99	121.17	111.71
1	W	161	LEU	CA-C-O	-5.97	113.76	121.17
1	C	70	GLN	CA-C-N	-5.97	112.50	121.87
1	C	70	GLN	C-N-CA	-5.97	112.50	121.87
1	E	139	ASN	N-CA-C	5.88	121.18	113.30
2	V	103	SER	N-CA-C	5.86	118.17	111.02
1	C	161	LEU	CB-CA-C	-5.85	102.66	111.73
2	H	171	VAL	N-CA-C	-5.85	97.17	109.34
1	W	70	GLN	CA-C-N	-5.81	112.74	121.87
1	W	70	GLN	C-N-CA	-5.81	112.74	121.87
2	X	41	VAL	N-CA-C	5.78	115.97	110.42
2	L	103	SER	N-CA-C	5.77	117.24	111.07
1	S	112	ILE	N-CA-C	5.72	115.91	110.53
2	V	171	VAL	N-CA-C	-5.70	97.48	109.34
1	C	88	ILE	N-CA-C	-5.65	105.02	110.72
2	X	171	VAL	N-CA-C	-5.63	97.63	109.34
3	D	17	GLU	N-CA-C	5.61	118.71	109.85
1	E	5	LEU	N-CA-C	5.59	117.06	111.07
2	R	68	ALA	CA-C-N	-5.59	114.20	119.90
2	R	68	ALA	C-N-CA	-5.59	114.20	119.90
2	B	40	ALA	N-CA-C	-5.58	104.42	111.11
1	S	153	TYR	N-CA-C	5.57	117.43	111.36
2	T	103	SER	N-CA-C	5.56	117.02	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	X	103	SER	N-CA-C	5.54	117.00	111.07
1	O	119	ASN	N-CA-C	5.53	116.99	111.07
2	R	171	VAL	CA-C-N	-5.52	111.76	121.70
2	R	171	VAL	C-N-CA	-5.52	111.76	121.70
1	S	161	LEU	CA-C-N	-5.50	111.79	121.70
1	S	161	LEU	C-N-CA	-5.50	111.79	121.70
1	C	161	LEU	CA-C-O	-5.50	114.76	121.58
2	R	171	VAL	CA-C-O	-5.50	113.91	120.78
2	L	3	ASP	N-CA-C	-5.48	102.08	110.14
1	K	112	ILE	N-CA-C	5.48	116.25	110.72
1	I	82	ASP	N-CA-C	5.47	117.04	111.14
1	W	161	LEU	N-CA-C	-5.46	103.41	111.81
1	E	7	ASP	N-CA-C	-5.43	105.25	111.07
2	B	20	SER	N-CA-C	5.41	118.28	110.28
2	V	171	VAL	CA-C-O	-5.40	114.03	120.78
1	G	2	LYS	N-CA-C	5.39	122.28	110.80
2	L	152	ASP	N-CA-C	5.38	117.52	108.96
1	A	158	ILE	N-CA-C	5.34	115.96	110.36
2	N	171	VAL	CA-C-N	-5.33	112.11	121.70
2	N	171	VAL	C-N-CA	-5.33	112.11	121.70
2	L	129	VAL	N-CA-C	-5.30	105.55	110.53
1	Q	161	LEU	CA-C-N	-5.29	112.17	121.70
1	Q	161	LEU	C-N-CA	-5.29	112.17	121.70
1	I	2	LYS	N-CA-C	5.28	122.05	110.80
2	N	44	ILE	N-CA-C	-5.26	105.37	110.42
2	J	19	VAL	CB-CA-C	5.25	119.89	111.32
1	I	70	GLN	CA-C-N	-5.25	113.63	121.87
1	I	70	GLN	C-N-CA	-5.25	113.63	121.87
2	R	17	GLU	N-CA-C	5.24	118.28	109.95
1	S	61	ASN	N-CA-C	5.22	117.05	111.36
1	A	161	LEU	CA-C-N	-5.21	112.32	121.70
1	A	161	LEU	C-N-CA	-5.21	112.32	121.70
2	R	48	ALA	N-CA-C	5.19	116.62	111.07
1	E	61	ASN	N-CA-C	5.18	116.74	111.14
2	J	107	ASP	N-CA-C	5.18	117.01	111.36
2	J	58	ALA	N-CA-C	-5.16	105.66	111.28
3	D	54	ASN	N-CA-C	5.15	116.58	111.07
3	D	171	VAL	O-C-N	-5.15	116.13	122.57
2	B	171	VAL	CA-C-O	-5.13	114.88	121.40
1	U	10	SER	N-CA-C	5.12	117.53	111.33
2	L	18	MET	N-CA-C	-5.10	102.21	110.32
2	P	103	SER	N-CA-C	5.09	117.21	111.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	62	GLU	N-CA-CB	-5.08	102.11	110.40
2	J	171	VAL	CB-CA-C	-5.08	104.79	111.70
2	R	15	ARG	CB-CA-C	-5.08	101.61	110.09
1	A	68	CYS	N-CA-C	5.06	120.45	113.97
1	I	161	LEU	CA-C-N	-5.06	112.58	121.70
1	I	161	LEU	C-N-CA	-5.06	112.58	121.70
2	L	94	THR	N-CA-C	5.06	116.80	111.28
1	U	52	ILE	N-CA-C	5.06	115.28	110.42
2	T	171	VAL	O-C-N	-5.06	116.25	122.57
1	G	139	ASN	N-CA-C	5.05	119.40	112.88
1	W	52	ILE	N-CA-C	5.05	115.20	110.30
1	E	2	LYS	N-CA-C	5.05	121.55	110.80
1	G	120	ARG	N-CA-C	-5.04	105.69	111.14
1	K	61	ASN	N-CA-C	5.04	116.58	111.14
2	H	171	VAL	CA-C-O	-5.03	114.50	120.78
1	Q	59	VAL	N-CA-C	-5.01	105.71	110.42
2	H	86	MET	N-CA-C	-5.01	105.10	111.11
1	W	2	LYS	N-CA-C	5.00	121.46	110.80

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	71	GLY	Peptide
1	C	71	GLY	Peptide
1	E	71	GLY	Peptide
1	G	71	GLY	Peptide
1	I	71	GLY	Peptide
1	M	71	GLY	Peptide
1	S	71	GLY	Peptide
1	W	71	GLY	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1211	0	1172	15	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	C	1211	0	1172	23	0
1	E	1211	0	1172	19	1
1	G	1211	0	1172	14	0
1	I	1211	0	1172	19	0
1	K	1211	0	1172	17	0
1	M	1211	0	1172	27	0
1	O	1211	0	1172	17	1
1	Q	1211	0	1172	22	0
1	S	1211	0	1172	21	0
1	U	1211	0	1172	13	0
1	W	1211	0	1172	13	0
2	B	1242	0	1234	39	0
2	F	1242	0	1233	29	0
2	H	1242	0	1234	35	1
2	J	1242	0	1234	33	0
2	L	1242	0	1234	41	0
2	N	1242	0	1233	41	1
2	P	1242	0	1233	35	0
2	R	1242	0	1234	41	0
2	T	1242	0	1235	43	1
2	V	1242	0	1233	29	0
2	X	1242	0	1233	29	0
3	D	1244	0	1237	42	1
4	A	43	0	37	3	0
4	B	86	0	75	22	0
4	C	43	0	37	3	0
4	D	86	0	72	14	0
4	E	43	0	37	4	0
4	F	86	0	73	8	0
4	G	43	0	37	4	0
4	H	86	0	75	20	0
4	I	43	0	37	3	0
4	J	86	0	74	25	0
4	K	43	0	36	1	0
4	L	86	0	75	24	0
4	M	43	0	36	3	0
4	N	86	0	74	15	0
4	O	43	0	37	4	0
4	P	86	0	73	24	0
4	Q	43	0	37	4	0
4	R	86	0	74	18	0
4	S	43	0	37	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	T	86	0	76	26	0
4	U	43	0	37	3	0
4	V	86	0	74	11	0
4	W	43	0	37	4	0
4	X	86	0	72	8	0
5	A	2	0	0	1	0
5	C	31	0	0	3	0
5	D	13	0	0	2	0
5	E	8	0	0	2	0
5	F	39	0	0	5	0
5	I	40	0	0	3	0
5	J	15	0	0	1	0
5	K	9	0	0	3	0
5	L	31	0	0	2	0
5	M	40	0	0	5	0
5	N	13	0	0	6	0
5	O	13	0	0	3	0
5	P	27	0	0	4	0
5	Q	2	0	0	1	0
5	R	3	0	0	0	0
5	S	6	0	0	0	0
5	T	30	0	0	4	0
5	W	34	0	0	3	0
5	X	19	0	0	4	0
All	All	31361	0	30200	742	3

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 12.

All (742) 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)
2:R:153:CYS:SG	4:R:255:CYC:HAC1	1.18	1.71
2:B:153:CYS:SG	4:B:255:CYC:HAC2	1.27	1.70
2:J:82:CYS:SG	4:J:184:CYC:HAC2	1.15	1.66
2:H:153:CYS:SG	4:H:255:CYC:HAC1	1.15	1.64
2:T:153:CYS:SG	4:T:255:CYC:HAC1	1.41	1.58
2:T:82:CYS:SG	4:T:184:CYC:HAC2	1.42	1.58
2:H:153:CYS:SG	4:H:255:CYC:CAC	2.11	1.37
2:R:153:CYS:SG	4:R:255:CYC:CAC	2.12	1.36
2:B:153:CYS:SG	4:B:255:CYC:CAC	2.12	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:T:153:CYS:SG	4:T:255:CYC:CAC	2.14	1.34
2:T:82:CYS:SG	4:T:184:CYC:CAC	2.24	1.26
2:L:82:CYS:SG	4:L:184:CYC:HAC2	1.76	1.25
2:L:82:CYS:SG	4:L:184:CYC:CBC	2.27	1.22
2:N:15:ARG:HD2	5:N:2004:HOH:O	1.43	1.18
2:L:82:CYS:SG	4:L:184:CYC:CAC	2.31	1.18
1:C:120:ARG:HD2	1:I:162:SER:O	1.39	1.17
2:N:171:VAL:O	2:N:172:SER:CB	1.92	1.14
4:S:184:CYC:HC	4:S:184:CYC:HMD1	1.11	1.14
1:K:32:ARG:HD2	5:K:2004:HOH:O	1.49	1.12
2:L:82:CYS:SG	4:L:184:CYC:HBC2	1.88	1.09
2:L:171:VAL:O	2:L:172:SER:HB2	1.47	1.07
4:B:184:CYC:NC	4:B:184:CYC:HMD1	1.71	1.06
4:S:184:CYC:HBD1	4:S:184:CYC:HHA	1.33	1.06
4:B:184:CYC:HMD1	4:B:184:CYC:HC	0.92	1.06
4:B:255:CYC:CMA	4:B:255:CYC:HB	1.68	1.06
4:P:255:CYC:HBC3	4:P:255:CYC:HHD	1.08	1.06
2:L:171:VAL:O	2:L:172:SER:CB	1.96	1.05
2:V:171:VAL:O	2:V:172:SER:HB3	1.50	1.05
2:J:171:VAL:O	2:J:172:SER:HB2	1.50	1.05
2:B:171:VAL:O	2:B:172:SER:HB3	1.32	1.05
2:P:171:VAL:O	2:P:172:SER:CB	2.04	1.04
2:P:171:VAL:O	2:P:172:SER:HB3	1.29	1.04
4:W:184:CYC:HMD1	4:W:184:CYC:HC	1.18	1.04
4:X:184:CYC:HMD3	4:X:184:CYC:HC	1.18	1.03
4:J:255:CYC:HMA2	4:J:255:CYC:HMB2	1.38	1.03
2:H:171:VAL:O	2:H:172:SER:HB3	1.53	1.03
4:X:184:CYC:HC	4:X:184:CYC:CMD	1.72	1.03
2:R:171:VAL:HG23	2:R:171:VAL:O	1.53	1.02
2:X:171:VAL:O	2:X:172:SER:HB3	1.58	1.02
4:L:184:CYC:HC	4:L:184:CYC:HMD1	1.23	1.02
2:J:171:VAL:O	2:J:172:SER:CB	2.06	1.01
4:B:184:CYC:HC	4:B:184:CYC:CMD	1.75	0.99
3:D:40:VAL:CG1	3:D:156:LEU:HD21	1.91	0.99
1:M:6:THR:HG21	5:N:2002:HOH:O	1.61	0.99
3:D:40:VAL:HG11	3:D:156:LEU:HD21	1.41	0.99
2:P:20:SER:H	2:P:23:GLN:HE21	1.10	0.98
2:L:20:SER:H	2:L:23:GLN:HE21	1.05	0.98
1:C:32:ARG:HD2	5:C:2005:HOH:O	1.63	0.97
2:X:62:GLU:HG2	5:X:2011:HOH:O	1.64	0.97
2:N:20:SER:H	2:N:23:GLN:HE21	1.03	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:88:ILE:HG21	4:L:184:CYC:HBB3	1.47	0.97
2:B:20:SER:H	2:B:23:GLN:NE2	1.63	0.96
1:W:1:MET:HB2	5:W:2001:HOH:O	1.65	0.96
2:B:171:VAL:O	2:B:172:SER:CB	2.13	0.96
3:D:20:SER:H	3:D:23:GLN:HE21	1.08	0.95
4:P:184:CYC:HC	4:P:184:CYC:CMD	1.78	0.95
2:H:20:SER:H	2:H:23:GLN:HE21	0.97	0.95
2:N:171:VAL:O	2:N:172:SER:HB2	1.63	0.95
2:V:20:SER:H	2:V:23:GLN:HE21	1.12	0.94
4:J:255:CYC:HMB2	4:J:255:CYC:CMA	1.98	0.94
2:J:20:SER:H	2:J:23:GLN:HE21	1.11	0.93
4:P:255:CYC:HBC3	4:P:255:CYC:CHD	1.91	0.93
2:R:20:SER:H	2:R:23:GLN:HE21	1.13	0.93
2:X:20:SER:H	2:X:23:GLN:HE21	1.12	0.93
2:N:171:VAL:O	2:N:172:SER:HB3	1.69	0.92
2:T:153:CYS:HG	4:T:255:CYC:HAC1	1.16	0.91
2:B:20:SER:H	2:B:23:GLN:HE21	0.92	0.91
4:B:255:CYC:HB	4:B:255:CYC:HMA2	1.32	0.91
4:D:184:CYC:HC	4:D:184:CYC:CMD	1.84	0.91
2:F:20:SER:H	2:F:23:GLN:HE21	1.05	0.91
2:R:60:PHE:CE2	2:R:79:MET:HE1	2.05	0.91
1:C:120:ARG:CD	1:I:162:SER:O	2.19	0.90
1:E:162:SER:O	1:G:120:ARG:HG2	1.71	0.90
1:Q:6:THR:HG22	2:R:1:MET:HE2	1.54	0.90
2:T:20:SER:H	2:T:23:GLN:HE21	1.00	0.90
2:T:171:VAL:O	2:T:172:SER:HB3	1.70	0.90
4:J:255:CYC:OB	4:J:255:CYC:HBB3	1.69	0.89
2:N:153:CYS:SG	4:N:255:CYC:C3C	2.60	0.89
4:S:184:CYC:HHA	4:S:184:CYC:CBD	2.03	0.88
4:P:255:CYC:HBA1	4:P:255:CYC:HHA	1.55	0.88
2:R:171:VAL:O	2:R:171:VAL:CG2	2.13	0.87
2:L:79:MET:HE3	2:L:83:LEU:HG	1.57	0.87
2:P:20:SER:H	2:P:23:GLN:NE2	1.73	0.87
4:H:184:CYC:HMD1	4:H:184:CYC:HC	1.38	0.87
2:J:82:CYS:HG	4:J:184:CYC:HAC2	1.35	0.86
4:S:184:CYC:HMD1	4:S:184:CYC:NC	1.89	0.86
4:J:255:CYC:HMA2	4:J:255:CYC:CMB	2.04	0.85
2:H:20:SER:H	2:H:23:GLN:NE2	1.74	0.85
4:R:184:CYC:HC	4:R:184:CYC:CMD	1.90	0.85
1:A:6:THR:HG22	2:B:1:MET:HE2	1.57	0.85
2:T:82:CYS:SG	4:T:184:CYC:CBC	2.65	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:20:SER:H	2:F:23:GLN:NE2	1.75	0.84
2:X:79:MET:HE3	2:X:83:LEU:HG	1.59	0.84
4:B:255:CYC:CMA	4:B:255:CYC:NB	2.40	0.83
4:D:184:CYC:HC	4:D:184:CYC:HMD3	1.42	0.83
2:T:82:CYS:CB	4:T:184:CYC:HAC2	2.07	0.83
4:T:255:CYC:HBB2	4:T:255:CYC:OB	1.77	0.83
2:N:20:SER:H	2:N:23:GLN:NE2	1.77	0.83
2:T:153:CYS:SG	4:T:255:CYC:HAC2	2.19	0.83
4:L:255:CYC:HBB2	4:L:255:CYC:HMB3	1.61	0.82
2:T:20:SER:H	2:T:23:GLN:NE2	1.77	0.82
1:M:162:SER:O	1:W:120:ARG:HG2	1.78	0.82
2:R:60:PHE:HE2	2:R:79:MET:HE1	1.43	0.82
4:V:255:CYC:HB	4:V:255:CYC:CMA	1.93	0.81
2:J:60:PHE:CE2	2:J:79:MET:HE1	2.16	0.80
2:T:76:SER:HB2	5:W:2021:HOH:O	1.82	0.80
2:F:60:PHE:CE2	2:F:79:MET:HE1	2.17	0.80
4:P:255:CYC:HHD	4:P:255:CYC:CBC	1.95	0.80
4:B:255:CYC:NB	4:B:255:CYC:HMA1	1.97	0.79
2:P:36:LYS:HE3	5:P:2027:HOH:O	1.80	0.79
2:R:20:SER:H	2:R:23:GLN:NE2	1.81	0.78
4:V:255:CYC:HB	4:V:255:CYC:HMA2	1.47	0.78
2:R:52:VAL:HG22	2:R:134:MET:CE	2.13	0.78
2:L:20:SER:H	2:L:23:GLN:NE2	1.79	0.78
2:B:20:SER:OG	2:B:23:GLN:HG3	1.84	0.78
3:D:60:PHE:CE2	3:D:79:MET:HE1	2.19	0.78
3:D:20:SER:H	3:D:23:GLN:NE2	1.81	0.78
2:X:20:SER:H	2:X:23:GLN:NE2	1.81	0.78
1:C:11:THR:HB	5:K:2001:HOH:O	1.84	0.78
2:T:79:MET:HE3	2:T:83:LEU:HG	1.66	0.77
2:B:20:SER:N	2:B:23:GLN:HE21	1.77	0.77
1:M:83:LYS:HG2	5:M:2022:HOH:O	1.82	0.77
4:P:255:CYC:HHA	4:P:255:CYC:CBA	2.13	0.77
2:H:79:MET:HE3	2:H:83:LEU:HG	1.65	0.77
2:V:79:MET:HE3	2:V:83:LEU:HG	1.67	0.76
3:D:40:VAL:HG11	3:D:156:LEU:CD2	2.14	0.76
2:N:60:PHE:CE2	2:N:79:MET:HE1	2.20	0.76
4:J:255:CYC:CMA	4:J:255:CYC:CMB	2.62	0.76
2:L:82:CYS:CB	4:L:184:CYC:HAC2	2.15	0.76
4:B:255:CYC:HB	4:B:255:CYC:HMA1	1.52	0.75
2:T:20:SER:OG	2:T:23:GLN:HG3	1.86	0.75
2:J:20:SER:H	2:J:23:GLN:NE2	1.83	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:57:ARG:HD3	4:E:184:CYC:O2D	1.86	0.75
2:N:11:GLN:HA	5:N:2003:HOH:O	1.86	0.75
1:G:111:LEU:HD12	4:G:184:CYC:HBB3	1.69	0.75
2:X:60:PHE:CE2	2:X:79:MET:HE1	2.22	0.74
4:L:255:CYC:HBB2	4:L:255:CYC:CMB	2.17	0.74
3:D:60:PHE:HE2	3:D:79:MET:HE1	1.53	0.74
1:E:6:THR:HG22	2:F:1:MET:HE2	1.68	0.74
2:R:35:ASN:HB2	4:R:255:CYC:O2D	1.87	0.74
4:M:184:CYC:O1D	2:P:57:ARG:NH1	2.21	0.74
2:B:57:ARG:NH1	4:E:184:CYC:O1D	2.21	0.73
2:N:20:SER:OG	2:N:23:GLN:HG3	1.88	0.73
2:V:20:SER:H	2:V:23:GLN:NE2	1.86	0.73
2:X:15:ARG:HD2	5:X:2003:HOH:O	1.88	0.73
4:X:184:CYC:HMD3	4:X:184:CYC:NC	2.00	0.73
2:P:170:ALA:HB1	5:P:2018:HOH:O	1.89	0.73
2:J:29:GLN:HG2	5:J:2005:HOH:O	1.88	0.73
4:H:255:CYC:HB	4:H:255:CYC:CMA	2.02	0.72
2:N:36:LYS:HD3	4:N:255:CYC:HMD3	1.72	0.72
2:P:79:MET:HE3	2:P:83:LEU:HG	1.72	0.72
4:S:184:CYC:CBD	4:S:184:CYC:CHA	2.68	0.72
4:P:184:CYC:HBD2	4:P:184:CYC:HHA	1.72	0.72
4:P:184:CYC:HC	4:P:184:CYC:HMD2	1.52	0.72
4:S:184:CYC:HC	4:S:184:CYC:CMD	1.98	0.71
2:V:20:SER:OG	2:V:23:GLN:HG3	1.90	0.71
2:B:79:MET:HE3	2:B:83:LEU:HG	1.71	0.71
4:R:184:CYC:HC	4:R:184:CYC:HMD3	1.55	0.71
2:V:171:VAL:O	2:V:172:SER:CB	2.28	0.71
1:E:162:SER:O	1:G:120:ARG:CG	2.39	0.70
2:P:20:SER:OG	2:P:23:GLN:HG3	1.91	0.70
2:R:153:CYS:HG	4:R:255:CYC:HAC1	1.52	0.70
4:P:184:CYC:CMA	4:P:184:CYC:HB	2.04	0.70
4:B:255:CYC:HHA	4:B:255:CYC:HBA1	1.74	0.70
1:E:161:LEU:O	1:E:162:SER:HB2	1.91	0.70
2:R:74:TYR:O	2:R:75:ALA:HB3	1.91	0.70
1:A:120:ARG:HD2	1:K:162:SER:O	1.91	0.70
2:F:60:PHE:HE2	2:F:79:MET:HE1	1.56	0.70
2:H:113:LEU:HD13	4:H:184:CYC:HMB2	1.74	0.70
2:J:60:PHE:HE2	2:J:79:MET:HE1	1.55	0.70
2:J:79:MET:HE3	2:J:83:LEU:HG	1.73	0.70
4:B:255:CYC:HMA2	1:G:145:ASP:OD1	1.91	0.70
2:F:79:MET:HE3	2:F:83:LEU:HG	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:255:CYC:CMA	4:D:255:CYC:HB	2.04	0.69
2:L:88:ILE:CG2	4:L:184:CYC:HBB3	2.21	0.69
2:N:57:ARG:NH1	4:Q:184:CYC:O1D	2.25	0.69
4:J:184:CYC:HC	4:J:184:CYC:HMD1	1.56	0.69
4:P:184:CYC:HB	4:P:184:CYC:HMA2	1.58	0.69
2:F:20:SER:N	2:F:23:GLN:HE21	1.87	0.69
4:R:255:CYC:HB	4:R:255:CYC:HMA2	1.57	0.69
2:R:20:SER:OG	2:R:23:GLN:HG3	1.93	0.69
1:E:145:ASP:OD1	4:J:255:CYC:HMB3	1.92	0.69
1:C:68:CYS:HB2	1:M:68:CYS:HB2	1.74	0.69
2:P:60:PHE:CE2	2:P:79:MET:HE1	2.28	0.69
2:R:113:LEU:HD13	4:R:184:CYC:HMB2	1.75	0.68
3:D:1:MET:SD	5:D:2009:HOH:O	2.51	0.68
4:D:255:CYC:HB	4:D:255:CYC:HMA2	1.57	0.68
2:N:33:GLU:HG3	5:N:2007:HOH:O	1.93	0.68
4:V:255:CYC:CMA	4:V:255:CYC:NB	2.56	0.68
2:F:52:VAL:HG22	2:F:134:MET:CE	2.24	0.68
1:O:32:ARG:HA	5:O:2008:HOH:O	1.94	0.68
1:E:33:GLN:NE2	4:J:255:CYC:HBB1	2.08	0.67
2:X:60:PHE:HE2	2:X:79:MET:HE1	1.58	0.67
2:N:153:CYS:SG	4:N:255:CYC:HAC2	2.28	0.67
2:X:171:VAL:O	2:X:172:SER:CB	2.33	0.67
1:S:128:TRP:CE3	4:S:184:CYC:HMC3	2.29	0.66
2:N:52:VAL:HG22	2:N:134:MET:CE	2.25	0.66
1:A:162:SER:O	1:K:120:ARG:HD2	1.95	0.66
3:D:79:MET:HE3	3:D:83:LEU:HG	1.76	0.66
2:J:20:SER:OG	2:J:23:GLN:HG3	1.95	0.66
2:N:19:VAL:CG1	2:N:23:GLN:HB2	2.26	0.66
2:R:74:TYR:O	2:R:75:ALA:CB	2.44	0.66
2:B:153:CYS:SG	4:B:255:CYC:HAC1	2.29	0.65
4:L:255:CYC:HHD	4:L:255:CYC:HBC3	1.76	0.65
1:M:35:ALA:HA	5:M:2008:HOH:O	1.96	0.65
3:D:40:VAL:HG21	3:D:160:ILE:HD11	1.79	0.65
4:G:184:CYC:HMC1	4:G:184:CYC:HBC2	1.78	0.65
2:T:153:CYS:SG	4:T:255:CYC:H2C	2.36	0.65
2:F:146:ALA:HA	5:F:2032:HOH:O	1.95	0.65
4:W:184:CYC:HMD1	4:W:184:CYC:NC	2.03	0.65
2:J:82:CYS:HG	4:J:184:CYC:CAC	1.99	0.65
4:R:255:CYC:HB	4:R:255:CYC:CMA	2.09	0.65
2:P:37:ARG:O	2:P:40:ALA:HB3	1.97	0.64
3:D:51:VAL:HG12	3:D:134:MET:HG2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3:THR:O	1:S:7:ASP:HB2	1.97	0.64
4:H:255:CYC:HB	4:H:255:CYC:HMA2	1.62	0.64
2:P:20:SER:N	2:P:23:GLN:HE21	1.89	0.64
2:R:79:MET:HE3	2:R:83:LEU:HG	1.80	0.64
2:N:74:TYR:O	2:N:75:ALA:HB3	1.98	0.64
4:V:184:CYC:HC	4:V:184:CYC:CMD	2.11	0.64
4:U:184:CYC:O1D	2:X:57:ARG:NH1	2.31	0.63
2:L:60:PHE:CE2	2:L:79:MET:HE1	2.32	0.63
4:V:255:CYC:HBC3	4:V:255:CYC:HHD	1.80	0.63
4:D:184:CYC:HMD3	4:D:184:CYC:NC	2.11	0.63
1:M:6:THR:HG22	2:N:1:MET:HE2	1.79	0.63
1:O:6:THR:HG22	2:P:1:MET:HE2	1.79	0.63
2:T:19:VAL:CG1	2:T:23:GLN:HB2	2.29	0.63
2:T:60:PHE:CE2	2:T:79:MET:HE1	2.34	0.63
2:X:63:GLN:HG3	5:X:2011:HOH:O	1.97	0.63
4:J:255:CYC:HHA	4:J:255:CYC:O1A	1.98	0.63
2:L:171:VAL:O	2:L:172:SER:HB3	1.92	0.63
2:B:153:CYS:SG	4:B:255:CYC:H2C	2.39	0.63
1:U:40:ALA:HB2	1:U:146:ALA:HB1	1.79	0.63
1:E:40:ALA:HB2	1:E:146:ALA:HB1	1.79	0.63
4:F:255:CYC:HBB2	4:F:255:CYC:OB	2.00	0.62
4:P:184:CYC:CMD	4:P:184:CYC:NC	2.58	0.62
2:V:60:PHE:CE2	2:V:79:MET:HE1	2.35	0.62
1:Q:120:ARG:HD2	1:S:162:SER:O	1.99	0.61
2:N:6:THR:HG21	5:N:2002:HOH:O	2.00	0.61
4:T:184:CYC:CMA	4:T:184:CYC:HB	2.13	0.61
1:M:24:ILE:HG21	4:N:255:CYC:HBB2	1.81	0.61
5:M:2037:HOH:O	1:S:21:SER:HB3	2.00	0.61
2:N:60:PHE:HE2	2:N:79:MET:HE1	1.63	0.61
4:T:184:CYC:CMA	4:T:184:CYC:NB	2.64	0.61
2:B:37:ARG:O	2:B:40:ALA:HB3	2.01	0.61
4:L:184:CYC:HMD1	4:L:184:CYC:NC	2.05	0.61
2:P:74:TYR:O	2:P:75:ALA:HB3	1.99	0.61
4:P:255:CYC:HBD2	5:P:2027:HOH:O	2.00	0.61
2:T:60:PHE:HE2	2:T:79:MET:HE1	1.65	0.61
2:T:152:ASP:HB3	5:T:2027:HOH:O	2.00	0.61
3:D:20:SER:OG	3:D:23:GLN:HG3	2.01	0.61
3:D:18:MET:HB3	5:D:2004:HOH:O	1.99	0.60
1:C:73:ASN:HA	4:C:184:CYC:HBD2	1.83	0.60
4:P:184:CYC:CMA	4:P:184:CYC:NB	2.64	0.60
4:D:255:CYC:HBC3	4:D:255:CYC:HHD	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:20:SER:OG	2:F:23:GLN:HG3	2.01	0.60
1:K:6:THR:HG22	2:L:1:MET:HE2	1.84	0.60
4:R:255:CYC:CMA	4:R:255:CYC:NB	2.64	0.60
4:J:255:CYC:HBC3	4:J:255:CYC:HHD	1.84	0.59
1:Q:3:THR:O	1:Q:7:ASP:HB2	2.02	0.59
2:N:74:TYR:O	2:N:75:ALA:CB	2.50	0.59
2:N:79:MET:HE3	2:N:83:LEU:HG	1.84	0.59
3:D:52:VAL:HA	3:D:134:MET:HE3	1.84	0.59
2:H:171:VAL:O	2:H:172:SER:CB	2.31	0.59
1:A:95:VAL:HG21	1:A:154:LEU:HD13	1.85	0.59
2:H:60:PHE:CE2	2:H:79:MET:HE1	2.36	0.59
1:Q:120:ARG:HG2	1:S:162:SER:O	2.03	0.59
4:H:255:CYC:HBC3	4:H:255:CYC:HHD	1.83	0.59
4:T:184:CYC:HB	4:T:184:CYC:HMA2	1.65	0.59
4:L:184:CYC:HBB2	5:L:2030:HOH:O	2.01	0.59
1:M:120:ARG:HG2	1:W:162:SER:O	2.02	0.59
1:K:40:ALA:HB2	1:K:146:ALA:HB1	1.84	0.59
2:H:52:VAL:HG22	2:H:134:MET:CE	2.32	0.59
1:I:6:THR:HG23	2:J:3:ASP:OD2	2.03	0.59
1:S:6:THR:HG22	2:T:1:MET:HE2	1.84	0.59
2:F:6:THR:HG21	5:F:2002:HOH:O	2.02	0.58
1:G:6:THR:HG22	2:H:1:MET:HE2	1.85	0.58
2:H:153:CYS:SG	4:H:255:CYC:C3C	2.87	0.58
1:A:40:ALA:HB2	1:A:146:ALA:HB1	1.84	0.58
2:J:113:LEU:HD13	4:J:184:CYC:HMB2	1.84	0.58
2:L:90:LEU:O	2:L:94:THR:HG23	2.03	0.58
1:Q:67:THR:HB	5:Q:2002:HOH:O	2.03	0.58
2:V:113:LEU:HD13	4:V:184:CYC:HMB2	1.85	0.58
4:X:184:CYC:CMD	4:X:184:CYC:NC	2.55	0.58
1:W:6:THR:HG22	2:X:1:MET:HE2	1.85	0.58
2:J:52:VAL:HG22	2:J:134:MET:CE	2.33	0.58
4:O:184:CYC:O1D	2:R:57:ARG:NH1	2.35	0.58
2:L:20:SER:OG	2:L:23:GLN:HG3	2.03	0.58
3:D:19:VAL:CG1	3:D:23:GLN:HB2	2.34	0.58
4:H:255:CYC:HHA	4:H:255:CYC:CGA	2.33	0.58
1:S:90:TYR:CD2	4:S:184:CYC:HBB3	2.39	0.58
4:W:184:CYC:HC	4:W:184:CYC:CMD	2.06	0.58
1:Q:162:SER:O	1:S:120:ARG:HD2	2.03	0.58
4:R:184:CYC:HMD3	4:R:184:CYC:NC	2.18	0.58
2:X:52:VAL:HG22	2:X:134:MET:CE	2.33	0.57
4:R:255:CYC:HBC3	4:R:255:CYC:HHD	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:108:ARG:O	4:N:184:CYC:HBB1	2.05	0.57
1:O:162:SER:O	1:U:120:ARG:HG2	2.05	0.57
2:T:151:GLY:HA3	4:T:255:CYC:HMD2	1.86	0.57
4:D:255:CYC:HBD1	4:D:255:CYC:CHA	2.34	0.57
4:R:184:CYC:HC	4:R:184:CYC:HMD2	1.68	0.57
2:X:52:VAL:HA	2:X:134:MET:HE3	1.86	0.57
4:H:184:CYC:HMD1	4:H:184:CYC:NC	2.14	0.57
2:X:35:ASN:ND2	5:X:2007:HOH:O	2.38	0.57
4:F:184:CYC:CMD	4:F:184:CYC:HC	2.18	0.57
4:V:255:CYC:NB	4:V:255:CYC:HMA1	2.19	0.57
2:T:82:CYS:SG	4:T:184:CYC:H2C	2.44	0.56
1:C:40:ALA:HB2	1:C:146:ALA:HB1	1.87	0.56
4:P:184:CYC:HC	4:P:184:CYC:HMD3	1.68	0.56
1:S:128:TRP:CD2	4:S:184:CYC:HMC3	2.41	0.56
2:B:52:VAL:HG22	2:B:134:MET:CE	2.35	0.56
3:D:171:VAL:HG23	3:D:172:SER:N	2.21	0.56
2:P:60:PHE:HE2	2:P:79:MET:HE1	1.70	0.56
1:E:145:ASP:OD1	4:J:255:CYC:CMB	2.53	0.56
4:T:184:CYC:HC	4:T:184:CYC:CMD	2.19	0.56
2:B:60:PHE:CE2	2:B:79:MET:HE1	2.40	0.56
2:B:171:VAL:O	2:B:171:VAL:CG2	2.54	0.56
1:G:72:PRO:HB2	4:G:184:CYC:O1D	2.06	0.56
4:T:255:CYC:HBC3	4:T:255:CYC:HHD	1.88	0.56
2:J:74:TYR:O	2:J:75:ALA:HB3	2.06	0.56
4:L:184:CYC:HC	4:L:184:CYC:CMD	2.09	0.56
1:O:17:ARG:HB2	5:O:2003:HOH:O	2.06	0.56
4:L:255:CYC:HB	4:L:255:CYC:CMA	2.19	0.55
2:V:19:VAL:CG1	2:V:23:GLN:HB2	2.36	0.55
3:D:40:VAL:CG1	3:D:156:LEU:CD2	2.75	0.55
1:I:142:LEU:HD23	5:I:2034:HOH:O	2.06	0.55
1:Q:18:PHE:HB3	2:R:45:THR:HG23	1.87	0.55
4:D:255:CYC:CMA	4:D:255:CYC:NB	2.70	0.55
2:N:153:CYS:SG	4:N:255:CYC:C4C	2.95	0.55
2:V:60:PHE:HE2	2:V:79:MET:HE1	1.70	0.55
2:P:110:LEU:O	5:P:2018:HOH:O	2.18	0.55
1:A:125:SER:HB3	1:A:128:TRP:CE2	2.42	0.55
1:Q:40:ALA:HB2	1:Q:146:ALA:HB1	1.89	0.55
1:C:3:THR:O	1:C:7:ASP:HB2	2.07	0.54
3:D:68:ALA:O	3:D:69:PRO:C	2.48	0.54
1:E:120:ARG:HG2	1:G:162:SER:O	2.07	0.54
4:H:255:CYC:CMA	4:H:255:CYC:NB	2.69	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:153:CYS:SG	4:H:255:CYC:CBC	2.92	0.54
2:L:36:LYS:HD3	4:L:255:CYC:HMD3	1.90	0.54
2:L:74:TYR:O	2:L:75:ALA:HB3	2.08	0.54
2:T:153:CYS:SG	4:T:255:CYC:C3C	2.92	0.54
1:I:28:PHE:HE2	4:J:255:CYC:HBB2	1.73	0.54
1:I:95:VAL:HG21	1:I:154:LEU:HD13	1.90	0.54
2:R:90:LEU:O	2:R:94:THR:HG23	2.07	0.54
5:C:2004:HOH:O	1:K:32:ARG:HG3	2.08	0.54
1:M:61:ASN:HB2	5:M:2015:HOH:O	2.08	0.54
2:L:60:PHE:HE2	2:L:79:MET:HE1	1.73	0.53
4:U:184:CYC:HC	4:U:184:CYC:CMD	2.21	0.53
2:H:60:PHE:HE2	2:H:79:MET:HE1	1.73	0.53
1:S:67:THR:O	1:S:76:ALA:HA	2.09	0.53
2:B:74:TYR:O	2:B:75:ALA:HB3	2.07	0.53
2:F:62:GLU:HG2	5:F:2018:HOH:O	2.09	0.53
1:M:120:ARG:HD2	1:W:162:SER:O	2.08	0.53
2:H:83:LEU:HD13	1:K:121:THR:HG21	1.90	0.53
2:P:2:PHE:HA	2:P:6:THR:HG22	1.89	0.53
2:R:52:VAL:HG22	2:R:134:MET:HE3	1.89	0.53
2:T:153:CYS:SG	4:T:255:CYC:C2C	2.97	0.53
2:L:79:MET:HE3	2:L:83:LEU:CG	2.36	0.53
1:A:73:ASN:HA	4:A:184:CYC:HBD2	1.91	0.53
3:D:52:VAL:HG22	3:D:134:MET:CE	2.39	0.53
2:R:19:VAL:CG1	2:R:23:GLN:HB2	2.38	0.53
2:B:113:LEU:HD13	4:B:184:CYC:HMB2	1.89	0.53
1:S:95:VAL:HG21	1:S:154:LEU:HD13	1.90	0.53
2:V:58:ALA:HB3	2:V:133:LYS:HD3	1.91	0.53
1:W:95:VAL:HG21	1:W:154:LEU:HD13	1.91	0.53
1:C:6:THR:HG22	3:D:1:MET:HE2	1.90	0.52
2:L:20:SER:N	2:L:23:GLN:HE21	1.90	0.52
4:D:255:CYC:HBD1	4:D:255:CYC:HHA	1.89	0.52
2:F:74:TYR:O	2:F:75:ALA:HB3	2.09	0.52
1:M:72:PRO:O	4:M:184:CYC:HBD2	2.09	0.52
2:R:68:ALA:O	2:R:69:PRO:C	2.50	0.52
1:S:40:ALA:HB2	1:S:146:ALA:HB1	1.91	0.52
1:G:3:THR:O	1:G:7:ASP:HB2	2.10	0.52
4:L:255:CYC:CMB	4:L:255:CYC:CBB	2.87	0.52
2:T:20:SER:N	2:T:23:GLN:HE21	1.86	0.52
2:T:52:VAL:HG22	2:T:134:MET:CE	2.40	0.52
1:G:40:ALA:HB2	1:G:146:ALA:HB1	1.92	0.52
2:H:153:CYS:SG	4:H:255:CYC:H2C	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:46:ALA:HA	5:W:2030:HOH:O	2.09	0.52
1:W:3:THR:O	1:W:7:ASP:HB2	2.10	0.52
4:E:184:CYC:HBD1	4:E:184:CYC:HHA	1.92	0.51
4:T:184:CYC:HBB2	4:T:184:CYC:OB	2.09	0.51
2:L:92:TYR:CE2	4:L:184:CYC:HBB1	2.46	0.51
2:R:60:PHE:CZ	2:R:79:MET:HE1	2.43	0.51
2:B:2:PHE:HA	2:B:6:THR:HG22	1.91	0.51
2:B:153:CYS:SG	4:B:255:CYC:C3C	2.93	0.51
1:C:68:CYS:HB2	1:M:68:CYS:C	2.35	0.51
1:O:40:ALA:HB2	1:O:146:ALA:HB1	1.91	0.51
2:T:62:GLU:HG2	5:T:2013:HOH:O	2.10	0.51
4:J:255:CYC:HMB1	4:J:255:CYC:C3A	2.41	0.51
3:D:37:ARG:O	3:D:40:VAL:HG13	2.11	0.51
2:N:109:CYS:HA	4:N:184:CYC:CBB	2.41	0.51
1:O:95:VAL:HG21	1:O:154:LEU:HD13	1.92	0.51
1:K:74:TYR:HA	4:K:184:CYC:OC	2.11	0.51
2:N:90:LEU:O	2:N:94:THR:HG23	2.11	0.51
4:A:184:CYC:O1D	3:D:57:ARG:NH1	2.43	0.51
2:J:19:VAL:CG1	2:J:23:GLN:HB2	2.41	0.51
2:T:82:CYS:SG	4:T:184:CYC:HBC2	2.49	0.51
2:P:74:TYR:O	2:P:75:ALA:CB	2.59	0.50
3:D:19:VAL:HG13	3:D:23:GLN:HB2	1.93	0.50
1:E:95:VAL:HG21	1:E:154:LEU:HD13	1.92	0.50
1:C:91:TYR:O	1:C:95:VAL:HG23	2.12	0.50
1:E:35:ALA:HA	5:F:2006:HOH:O	2.10	0.50
1:E:145:ASP:CG	4:J:255:CYC:HMB3	2.36	0.50
1:I:6:THR:HG22	2:J:1:MET:HE2	1.93	0.50
4:J:255:CYC:OB	4:J:255:CYC:CBB	2.45	0.50
2:L:82:CYS:SG	4:L:184:CYC:HBC1	2.40	0.50
2:N:74:TYR:OH	2:R:13:ASP:OD1	2.21	0.50
4:P:184:CYC:NC	4:P:184:CYC:HMD3	2.26	0.50
4:R:255:CYC:HBA1	4:R:255:CYC:HHA	1.93	0.50
2:B:3:ASP:O	2:B:4:ALA:C	2.53	0.50
3:D:69:PRO:HA	3:D:74:TYR:CG	2.46	0.50
4:P:255:CYC:HBA1	4:P:255:CYC:HAD1	1.93	0.50
2:T:151:GLY:HA3	4:T:255:CYC:CMD	2.41	0.50
2:F:52:VAL:HA	2:F:134:MET:HE3	1.93	0.50
1:O:3:THR:O	1:O:7:ASP:HB2	2.12	0.50
1:W:125:SER:HB3	1:W:128:TRP:CE2	2.47	0.50
1:K:3:THR:O	1:K:7:ASP:HB2	2.11	0.50
2:P:48:ALA:O	2:P:52:VAL:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:74:TYR:O	2:V:75:ALA:HB3	2.10	0.50
2:H:72:ASN:HB3	4:H:184:CYC:OC	2.12	0.50
2:R:123:PRO:O	2:R:126:SER:HB2	2.12	0.50
1:W:72:PRO:HB2	4:W:184:CYC:O1D	2.12	0.50
2:F:151:GLY:HA3	4:F:255:CYC:HMD2	1.94	0.50
2:H:51:VAL:HG12	2:H:134:MET:HG2	1.93	0.50
1:Q:120:ARG:CG	1:S:162:SER:O	2.60	0.50
1:I:125:SER:HB3	1:I:128:TRP:CE2	2.47	0.50
2:N:153:CYS:SG	4:N:255:CYC:C2C	3.00	0.50
2:H:19:VAL:CG1	2:H:23:GLN:HB2	2.41	0.49
2:L:82:CYS:CA	4:L:184:CYC:HAC2	2.42	0.49
1:S:1:MET:O	1:S:3:THR:HG23	2.11	0.49
1:E:161:LEU:O	1:E:162:SER:CB	2.47	0.49
2:R:153:CYS:SG	4:R:255:CYC:C3C	2.95	0.49
4:U:184:CYC:NB	4:U:184:CYC:CMA	2.76	0.49
2:P:115:GLU:H	2:P:115:GLU:CD	2.21	0.49
2:V:90:LEU:O	2:V:94:THR:HG23	2.12	0.49
2:X:51:VAL:HG12	2:X:134:MET:HG2	1.93	0.49
2:H:103:SER:O	2:H:104:ALA:C	2.55	0.49
1:I:3:THR:HB	5:I:2001:HOH:O	2.12	0.49
1:M:24:ILE:HG21	4:N:255:CYC:CBB	2.43	0.49
2:V:51:VAL:HG12	2:V:134:MET:HG2	1.95	0.49
4:D:184:CYC:HC	4:D:184:CYC:HMD2	1.71	0.48
1:O:110:TYR:O	2:R:75:ALA:HA	2.12	0.48
2:H:20:SER:OG	2:H:23:GLN:HG3	2.13	0.48
4:P:184:CYC:HBB2	4:P:184:CYC:OB	2.13	0.48
4:J:184:CYC:HMD1	4:J:184:CYC:NC	2.27	0.48
2:R:52:VAL:HA	2:R:134:MET:HE3	1.96	0.48
3:D:35:ASN:HB2	4:D:255:CYC:O1D	2.13	0.48
4:H:184:CYC:HC	4:H:184:CYC:CMD	2.19	0.48
1:M:125:SER:HB3	1:M:128:TRP:CE2	2.48	0.48
2:R:2:PHE:HA	2:R:6:THR:HG22	1.94	0.48
2:L:69:PRO:HA	2:L:74:TYR:CG	2.49	0.48
2:P:19:VAL:HG13	2:P:23:GLN:HB2	1.96	0.48
2:X:90:LEU:O	2:X:94:THR:HG23	2.12	0.48
2:B:60:PHE:HE2	2:B:79:MET:HE1	1.79	0.48
1:C:17:ARG:NH2	1:K:2:LYS:HD2	2.28	0.48
2:T:68:ALA:HB1	5:T:2014:HOH:O	2.14	0.48
2:T:19:VAL:HG12	2:T:23:GLN:HB2	1.95	0.48
4:X:184:CYC:HBB2	4:X:184:CYC:OB	2.13	0.48
1:C:104:THR:O	1:C:105:GLY:C	2.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:135:LYS:HG3	2:J:164:PHE:CB	2.44	0.47
2:N:52:VAL:HA	2:N:134:MET:HE3	1.96	0.47
1:Q:26:VAL:HG22	1:U:26:VAL:HG22	1.96	0.47
2:B:153:CYS:SG	4:B:255:CYC:C2C	3.03	0.47
1:I:121:THR:HG21	2:L:83:LEU:HD13	1.95	0.47
2:F:103:SER:O	2:F:104:ALA:C	2.57	0.47
2:L:39:ASP:OD1	4:L:255:CYC:HHB	2.15	0.47
4:L:255:CYC:HB	4:L:255:CYC:HMA2	1.79	0.47
4:H:255:CYC:NB	4:H:255:CYC:HMA1	2.28	0.47
4:R:255:CYC:HHA	4:R:255:CYC:CBA	2.45	0.47
1:U:24:ILE:HG23	2:V:38:LEU:HD22	1.96	0.47
2:V:19:VAL:HG13	2:V:23:GLN:HB2	1.96	0.47
2:X:74:TYR:O	2:X:75:ALA:HB3	2.15	0.47
2:B:123:PRO:O	2:B:126:SER:HB2	2.14	0.47
3:D:90:LEU:O	3:D:94:THR:HG23	2.13	0.47
3:D:115:GLU:H	3:D:115:GLU:CD	2.23	0.47
3:D:171:VAL:O	3:D:172:SER:CB	2.59	0.47
2:F:68:ALA:O	2:F:69:PRO:C	2.57	0.47
4:L:255:CYC:CMA	4:L:255:CYC:NB	2.78	0.47
1:Q:95:VAL:HG21	1:Q:154:LEU:HD13	1.97	0.47
4:Q:184:CYC:HB	4:Q:184:CYC:HMA2	1.80	0.47
2:R:40:ALA:HB2	2:R:156:LEU:HD21	1.96	0.47
2:T:74:TYR:O	2:T:75:ALA:HB3	2.15	0.47
1:U:121:THR:HG21	2:X:83:LEU:HD13	1.95	0.47
1:A:67:THR:O	1:A:76:ALA:HA	2.15	0.47
2:F:60:PHE:CZ	2:F:79:MET:HE1	2.47	0.47
2:H:2:PHE:HA	2:H:6:THR:HG22	1.95	0.47
4:H:255:CYC:HHA	4:H:255:CYC:O1A	2.15	0.47
2:P:90:LEU:O	2:P:94:THR:HG23	2.15	0.47
2:N:20:SER:N	2:N:23:GLN:HE21	1.88	0.47
4:P:255:CYC:HHA	4:P:255:CYC:CGA	2.44	0.47
1:C:121:THR:HG21	2:F:83:LEU:HD13	1.97	0.47
2:V:69:PRO:HA	2:V:74:TYR:CG	2.50	0.47
2:X:79:MET:HE3	2:X:83:LEU:CG	2.38	0.47
1:I:48:ALA:O	1:I:52:ILE:HG13	2.15	0.46
2:N:36:LYS:HD3	4:N:255:CYC:CMD	2.43	0.46
2:T:19:VAL:HG13	2:T:23:GLN:HB2	1.97	0.46
1:U:6:THR:HG22	2:V:1:MET:HE2	1.97	0.46
3:D:36:LYS:O	3:D:40:VAL:HG12	2.15	0.46
2:L:52:VAL:HG22	2:L:134:MET:CE	2.45	0.46
4:R:255:CYC:NB	4:R:255:CYC:HMA1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:68:CYS:HB2	1:M:68:CYS:O	2.16	0.46
1:I:120:ARG:HG3	1:I:120:ARG:HH11	1.79	0.46
4:P:255:CYC:CHA	4:P:255:CYC:O1A	2.63	0.46
1:A:72:PRO:O	4:A:184:CYC:HBD2	2.15	0.46
2:P:2:PHE:HA	2:P:6:THR:CG2	2.45	0.46
2:R:19:VAL:HG13	2:R:23:GLN:HB2	1.97	0.46
2:T:171:VAL:O	2:T:172:SER:CB	2.43	0.46
4:B:184:CYC:HC	4:B:184:CYC:C2D	2.29	0.46
3:D:2:PHE:HA	3:D:6:THR:HG22	1.97	0.46
1:E:10:SER:CA	5:E:2002:HOH:O	2.63	0.46
1:G:95:VAL:HG21	1:G:154:LEU:HD13	1.98	0.46
2:H:52:VAL:HA	2:H:134:MET:HE3	1.97	0.46
2:T:90:LEU:O	2:T:94:THR:HG23	2.16	0.46
1:U:135:TYR:CE2	1:U:139:ASN:ND2	2.84	0.46
2:R:69:PRO:HA	2:R:74:TYR:CG	2.50	0.46
1:O:6:THR:O	1:O:10:SER:HB2	2.16	0.46
4:V:255:CYC:HHA	4:V:255:CYC:HAD1	1.76	0.46
1:C:18:PHE:CE2	3:D:91:ARG:HA	2.51	0.46
1:E:10:SER:N	5:E:2002:HOH:O	2.49	0.46
2:V:72:ASN:HB3	4:V:184:CYC:OC	2.15	0.46
2:B:19:VAL:CG1	2:B:23:GLN:HB2	2.46	0.46
1:E:162:SER:O	1:G:120:ARG:HD2	2.16	0.46
1:K:1:MET:O	1:K:3:THR:HG23	2.16	0.46
2:R:144:ASP:HA	2:R:145:PRO:HD3	1.82	0.46
2:N:22:ALA:HA	5:N:2006:HOH:O	2.14	0.46
2:N:60:PHE:CZ	2:N:79:MET:HE1	2.51	0.46
2:P:13:ASP:OD1	2:R:74:TYR:OH	2.31	0.46
2:N:19:VAL:HG13	2:N:23:GLN:HB2	1.95	0.45
4:P:184:CYC:HC	4:P:184:CYC:C2D	2.27	0.45
4:T:255:CYC:HAD1	5:T:2030:HOH:O	2.16	0.45
2:X:20:SER:OG	2:X:23:GLN:HG3	2.16	0.45
1:C:13:ASP:OD2	3:D:108:ARG:HD2	2.17	0.45
1:C:79:ARG:HG3	5:C:2015:HOH:O	2.15	0.45
4:C:184:CYC:O1D	2:F:57:ARG:NH1	2.47	0.45
1:Q:6:THR:O	1:Q:10:SER:HB2	2.16	0.45
1:Q:6:THR:CG2	2:R:1:MET:HE2	2.37	0.45
2:F:49:SER:HB3	5:I:2039:HOH:O	2.17	0.45
2:J:135:LYS:HG3	2:J:164:PHE:HB2	1.98	0.45
2:X:72:ASN:HB3	4:X:184:CYC:OC	2.16	0.45
1:M:13:ASP:OD2	2:N:108:ARG:HD2	2.17	0.45
1:M:40:ALA:HB2	1:M:146:ALA:HB1	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:R:40:ALA:HB1	2:R:160:ILE:HD11	1.98	0.45
2:J:90:LEU:O	2:J:94:THR:HG23	2.17	0.45
1:M:2:LYS:HD2	1:S:17:ARG:NH2	2.32	0.45
2:P:52:VAL:HA	2:P:134:MET:HE3	1.97	0.45
1:A:135:TYR:CE2	1:A:139:ASN:ND2	2.85	0.45
2:B:69:PRO:HA	2:B:74:TYR:CG	2.51	0.45
1:K:13:ASP:OD1	2:L:92:TYR:OH	2.28	0.45
4:D:184:CYC:CMD	4:D:184:CYC:NC	2.65	0.45
2:B:113:LEU:HG	2:B:171:VAL:HG12	1.98	0.45
1:C:125:SER:HB3	1:C:128:TRP:CE2	2.51	0.45
2:F:2:PHE:HA	2:F:6:THR:CG2	2.47	0.45
2:F:115:GLU:CD	2:F:115:GLU:H	2.25	0.45
1:I:68:CYS:HB2	1:W:60:TYR:HB3	1.99	0.45
2:T:68:ALA:O	2:T:69:PRO:C	2.60	0.45
1:W:130:ILE:HD11	1:W:161:LEU:O	2.17	0.45
4:B:184:CYC:NC	4:B:184:CYC:CMD	2.54	0.44
1:E:162:SER:O	1:G:120:ARG:CD	2.65	0.44
2:N:19:VAL:HG12	2:N:23:GLN:HB2	1.96	0.44
1:Q:120:ARG:CD	1:S:162:SER:O	2.65	0.44
2:T:2:PHE:HA	2:T:6:THR:HG22	1.99	0.44
2:V:52:VAL:HG22	2:V:134:MET:CE	2.47	0.44
2:L:92:TYR:HE2	4:L:184:CYC:HBB1	1.80	0.44
2:V:2:PHE:HA	2:V:6:THR:HG22	1.99	0.44
1:I:111:LEU:C	1:I:111:LEU:HD23	2.42	0.44
4:V:184:CYC:HHA	4:V:184:CYC:HAD2	1.73	0.44
2:B:144:ASP:HA	2:B:145:PRO:HD3	1.88	0.44
4:F:184:CYC:HC	4:F:184:CYC:HMD3	1.83	0.44
2:L:51:VAL:HG12	2:L:134:MET:HG2	2.00	0.44
1:M:121:THR:HG21	2:P:83:LEU:HD13	1.99	0.44
2:B:90:LEU:O	2:B:94:THR:HG23	2.17	0.44
1:C:120:ARG:CG	1:I:162:SER:O	2.65	0.44
4:F:255:CYC:OB	4:F:255:CYC:CBB	2.65	0.44
4:P:184:CYC:OB	4:P:184:CYC:CBB	2.66	0.44
1:U:3:THR:O	1:U:4:PRO:C	2.58	0.44
2:H:113:LEU:HD13	4:H:184:CYC:CMB	2.45	0.44
2:J:60:PHE:CZ	2:J:79:MET:HE1	2.51	0.44
2:L:45:THR:C	2:L:47:ASN:H	2.25	0.44
1:C:1:MET:O	1:C:3:THR:HG23	2.17	0.44
2:H:2:PHE:HA	2:H:6:THR:CG2	2.48	0.44
2:J:31:VAL:O	2:J:34:ALA:HB2	2.17	0.44
1:A:70:GLN:HG3	5:A:2002:HOH:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:19:VAL:HG12	2:J:23:GLN:HB2	2.00	0.44
2:N:58:ALA:HB3	2:N:133:LYS:HD3	2.00	0.44
1:S:122:PHE:HE2	2:V:79:MET:HE2	1.83	0.44
4:S:184:CYC:HBB2	4:S:184:CYC:OB	2.18	0.44
2:J:171:VAL:O	2:J:172:SER:HB3	2.10	0.43
2:L:74:TYR:O	2:L:75:ALA:CB	2.66	0.43
2:V:115:GLU:CD	2:V:115:GLU:H	2.25	0.43
3:D:74:TYR:O	3:D:75:ALA:HB3	2.18	0.43
1:G:104:THR:O	1:G:105:GLY:C	2.60	0.43
1:I:128:TRP:CE3	4:I:184:CYC:HMC3	2.52	0.43
1:O:91:TYR:CD2	1:O:133:LEU:HD21	2.54	0.43
1:Q:79:ARG:HE	1:Q:79:ARG:HB3	1.72	0.43
4:Q:184:CYC:CMD	4:Q:184:CYC:NC	2.81	0.43
1:U:79:ARG:HE	1:U:79:ARG:HB3	1.72	0.43
2:N:69:PRO:HA	2:N:74:TYR:CG	2.52	0.43
4:O:184:CYC:HHA	4:O:184:CYC:HAA2	1.87	0.43
2:P:52:VAL:HG22	2:P:134:MET:CE	2.48	0.43
2:P:79:MET:HE3	2:P:83:LEU:CG	2.46	0.43
2:J:74:TYR:O	2:J:75:ALA:CB	2.66	0.43
2:L:19:VAL:CG1	2:L:23:GLN:HB2	2.49	0.43
4:X:184:CYC:CBD	4:X:184:CYC:HHA	2.49	0.43
2:B:74:TYR:O	2:B:75:ALA:CB	2.66	0.43
4:I:184:CYC:HMA1	2:L:79:MET:HG2	2.00	0.43
2:T:103:SER:O	2:T:104:ALA:C	2.61	0.43
1:O:162:SER:O	1:U:120:ARG:HD2	2.18	0.43
1:Q:125:SER:HB3	1:Q:128:TRP:CE2	2.54	0.43
2:T:82:CYS:CA	4:T:184:CYC:HAC2	2.48	0.43
2:X:68:ALA:O	2:X:69:PRO:C	2.59	0.43
3:D:40:VAL:HG12	3:D:156:LEU:HD21	1.94	0.43
2:H:28:SER:O	2:H:31:VAL:HB	2.19	0.43
4:N:184:CYC:HB	4:N:184:CYC:HMA2	1.84	0.43
2:X:19:VAL:CG1	2:X:23:GLN:HB2	2.49	0.43
1:A:3:THR:O	1:A:4:PRO:C	2.61	0.42
3:D:48:ALA:O	3:D:52:VAL:HG23	2.19	0.42
4:F:255:CYC:CMA	4:F:255:CYC:HB	2.32	0.42
2:H:74:TYR:O	2:H:75:ALA:HB3	2.18	0.42
1:M:120:ARG:CG	1:W:162:SER:O	2.67	0.42
2:N:151:GLY:HA3	4:N:255:CYC:HMD2	2.01	0.42
4:N:255:CYC:HBA1	4:N:255:CYC:HHA	2.01	0.42
4:T:184:CYC:NB	4:T:184:CYC:HMA2	2.32	0.42
3:D:10:ALA:O	3:D:14:THR:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:10:ALA:O	2:L:14:THR:HG23	2.20	0.42
2:P:51:VAL:HG12	2:P:134:MET:HG2	2.01	0.42
2:X:103:SER:O	2:X:104:ALA:C	2.62	0.42
2:J:113:LEU:HD13	4:J:184:CYC:CMB	2.47	0.42
2:N:103:SER:O	2:N:104:ALA:C	2.62	0.42
2:P:114:ARG:HB2	2:P:170:ALA:O	2.19	0.42
2:X:113:LEU:HD13	4:X:184:CYC:CMB	2.50	0.42
1:E:115:ILE:HD12	1:E:115:ILE:HA	1.87	0.42
2:H:37:ARG:O	2:H:40:ALA:HB3	2.19	0.42
1:K:91:TYR:O	1:K:95:VAL:HG23	2.19	0.42
1:M:147:ALA:O	1:M:148:ALA:C	2.61	0.42
4:N:255:CYC:CMA	4:N:255:CYC:HB	2.33	0.42
2:P:3:ASP:O	2:P:4:ALA:C	2.60	0.42
2:P:19:VAL:CG1	2:P:23:GLN:HB2	2.49	0.42
2:F:2:PHE:HA	2:F:6:THR:HG22	2.02	0.42
2:F:52:VAL:HG22	2:F:134:MET:HE1	2.00	0.42
4:F:184:CYC:HB	4:F:184:CYC:HMA2	1.85	0.42
1:K:33:GLN:N	5:K:2004:HOH:O	2.51	0.42
1:K:53:SER:O	1:K:54:GLY:C	2.62	0.42
1:O:79:ARG:HE	1:O:79:ARG:HB3	1.71	0.42
2:B:2:PHE:HA	2:B:6:THR:CG2	2.49	0.42
2:J:37:ARG:O	2:J:40:ALA:HB3	2.19	0.42
2:R:153:CYS:SG	4:R:255:CYC:H2C	2.59	0.42
2:X:48:ALA:O	2:X:52:VAL:HG23	2.19	0.42
2:X:113:LEU:CD2	2:X:171:VAL:HG12	2.50	0.42
1:A:75:ALA:O	1:A:81:LYS:HD3	2.20	0.42
1:S:125:SER:HB3	1:S:128:TRP:CE2	2.55	0.42
2:T:124:GLY:HA3	2:T:172:SER:H	1.85	0.42
2:B:52:VAL:HG22	2:B:134:MET:HE3	2.02	0.42
2:B:171:VAL:O	2:B:171:VAL:HG23	2.16	0.42
4:J:255:CYC:CMB	4:J:255:CYC:C3A	2.98	0.42
1:O:53:SER:O	1:O:54:GLY:C	2.60	0.42
2:T:52:VAL:HA	2:T:134:MET:HE3	2.01	0.42
2:T:74:TYR:O	2:T:75:ALA:CB	2.68	0.42
4:H:255:CYC:CGA	4:H:255:CYC:CHA	2.97	0.42
1:I:74:TYR:HA	4:I:184:CYC:OC	2.20	0.42
1:M:162:SER:O	1:W:120:ARG:CG	2.57	0.42
1:O:1:MET:O	1:O:3:THR:HG23	2.20	0.42
1:A:120:ARG:HG3	1:A:120:ARG:HH11	1.85	0.42
2:L:2:PHE:HA	2:L:6:THR:HG22	2.02	0.42
2:L:52:VAL:HA	2:L:134:MET:HE3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:115:GLU:CD	2:H:115:GLU:H	2.28	0.41
2:J:2:PHE:HA	2:J:6:THR:HG22	2.02	0.41
1:S:115:ILE:HD12	1:S:115:ILE:HA	1.78	0.41
2:B:83:LEU:HD13	1:E:121:THR:HG21	2.01	0.41
1:M:26:VAL:HG13	1:S:26:VAL:HG22	2.02	0.41
4:M:184:CYC:NB	4:M:184:CYC:CMA	2.83	0.41
1:O:48:ALA:O	1:O:52:ILE:HG13	2.19	0.41
4:C:184:CYC:HC	4:C:184:CYC:CMD	2.32	0.41
4:D:184:CYC:CBB	4:D:184:CYC:OB	2.67	0.41
4:E:184:CYC:HHD	4:E:184:CYC:HAC1	1.91	0.41
1:M:5:LEU:HB2	2:N:3:ASP:OD2	2.19	0.41
1:Q:74:TYR:HA	4:Q:184:CYC:OC	2.20	0.41
3:D:171:VAL:HG23	3:D:172:SER:H	1.86	0.41
2:F:90:LEU:O	2:F:94:THR:HG23	2.20	0.41
2:F:119:ALA:HA	5:F:2026:HOH:O	2.20	0.41
2:H:113:LEU:HG	2:H:171:VAL:HG12	2.03	0.41
2:J:52:VAL:HA	2:J:134:MET:HE3	2.02	0.41
2:L:67:ILE:O	5:L:2012:HOH:O	2.22	0.41
1:O:128:TRP:CE3	4:O:184:CYC:HMC3	2.55	0.41
1:Q:99:LEU:HD23	1:Q:153:TYR:HE2	1.85	0.41
4:V:184:CYC:HC	4:V:184:CYC:HMD2	1.83	0.41
4:B:184:CYC:OB	4:B:184:CYC:HBB2	2.20	0.41
2:B:51:VAL:HG12	2:B:134:MET:HG2	2.03	0.41
2:J:82:CYS:SG	4:J:184:CYC:C3C	3.00	0.41
2:J:127:VAL:HG22	4:J:184:CYC:H3C	2.03	0.41
1:M:3:THR:O	1:M:7:ASP:HB2	2.21	0.41
1:O:17:ARG:CB	5:O:2003:HOH:O	2.64	0.41
4:T:184:CYC:HC	4:T:184:CYC:HMD3	1.85	0.41
2:F:74:TYR:O	2:F:75:ALA:CB	2.68	0.41
4:J:184:CYC:HC	4:J:184:CYC:CMD	2.29	0.41
4:P:255:CYC:CMA	4:P:255:CYC:HB	2.34	0.41
2:X:2:PHE:HA	2:X:6:THR:HG22	2.02	0.41
3:D:3:ASP:O	3:D:4:ALA:C	2.62	0.41
3:D:123:PRO:O	3:D:126:SER:HB2	2.21	0.41
3:D:144:ASP:HA	3:D:145:PRO:HD3	1.95	0.41
4:F:184:CYC:HB	4:F:184:CYC:CMA	2.34	0.41
1:G:72:PRO:O	4:G:184:CYC:HBD2	2.21	0.41
1:K:73:ASN:OD1	1:K:73:ASN:N	2.52	0.41
2:R:58:ALA:HB3	2:R:133:LYS:HD3	2.02	0.41
2:R:113:LEU:HG	2:R:171:VAL:HG12	2.03	0.41
1:Q:13:ASP:HA	2:R:95:TYR:OH	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:24:ILE:HG23	1:C:24:ILE:HD12	1.74	0.40
2:H:31:VAL:O	2:H:34:ALA:HB2	2.21	0.40
2:H:144:ASP:HA	2:H:145:PRO:HD3	1.90	0.40
1:I:67:THR:O	1:I:76:ALA:HA	2.21	0.40
1:M:39:SER:HB3	5:M:2009:HOH:O	2.20	0.40
2:P:144:ASP:HA	2:P:145:PRO:HD3	1.89	0.40
1:Q:17:ARG:CZ	1:U:2:LYS:HD2	2.51	0.40
2:V:37:ARG:O	2:V:40:ALA:HB3	2.22	0.40
1:I:77:ASP:O	1:I:81:LYS:HB2	2.22	0.40
2:J:69:PRO:HA	2:J:74:TYR:CG	2.56	0.40
1:Q:26:VAL:HG13	1:U:26:VAL:HG22	2.03	0.40
1:U:99:LEU:HD23	1:U:153:TYR:HE2	1.85	0.40
2:B:10:ALA:O	2:B:14:THR:HG23	2.21	0.40
2:B:149:THR:OG1	4:B:255:CYC:O1A	2.26	0.40
2:H:153:CYS:SG	4:H:255:CYC:C2C	3.09	0.40
2:L:103:SER:O	2:L:104:ALA:C	2.64	0.40
1:M:115:ILE:HD12	1:M:115:ILE:HA	1.94	0.40
4:N:255:CYC:HB	4:N:255:CYC:HMA2	1.86	0.40
4:O:184:CYC:HHA	4:O:184:CYC:HBD1	2.04	0.40
2:P:68:ALA:O	2:P:69:PRO:C	2.61	0.40
4:P:255:CYC:HB	4:P:255:CYC:HMA2	1.86	0.40
1:Q:115:ILE:HD12	1:Q:115:ILE:HA	1.94	0.40
2:V:3:ASP:O	2:V:4:ALA:C	2.63	0.40
2:V:39:ASP:CG	2:V:148:ILE:HD11	2.47	0.40
2:V:52:VAL:HA	2:V:134:MET:HE3	2.03	0.40
2:V:68:ALA:O	2:V:69:PRO:C	2.63	0.40
1:C:2:LYS:HD2	1:K:17:ARG:NH2	2.35	0.40
2:F:135:LYS:HG3	2:F:164:PHE:HB2	2.03	0.40
1:A:121:THR:HG21	3:D:83:LEU:HD13	2.04	0.40
4:B:255:CYC:OB	4:B:255:CYC:CBB	2.69	0.40
3:D:72:ASN:HB3	4:D:184:CYC:OC	2.22	0.40
2:H:57:ARG:O	2:H:58:ALA:C	2.61	0.40
2:H:69:PRO:HA	2:H:74:TYR:CG	2.55	0.40
4:P:255:CYC:CHD	4:P:255:CYC:CBC	2.66	0.40
1:S:18:PHE:CE2	2:T:91:ARG:HA	2.56	0.40
2:V:79:MET:HE3	2:V:83:LEU:CG	2.45	0.40

All (3) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:62:GLU:OE1	2:H:23:GLN:CG[2_746]	2.05	0.15
1:E:67:THR:O	1:O:61:ASN:CG[1_554]	2.07	0.13
2:N:114:ARG:NH1	2:T:15:ARG:NH2[2_547]	2.19	0.01

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	160/162 (99%)	156 (98%)	3 (2%)	1 (1%)	22	57
1	C	160/162 (99%)	152 (95%)	6 (4%)	2 (1%)	10	39
1	E	160/162 (99%)	157 (98%)	2 (1%)	1 (1%)	22	57
1	G	160/162 (99%)	155 (97%)	4 (2%)	1 (1%)	22	57
1	I	160/162 (99%)	158 (99%)	1 (1%)	1 (1%)	22	57
1	K	160/162 (99%)	153 (96%)	6 (4%)	1 (1%)	22	57
1	M	160/162 (99%)	157 (98%)	2 (1%)	1 (1%)	22	57
1	O	160/162 (99%)	156 (98%)	3 (2%)	1 (1%)	22	57
1	Q	160/162 (99%)	155 (97%)	4 (2%)	1 (1%)	22	57
1	S	160/162 (99%)	154 (96%)	4 (2%)	2 (1%)	10	39
1	U	160/162 (99%)	156 (98%)	3 (2%)	1 (1%)	22	57
1	W	160/162 (99%)	153 (96%)	6 (4%)	1 (1%)	22	57
2	B	170/172 (99%)	161 (95%)	8 (5%)	1 (1%)	22	57
2	F	170/172 (99%)	164 (96%)	4 (2%)	2 (1%)	11	41
2	H	170/172 (99%)	161 (95%)	8 (5%)	1 (1%)	22	57
2	J	170/172 (99%)	165 (97%)	4 (2%)	1 (1%)	22	57
2	L	170/172 (99%)	162 (95%)	7 (4%)	1 (1%)	22	57
2	N	170/172 (99%)	162 (95%)	7 (4%)	1 (1%)	22	57
2	P	170/172 (99%)	164 (96%)	5 (3%)	1 (1%)	22	57

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	R	170/172 (99%)	163 (96%)	6 (4%)	1 (1%)	22	57
2	T	170/172 (99%)	162 (95%)	6 (4%)	2 (1%)	11	41
2	V	170/172 (99%)	163 (96%)	6 (4%)	1 (1%)	22	57
2	X	170/172 (99%)	162 (95%)	7 (4%)	1 (1%)	22	57
3	D	170/172 (99%)	162 (95%)	6 (4%)	2 (1%)	11	41
All	All	3960/4008 (99%)	3813 (96%)	118 (3%)	29 (1%)	19	54

All (29) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	2	LYS
1	G	2	LYS
1	M	2	LYS
1	O	2	LYS
1	Q	2	LYS
1	A	2	LYS
1	C	2	LYS
3	D	171	VAL
1	I	2	LYS
1	K	2	LYS
1	S	2	LYS
1	U	2	LYS
1	W	2	LYS
2	N	75	ALA
2	R	75	ALA
3	D	75	ALA
2	F	34	ALA
2	H	75	ALA
2	L	75	ALA
2	P	75	ALA
2	T	75	ALA
2	B	75	ALA
2	F	75	ALA
2	J	75	ALA
2	V	75	ALA
2	X	75	ALA
1	C	105	GLY
1	S	105	GLY
2	T	171	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	120/120 (100%)	108 (90%)	12 (10%)	6 25
1	C	120/120 (100%)	105 (88%)	15 (12%)	3 17
1	E	120/120 (100%)	108 (90%)	12 (10%)	6 25
1	G	120/120 (100%)	106 (88%)	14 (12%)	4 19
1	I	120/120 (100%)	106 (88%)	14 (12%)	4 19
1	K	120/120 (100%)	108 (90%)	12 (10%)	6 25
1	M	120/120 (100%)	108 (90%)	12 (10%)	6 25
1	O	120/120 (100%)	108 (90%)	12 (10%)	6 25
1	Q	120/120 (100%)	109 (91%)	11 (9%)	7 29
1	S	120/120 (100%)	107 (89%)	13 (11%)	5 22
1	U	120/120 (100%)	106 (88%)	14 (12%)	4 19
1	W	120/120 (100%)	108 (90%)	12 (10%)	6 25
2	B	123/123 (100%)	111 (90%)	12 (10%)	6 26
2	F	123/123 (100%)	115 (94%)	8 (6%)	14 43
2	H	123/123 (100%)	112 (91%)	11 (9%)	8 31
2	J	123/123 (100%)	114 (93%)	9 (7%)	11 39
2	L	123/123 (100%)	115 (94%)	8 (6%)	14 43
2	N	123/123 (100%)	113 (92%)	10 (8%)	9 34
2	P	123/123 (100%)	114 (93%)	9 (7%)	11 39
2	R	123/123 (100%)	113 (92%)	10 (8%)	9 34
2	T	123/123 (100%)	115 (94%)	8 (6%)	14 43
2	V	123/123 (100%)	112 (91%)	11 (9%)	8 31
2	X	123/123 (100%)	114 (93%)	9 (7%)	11 39
3	D	124/124 (100%)	113 (91%)	11 (9%)	8 31
All	All	2917/2917 (100%)	2648 (91%)	269 (9%)	7 29

All (269) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	MET
1	A	7	ASP
1	A	10	SER
1	A	11	THR
1	A	32	ARG
1	A	39	SER
1	A	46	SER
1	A	81	LYS
1	A	117	GLU
1	A	120	ARG
1	A	152	SER
1	A	154	LEU
2	B	6	THR
2	B	14	THR
2	B	18	MET
2	B	21	VAL
2	B	23	GLN
2	B	28	SER
2	B	30	MET
2	B	84	ARG
2	B	115	GLU
2	B	141	ILE
2	B	142	VAL
2	B	172	SER
1	C	1	MET
1	C	2	LYS
1	C	7	ASP
1	C	10	SER
1	C	11	THR
1	C	32	ARG
1	C	39	SER
1	C	53	SER
1	C	81	LYS
1	C	112	ILE
1	C	117	GLU
1	C	120	ARG
1	C	152	SER
1	C	154	LEU
1	C	162	SER
3	D	6	THR
3	D	18	MET
3	D	21	VAL
3	D	28	SER

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Mol	Chain	Res	Type
3	D	30	MET
3	D	40	VAL
3	D	84	ARG
3	D	115	GLU
3	D	118	SER
3	D	142	VAL
3	D	172	SER
1	E	1	MET
1	E	2	LYS
1	E	10	SER
1	E	11	THR
1	E	32	ARG
1	E	39	SER
1	E	46	SER
1	E	53	SER
1	E	81	LYS
1	E	117	GLU
1	E	120	ARG
1	E	154	LEU
2	F	6	THR
2	F	21	VAL
2	F	23	GLN
2	F	28	SER
2	F	30	MET
2	F	115	GLU
2	F	118	SER
2	F	142	VAL
1	G	1	MET
1	G	7	ASP
1	G	10	SER
1	G	11	THR
1	G	32	ARG
1	G	39	SER
1	G	53	SER
1	G	81	LYS
1	G	112	ILE
1	G	117	GLU
1	G	120	ARG
1	G	152	SER
1	G	154	LEU
1	G	162	SER
2	H	6	THR

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Mol	Chain	Res	Type
2	H	14	THR
2	H	15	ARG
2	H	18	MET
2	H	21	VAL
2	H	23	GLN
2	H	28	SER
2	H	115	GLU
2	H	118	SER
2	H	142	VAL
2	H	172	SER
1	I	1	MET
1	I	2	LYS
1	I	7	ASP
1	I	10	SER
1	I	11	THR
1	I	32	ARG
1	I	39	SER
1	I	46	SER
1	I	53	SER
1	I	81	LYS
1	I	112	ILE
1	I	117	GLU
1	I	120	ARG
1	I	154	LEU
2	J	6	THR
2	J	18	MET
2	J	21	VAL
2	J	28	SER
2	J	49	SER
2	J	84	ARG
2	J	115	GLU
2	J	118	SER
2	J	142	VAL
1	K	1	MET
1	K	2	LYS
1	K	10	SER
1	K	11	THR
1	K	32	ARG
1	K	39	SER
1	K	46	SER
1	K	53	SER
1	K	81	LYS

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Mol	Chain	Res	Type
1	K	117	GLU
1	K	120	ARG
1	K	154	LEU
2	L	6	THR
2	L	18	MET
2	L	21	VAL
2	L	28	SER
2	L	84	ARG
2	L	94	THR
2	L	115	GLU
2	L	142	VAL
1	M	1	MET
1	M	2	LYS
1	M	7	ASP
1	M	10	SER
1	M	11	THR
1	M	32	ARG
1	M	46	SER
1	M	53	SER
1	M	81	LYS
1	M	117	GLU
1	M	120	ARG
1	M	154	LEU
2	N	6	THR
2	N	14	THR
2	N	18	MET
2	N	21	VAL
2	N	28	SER
2	N	36	LYS
2	N	84	ARG
2	N	115	GLU
2	N	118	SER
2	N	142	VAL
1	O	1	MET
1	O	7	ASP
1	O	10	SER
1	O	11	THR
1	O	32	ARG
1	O	39	SER
1	O	46	SER
1	O	53	SER
1	O	81	LYS

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Mol	Chain	Res	Type
1	O	117	GLU
1	O	120	ARG
1	O	154	LEU
2	P	6	THR
2	P	18	MET
2	P	21	VAL
2	P	23	GLN
2	P	28	SER
2	P	115	GLU
2	P	118	SER
2	P	142	VAL
2	P	172	SER
1	Q	1	MET
1	Q	2	LYS
1	Q	7	ASP
1	Q	10	SER
1	Q	11	THR
1	Q	15	GLN
1	Q	39	SER
1	Q	53	SER
1	Q	81	LYS
1	Q	117	GLU
1	Q	154	LEU
2	R	6	THR
2	R	14	THR
2	R	18	MET
2	R	21	VAL
2	R	28	SER
2	R	84	ARG
2	R	115	GLU
2	R	118	SER
2	R	142	VAL
2	R	172	SER
1	S	1	MET
1	S	2	LYS
1	S	7	ASP
1	S	10	SER
1	S	11	THR
1	S	32	ARG
1	S	39	SER
1	S	53	SER
1	S	81	LYS

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Mol	Chain	Res	Type
1	S	115	ILE
1	S	117	GLU
1	S	120	ARG
1	S	154	LEU
2	T	6	THR
2	T	18	MET
2	T	21	VAL
2	T	30	MET
2	T	84	ARG
2	T	115	GLU
2	T	118	SER
2	T	142	VAL
1	U	1	MET
1	U	2	LYS
1	U	7	ASP
1	U	10	SER
1	U	11	THR
1	U	32	ARG
1	U	39	SER
1	U	46	SER
1	U	53	SER
1	U	68	CYS
1	U	81	LYS
1	U	117	GLU
1	U	120	ARG
1	U	154	LEU
2	V	6	THR
2	V	14	THR
2	V	18	MET
2	V	21	VAL
2	V	28	SER
2	V	30	MET
2	V	84	ARG
2	V	115	GLU
2	V	118	SER
2	V	142	VAL
2	V	172	SER
1	W	1	MET
1	W	2	LYS
1	W	7	ASP
1	W	10	SER
1	W	11	THR

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Mol	Chain	Res	Type
1	W	32	ARG
1	W	39	SER
1	W	53	SER
1	W	81	LYS
1	W	117	GLU
1	W	120	ARG
1	W	154	LEU
2	X	6	THR
2	X	18	MET
2	X	21	VAL
2	X	23	GLN
2	X	28	SER
2	X	84	ARG
2	X	115	GLU
2	X	142	VAL
2	X	172	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (51) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	70	GLN
1	A	78	GLN
1	A	139	ASN
2	B	23	GLN
2	B	35	ASN
2	B	42	ASN
2	B	47	ASN
3	D	23	GLN
3	D	35	ASN
3	D	47	ASN
1	E	70	GLN
2	F	23	GLN
2	F	35	ASN
2	F	42	ASN
2	F	47	ASN
2	F	111	ASN
1	G	70	GLN
2	H	23	GLN
2	H	35	ASN
2	H	47	ASN
2	J	23	GLN
2	J	35	ASN

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Mol	Chain	Res	Type
2	J	47	ASN
2	L	23	GLN
2	L	35	ASN
2	L	42	ASN
2	L	47	ASN
2	L	111	ASN
2	N	23	GLN
2	N	35	ASN
2	N	47	ASN
2	P	23	GLN
2	P	35	ASN
2	P	42	ASN
2	P	47	ASN
2	R	23	GLN
2	R	35	ASN
2	R	47	ASN
2	T	23	GLN
2	T	35	ASN
2	T	42	ASN
2	T	47	ASN
2	T	111	ASN
2	V	23	GLN
2	V	35	ASN
2	V	42	ASN
2	V	47	ASN
1	W	78	GLN
2	X	23	GLN
2	X	35	ASN
2	X	47	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

36 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	CYC	B	184	2	42,46,46	3.74	12 (28%)	50,67,67	2.84	16 (32%)
4	CYC	E	184	1	42,46,46	3.24	14 (33%)	50,67,67	2.88	15 (30%)
4	CYC	O	184	1	42,46,46	3.34	12 (28%)	50,67,67	2.60	15 (30%)
4	CYC	H	184	2	42,46,46	4.14	12 (28%)	50,67,67	3.04	16 (32%)
4	CYC	T	184	-	42,46,46	3.39	14 (33%)	50,67,67	3.08	18 (36%)
4	CYC	V	184	2	42,46,46	3.42	14 (33%)	50,67,67	2.82	15 (30%)
4	CYC	P	255	2	42,46,46	3.26	13 (30%)	50,67,67	2.90	19 (38%)
4	CYC	V	255	2	42,46,46	3.84	17 (40%)	50,67,67	3.17	16 (32%)
4	CYC	J	184	2	42,46,46	3.26	14 (33%)	50,67,67	3.10	16 (32%)
4	CYC	X	184	2	42,46,46	4.43	13 (30%)	50,67,67	2.53	17 (34%)
4	CYC	D	184	3	42,46,46	3.94	12 (28%)	50,67,67	3.06	23 (46%)
4	CYC	H	255	-	42,46,46	3.44	14 (33%)	50,67,67	2.74	20 (40%)
4	CYC	L	184	-	42,46,46	3.75	12 (28%)	50,67,67	2.84	18 (36%)
4	CYC	I	184	1	42,46,46	3.67	12 (28%)	50,67,67	2.92	21 (42%)
4	CYC	N	255	2	42,46,46	3.71	13 (30%)	50,67,67	2.59	18 (36%)
4	CYC	K	184	1	42,46,46	3.77	12 (28%)	50,67,67	2.72	17 (34%)
4	CYC	F	255	2	42,46,46	4.10	14 (33%)	50,67,67	2.50	17 (34%)
4	CYC	R	184	2	42,46,46	3.96	12 (28%)	50,67,67	2.90	21 (42%)
4	CYC	J	255	2	42,46,46	3.64	17 (40%)	50,67,67	3.07	22 (44%)
4	CYC	C	184	1	42,46,46	3.45	14 (33%)	50,67,67	2.81	18 (36%)
4	CYC	A	184	1	42,46,46	3.75	13 (30%)	50,67,67	2.76	22 (44%)
4	CYC	U	184	1	42,46,46	3.55	15 (35%)	50,67,67	3.04	24 (48%)
4	CYC	N	184	2	42,46,46	3.64	14 (33%)	50,67,67	2.57	16 (32%)
4	CYC	S	184	1	42,46,46	3.77	14 (33%)	50,67,67	3.27	24 (48%)
4	CYC	X	255	2	42,46,46	3.37	11 (26%)	50,67,67	2.60	19 (38%)
4	CYC	L	255	2	42,46,46	3.87	13 (30%)	50,67,67	2.69	17 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	CYC	R	255	-	42,46,46	3.93	10 (23%)	50,67,67	3.06	18 (36%)
4	CYC	B	255	-	42,46,46	3.74	14 (33%)	50,67,67	2.96	20 (40%)
4	CYC	W	184	1	42,46,46	3.59	16 (38%)	50,67,67	2.43	13 (26%)
4	CYC	T	255	-	42,46,46	3.30	14 (33%)	50,67,67	2.31	14 (28%)
4	CYC	F	184	2	42,46,46	3.93	14 (33%)	50,67,67	2.46	18 (36%)
4	CYC	D	255	3	42,46,46	3.56	13 (30%)	50,67,67	2.67	21 (42%)
4	CYC	Q	184	1	42,46,46	3.34	15 (35%)	50,67,67	2.61	17 (34%)
4	CYC	M	184	1	42,46,46	3.83	15 (35%)	50,67,67	3.01	19 (38%)
4	CYC	P	184	2	42,46,46	4.24	12 (28%)	50,67,67	2.84	21 (42%)
4	CYC	G	184	1	42,46,46	3.29	15 (35%)	50,67,67	2.59	16 (32%)

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	CYC	B	184	2	-	15/25/74/74	0/4/4/4
4	CYC	E	184	1	-	15/25/74/74	0/4/4/4
4	CYC	O	184	1	-	8/25/74/74	0/4/4/4
4	CYC	H	184	2	-	12/25/74/74	0/4/4/4
4	CYC	T	184	-	-	10/25/74/74	0/4/4/4
4	CYC	V	184	2	-	13/25/74/74	0/4/4/4
4	CYC	P	255	2	-	14/25/74/74	0/4/4/4
4	CYC	V	255	2	-	7/25/74/74	0/4/4/4
4	CYC	J	184	2	-	14/25/74/74	0/4/4/4
4	CYC	X	184	2	-	17/25/74/74	0/4/4/4
4	CYC	D	184	3	-	15/25/74/74	0/4/4/4
4	CYC	H	255	-	-	6/25/74/74	0/4/4/4
4	CYC	L	184	-	-	14/25/74/74	0/4/4/4
4	CYC	I	184	1	-	7/25/74/74	0/4/4/4
4	CYC	N	255	2	-	14/25/74/74	0/4/4/4
4	CYC	K	184	1	-	11/25/74/74	0/4/4/4
4	CYC	F	255	2	-	10/25/74/74	0/4/4/4
4	CYC	R	184	2	-	15/25/74/74	0/4/4/4
4	CYC	J	255	2	-	17/25/74/74	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	CYC	C	184	1	-	8/25/74/74	0/4/4/4
4	CYC	A	184	1	-	11/25/74/74	0/4/4/4
4	CYC	U	184	1	-	10/25/74/74	0/4/4/4
4	CYC	N	184	2	-	11/25/74/74	0/4/4/4
4	CYC	S	184	1	-	14/25/74/74	0/4/4/4
4	CYC	X	255	2	-	11/25/74/74	0/4/4/4
4	CYC	L	255	2	-	13/25/74/74	0/4/4/4
4	CYC	R	255	-	-	11/25/74/74	0/4/4/4
4	CYC	B	255	-	-	14/25/74/74	0/4/4/4
4	CYC	W	184	1	-	12/25/74/74	0/4/4/4
4	CYC	T	255	-	-	12/25/74/74	0/4/4/4
4	CYC	F	184	2	-	10/25/74/74	0/4/4/4
4	CYC	D	255	3	-	15/25/74/74	0/4/4/4
4	CYC	Q	184	1	-	8/25/74/74	0/4/4/4
4	CYC	M	184	1	-	9/25/74/74	0/4/4/4
4	CYC	P	184	2	-	14/25/74/74	0/4/4/4
4	CYC	G	184	1	-	10/25/74/74	0/4/4/4

All (485) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	X	184	CYC	CHA-C1A	25.35	1.56	1.35
4	P	184	CYC	CHA-C1A	23.26	1.54	1.35
4	H	184	CYC	CHA-C1A	23.19	1.54	1.35
4	F	255	CYC	CHA-C1A	22.44	1.53	1.35
4	R	255	CYC	CHA-C1A	21.99	1.53	1.35
4	F	184	CYC	CHA-C1A	21.64	1.53	1.35
4	R	184	CYC	CHA-C1A	21.44	1.53	1.35
4	L	255	CYC	CHA-C1A	21.42	1.53	1.35
4	D	184	CYC	CHA-C1A	21.36	1.53	1.35
4	B	184	CYC	CHA-C1A	21.09	1.52	1.35
4	K	184	CYC	CHA-C1A	20.82	1.52	1.35
4	A	184	CYC	CHA-C1A	20.68	1.52	1.35
4	M	184	CYC	CHA-C1A	20.46	1.52	1.35
4	B	255	CYC	CHA-C1A	20.02	1.51	1.35
4	L	184	CYC	CHA-C1A	19.99	1.51	1.35
4	V	255	CYC	CHA-C1A	19.90	1.51	1.35
4	N	255	CYC	CHA-C1A	19.38	1.51	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	I	184	CYC	CHA-C1A	19.30	1.51	1.35
4	S	184	CYC	CHA-C1A	19.05	1.51	1.35
4	N	184	CYC	CHA-C1A	18.94	1.50	1.35
4	J	255	CYC	CHA-C1A	18.25	1.50	1.35
4	D	255	CYC	CHA-C1A	18.15	1.50	1.35
4	U	184	CYC	CHA-C1A	18.07	1.50	1.35
4	W	184	CYC	CHA-C1A	17.70	1.49	1.35
4	H	255	CYC	CHA-C1A	17.04	1.49	1.35
4	V	184	CYC	CHA-C1A	16.91	1.49	1.35
4	T	184	CYC	CHA-C1A	16.78	1.49	1.35
4	X	255	CYC	CHA-C1A	16.75	1.49	1.35
4	O	184	CYC	CHA-C1A	16.67	1.49	1.35
4	C	184	CYC	CHA-C1A	16.59	1.49	1.35
4	J	184	CYC	CHA-C1A	16.52	1.48	1.35
4	P	255	CYC	CHA-C1A	16.48	1.48	1.35
4	G	184	CYC	CHA-C1A	15.91	1.48	1.35
4	T	255	CYC	CHA-C1A	15.85	1.48	1.35
4	Q	184	CYC	CHA-C1A	15.39	1.48	1.35
4	E	184	CYC	CHA-C1A	14.55	1.47	1.35
4	S	184	CYC	C4B-C3B	-7.80	1.33	1.48
4	Q	184	CYC	CHB-C1B	7.01	1.54	1.38
4	N	255	CYC	CHB-C1B	6.54	1.53	1.38
4	F	255	CYC	C4B-C3B	-6.53	1.35	1.48
4	J	255	CYC	C4B-C3B	-6.45	1.35	1.48
4	C	184	CYC	C4B-C3B	-6.43	1.36	1.48
4	I	184	CYC	C4B-C3B	-6.35	1.36	1.48
4	V	184	CYC	CHB-C1B	6.25	1.52	1.38
4	G	184	CYC	C1A-C2A	-6.22	1.35	1.45
4	V	184	CYC	CHB-C4A	6.22	1.55	1.40
4	T	255	CYC	C4B-C3B	-6.21	1.36	1.48
4	T	255	CYC	CHB-C1B	6.17	1.52	1.38
4	O	184	CYC	CHB-C1B	6.16	1.52	1.38
4	E	184	CYC	C2C-C1C	-6.16	1.46	1.52
4	W	184	CYC	C4B-C3B	-6.09	1.36	1.48
4	L	255	CYC	C4B-C3B	-6.04	1.36	1.48
4	D	184	CYC	CHB-C4A	6.01	1.54	1.40
4	F	184	CYC	CHB-C1B	6.00	1.52	1.38
4	R	184	CYC	CHB-C1B	5.97	1.52	1.38
4	V	255	CYC	CHB-C4A	5.93	1.54	1.40
4	B	255	CYC	CHB-C1B	5.92	1.52	1.38
4	J	255	CYC	CHB-C1B	5.89	1.52	1.38
4	K	184	CYC	C4B-C3B	-5.87	1.37	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	184	CYC	CHB-C1B	5.84	1.51	1.38
4	E	184	CYC	CHB-C1B	5.84	1.51	1.38
4	S	184	CYC	CHB-C1B	5.83	1.51	1.38
4	V	255	CYC	CHB-C1B	5.82	1.51	1.38
4	F	184	CYC	CHB-C4A	5.64	1.53	1.40
4	W	184	CYC	C1A-C2A	-5.60	1.36	1.45
4	X	255	CYC	CHB-C1B	5.58	1.51	1.38
4	T	184	CYC	CHB-C1B	5.56	1.51	1.38
4	E	184	CYC	C4B-C3B	-5.52	1.37	1.48
4	P	184	CYC	CHB-C1B	5.48	1.51	1.38
4	X	255	CYC	CHB-C4A	5.47	1.53	1.40
4	N	184	CYC	CHB-C1B	5.47	1.51	1.38
4	H	184	CYC	CHB-C1B	5.47	1.51	1.38
4	L	184	CYC	CHB-C1B	5.45	1.51	1.38
4	D	255	CYC	CHB-C1B	5.37	1.50	1.38
4	P	184	CYC	C4B-C3B	-5.36	1.38	1.48
4	Q	184	CYC	CHB-C4A	5.35	1.52	1.40
4	U	184	CYC	C4B-C3B	-5.35	1.38	1.48
4	G	184	CYC	CHB-C1B	5.31	1.50	1.38
4	D	184	CYC	CHB-C1B	5.31	1.50	1.38
4	G	184	CYC	CHB-C4A	5.30	1.52	1.40
4	X	255	CYC	C4B-C3B	-5.28	1.38	1.48
4	H	255	CYC	CHB-C1B	5.26	1.50	1.38
4	X	255	CYC	C1A-C2A	-5.26	1.37	1.45
4	Q	184	CYC	C4B-C3B	-5.26	1.38	1.48
4	R	255	CYC	CHB-C1B	5.24	1.50	1.38
4	O	184	CYC	CHB-C4A	5.23	1.52	1.40
4	L	184	CYC	C4B-C3B	-5.17	1.38	1.48
4	W	184	CYC	CHB-C1B	5.17	1.50	1.38
4	T	184	CYC	C2C-C1C	-5.16	1.47	1.52
4	I	184	CYC	CHB-C1B	5.16	1.50	1.38
4	V	184	CYC	C4B-C3B	-5.15	1.38	1.48
4	H	255	CYC	CHB-C4A	5.14	1.52	1.40
4	F	255	CYC	CHB-C1B	5.13	1.50	1.38
4	N	184	CYC	CHB-C4A	5.13	1.52	1.40
4	D	255	CYC	C2C-C1C	-5.13	1.47	1.52
4	R	184	CYC	CHB-C4A	5.12	1.52	1.40
4	I	184	CYC	CHB-C4A	5.08	1.52	1.40
4	E	184	CYC	CHB-C4A	5.08	1.52	1.40
4	X	184	CYC	C4B-C3B	-5.07	1.38	1.48
4	N	255	CYC	CHB-C4A	5.06	1.52	1.40
4	M	184	CYC	C4B-C3B	-5.02	1.38	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	R	255	CYC	C4B-C3B	-5.01	1.38	1.48
4	P	184	CYC	C1C-NC	-4.99	1.31	1.37
4	S	184	CYC	CHB-C4A	4.99	1.52	1.40
4	Q	184	CYC	C1A-C2A	-4.99	1.37	1.45
4	H	184	CYC	C4B-C3B	-4.97	1.38	1.48
4	T	184	CYC	C4B-C3B	-4.96	1.38	1.48
4	M	184	CYC	CHB-C1B	4.95	1.49	1.38
4	U	184	CYC	CHB-C1B	4.89	1.49	1.38
4	J	255	CYC	CHB-C4A	4.87	1.51	1.40
4	W	184	CYC	CHB-C4A	4.87	1.51	1.40
4	J	184	CYC	C4B-C3B	-4.86	1.39	1.48
4	O	184	CYC	C1A-C2A	-4.82	1.38	1.45
4	C	184	CYC	CHB-C1B	4.81	1.49	1.38
4	N	184	CYC	C3D-C2D	4.79	1.51	1.37
4	X	255	CYC	OB-C4B	4.75	1.32	1.23
4	D	255	CYC	CHB-C4A	4.75	1.51	1.40
4	T	255	CYC	CHB-C4A	4.75	1.51	1.40
4	A	184	CYC	CHB-C4A	4.73	1.51	1.40
4	N	255	CYC	OB-C4B	4.73	1.32	1.23
4	C	184	CYC	C2C-C1C	-4.66	1.47	1.52
4	D	255	CYC	C4B-C3B	-4.66	1.39	1.48
4	P	184	CYC	C2C-C1C	-4.62	1.48	1.52
4	D	184	CYC	C4B-C3B	-4.61	1.39	1.48
4	V	255	CYC	C4B-C3B	-4.59	1.39	1.48
4	P	255	CYC	C4B-C3B	-4.58	1.39	1.48
4	W	184	CYC	C1B-C2B	-4.58	1.36	1.45
4	L	184	CYC	CHB-C4A	4.56	1.51	1.40
4	P	255	CYC	CHB-C1B	4.53	1.48	1.38
4	H	255	CYC	C4B-C3B	-4.46	1.39	1.48
4	T	184	CYC	CHB-C4A	4.45	1.50	1.40
4	H	184	CYC	CHB-C4A	4.45	1.50	1.40
4	X	184	CYC	OB-C4B	4.45	1.32	1.23
4	N	184	CYC	C4B-C3B	-4.43	1.39	1.48
4	O	184	CYC	C4B-C3B	-4.39	1.39	1.48
4	C	184	CYC	C1B-C2B	-4.38	1.37	1.45
4	L	184	CYC	C1C-NC	-4.37	1.31	1.37
4	H	255	CYC	OB-C4B	4.36	1.31	1.23
4	B	255	CYC	CHB-C4A	4.35	1.50	1.40
4	C	184	CYC	CHB-C4A	4.35	1.50	1.40
4	R	255	CYC	C3D-C2D	4.35	1.50	1.37
4	T	255	CYC	OB-C4B	4.34	1.31	1.23
4	B	184	CYC	C4B-C3B	-4.34	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	K	184	CYC	CHB-C4A	4.31	1.50	1.40
4	X	184	CYC	CHB-C1B	4.30	1.48	1.38
4	P	184	CYC	CHB-C4A	4.27	1.50	1.40
4	G	184	CYC	C4B-C3B	-4.23	1.40	1.48
4	U	184	CYC	CHB-C4A	4.22	1.50	1.40
4	V	255	CYC	C1A-C2A	-4.22	1.39	1.45
4	L	255	CYC	CHB-C1B	4.21	1.48	1.38
4	R	255	CYC	CHB-C4A	4.21	1.50	1.40
4	P	184	CYC	C1A-C2A	-4.20	1.39	1.45
4	D	255	CYC	C1B-C2B	-4.18	1.37	1.45
4	R	255	CYC	C2C-C1C	-4.18	1.48	1.52
4	H	184	CYC	C1C-NC	-4.14	1.32	1.37
4	K	184	CYC	CHB-C1B	4.12	1.47	1.38
4	U	184	CYC	C3D-C2D	4.11	1.49	1.37
4	M	184	CYC	CHB-C4A	4.07	1.50	1.40
4	J	184	CYC	CHB-C1B	4.07	1.47	1.38
4	U	184	CYC	C1B-C2B	-4.07	1.37	1.45
4	B	255	CYC	C4B-C3B	-4.06	1.40	1.48
4	N	184	CYC	OB-C4B	4.05	1.31	1.23
4	W	184	CYC	C3D-C2D	4.05	1.49	1.37
4	J	184	CYC	CHB-C4A	4.04	1.49	1.40
4	J	184	CYC	C1A-C2A	-4.00	1.39	1.45
4	N	184	CYC	C1A-C2A	-3.99	1.39	1.45
4	H	255	CYC	C1B-C2B	-3.98	1.37	1.45
4	N	255	CYC	C4B-C3B	-3.98	1.40	1.48
4	N	255	CYC	C3D-C2D	3.97	1.49	1.37
4	B	184	CYC	CHB-C1B	3.97	1.47	1.38
4	M	184	CYC	C3D-C2D	3.95	1.49	1.37
4	P	255	CYC	CHB-C4A	3.94	1.49	1.40
4	I	184	CYC	C1A-C2A	-3.94	1.39	1.45
4	L	255	CYC	CHB-C4A	3.94	1.49	1.40
4	X	184	CYC	C1C-NC	-3.93	1.32	1.37
4	H	184	CYC	C2C-C1C	-3.91	1.48	1.52
4	D	184	CYC	C3D-C2D	3.90	1.49	1.37
4	I	184	CYC	OB-C4B	3.89	1.31	1.23
4	C	184	CYC	C3D-C2D	3.88	1.49	1.37
4	V	184	CYC	C3D-C2D	3.88	1.49	1.37
4	T	184	CYC	OB-C4B	3.87	1.31	1.23
4	X	184	CYC	CHB-C4A	3.87	1.49	1.40
4	E	184	CYC	C1A-C2A	-3.87	1.39	1.45
4	C	184	CYC	C1C-NC	-3.86	1.32	1.37
4	B	255	CYC	C1C-NC	-3.84	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	F	184	CYC	C4B-C3B	-3.83	1.41	1.48
4	M	184	CYC	C1A-C2A	-3.81	1.39	1.45
4	H	255	CYC	C1C-NC	-3.81	1.32	1.37
4	F	255	CYC	C1B-C2B	-3.77	1.38	1.45
4	F	255	CYC	C3D-C2D	3.75	1.48	1.37
4	F	255	CYC	CHB-C4A	3.74	1.49	1.40
4	L	184	CYC	C2C-C1C	-3.73	1.48	1.52
4	J	255	CYC	OB-C4B	3.73	1.30	1.23
4	D	255	CYC	C3D-C2D	3.71	1.48	1.37
4	B	255	CYC	C2C-C1C	-3.71	1.48	1.52
4	G	184	CYC	C1A-NA	-3.70	1.30	1.38
4	S	184	CYC	C1B-C2B	-3.70	1.38	1.45
4	S	184	CYC	C3D-C2D	3.68	1.48	1.37
4	V	255	CYC	C3B-C2B	3.67	1.44	1.36
4	K	184	CYC	C3D-C2D	3.67	1.48	1.37
4	R	184	CYC	C4B-C3B	-3.66	1.41	1.48
4	L	255	CYC	C1B-C2B	-3.65	1.38	1.45
4	Q	184	CYC	OB-C4B	3.65	1.30	1.23
4	B	184	CYC	CHB-C4A	3.65	1.49	1.40
4	S	184	CYC	C1A-C2A	-3.65	1.39	1.45
4	L	184	CYC	C3D-C2D	3.65	1.48	1.37
4	L	255	CYC	C3D-C2D	3.65	1.48	1.37
4	R	184	CYC	C1C-NC	-3.64	1.32	1.37
4	M	184	CYC	C2C-C1C	-3.64	1.48	1.52
4	H	184	CYC	C3D-C2D	3.64	1.48	1.37
4	F	255	CYC	C1A-C2A	-3.63	1.39	1.45
4	J	184	CYC	C1C-NC	-3.61	1.32	1.37
4	X	184	CYC	C4D-CHA	3.60	1.55	1.41
4	J	255	CYC	C4D-CHA	3.59	1.55	1.41
4	A	184	CYC	C3D-C2D	3.59	1.48	1.37
4	H	255	CYC	C2C-C1C	-3.55	1.48	1.52
4	R	184	CYC	C1A-C2A	-3.55	1.40	1.45
4	P	184	CYC	C3D-C2D	3.55	1.48	1.37
4	H	255	CYC	C1A-C2A	-3.54	1.40	1.45
4	R	184	CYC	C4D-CHA	3.54	1.54	1.41
4	U	184	CYC	C1C-NC	-3.53	1.33	1.37
4	H	184	CYC	C4D-CHA	3.53	1.54	1.41
4	T	255	CYC	C3D-C2D	3.50	1.48	1.37
4	V	255	CYC	CAD-C3D	-3.49	1.46	1.52
4	B	255	CYC	C3D-C2D	3.47	1.48	1.37
4	R	184	CYC	C1D-CHD	3.47	1.54	1.41
4	F	184	CYC	C1C-NC	-3.47	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	P	255	CYC	C1B-C2B	-3.46	1.38	1.45
4	U	184	CYC	C1A-C2A	-3.46	1.40	1.45
4	L	184	CYC	OB-C4B	3.44	1.30	1.23
4	R	184	CYC	C3D-C2D	3.44	1.47	1.37
4	B	255	CYC	C4D-CHA	3.43	1.54	1.41
4	A	184	CYC	OB-C4B	3.41	1.30	1.23
4	B	184	CYC	C1C-NC	-3.41	1.33	1.37
4	K	184	CYC	OB-C4B	3.40	1.30	1.23
4	E	184	CYC	C1A-NA	-3.39	1.31	1.38
4	J	255	CYC	C1B-C2B	-3.38	1.39	1.45
4	E	184	CYC	C3D-C2D	3.36	1.47	1.37
4	I	184	CYC	C3D-C2D	3.35	1.47	1.37
4	P	255	CYC	C3D-C2D	3.34	1.47	1.37
4	V	255	CYC	C1C-NC	-3.34	1.33	1.37
4	N	255	CYC	C1C-NC	-3.34	1.33	1.37
4	K	184	CYC	C1A-C2A	-3.32	1.40	1.45
4	S	184	CYC	C4D-CHA	3.31	1.54	1.41
4	L	255	CYC	C2C-C1C	-3.28	1.49	1.52
4	U	184	CYC	C4D-CHA	3.25	1.53	1.41
4	F	255	CYC	OB-C4B	3.25	1.29	1.23
4	D	184	CYC	C1D-CHD	3.23	1.53	1.41
4	U	184	CYC	C1D-CHD	3.22	1.53	1.41
4	P	255	CYC	C4A-C3A	3.21	1.52	1.45
4	L	184	CYC	C4A-C3A	3.21	1.52	1.45
4	X	255	CYC	C3D-C2D	3.20	1.47	1.37
4	Q	184	CYC	C4C-NC	-3.19	1.30	1.37
4	Q	184	CYC	C1B-C2B	-3.19	1.39	1.45
4	B	255	CYC	OB-C4B	3.19	1.29	1.23
4	B	184	CYC	C4D-CHA	3.18	1.53	1.41
4	R	184	CYC	C2C-C1C	-3.18	1.49	1.52
4	D	184	CYC	OB-C4B	3.17	1.29	1.23
4	F	184	CYC	C4C-NC	-3.16	1.30	1.37
4	H	184	CYC	C4C-NC	-3.16	1.30	1.37
4	N	255	CYC	C1A-C2A	-3.15	1.40	1.45
4	J	184	CYC	C3D-C2D	3.15	1.47	1.37
4	I	184	CYC	C4D-CHA	3.14	1.53	1.41
4	G	184	CYC	C3D-C2D	3.13	1.46	1.37
4	J	184	CYC	C1B-C2B	-3.12	1.39	1.45
4	H	255	CYC	C3D-C2D	3.12	1.46	1.37
4	T	184	CYC	C3D-C2D	3.11	1.46	1.37
4	X	184	CYC	C1D-CHD	3.11	1.53	1.41
4	O	184	CYC	C3D-C2D	3.09	1.46	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	P	184	CYC	C4C-NC	-3.08	1.30	1.37
4	F	255	CYC	C4D-CHA	3.08	1.53	1.41
4	T	255	CYC	C1A-C2A	-3.07	1.40	1.45
4	M	184	CYC	C1D-CHD	3.07	1.53	1.41
4	R	184	CYC	C4C-NC	-3.06	1.30	1.37
4	P	184	CYC	C4D-CHA	3.06	1.53	1.41
4	B	184	CYC	C2C-C1C	-3.05	1.49	1.52
4	C	184	CYC	C1D-CHD	3.05	1.53	1.41
4	K	184	CYC	C4D-CHA	3.04	1.52	1.41
4	F	184	CYC	C4D-CHA	3.04	1.52	1.41
4	D	255	CYC	C1D-CHD	3.02	1.52	1.41
4	D	184	CYC	C4D-CHA	3.00	1.52	1.41
4	B	184	CYC	C1B-C2B	-3.00	1.39	1.45
4	L	255	CYC	C1C-NC	-2.99	1.33	1.37
4	P	255	CYC	OB-C4B	2.98	1.29	1.23
4	V	184	CYC	C1C-NC	-2.98	1.33	1.37
4	L	255	CYC	C4C-NC	-2.97	1.31	1.37
4	W	184	CYC	OB-C4B	2.97	1.29	1.23
4	A	184	CYC	C1C-NC	-2.97	1.33	1.37
4	O	184	CYC	C1A-NA	-2.95	1.32	1.38
4	X	184	CYC	C3D-C2D	2.95	1.46	1.37
4	Q	184	CYC	C3D-C2D	2.94	1.46	1.37
4	A	184	CYC	C1A-C2A	-2.94	1.41	1.45
4	V	184	CYC	C1A-C2A	-2.94	1.41	1.45
4	N	184	CYC	C2C-C1C	-2.93	1.49	1.52
4	X	184	CYC	C2C-C1C	-2.93	1.49	1.52
4	J	255	CYC	C1A-C2A	-2.93	1.41	1.45
4	K	184	CYC	C1D-CHD	2.93	1.52	1.41
4	R	255	CYC	OB-C4B	2.92	1.29	1.23
4	N	255	CYC	C4C-NC	-2.91	1.31	1.37
4	M	184	CYC	C4D-CHA	2.91	1.52	1.41
4	M	184	CYC	OB-C4B	2.89	1.29	1.23
4	J	184	CYC	C4D-CHA	2.89	1.52	1.41
4	R	184	CYC	OB-C4B	2.89	1.29	1.23
4	B	255	CYC	C4C-NC	-2.88	1.31	1.37
4	G	184	CYC	OB-C4B	2.87	1.29	1.23
4	N	184	CYC	C4D-CHA	2.86	1.52	1.41
4	V	255	CYC	C4D-CHA	2.85	1.52	1.41
4	J	255	CYC	C2C-C1C	-2.84	1.49	1.52
4	T	255	CYC	C4C-NC	-2.84	1.31	1.37
4	I	184	CYC	C1B-C2B	-2.84	1.40	1.45
4	V	184	CYC	C1D-CHD	2.84	1.52	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	184	CYC	OB-C4B	2.84	1.29	1.23
4	V	184	CYC	C4B-NB	-2.83	1.32	1.38
4	J	184	CYC	C4C-NC	-2.82	1.31	1.37
4	L	184	CYC	C1A-C2A	-2.82	1.41	1.45
4	M	184	CYC	C1B-C2B	-2.82	1.40	1.45
4	D	255	CYC	OB-C4B	2.81	1.28	1.23
4	L	184	CYC	C4D-CHA	2.80	1.52	1.41
4	E	184	CYC	C4D-CHA	2.80	1.52	1.41
4	G	184	CYC	C1C-NC	-2.79	1.34	1.37
4	N	255	CYC	C4D-CHA	2.78	1.51	1.41
4	J	184	CYC	C1A-NA	-2.78	1.32	1.38
4	C	184	CYC	O1D-CGD	2.77	1.31	1.22
4	D	255	CYC	C1A-C2A	-2.77	1.41	1.45
4	F	184	CYC	C1D-CHD	2.77	1.51	1.41
4	B	184	CYC	C3D-C2D	2.77	1.45	1.37
4	D	184	CYC	C2A-C3A	2.77	1.42	1.36
4	V	255	CYC	C1B-C2B	-2.74	1.40	1.45
4	U	184	CYC	C2C-C1C	-2.74	1.49	1.52
4	H	184	CYC	C1D-CHD	2.74	1.51	1.41
4	I	184	CYC	C3C-C4C	2.73	1.54	1.50
4	O	184	CYC	C3B-C2B	2.73	1.42	1.36
4	N	184	CYC	C1D-CHD	2.72	1.51	1.41
4	U	184	CYC	C1A-NA	-2.71	1.32	1.38
4	X	184	CYC	C1B-C2B	-2.71	1.40	1.45
4	C	184	CYC	C4B-NB	-2.71	1.32	1.38
4	V	255	CYC	C3D-C2D	2.71	1.45	1.37
4	W	184	CYC	O2D-CGD	-2.70	1.21	1.30
4	P	255	CYC	C1A-NA	-2.69	1.32	1.38
4	F	184	CYC	OB-C4B	2.69	1.28	1.23
4	E	184	CYC	C1D-CHD	2.68	1.51	1.41
4	M	184	CYC	C3B-C2B	2.68	1.42	1.36
4	V	255	CYC	C1A-NA	-2.66	1.32	1.38
4	F	255	CYC	C1B-NB	-2.66	1.33	1.37
4	T	184	CYC	C1A-C2A	-2.65	1.41	1.45
4	V	184	CYC	C4A-C3A	2.63	1.51	1.45
4	H	255	CYC	C1D-CHD	2.62	1.51	1.41
4	S	184	CYC	C1C-NC	-2.60	1.34	1.37
4	H	255	CYC	C4C-NC	-2.60	1.31	1.37
4	N	184	CYC	C1B-C2B	-2.60	1.40	1.45
4	V	184	CYC	OB-C4B	2.60	1.28	1.23
4	E	184	CYC	C1B-C2B	-2.60	1.40	1.45
4	J	184	CYC	C2C-C1C	-2.58	1.49	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	X	184	CYC	C4C-NC	-2.58	1.31	1.37
4	J	255	CYC	C4C-NC	-2.58	1.31	1.37
4	R	255	CYC	C1B-C2B	-2.58	1.40	1.45
4	J	255	CYC	C1C-NC	-2.57	1.34	1.37
4	R	255	CYC	C4D-CHA	2.57	1.51	1.41
4	S	184	CYC	C4A-C3A	2.56	1.51	1.45
4	T	184	CYC	C1C-NC	-2.55	1.34	1.37
4	N	255	CYC	C1D-CHD	2.54	1.51	1.41
4	O	184	CYC	C2C-C1C	-2.53	1.49	1.52
4	T	184	CYC	C4A-C3A	2.53	1.51	1.45
4	G	184	CYC	C4B-NB	-2.53	1.32	1.38
4	Q	184	CYC	C2C-C1C	-2.52	1.49	1.52
4	T	255	CYC	C1B-C2B	-2.52	1.40	1.45
4	S	184	CYC	C1D-CHD	2.51	1.50	1.41
4	O	184	CYC	OB-C4B	2.51	1.28	1.23
4	A	184	CYC	C4D-CHA	2.51	1.50	1.41
4	T	184	CYC	C4D-CHA	2.50	1.50	1.41
4	D	184	CYC	C1A-C2A	-2.50	1.41	1.45
4	F	255	CYC	C4B-NB	-2.50	1.32	1.38
4	D	184	CYC	C4A-C3A	2.49	1.51	1.45
4	J	255	CYC	C3D-C2D	2.48	1.45	1.37
4	Q	184	CYC	C4B-NB	-2.48	1.32	1.38
4	T	255	CYC	C4A-C3A	2.47	1.51	1.45
4	G	184	CYC	C1D-CHD	2.47	1.50	1.41
4	N	184	CYC	C4C-NC	-2.47	1.32	1.37
4	B	255	CYC	C1D-CHD	2.45	1.50	1.41
4	J	255	CYC	CMB-C2B	-2.44	1.45	1.50
4	O	184	CYC	C1D-CHD	2.44	1.50	1.41
4	N	255	CYC	CAD-C3D	2.43	1.55	1.52
4	J	255	CYC	C3B-C2B	-2.42	1.31	1.36
4	Q	184	CYC	C4A-C3A	2.41	1.51	1.45
4	F	184	CYC	C3D-C2D	2.41	1.44	1.37
4	E	184	CYC	C1C-NC	-2.41	1.34	1.37
4	Q	184	CYC	C1D-CHD	2.41	1.50	1.41
4	U	184	CYC	C4B-NB	-2.39	1.32	1.38
4	B	184	CYC	O1A-CGA	2.39	1.30	1.22
4	S	184	CYC	C4C-NC	-2.39	1.32	1.37
4	B	255	CYC	C2A-C3A	2.39	1.41	1.36
4	I	184	CYC	C4A-C3A	2.38	1.50	1.45
4	W	184	CYC	C1A-NA	-2.37	1.33	1.38
4	W	184	CYC	C1D-CHD	2.37	1.50	1.41
4	A	184	CYC	C4C-NC	-2.37	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	Q	184	CYC	C1C-NC	-2.36	1.34	1.37
4	H	184	CYC	C1A-C2A	-2.36	1.42	1.45
4	B	184	CYC	C1D-CHD	2.36	1.50	1.41
4	C	184	CYC	C4D-CHA	2.36	1.50	1.41
4	S	184	CYC	OB-C4B	2.36	1.28	1.23
4	L	255	CYC	O1D-CGD	2.35	1.30	1.22
4	G	184	CYC	C1B-C2B	-2.35	1.40	1.45
4	F	184	CYC	C4B-NB	-2.34	1.33	1.38
4	L	255	CYC	C1D-CHD	2.34	1.50	1.41
4	M	184	CYC	CBD-CGD	2.33	1.56	1.50
4	A	184	CYC	C4B-C3B	-2.33	1.43	1.48
4	V	184	CYC	C4D-CHA	2.33	1.50	1.41
4	K	184	CYC	C4C-NC	-2.33	1.32	1.37
4	N	255	CYC	C2A-C3A	2.32	1.41	1.36
4	W	184	CYC	C4D-CHA	2.31	1.50	1.41
4	M	184	CYC	C3C-C4C	2.31	1.54	1.50
4	T	184	CYC	C1D-CHD	2.31	1.50	1.41
4	D	255	CYC	C4D-CHA	2.31	1.50	1.41
4	W	184	CYC	C4C-NC	-2.30	1.32	1.37
4	D	255	CYC	C1A-NA	-2.29	1.33	1.38
4	F	184	CYC	C3C-C4C	-2.28	1.47	1.50
4	J	184	CYC	C1D-CHD	2.28	1.50	1.41
4	S	184	CYC	C2C-C1C	2.27	1.54	1.52
4	K	184	CYC	C1B-C2B	-2.26	1.41	1.45
4	C	184	CYC	C4A-C3A	2.26	1.50	1.45
4	J	255	CYC	C1A-NA	-2.25	1.33	1.38
4	N	184	CYC	C4A-C3A	2.25	1.50	1.45
4	P	255	CYC	CBA-CGA	2.24	1.55	1.50
4	E	184	CYC	CBD-CGD	2.24	1.55	1.50
4	V	255	CYC	C2C-C1C	-2.24	1.50	1.52
4	F	255	CYC	C4A-NA	-2.23	1.31	1.36
4	P	255	CYC	C1D-CHD	2.23	1.49	1.41
4	P	184	CYC	C1D-CHD	2.22	1.49	1.41
4	J	255	CYC	O1D-CGD	2.22	1.29	1.22
4	P	255	CYC	C1A-C2A	-2.22	1.42	1.45
4	T	255	CYC	C1C-NC	-2.22	1.34	1.37
4	X	184	CYC	C1A-C2A	-2.21	1.42	1.45
4	L	184	CYC	C4C-NC	-2.21	1.32	1.37
4	B	255	CYC	C1A-C2A	-2.20	1.42	1.45
4	F	255	CYC	CAD-C3D	-2.20	1.48	1.52
4	N	184	CYC	C3B-C2B	2.19	1.41	1.36
4	X	255	CYC	C4A-C3A	2.19	1.50	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	T	184	CYC	C4C-NC	-2.18	1.32	1.37
4	H	255	CYC	C4D-CHA	2.18	1.49	1.41
4	F	255	CYC	C1D-CHD	2.17	1.49	1.41
4	H	184	CYC	OB-C4B	2.17	1.27	1.23
4	O	184	CYC	C4D-CHA	2.17	1.49	1.41
4	F	184	CYC	C2C-C1C	-2.16	1.50	1.52
4	E	184	CYC	C4B-NB	-2.16	1.33	1.38
4	K	184	CYC	C1C-NC	-2.16	1.34	1.37
4	U	184	CYC	C4A-C3A	2.15	1.50	1.45
4	F	184	CYC	C1A-C2A	-2.15	1.42	1.45
4	L	255	CYC	C4B-NB	-2.15	1.33	1.38
4	P	255	CYC	C1C-NC	-2.14	1.34	1.37
4	X	255	CYC	C1D-CHD	2.14	1.49	1.41
4	U	184	CYC	CAC-C3C	-2.14	1.49	1.54
4	T	184	CYC	CAA-C2A	2.13	1.56	1.51
4	G	184	CYC	C4D-CHA	2.12	1.49	1.41
4	A	184	CYC	CAD-C3D	-2.12	1.48	1.52
4	M	184	CYC	O1D-CGD	2.11	1.29	1.22
4	X	255	CYC	C1B-C2B	-2.11	1.41	1.45
4	W	184	CYC	C3C-C4C	2.10	1.53	1.50
4	V	255	CYC	C4C-NC	-2.10	1.32	1.37
4	T	255	CYC	C3B-C2B	2.10	1.41	1.36
4	V	255	CYC	C4B-NB	-2.09	1.33	1.38
4	J	184	CYC	O1D-CGD	2.09	1.29	1.22
4	P	184	CYC	CAD-C3D	-2.08	1.49	1.52
4	I	184	CYC	C1D-CHD	2.08	1.49	1.41
4	T	255	CYC	C4D-CHA	2.08	1.49	1.41
4	B	255	CYC	O1D-CGD	2.07	1.29	1.22
4	H	255	CYC	C1A-NA	-2.07	1.34	1.38
4	V	184	CYC	C4C-NC	-2.07	1.33	1.37
4	R	255	CYC	C1A-C2A	-2.07	1.42	1.45
4	D	255	CYC	C1C-NC	-2.06	1.34	1.37
4	W	184	CYC	C1B-NB	-2.06	1.34	1.37
4	C	184	CYC	O1A-CGA	2.05	1.29	1.22
4	T	255	CYC	CHD-C4C	-2.05	1.32	1.38
4	X	255	CYC	C4D-CHA	2.05	1.49	1.41
4	Q	184	CYC	C4D-CHA	2.05	1.49	1.41
4	A	184	CYC	C1D-CHD	2.04	1.49	1.41
4	G	184	CYC	C2C-C1C	-2.03	1.50	1.52
4	V	255	CYC	CMA-C3A	2.02	1.55	1.50
4	J	255	CYC	O2A-CGA	-2.02	1.23	1.30
4	A	184	CYC	C4A-C3A	2.02	1.50	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	G	184	CYC	C4C-NC	-2.01	1.33	1.37
4	V	255	CYC	O1A-CGA	2.01	1.28	1.22
4	L	255	CYC	C3B-C2B	2.01	1.41	1.36
4	D	184	CYC	C1C-NC	-2.00	1.35	1.37
4	W	184	CYC	C4B-NB	-2.00	1.33	1.38
4	V	184	CYC	C1B-C2B	-2.00	1.41	1.45

All (657) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	V	255	CYC	C3B-C4B-NB	12.86	117.17	106.78
4	J	184	CYC	C3B-C4B-NB	12.74	117.07	106.78
4	H	184	CYC	C3B-C4B-NB	12.46	116.84	106.78
4	S	184	CYC	OB-C4B-C3B	-12.43	114.55	128.04
4	E	184	CYC	C3B-C4B-NB	11.68	116.21	106.78
4	U	184	CYC	C3B-C4B-NB	11.32	115.92	106.78
4	S	184	CYC	C3B-C4B-NB	11.20	115.82	106.78
4	M	184	CYC	OC-C1C-C2C	-10.95	117.47	126.17
4	R	255	CYC	C3B-C4B-NB	10.93	115.61	106.78
4	D	184	CYC	C3B-C4B-NB	10.88	115.57	106.78
4	G	184	CYC	C3B-C4B-NB	10.87	115.56	106.78
4	V	184	CYC	C4D-CHA-C1A	-10.78	115.93	128.81
4	C	184	CYC	C3B-C4B-NB	10.57	115.32	106.78
4	R	184	CYC	C3B-C4B-NB	10.43	115.20	106.78
4	K	184	CYC	C3B-C4B-NB	10.32	115.11	106.78
4	B	184	CYC	C3B-C4B-NB	10.19	115.01	106.78
4	B	255	CYC	C3B-C4B-NB	9.91	114.79	106.78
4	P	184	CYC	C3B-C4B-NB	9.91	114.78	106.78
4	L	184	CYC	C3B-C4B-NB	9.89	114.77	106.78
4	O	184	CYC	C3B-C4B-NB	9.77	114.67	106.78
4	P	255	CYC	C3B-C4B-NB	9.73	114.64	106.78
4	T	184	CYC	OC-C1C-C2C	-9.71	118.45	126.17
4	T	184	CYC	C3B-C4B-NB	9.49	114.44	106.78
4	X	255	CYC	C3B-C4B-NB	9.40	114.37	106.78
4	V	184	CYC	C3B-C4B-NB	9.35	114.33	106.78
4	J	255	CYC	C3B-C4B-NB	9.23	114.23	106.78
4	Q	184	CYC	C4D-CHA-C1A	-9.17	117.85	128.81
4	H	255	CYC	C3B-C4B-NB	9.14	114.16	106.78
4	W	184	CYC	C3B-C4B-NB	9.00	114.05	106.78
4	F	184	CYC	C3B-C4B-NB	8.98	114.03	106.78
4	D	255	CYC	C3B-C4B-NB	8.93	113.99	106.78
4	R	184	CYC	CAB-C3B-C4B	8.93	135.48	121.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	N	255	CYC	C3B-C4B-NB	8.72	113.82	106.78
4	M	184	CYC	C3B-C4B-NB	8.69	113.80	106.78
4	B	255	CYC	C4D-CHA-C1A	-8.61	118.52	128.81
4	X	184	CYC	C3B-C4B-NB	8.57	113.70	106.78
4	Q	184	CYC	C3B-C4B-NB	8.57	113.70	106.78
4	L	255	CYC	C3B-C4B-NB	8.42	113.58	106.78
4	F	255	CYC	C3B-C4B-NB	8.00	113.24	106.78
4	I	184	CYC	C3B-C4B-NB	7.93	113.19	106.78
4	K	184	CYC	OB-C4B-C3B	-7.75	119.62	128.04
4	J	255	CYC	OB-C4B-C3B	-7.73	119.65	128.04
4	L	255	CYC	C4D-CHA-C1A	-7.64	119.69	128.81
4	I	184	CYC	OB-C4B-C3B	-7.62	119.77	128.04
4	R	255	CYC	CAB-C3B-C4B	7.53	133.27	121.38
4	N	184	CYC	C3B-C4B-NB	7.46	112.80	106.78
4	D	184	CYC	CBD-CAD-C3D	7.45	125.33	112.62
4	A	184	CYC	C3B-C4B-NB	7.41	112.77	106.78
4	T	255	CYC	C4D-CHA-C1A	-7.35	120.03	128.81
4	O	184	CYC	OC-C1C-C2C	-7.32	120.35	126.17
4	R	255	CYC	OB-C4B-C3B	-7.26	120.16	128.04
4	A	184	CYC	CAB-C3B-C4B	7.24	132.81	121.38
4	H	184	CYC	OB-C4B-C3B	-7.14	120.29	128.04
4	V	255	CYC	CAA-CBA-CGA	-7.01	98.51	113.60
4	X	255	CYC	OB-C4B-C3B	-7.00	120.44	128.04
4	R	255	CYC	OC-C1C-C2C	-6.92	120.67	126.17
4	J	184	CYC	CAB-C3B-C4B	6.85	132.19	121.38
4	H	184	CYC	C1B-NB-C4B	-6.77	102.04	110.67
4	B	184	CYC	C1B-NB-C4B	-6.77	102.05	110.67
4	P	255	CYC	OB-C4B-C3B	-6.70	120.77	128.04
4	J	184	CYC	CAA-CBA-CGA	-6.56	99.49	113.60
4	V	255	CYC	C1B-NB-C4B	-6.51	102.38	110.67
4	E	184	CYC	OC-C1C-C2C	-6.48	121.02	126.17
4	F	255	CYC	C4D-CHA-C1A	-6.47	121.08	128.81
4	H	255	CYC	CAB-C3B-C4B	6.46	131.57	121.38
4	D	255	CYC	CAB-C3B-C4B	6.45	131.56	121.38
4	J	255	CYC	C1B-NB-C4B	-6.42	102.49	110.67
4	K	184	CYC	C1B-NB-C4B	-6.40	102.52	110.67
4	I	184	CYC	CBD-CAD-C3D	-6.39	101.71	112.62
4	U	184	CYC	C1B-NB-C4B	-6.38	102.55	110.67
4	J	184	CYC	C1B-NB-C4B	-6.35	102.58	110.67
4	N	184	CYC	CBD-CAD-C3D	6.33	123.42	112.62
4	U	184	CYC	CAB-C3B-C4B	6.30	131.33	121.38
4	B	255	CYC	C1B-NB-C4B	-6.27	102.69	110.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	J	255	CYC	CHA-C1A-NA	-6.24	120.17	128.83
4	W	184	CYC	C4D-CHA-C1A	-6.24	121.36	128.81
4	E	184	CYC	C1B-NB-C4B	-6.23	102.73	110.67
4	S	184	CYC	C4D-CHA-C1A	-6.23	121.37	128.81
4	F	255	CYC	CBD-CAD-C3D	-6.22	102.00	112.62
4	L	184	CYC	CBD-CAD-C3D	6.22	123.24	112.62
4	N	184	CYC	C4D-CHA-C1A	-6.19	121.42	128.81
4	N	255	CYC	C4D-CHA-C1A	-6.18	121.42	128.81
4	D	255	CYC	C4D-CHA-C1A	-6.18	121.42	128.81
4	U	184	CYC	C1B-CHB-C4A	-6.15	113.07	128.08
4	H	184	CYC	CAB-C3B-C4B	6.13	131.06	121.38
4	A	184	CYC	CBD-CAD-C3D	-6.12	102.18	112.62
4	V	255	CYC	OB-C4B-C3B	-6.11	121.41	128.04
4	I	184	CYC	C2C-C1C-NC	6.10	113.53	108.27
4	D	184	CYC	C2C-C1C-NC	6.08	113.51	108.27
4	P	184	CYC	C2C-C1C-NC	6.05	113.49	108.27
4	A	184	CYC	OC-C1C-C2C	-6.04	121.37	126.17
4	T	255	CYC	C3B-C4B-NB	5.95	111.58	106.78
4	D	184	CYC	OC-C1C-C2C	-5.89	121.49	126.17
4	N	255	CYC	OB-C4B-C3B	-5.84	121.70	128.04
4	N	184	CYC	OC-C1C-C2C	-5.83	121.54	126.17
4	B	255	CYC	OB-C4B-C3B	-5.82	121.72	128.04
4	F	184	CYC	CAB-C3B-C4B	5.81	130.55	121.38
4	R	255	CYC	C1B-NB-C4B	-5.77	103.32	110.67
4	L	184	CYC	CMA-C3A-C4A	5.77	133.95	125.06
4	X	184	CYC	C1B-NB-C4B	-5.73	103.37	110.67
4	P	184	CYC	OB-C4B-C3B	-5.73	121.83	128.04
4	B	184	CYC	OB-C4B-C3B	-5.70	121.86	128.04
4	P	255	CYC	C1B-NB-C4B	-5.70	103.42	110.67
4	R	184	CYC	C1B-NB-C4B	-5.69	103.42	110.67
4	H	255	CYC	C1B-NB-C4B	-5.69	103.43	110.67
4	C	184	CYC	C1B-NB-C4B	-5.67	103.45	110.67
4	X	255	CYC	C4D-CHA-C1A	-5.67	122.04	128.81
4	J	255	CYC	CBB-CAB-C3B	-5.67	96.81	112.43
4	U	184	CYC	C4D-CHA-C1A	-5.65	122.06	128.81
4	L	255	CYC	OB-C4B-C3B	-5.65	121.91	128.04
4	M	184	CYC	CAC-C3C-C4C	5.64	127.17	112.67
4	X	184	CYC	OB-C4B-C3B	-5.62	121.94	128.04
4	V	255	CYC	CBD-CAD-C3D	-5.61	103.04	112.62
4	J	184	CYC	OC-C1C-C2C	-5.61	121.71	126.17
4	T	184	CYC	OB-C4B-C3B	-5.59	121.97	128.04
4	N	255	CYC	CBD-CAD-C3D	5.59	122.15	112.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	I	184	CYC	C4D-CHA-C1A	-5.58	122.14	128.81
4	F	184	CYC	CMB-C2B-C1B	5.58	131.13	124.17
4	G	184	CYC	C1B-NB-C4B	-5.54	103.62	110.67
4	I	184	CYC	OC-C1C-C2C	-5.54	121.77	126.17
4	D	184	CYC	C4D-CHA-C1A	-5.53	122.20	128.81
4	M	184	CYC	C1B-CHB-C4A	-5.47	114.71	128.08
4	V	184	CYC	CAB-C3B-C4B	5.46	130.01	121.38
4	T	184	CYC	C2C-C1C-NC	5.46	112.98	108.27
4	D	184	CYC	C1B-NB-C4B	-5.44	103.75	110.67
4	J	184	CYC	C2C-C1C-NC	5.42	112.94	108.27
4	T	255	CYC	OB-C4B-C3B	-5.36	122.23	128.04
4	L	184	CYC	C1B-NB-C4B	-5.29	103.93	110.67
4	O	184	CYC	C2C-C1C-NC	5.26	112.81	108.27
4	P	255	CYC	C1B-CHB-C4A	-5.25	115.25	128.08
4	P	184	CYC	C1B-CHB-C4A	-5.18	115.42	128.08
4	C	184	CYC	C4D-CHA-C1A	-5.15	122.65	128.81
4	S	184	CYC	C1B-NB-C4B	-5.12	104.15	110.67
4	J	255	CYC	CHB-C4A-C3A	5.11	138.04	124.90
4	L	184	CYC	OB-C4B-C3B	-5.11	122.50	128.04
4	H	184	CYC	CHD-C4C-NC	-5.10	119.14	125.20
4	B	184	CYC	C2C-C1C-NC	5.10	112.67	108.27
4	B	255	CYC	CAB-C3B-C4B	5.06	129.37	121.38
4	A	184	CYC	C2C-C1C-NC	5.06	112.63	108.27
4	A	184	CYC	C4D-CHA-C1A	-5.00	122.84	128.81
4	H	255	CYC	C4D-CHA-C1A	-4.99	122.85	128.81
4	B	184	CYC	CAB-C3B-C4B	4.95	129.21	121.38
4	X	184	CYC	CHD-C4C-NC	-4.94	119.33	125.20
4	C	184	CYC	OC-C1C-C2C	-4.94	122.25	126.17
4	L	255	CYC	CMA-C3A-C4A	4.93	132.65	125.06
4	P	255	CYC	CAB-C3B-C4B	4.92	129.14	121.38
4	V	184	CYC	C2C-C1C-NC	4.89	112.49	108.27
4	T	184	CYC	C4D-CHA-C1A	-4.85	123.01	128.81
4	E	184	CYC	OB-C4B-C3B	-4.82	122.81	128.04
4	O	184	CYC	CAB-C3B-C4B	4.82	128.99	121.38
4	D	184	CYC	OB-C4B-C3B	-4.80	122.83	128.04
4	E	184	CYC	C4D-CHA-C1A	-4.80	123.08	128.81
4	C	184	CYC	CMA-C3A-C4A	4.78	132.42	125.06
4	N	184	CYC	C1B-CHB-C4A	-4.77	116.43	128.08
4	T	184	CYC	C1B-CHB-C4A	-4.76	116.45	128.08
4	F	184	CYC	C1B-NB-C4B	-4.73	104.65	110.67
4	Q	184	CYC	CAB-C3B-C4B	4.70	128.81	121.38
4	F	255	CYC	CHB-C4A-C3A	4.70	136.99	124.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	T	184	CYC	CBD-CAD-C3D	4.68	120.61	112.62
4	P	255	CYC	OC-C1C-C2C	-4.68	122.45	126.17
4	P	184	CYC	C4D-CHA-C1A	-4.68	123.21	128.81
4	W	184	CYC	CAB-C3B-C4B	4.67	128.75	121.38
4	M	184	CYC	OC-C1C-NC	4.66	130.58	124.94
4	C	184	CYC	C2C-C1C-NC	4.64	112.28	108.27
4	V	255	CYC	C1B-CHB-C4A	-4.64	116.75	128.08
4	C	184	CYC	C1B-CHB-C4A	-4.63	116.76	128.08
4	N	255	CYC	C1B-NB-C4B	-4.59	104.82	110.67
4	L	184	CYC	CAB-C3B-C4B	4.58	128.62	121.38
4	P	255	CYC	CHB-C1B-C2B	-4.58	117.87	126.95
4	X	255	CYC	C1B-NB-C4B	-4.58	104.84	110.67
4	T	184	CYC	C1B-NB-C4B	-4.56	104.86	110.67
4	C	184	CYC	CAB-C3B-C4B	4.55	128.56	121.38
4	D	255	CYC	C1B-CHB-C4A	-4.54	116.99	128.08
4	S	184	CYC	CHD-C4C-NC	-4.52	119.83	125.20
4	P	184	CYC	C1B-NB-C4B	-4.49	104.95	110.67
4	M	184	CYC	C1B-NB-C4B	-4.48	104.97	110.67
4	I	184	CYC	CMB-C2B-C1B	4.48	129.76	124.17
4	T	184	CYC	CMB-C2B-C1B	4.45	129.73	124.17
4	E	184	CYC	CAB-C3B-C4B	4.45	128.41	121.38
4	P	255	CYC	CHB-C4A-NA	-4.45	115.62	124.93
4	T	255	CYC	CMA-C3A-C4A	4.44	131.91	125.06
4	B	184	CYC	OC-C1C-C2C	-4.41	122.67	126.17
4	L	255	CYC	C1B-NB-C4B	-4.41	105.06	110.67
4	H	184	CYC	C2C-C1C-NC	4.37	112.04	108.27
4	K	184	CYC	O1D-CGD-CBD	-4.37	109.04	123.08
4	W	184	CYC	OB-C4B-C3B	-4.37	123.30	128.04
4	W	184	CYC	C1B-NB-C4B	-4.34	105.14	110.67
4	B	184	CYC	C1B-CHB-C4A	-4.34	117.47	128.08
4	P	184	CYC	CAB-C3B-C4B	4.33	128.22	121.38
4	J	255	CYC	OC-C1C-C2C	-4.33	122.73	126.17
4	B	184	CYC	CBD-CAD-C3D	4.33	120.00	112.62
4	B	184	CYC	C4D-CHA-C1A	-4.31	123.66	128.81
4	V	255	CYC	CHB-C1B-C2B	-4.29	118.45	126.95
4	O	184	CYC	C4D-CHA-C1A	-4.29	123.69	128.81
4	E	184	CYC	OC-C1C-NC	4.29	130.13	124.94
4	B	255	CYC	CAA-CBA-CGA	-4.26	104.43	113.60
4	M	184	CYC	C2C-C1C-NC	4.26	111.94	108.27
4	X	184	CYC	C4D-CHA-C1A	-4.25	123.74	128.81
4	V	255	CYC	CAB-C3B-C2B	4.23	134.76	127.53
4	B	255	CYC	C1B-CHB-C4A	-4.22	117.76	128.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	H	255	CYC	OC-C1C-C2C	-4.22	122.81	126.17
4	R	184	CYC	OC-C1C-C2C	-4.21	122.83	126.17
4	A	184	CYC	C1B-NB-C4B	-4.17	105.36	110.67
4	F	255	CYC	CMA-C3A-C4A	4.15	131.46	125.06
4	U	184	CYC	CHA-C1A-NA	-4.15	123.08	128.83
4	H	255	CYC	OB-C4B-C3B	-4.14	123.54	128.04
4	X	255	CYC	CHB-C4A-C3A	4.14	135.55	124.90
4	P	184	CYC	CAA-CBA-CGA	-4.12	104.75	113.60
4	D	255	CYC	OC-C1C-C2C	-4.11	122.90	126.17
4	N	184	CYC	CAD-C3D-C2D	4.11	139.05	127.25
4	W	184	CYC	C1B-CHB-C4A	-4.10	118.05	128.08
4	R	184	CYC	C4D-CHA-C1A	-4.10	123.91	128.81
4	L	184	CYC	C2C-C1C-NC	4.09	111.80	108.27
4	M	184	CYC	OB-C4B-C3B	-4.06	123.63	128.04
4	H	255	CYC	CHB-C1B-C2B	-4.06	118.90	126.95
4	V	184	CYC	C1B-CHB-C4A	-4.06	118.17	128.08
4	T	255	CYC	CBB-CAB-C3B	-4.06	101.25	112.43
4	J	255	CYC	CMB-C2B-C1B	4.05	129.22	124.17
4	P	255	CYC	CHA-C1A-NA	-4.04	123.22	128.83
4	P	184	CYC	CHD-C4C-NC	-4.04	120.40	125.20
4	H	184	CYC	CMB-C2B-C1B	4.04	129.21	124.17
4	J	255	CYC	CAB-C3B-C4B	3.99	127.68	121.38
4	F	255	CYC	CHB-C4A-NA	-3.98	116.60	124.93
4	L	184	CYC	CMB-C2B-C1B	3.98	129.13	124.17
4	H	255	CYC	C1B-CHB-C4A	-3.97	118.39	128.08
4	U	184	CYC	CMA-C3A-C4A	3.95	131.14	125.06
4	Q	184	CYC	C1B-CHB-C4A	-3.94	118.45	128.08
4	K	184	CYC	CMB-C2B-C1B	3.94	129.08	124.17
4	F	184	CYC	C4D-CHA-C1A	-3.93	124.12	128.81
4	L	255	CYC	CAA-C2A-C3A	-3.92	120.57	127.88
4	I	184	CYC	C1B-NB-C4B	-3.92	105.68	110.67
4	R	184	CYC	C2C-C1C-NC	3.92	111.65	108.27
4	R	184	CYC	CAC-C3C-C2C	-3.90	104.51	114.26
4	I	184	CYC	CAB-C3B-C4B	3.89	127.52	121.38
4	B	255	CYC	CBD-CAD-C3D	3.87	119.23	112.62
4	G	184	CYC	C4D-CHA-C1A	-3.85	124.21	128.81
4	R	255	CYC	C1B-CHB-C4A	-3.85	118.68	128.08
4	Q	184	CYC	C2C-C1C-NC	3.85	111.59	108.27
4	X	184	CYC	CAB-C3B-C4B	3.83	127.44	121.38
4	O	184	CYC	OB-C4B-C3B	-3.83	123.89	128.04
4	E	184	CYC	CHA-C1A-NA	-3.82	123.52	128.83
4	H	255	CYC	C2C-C1C-NC	3.82	111.57	108.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	D	255	CYC	C1B-NB-C4B	-3.82	105.81	110.67
4	Q	184	CYC	OC-C1C-C2C	-3.79	123.16	126.17
4	H	255	CYC	CHD-C4C-NC	-3.78	120.71	125.20
4	G	184	CYC	CAA-CBA-CGA	-3.78	105.47	113.60
4	V	184	CYC	CAD-CBD-CGD	-3.77	103.19	113.76
4	T	184	CYC	CAB-C3B-C4B	3.77	127.33	121.38
4	F	255	CYC	C1B-NB-C4B	-3.77	105.87	110.67
4	B	255	CYC	CHA-C1A-NA	-3.77	123.60	128.83
4	L	184	CYC	CAD-CBD-CGD	-3.77	103.20	113.76
4	B	184	CYC	C2B-C1B-NB	3.75	112.48	106.99
4	J	255	CYC	CHB-C4A-NA	-3.75	117.09	124.93
4	V	255	CYC	CMB-C2B-C1B	-3.74	119.49	124.17
4	J	255	CYC	C2C-C1C-NC	3.73	111.48	108.27
4	L	255	CYC	CHB-C1B-C2B	-3.73	119.57	126.95
4	V	255	CYC	C4D-CHA-C1A	-3.72	124.37	128.81
4	N	255	CYC	CHD-C4C-NC	-3.70	120.81	125.20
4	W	184	CYC	C2C-C1C-NC	3.69	111.45	108.27
4	P	255	CYC	CHB-C4A-C3A	3.68	134.36	124.90
4	L	184	CYC	C4D-CHA-C1A	-3.65	124.45	128.81
4	B	184	CYC	CHB-C1B-C2B	-3.62	119.78	126.95
4	J	184	CYC	C1B-CHB-C4A	-3.61	119.27	128.08
4	B	255	CYC	OC-C1C-C2C	-3.59	123.32	126.17
4	P	255	CYC	C2C-C1C-NC	3.58	111.36	108.27
4	H	184	CYC	C4D-CHA-C1A	-3.55	124.57	128.81
4	X	184	CYC	C2B-C1B-NB	3.55	112.19	106.99
4	N	184	CYC	C2C-C1C-NC	3.54	111.33	108.27
4	R	255	CYC	CMC-C2C-C1C	-3.54	104.77	112.40
4	T	184	CYC	CMC-C2C-C1C	-3.54	104.77	112.40
4	E	184	CYC	CMC-C2C-C1C	-3.53	104.79	112.40
4	R	184	CYC	CMB-C2B-C1B	3.52	128.57	124.17
4	O	184	CYC	C1B-NB-C4B	-3.51	106.20	110.67
4	S	184	CYC	CAD-CBD-CGD	-3.50	103.93	113.76
4	R	184	CYC	CHD-C4C-NC	-3.50	121.04	125.20
4	N	184	CYC	O2A-CGA-CBA	3.49	125.26	114.03
4	M	184	CYC	C4D-CHA-C1A	-3.49	124.64	128.81
4	N	184	CYC	C1B-NB-C4B	-3.48	106.24	110.67
4	L	184	CYC	CHB-C4A-C3A	3.48	133.85	124.90
4	L	255	CYC	C1B-CHB-C4A	-3.47	119.59	128.08
4	L	255	CYC	CAA-C2A-C1A	3.47	131.14	125.01
4	X	255	CYC	C3A-C4A-NA	-3.46	103.14	110.53
4	U	184	CYC	CHB-C1B-C2B	-3.46	120.10	126.95
4	K	184	CYC	O2D-CGD-CBD	3.46	125.14	114.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	X	255	CYC	C2C-C1C-NC	3.45	111.25	108.27
4	F	184	CYC	CHD-C4C-NC	-3.44	121.11	125.20
4	F	255	CYC	C1B-CHB-C4A	-3.44	119.69	128.08
4	X	184	CYC	CMC-C2C-C1C	-3.43	105.00	112.40
4	L	184	CYC	C1B-CHB-C4A	-3.43	119.70	128.08
4	N	184	CYC	O1A-CGA-CBA	-3.43	112.06	123.08
4	B	184	CYC	CHA-C1A-NA	-3.43	124.07	128.83
4	U	184	CYC	OB-C4B-C3B	-3.42	124.33	128.04
4	G	184	CYC	CAB-C3B-C4B	3.41	126.77	121.38
4	Q	184	CYC	C1B-NB-C4B	-3.41	106.33	110.67
4	L	255	CYC	C2C-C1C-NC	3.40	111.20	108.27
4	R	255	CYC	CMD-C2D-C3D	3.39	131.34	124.94
4	G	184	CYC	OB-C4B-NB	-3.39	117.19	125.08
4	D	184	CYC	CMB-C2B-C1B	3.39	128.40	124.17
4	J	184	CYC	O1D-CGD-CBD	-3.38	112.21	123.08
4	T	184	CYC	CAD-CBD-CGD	-3.38	104.29	113.76
4	V	184	CYC	C1B-NB-C4B	-3.38	106.37	110.67
4	Q	184	CYC	CBD-CAD-C3D	-3.37	106.87	112.62
4	G	184	CYC	C1B-CHB-C4A	-3.36	119.86	128.08
4	S	184	CYC	CMA-C3A-C4A	3.36	130.24	125.06
4	V	255	CYC	C2B-C1B-NB	3.36	111.90	106.99
4	J	255	CYC	CAA-C2A-C1A	3.36	130.95	125.01
4	N	255	CYC	C1A-NA-C4A	3.35	112.83	106.51
4	S	184	CYC	C1B-CHB-C4A	-3.35	119.90	128.08
4	V	184	CYC	CHD-C4C-NC	-3.34	121.23	125.20
4	M	184	CYC	CBB-CAB-C3B	-3.32	103.27	112.43
4	R	184	CYC	CAB-C3B-C2B	-3.32	121.85	127.53
4	H	184	CYC	CMA-C3A-C4A	3.31	130.17	125.06
4	P	255	CYC	O2A-CGA-O1A	-3.31	115.04	123.30
4	G	184	CYC	CHB-C4A-C3A	3.30	133.39	124.90
4	R	255	CYC	CHB-C1B-C2B	-3.30	120.42	126.95
4	U	184	CYC	CBD-CAD-C3D	-3.29	107.00	112.62
4	N	184	CYC	OB-C4B-C3B	-3.29	124.47	128.04
4	D	255	CYC	CMA-C3A-C4A	3.28	130.12	125.06
4	H	255	CYC	O2D-CGD-CBD	3.28	124.56	114.03
4	X	255	CYC	C1A-NA-C4A	3.27	112.68	106.51
4	J	184	CYC	CAD-CBD-CGD	-3.27	104.60	113.76
4	L	255	CYC	CBB-CAB-C3B	-3.25	103.48	112.43
4	F	184	CYC	CAA-CBA-CGA	-3.24	106.62	113.60
4	D	255	CYC	OB-C4B-C3B	-3.24	124.53	128.04
4	S	184	CYC	CAA-CBA-CGA	-3.22	106.67	113.60
4	J	184	CYC	OB-C4B-C3B	-3.22	124.55	128.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	K	184	CYC	C2B-C1B-NB	3.21	111.69	106.99
4	G	184	CYC	C2B-C1B-NB	3.21	111.68	106.99
4	R	255	CYC	C4D-CHA-C1A	-3.20	124.98	128.81
4	A	184	CYC	CAA-CBA-CGA	-3.19	106.73	113.60
4	E	184	CYC	CHD-C4C-NC	3.19	129.00	125.20
4	R	255	CYC	C1B-C2B-C3B	3.17	111.18	107.87
4	T	255	CYC	CHD-C4C-NC	-3.17	121.44	125.20
4	P	255	CYC	C2A-C1A-NA	3.17	114.65	110.05
4	J	255	CYC	C1A-NA-C4A	3.16	112.47	106.51
4	P	184	CYC	CMB-C2B-C1B	3.15	128.09	124.17
4	L	184	CYC	CHB-C4A-NA	-3.13	118.38	124.93
4	X	184	CYC	O1D-CGD-CBD	-3.13	113.02	123.08
4	S	184	CYC	CAB-C3B-C2B	3.13	132.88	127.53
4	R	184	CYC	CBD-CAD-C3D	3.13	117.95	112.62
4	D	184	CYC	CAC-C3C-C2C	-3.12	106.46	114.26
4	X	184	CYC	CBD-CAD-C3D	3.12	117.94	112.62
4	G	184	CYC	CBB-CAB-C3B	3.12	121.02	112.43
4	D	184	CYC	CAB-C3B-C4B	3.10	126.28	121.38
4	N	255	CYC	O2A-CGA-CBA	3.10	124.00	114.03
4	M	184	CYC	CMD-C2D-C3D	3.09	130.77	124.94
4	P	255	CYC	C2B-C1B-NB	3.09	111.51	106.99
4	J	255	CYC	CMA-C3A-C4A	3.08	129.81	125.06
4	N	255	CYC	C2C-C1C-NC	3.07	110.92	108.27
4	X	255	CYC	CBB-CAB-C3B	3.05	120.85	112.43
4	G	184	CYC	O2D-CGD-CBD	3.05	123.83	114.03
4	O	184	CYC	CHB-C4A-C3A	3.05	132.74	124.90
4	D	184	CYC	O2A-CGA-CBA	3.05	123.83	114.03
4	T	184	CYC	CBA-CAA-C2A	3.04	121.08	112.63
4	R	255	CYC	CAA-C2A-C3A	-3.04	122.22	127.88
4	N	184	CYC	CAB-C3B-C4B	3.03	126.16	121.38
4	V	255	CYC	CMB-C2B-C3B	3.02	134.31	126.12
4	B	184	CYC	CAD-CBD-CGD	-3.02	105.30	113.76
4	D	184	CYC	C1B-CHB-C4A	-3.01	120.72	128.08
4	I	184	CYC	C1B-CHB-C4A	-3.00	120.75	128.08
4	O	184	CYC	CHD-C4C-NC	2.99	128.76	125.20
4	H	255	CYC	C2B-C1B-NB	2.99	111.37	106.99
4	P	184	CYC	CMA-C3A-C4A	2.98	129.66	125.06
4	U	184	CYC	CHB-C4A-C3A	2.98	132.56	124.90
4	A	184	CYC	OB-C4B-NB	-2.98	118.16	125.08
4	L	255	CYC	CAB-C3B-C4B	2.97	126.07	121.38
4	D	255	CYC	CAC-C3C-C4C	-2.97	105.06	112.67
4	R	255	CYC	OC-C1C-NC	2.96	128.53	124.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	T	184	CYC	OC-C1C-NC	2.96	128.53	124.94
4	L	255	CYC	CBD-CAD-C3D	-2.95	107.58	112.62
4	C	184	CYC	CHA-C1A-NA	-2.95	124.73	128.83
4	L	255	CYC	CAC-C3C-C2C	-2.95	106.89	114.26
4	I	184	CYC	CHB-C4A-C3A	2.95	132.49	124.90
4	K	184	CYC	CAC-C3C-C4C	2.95	120.25	112.67
4	M	184	CYC	C2C-C3C-C4C	2.95	105.75	101.34
4	C	184	CYC	CHB-C1B-C2B	-2.95	121.11	126.95
4	B	255	CYC	CMB-C2B-C1B	2.94	127.83	124.17
4	V	184	CYC	OB-C4B-NB	-2.94	118.25	125.08
4	A	184	CYC	CHB-C1B-C2B	-2.94	121.13	126.95
4	I	184	CYC	CBB-CAB-C3B	-2.93	104.34	112.43
4	I	184	CYC	CMA-C3A-C4A	2.93	129.57	125.06
4	H	255	CYC	CBD-CAD-C3D	-2.92	107.64	112.62
4	C	184	CYC	OB-C4B-NB	-2.91	118.31	125.08
4	K	184	CYC	C2C-C1C-NC	2.91	110.78	108.27
4	Q	184	CYC	CHD-C4C-NC	-2.91	121.74	125.20
4	E	184	CYC	O2D-CGD-CBD	2.91	123.38	114.03
4	P	184	CYC	C1A-NA-C4A	2.91	111.99	106.51
4	W	184	CYC	CHD-C4C-NC	-2.90	121.75	125.20
4	P	184	CYC	CHB-C4A-C3A	2.90	132.35	124.90
4	X	255	CYC	CMA-C3A-C4A	2.89	129.51	125.06
4	X	184	CYC	CAA-CBA-CGA	-2.89	107.39	113.60
4	I	184	CYC	CBC-CAC-C3C	-2.88	107.05	113.47
4	J	184	CYC	OB-C4B-NB	-2.88	118.38	125.08
4	D	255	CYC	CHB-C1B-C2B	-2.88	121.24	126.95
4	R	184	CYC	CAC-C3C-C4C	2.86	120.02	112.67
4	U	184	CYC	O1D-CGD-CBD	-2.86	113.90	123.08
4	C	184	CYC	CBD-CAD-C3D	-2.86	107.74	112.62
4	J	255	CYC	CBC-CAC-C3C	-2.85	107.11	113.47
4	R	184	CYC	OB-C4B-NB	-2.85	118.45	125.08
4	A	184	CYC	O1D-CGD-CBD	-2.85	113.92	123.08
4	I	184	CYC	O1D-CGD-CBD	-2.85	113.93	123.08
4	X	255	CYC	CAB-C3B-C2B	2.85	132.40	127.53
4	J	184	CYC	CHB-C1B-C2B	-2.84	121.31	126.95
4	F	184	CYC	CBD-CAD-C3D	2.84	117.47	112.62
4	J	184	CYC	C2B-C1B-NB	2.84	111.15	106.99
4	F	255	CYC	C1A-NA-C4A	2.83	111.84	106.51
4	N	255	CYC	O2D-CGD-CBD	2.83	123.12	114.03
4	N	255	CYC	CAB-C3B-C2B	2.83	132.36	127.53
4	B	255	CYC	CAC-C3C-C4C	-2.82	105.42	112.67
4	B	184	CYC	CHD-C4C-NC	-2.82	121.85	125.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	F	184	CYC	C1B-CHB-C4A	-2.82	121.19	128.08
4	D	255	CYC	C2C-C3C-C4C	2.81	105.56	101.34
4	S	184	CYC	CHB-C1B-C2B	-2.81	121.37	126.95
4	K	184	CYC	CBB-CAB-C3B	-2.81	104.68	112.43
4	F	184	CYC	C2B-C1B-NB	2.81	111.10	106.99
4	D	184	CYC	CBA-CAA-C2A	2.81	120.43	112.63
4	F	255	CYC	OB-C4B-C3B	-2.81	124.99	128.04
4	H	255	CYC	CHA-C1A-NA	-2.81	124.93	128.83
4	R	255	CYC	C2C-C1C-NC	2.81	110.69	108.27
4	M	184	CYC	CHD-C4C-NC	2.80	128.53	125.20
4	S	184	CYC	CHB-C4A-C3A	2.78	132.05	124.90
4	T	255	CYC	OC-C1C-C2C	-2.77	123.97	126.17
4	S	184	CYC	C2C-C1C-NC	2.77	110.66	108.27
4	E	184	CYC	CAD-CBD-CGD	2.77	121.53	113.76
4	I	184	CYC	O2D-CGD-CBD	2.76	122.89	114.03
4	P	255	CYC	C4A-C3A-C2A	-2.76	103.34	106.51
4	T	255	CYC	CAB-C3B-C2B	2.75	132.24	127.53
4	B	255	CYC	C2B-C1B-NB	2.75	111.01	106.99
4	A	184	CYC	CMA-C3A-C4A	2.74	129.28	125.06
4	H	184	CYC	O1D-CGD-CBD	-2.74	114.29	123.08
4	D	184	CYC	C2B-C1B-NB	2.73	110.98	106.99
4	D	255	CYC	C1B-C2B-C3B	2.73	110.72	107.87
4	V	255	CYC	C1A-NA-C4A	2.72	111.64	106.51
4	L	255	CYC	C2C-C3C-C4C	2.72	105.41	101.34
4	A	184	CYC	C1B-CHB-C4A	-2.71	121.45	128.08
4	B	255	CYC	C1A-NA-C4A	2.71	111.62	106.51
4	U	184	CYC	O2D-CGD-CBD	2.71	122.74	114.03
4	M	184	CYC	C2B-C1B-NB	2.71	110.95	106.99
4	H	255	CYC	CAA-CBA-CGA	-2.70	107.79	113.60
4	J	255	CYC	CAA-C2A-C3A	-2.69	122.86	127.88
4	Q	184	CYC	CHA-C1A-C2A	-2.69	119.11	125.32
4	U	184	CYC	C4A-C3A-C2A	-2.68	103.43	106.51
4	V	184	CYC	CBD-CAD-C3D	2.68	117.19	112.62
4	K	184	CYC	C1B-CHB-C4A	-2.67	121.56	128.08
4	F	255	CYC	CAB-C3B-C4B	2.67	125.59	121.38
4	T	184	CYC	CAA-CBA-CGA	-2.66	107.87	113.60
4	P	184	CYC	OC-C1C-C2C	-2.66	124.06	126.17
4	J	255	CYC	C3A-C4A-NA	-2.65	104.86	110.53
4	A	184	CYC	O1A-CGA-CBA	-2.65	114.57	123.08
4	D	255	CYC	CAD-CBD-CGD	-2.65	106.33	113.76
4	D	184	CYC	CAD-CBD-CGD	-2.65	106.34	113.76
4	G	184	CYC	C1A-NA-C4A	2.65	111.50	106.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	C	184	CYC	CMB-C2B-C1B	-2.65	120.86	124.17
4	W	184	CYC	OC-C1C-C2C	-2.64	124.07	126.17
4	K	184	CYC	CHB-C4A-C3A	2.63	131.68	124.90
4	U	184	CYC	CBC-CAC-C3C	-2.63	107.61	113.47
4	G	184	CYC	O2D-CGD-O1D	-2.63	116.74	123.30
4	A	184	CYC	CAC-C3C-C4C	2.63	119.42	112.67
4	U	184	CYC	C2C-C1C-NC	2.62	110.53	108.27
4	W	184	CYC	CHB-C1B-C2B	-2.61	121.77	126.95
4	D	255	CYC	C4A-C3A-C2A	-2.61	103.51	106.51
4	T	255	CYC	O2D-CGD-CBD	2.61	122.42	114.03
4	J	255	CYC	CAA-CBA-CGA	-2.60	108.00	113.60
4	P	255	CYC	CMA-C3A-C4A	2.60	129.07	125.06
4	H	184	CYC	O2D-CGD-CBD	2.60	122.38	114.03
4	A	184	CYC	CAB-C3B-C2B	-2.59	123.10	127.53
4	T	255	CYC	C1B-NB-C4B	-2.58	107.38	110.67
4	N	255	CYC	C3A-C4A-NA	-2.57	105.03	110.53
4	G	184	CYC	C3A-C4A-NA	-2.57	105.03	110.53
4	T	255	CYC	CHB-C1B-C2B	-2.57	121.86	126.95
4	R	184	CYC	CMD-C2D-C3D	2.57	129.78	124.94
4	N	255	CYC	CHB-C1B-C2B	-2.56	121.87	126.95
4	A	184	CYC	CHA-C1A-C2A	-2.56	119.40	125.32
4	V	184	CYC	CMB-C2B-C1B	2.56	127.36	124.17
4	X	255	CYC	OC-C1C-NC	-2.56	121.84	124.94
4	G	184	CYC	CAC-C3C-C4C	2.56	119.24	112.67
4	R	184	CYC	CAA-CBA-CGA	-2.55	108.11	113.60
4	P	184	CYC	CAD-C3D-C2D	-2.55	119.91	127.25
4	S	184	CYC	CAC-C3C-C4C	2.54	119.20	112.67
4	W	184	CYC	CAC-C3C-C4C	2.54	119.19	112.67
4	L	184	CYC	CAD-C3D-C2D	2.54	134.54	127.25
4	F	184	CYC	OB-C4B-NB	-2.54	119.18	125.08
4	D	184	CYC	C2C-C3C-C4C	2.53	105.13	101.34
4	J	255	CYC	C2C-C3C-C4C	2.53	105.13	101.34
4	U	184	CYC	CHB-C4A-NA	-2.52	119.66	124.93
4	X	184	CYC	CMB-C2B-C1B	2.52	127.31	124.17
4	X	184	CYC	OC-C1C-C2C	-2.52	124.17	126.17
4	N	184	CYC	CMC-C2C-C1C	-2.51	106.98	112.40
4	R	184	CYC	C1B-CHB-C4A	-2.51	121.94	128.08
4	U	184	CYC	CMD-C2D-C3D	2.51	129.68	124.94
4	T	255	CYC	C1B-CHB-C4A	-2.51	121.95	128.08
4	C	184	CYC	C2B-C1B-NB	2.50	110.65	106.99
4	U	184	CYC	C2B-C1B-NB	2.50	110.65	106.99
4	V	255	CYC	CHD-C4C-NC	-2.50	122.23	125.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	F	255	CYC	C2C-C3C-C4C	2.49	105.08	101.34
4	E	184	CYC	C1B-CHB-C4A	-2.49	121.99	128.08
4	B	255	CYC	CAD-CBD-CGD	-2.49	106.79	113.76
4	D	255	CYC	OC-C1C-NC	2.49	127.95	124.94
4	P	184	CYC	CAC-C3C-C2C	-2.48	108.06	114.26
4	A	184	CYC	C2B-C1B-NB	2.48	110.62	106.99
4	S	184	CYC	OC-C1C-NC	-2.47	121.95	124.94
4	J	184	CYC	O2D-CGD-O1D	2.46	129.44	123.30
4	B	255	CYC	CHB-C1B-C2B	-2.45	122.09	126.95
4	X	184	CYC	C2C-C1C-NC	2.45	110.39	108.27
4	C	184	CYC	CHB-C4A-C3A	2.45	131.20	124.90
4	N	255	CYC	CAC-C3C-C4C	2.45	118.97	112.67
4	Q	184	CYC	OB-C4B-NB	-2.45	119.38	125.08
4	L	255	CYC	C2B-C1B-NB	2.45	110.57	106.99
4	D	184	CYC	C1A-NA-C4A	2.45	111.12	106.51
4	V	255	CYC	C4A-C3A-C2A	-2.44	103.71	106.51
4	S	184	CYC	CBB-CAB-C3B	-2.43	105.72	112.43
4	A	184	CYC	CMD-C2D-C3D	2.43	129.53	124.94
4	E	184	CYC	C2B-C1B-NB	2.43	110.54	106.99
4	B	184	CYC	CAD-C3D-C2D	-2.43	120.27	127.25
4	D	184	CYC	CHB-C1B-NB	-2.43	120.85	126.06
4	D	255	CYC	CMB-C2B-C1B	-2.42	121.15	124.17
4	K	184	CYC	C1A-NA-C4A	2.41	111.05	106.51
4	R	255	CYC	CAA-C2A-C1A	2.41	129.27	125.01
4	N	184	CYC	CMD-C2D-C3D	2.41	129.48	124.94
4	D	184	CYC	O1A-CGA-CBA	-2.41	115.35	123.08
4	R	184	CYC	C1A-NA-C4A	2.40	111.03	106.51
4	F	255	CYC	CBA-CAA-C2A	2.40	119.29	112.63
4	J	184	CYC	CHA-C1A-NA	-2.40	125.50	128.83
4	U	184	CYC	OC-C1C-C2C	-2.39	124.27	126.17
4	V	184	CYC	CAD-C3D-C2D	2.39	134.13	127.25
4	K	184	CYC	CAB-C3B-C4B	2.39	125.15	121.38
4	N	255	CYC	O1D-CGD-CBD	-2.39	115.42	123.08
4	I	184	CYC	C2C-C3C-C4C	2.38	104.91	101.34
4	H	184	CYC	O2A-CGA-CBA	2.37	121.65	114.03
4	Q	184	CYC	CAA-CBA-CGA	-2.37	108.51	113.60
4	X	255	CYC	CBC-CAC-C3C	-2.37	108.20	113.47
4	H	255	CYC	O1D-CGD-CBD	-2.37	115.48	123.08
4	L	184	CYC	CBB-CAB-C3B	-2.36	105.92	112.43
4	K	184	CYC	CMD-C2D-C3D	2.36	129.39	124.94
4	P	184	CYC	C3A-C4A-NA	-2.36	105.48	110.53
4	F	184	CYC	OC-C1C-NC	2.36	127.80	124.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	B	255	CYC	CAA-C2A-C1A	2.35	129.17	125.01
4	B	255	CYC	C2C-C1C-NC	2.35	110.30	108.27
4	J	255	CYC	O2A-CGA-CBA	2.35	121.58	114.03
4	Q	184	CYC	C2A-C1A-NA	2.35	113.47	110.05
4	C	184	CYC	CAA-C2A-C3A	-2.35	123.51	127.88
4	X	255	CYC	O1A-CGA-CBA	-2.34	115.56	123.08
4	C	184	CYC	CHB-C4A-NA	-2.34	120.04	124.93
4	N	184	CYC	CMA-C3A-C4A	2.34	128.67	125.06
4	F	184	CYC	CHB-C1B-NB	-2.34	121.04	126.06
4	K	184	CYC	C4D-CHA-C1A	-2.33	126.03	128.81
4	P	184	CYC	CAD-CBD-CGD	-2.32	107.24	113.76
4	D	255	CYC	CMC-C2C-C1C	-2.32	107.39	112.40
4	N	255	CYC	CHB-C4A-C3A	2.32	130.87	124.90
4	X	184	CYC	CAD-CBD-CGD	-2.32	107.25	113.76
4	X	184	CYC	CAD-C3D-C2D	-2.32	120.58	127.25
4	R	255	CYC	C1A-NA-C4A	2.32	110.88	106.51
4	T	255	CYC	CBA-CAA-C2A	-2.32	106.18	112.63
4	S	184	CYC	C1A-NA-C4A	2.31	110.86	106.51
4	D	184	CYC	CHB-C4A-C3A	2.31	130.83	124.90
4	Q	184	CYC	O2A-CGA-CBA	2.30	121.43	114.03
4	L	255	CYC	CHD-C4C-NC	-2.30	122.47	125.20
4	H	255	CYC	CAC-C3C-C4C	2.30	118.58	112.67
4	D	255	CYC	O1A-CGA-CBA	-2.30	115.70	123.08
4	I	184	CYC	C1A-C2A-C3A	2.30	109.33	106.78
4	U	184	CYC	OB-C4B-NB	-2.30	119.74	125.08
4	R	184	CYC	CHA-C1A-NA	-2.29	125.65	128.83
4	R	184	CYC	CHB-C1B-C2B	-2.28	122.42	126.95
4	M	184	CYC	CAB-C3B-C4B	2.28	124.98	121.38
4	H	184	CYC	C2B-C1B-NB	2.28	110.33	106.99
4	O	184	CYC	CBB-CAB-C3B	-2.28	106.15	112.43
4	R	255	CYC	CHB-C1B-NB	2.28	130.94	126.06
4	O	184	CYC	CMA-C3A-C4A	2.27	128.57	125.06
4	H	184	CYC	OC-C1C-C2C	-2.27	124.37	126.17
4	U	184	CYC	CBA-CAA-C2A	-2.27	106.32	112.63
4	J	255	CYC	C4D-CHA-C1A	-2.27	126.10	128.81
4	V	184	CYC	CHA-C1A-NA	-2.27	125.68	128.83
4	F	255	CYC	CAD-CBD-CGD	2.26	120.08	113.76
4	F	184	CYC	CMA-C3A-C4A	2.25	128.53	125.06
4	X	184	CYC	CHB-C1B-C2B	-2.25	122.50	126.95
4	U	184	CYC	CAA-C2A-C3A	-2.24	123.71	127.88
4	P	255	CYC	CAC-C3C-C4C	-2.22	106.96	112.67
4	N	255	CYC	O1A-CGA-CBA	-2.22	115.95	123.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	H	255	CYC	CBC-CAC-C3C	2.22	118.41	113.47
4	R	255	CYC	CBC-CAC-C3C	2.21	118.39	113.47
4	J	255	CYC	CHA-C1A-C2A	2.21	130.43	125.32
4	R	184	CYC	C2B-C1B-NB	2.21	110.22	106.99
4	T	184	CYC	CHA-C1A-NA	-2.21	125.76	128.83
4	F	255	CYC	CAC-C3C-C4C	-2.20	107.01	112.67
4	B	184	CYC	C4A-C3A-C2A	-2.20	103.98	106.51
4	D	184	CYC	CAA-CBA-CGA	2.20	118.34	113.60
4	L	184	CYC	CHA-C1A-C2A	-2.20	120.25	125.32
4	S	184	CYC	CBD-CAD-C3D	-2.20	108.87	112.62
4	D	255	CYC	CMD-C2D-C3D	2.19	129.07	124.94
4	N	184	CYC	C2C-C3C-C4C	2.19	104.62	101.34
4	I	184	CYC	C1A-NA-C4A	2.19	110.64	106.51
4	N	255	CYC	OC-C1C-NC	-2.19	122.29	124.94
4	L	184	CYC	C4A-C3A-C2A	-2.19	104.00	106.51
4	G	184	CYC	O1A-CGA-CBA	-2.18	116.07	123.08
4	C	184	CYC	CAC-C3C-C4C	2.18	118.27	112.67
4	L	184	CYC	CAA-CBA-CGA	-2.17	108.93	113.60
4	E	184	CYC	O1D-CGD-CBD	-2.17	116.10	123.08
4	A	184	CYC	CHB-C4A-C3A	2.17	130.48	124.90
4	H	184	CYC	C1B-CHB-C4A	-2.17	122.78	128.08
4	T	184	CYC	CBB-CAB-C3B	-2.17	106.46	112.43
4	D	184	CYC	CAD-C3D-C2D	-2.17	121.02	127.25
4	Q	184	CYC	CAC-C3C-C4C	2.17	118.23	112.67
4	F	184	CYC	CHA-C1A-C2A	-2.16	120.32	125.32
4	V	184	CYC	CMA-C3A-C4A	2.16	128.39	125.06
4	M	184	CYC	CHB-C4A-C3A	2.16	130.45	124.90
4	P	184	CYC	CAA-C2A-C3A	-2.15	123.88	127.88
4	D	255	CYC	CBD-CAD-C3D	2.14	116.28	112.62
4	T	255	CYC	CHA-C1A-C2A	-2.14	120.38	125.32
4	S	184	CYC	O1D-CGD-CBD	-2.14	116.22	123.08
4	A	184	CYC	CHB-C4A-NA	-2.12	120.49	124.93
4	O	184	CYC	CHB-C4A-NA	-2.12	120.50	124.93
4	S	184	CYC	O2A-CGA-O1A	2.12	128.59	123.30
4	S	184	CYC	CHA-C1A-NA	-2.12	125.89	128.83
4	S	184	CYC	CAB-C3B-C4B	2.12	124.73	121.38
4	J	184	CYC	CAD-C3D-C2D	2.12	133.33	127.25
4	K	184	CYC	CHD-C4C-NC	-2.11	122.69	125.20
4	P	255	CYC	CHB-C1B-NB	2.11	130.59	126.06
4	D	255	CYC	CAA-C2A-C3A	-2.11	123.94	127.88
4	D	184	CYC	CAB-C3B-C2B	2.11	131.13	127.53
4	O	184	CYC	CAA-CBA-CGA	-2.11	109.07	113.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	H	255	CYC	CMA-C3A-C4A	2.10	128.30	125.06
4	W	184	CYC	CHB-C4A-C3A	2.10	130.30	124.90
4	M	184	CYC	CHB-C1B-C2B	-2.10	122.79	126.95
4	P	255	CYC	O1D-CGD-CBD	-2.10	116.34	123.08
4	X	255	CYC	CHA-C1A-C2A	-2.09	120.50	125.32
4	U	184	CYC	C1A-NA-C4A	2.08	110.43	106.51
4	X	255	CYC	O2A-CGA-CBA	2.08	120.71	114.03
4	H	255	CYC	CHB-C4A-C3A	2.08	130.24	124.90
4	Q	184	CYC	O1A-CGA-CBA	-2.07	116.44	123.08
4	B	255	CYC	CMD-C2D-C3D	2.06	128.84	124.94
4	I	184	CYC	CHB-C1B-C2B	-2.06	122.86	126.95
4	P	184	CYC	OC-C1C-NC	-2.06	122.44	124.94
4	X	255	CYC	C1B-CHB-C4A	-2.06	123.04	128.08
4	A	184	CYC	CBB-CAB-C3B	-2.06	106.75	112.43
4	F	255	CYC	CMD-C2D-C3D	2.05	128.81	124.94
4	X	255	CYC	CBD-CAD-C3D	-2.05	109.12	112.62
4	I	184	CYC	C4A-C3A-C2A	-2.05	104.16	106.51
4	H	184	CYC	O1A-CGA-CBA	-2.04	116.52	123.08
4	T	184	CYC	CMA-C3A-C4A	2.04	128.21	125.06
4	Q	184	CYC	O2D-CGD-CBD	2.04	120.59	114.03
4	O	184	CYC	CAD-CBD-CGD	-2.04	108.04	113.76
4	S	184	CYC	O1A-CGA-CBA	-2.04	116.53	123.08
4	M	184	CYC	CMA-C3A-C4A	2.04	128.20	125.06
4	B	255	CYC	CHB-C4A-C3A	2.04	130.14	124.90
4	F	184	CYC	CMD-C2D-C3D	-2.04	121.11	124.94
4	R	184	CYC	C3A-C4A-NA	-2.03	106.19	110.53
4	V	255	CYC	C1A-C2A-C3A	2.03	109.03	106.78
4	F	184	CYC	O2D-CGD-CBD	2.02	120.53	114.03
4	W	184	CYC	CAD-CBD-CGD	-2.02	108.09	113.76
4	O	184	CYC	C1B-CHB-C4A	-2.02	123.14	128.08
4	P	184	CYC	C1A-C2A-C3A	2.02	109.02	106.78
4	X	255	CYC	CMB-C2B-C1B	2.02	126.69	124.17
4	V	184	CYC	CMD-C2D-C3D	2.01	128.74	124.94
4	M	184	CYC	CAD-C3D-C2D	2.01	133.02	127.25
4	S	184	CYC	C3A-C4A-NA	-2.01	106.23	110.53
4	F	255	CYC	C3A-C4A-NA	-2.00	106.25	110.53
4	F	184	CYC	O1D-CGD-CBD	-2.00	116.66	123.08

There are no chirality outliers.

All (427) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	184	CYC	NA-C4A-CHB-C1B
4	A	184	CYC	C4B-C3B-CAB-CBB
4	A	184	CYC	C2C-C3C-CAC-CBC
4	A	184	CYC	C4C-C3C-CAC-CBC
4	A	184	CYC	C2D-C1D-CHD-C4C
4	B	184	CYC	NA-C4A-CHB-C1B
4	B	184	CYC	C3A-C4A-CHB-C1B
4	B	184	CYC	ND-C1D-CHD-C4C
4	B	184	CYC	C2D-C1D-CHD-C4C
4	B	184	CYC	C2D-C3D-CAD-CBD
4	B	184	CYC	C4D-C3D-CAD-CBD
4	B	255	CYC	C1A-C2A-CAA-CBA
4	B	255	CYC	C3A-C2A-CAA-CBA
4	B	255	CYC	NA-C4A-CHB-C1B
4	B	255	CYC	C2B-C3B-CAB-CBB
4	B	255	CYC	C4B-C3B-CAB-CBB
4	B	255	CYC	C2C-C3C-CAC-CBC
4	B	255	CYC	C4C-C3C-CAC-CBC
4	B	255	CYC	C2D-C3D-CAD-CBD
4	B	255	CYC	C4D-C3D-CAD-CBD
4	C	184	CYC	NA-C4A-CHB-C1B
4	C	184	CYC	C4C-C3C-CAC-CBC
4	C	184	CYC	ND-C1D-CHD-C4C
4	C	184	CYC	C2D-C1D-CHD-C4C
4	D	184	CYC	NA-C4A-CHB-C1B
4	D	184	CYC	C3A-C4A-CHB-C1B
4	D	184	CYC	C2B-C3B-CAB-CBB
4	D	184	CYC	C4B-C3B-CAB-CBB
4	D	184	CYC	C2C-C3C-CAC-CBC
4	D	184	CYC	C4C-C3C-CAC-CBC
4	D	184	CYC	ND-C1D-CHD-C4C
4	D	184	CYC	C2D-C1D-CHD-C4C
4	D	184	CYC	C2D-C3D-CAD-CBD
4	D	184	CYC	C4D-C3D-CAD-CBD
4	D	255	CYC	ND-C4D-CHA-C1A
4	D	255	CYC	C3D-C4D-CHA-C1A
4	D	255	CYC	NA-C4A-CHB-C1B
4	D	255	CYC	C3A-C4A-CHB-C1B
4	D	255	CYC	C2C-C3C-CAC-CBC
4	D	255	CYC	C4C-C3C-CAC-CBC
4	D	255	CYC	C2D-C3D-CAD-CBD
4	D	255	CYC	C4D-C3D-CAD-CBD
4	E	184	CYC	NA-C4A-CHB-C1B

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Mol	Chain	Res	Type	Atoms
4	E	184	CYC	C3A-C4A-CHB-C1B
4	E	184	CYC	C4B-C3B-CAB-CBB
4	E	184	CYC	C2C-C3C-CAC-CBC
4	E	184	CYC	C4C-C3C-CAC-CBC
4	E	184	CYC	ND-C1D-CHD-C4C
4	E	184	CYC	C2D-C1D-CHD-C4C
4	F	184	CYC	NA-C4A-CHB-C1B
4	F	184	CYC	C3A-C4A-CHB-C1B
4	F	184	CYC	ND-C1D-CHD-C4C
4	F	184	CYC	C2D-C1D-CHD-C4C
4	F	255	CYC	ND-C4D-CHA-C1A
4	F	255	CYC	C2A-CAA-CBA-CGA
4	F	255	CYC	C4C-C3C-CAC-CBC
4	G	184	CYC	NA-C4A-CHB-C1B
4	G	184	CYC	C3A-C4A-CHB-C1B
4	G	184	CYC	C4B-C3B-CAB-CBB
4	G	184	CYC	C4C-C3C-CAC-CBC
4	G	184	CYC	ND-C1D-CHD-C4C
4	G	184	CYC	C2D-C1D-CHD-C4C
4	H	184	CYC	NA-C4A-CHB-C1B
4	H	184	CYC	C3A-C4A-CHB-C1B
4	H	184	CYC	C2B-C3B-CAB-CBB
4	H	184	CYC	C4B-C3B-CAB-CBB
4	H	184	CYC	ND-C1D-CHD-C4C
4	H	184	CYC	C2D-C1D-CHD-C4C
4	H	255	CYC	NA-C4A-CHB-C1B
4	H	255	CYC	C3A-C4A-CHB-C1B
4	I	184	CYC	NA-C4A-CHB-C1B
4	I	184	CYC	C3A-C4A-CHB-C1B
4	I	184	CYC	C4C-C3C-CAC-CBC
4	I	184	CYC	ND-C1D-CHD-C4C
4	I	184	CYC	C2D-C1D-CHD-C4C
4	J	184	CYC	NA-C4A-CHB-C1B
4	J	184	CYC	C3A-C4A-CHB-C1B
4	J	184	CYC	C4B-C3B-CAB-CBB
4	J	184	CYC	ND-C1D-CHD-C4C
4	J	184	CYC	C2D-C1D-CHD-C4C
4	J	184	CYC	C2D-C3D-CAD-CBD
4	J	184	CYC	C4D-C3D-CAD-CBD
4	J	255	CYC	ND-C4D-CHA-C1A
4	J	255	CYC	C3D-C4D-CHA-C1A
4	J	255	CYC	NA-C4A-CHB-C1B

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Mol	Chain	Res	Type	Atoms
4	J	255	CYC	C3A-C4A-CHB-C1B
4	J	255	CYC	C2B-C1B-CHB-C4A
4	J	255	CYC	C4B-C3B-CAB-CBB
4	J	255	CYC	C2C-C3C-CAC-CBC
4	J	255	CYC	C4C-C3C-CAC-CBC
4	J	255	CYC	C2D-C1D-CHD-C4C
4	K	184	CYC	NA-C4A-CHB-C1B
4	K	184	CYC	C3A-C4A-CHB-C1B
4	K	184	CYC	C2C-C3C-CAC-CBC
4	K	184	CYC	C4C-C3C-CAC-CBC
4	K	184	CYC	ND-C1D-CHD-C4C
4	K	184	CYC	C2D-C1D-CHD-C4C
4	L	184	CYC	NA-C4A-CHB-C1B
4	L	184	CYC	C3A-C4A-CHB-C1B
4	L	184	CYC	C2C-C3C-CAC-CBC
4	L	184	CYC	C4C-C3C-CAC-CBC
4	L	184	CYC	ND-C1D-CHD-C4C
4	L	184	CYC	C2D-C1D-CHD-C4C
4	L	184	CYC	C2D-C3D-CAD-CBD
4	L	184	CYC	C4D-C3D-CAD-CBD
4	L	255	CYC	ND-C4D-CHA-C1A
4	L	255	CYC	C3D-C4D-CHA-C1A
4	L	255	CYC	NA-C4A-CHB-C1B
4	L	255	CYC	C4B-C3B-CAB-CBB
4	L	255	CYC	ND-C1D-CHD-C4C
4	L	255	CYC	C2D-C1D-CHD-C4C
4	M	184	CYC	NA-C4A-CHB-C1B
4	M	184	CYC	C3A-C4A-CHB-C1B
4	M	184	CYC	C2C-C3C-CAC-CBC
4	M	184	CYC	C4C-C3C-CAC-CBC
4	M	184	CYC	ND-C1D-CHD-C4C
4	N	184	CYC	NA-C4A-CHB-C1B
4	N	184	CYC	C3A-C4A-CHB-C1B
4	N	184	CYC	C4B-C3B-CAB-CBB
4	N	184	CYC	ND-C1D-CHD-C4C
4	N	184	CYC	C2D-C1D-CHD-C4C
4	N	184	CYC	C2D-C3D-CAD-CBD
4	N	184	CYC	C4D-C3D-CAD-CBD
4	N	255	CYC	ND-C4D-CHA-C1A
4	N	255	CYC	C3D-C4D-CHA-C1A
4	N	255	CYC	NA-C4A-CHB-C1B
4	N	255	CYC	C3A-C4A-CHB-C1B

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Mol	Chain	Res	Type	Atoms
4	N	255	CYC	C4B-C3B-CAB-CBB
4	N	255	CYC	C2C-C3C-CAC-CBC
4	N	255	CYC	C2D-C3D-CAD-CBD
4	N	255	CYC	C4D-C3D-CAD-CBD
4	O	184	CYC	NA-C4A-CHB-C1B
4	O	184	CYC	C4C-C3C-CAC-CBC
4	P	184	CYC	NA-C4A-CHB-C1B
4	P	184	CYC	C2B-C3B-CAB-CBB
4	P	184	CYC	C2C-C3C-CAC-CBC
4	P	184	CYC	C4C-C3C-CAC-CBC
4	P	184	CYC	ND-C1D-CHD-C4C
4	P	184	CYC	C2D-C1D-CHD-C4C
4	P	184	CYC	C2D-C3D-CAD-CBD
4	P	184	CYC	C4D-C3D-CAD-CBD
4	P	255	CYC	ND-C4D-CHA-C1A
4	P	255	CYC	C3D-C4D-CHA-C1A
4	P	255	CYC	NA-C4A-CHB-C1B
4	P	255	CYC	C3A-C4A-CHB-C1B
4	P	255	CYC	ND-C1D-CHD-C4C
4	P	255	CYC	C2D-C1D-CHD-C4C
4	Q	184	CYC	NA-C4A-CHB-C1B
4	Q	184	CYC	C3A-C4A-CHB-C1B
4	Q	184	CYC	C4B-C3B-CAB-CBB
4	Q	184	CYC	ND-C1D-CHD-C4C
4	R	184	CYC	NA-C4A-CHB-C1B
4	R	184	CYC	C3A-C4A-CHB-C1B
4	R	184	CYC	C2C-C3C-CAC-CBC
4	R	184	CYC	C4C-C3C-CAC-CBC
4	R	184	CYC	ND-C1D-CHD-C4C
4	R	184	CYC	C2D-C1D-CHD-C4C
4	R	184	CYC	C2D-C3D-CAD-CBD
4	R	184	CYC	C4D-C3D-CAD-CBD
4	R	255	CYC	ND-C4D-CHA-C1A
4	R	255	CYC	C3D-C4D-CHA-C1A
4	R	255	CYC	C1A-C2A-CAA-CBA
4	R	255	CYC	C3A-C2A-CAA-CBA
4	R	255	CYC	NA-C4A-CHB-C1B
4	S	184	CYC	NA-C4A-CHB-C1B
4	S	184	CYC	C3A-C4A-CHB-C1B
4	S	184	CYC	C4C-C3C-CAC-CBC
4	S	184	CYC	ND-C1D-CHD-C4C
4	S	184	CYC	C2D-C1D-CHD-C4C

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Mol	Chain	Res	Type	Atoms
4	S	184	CYC	C2D-C3D-CAD-CBD
4	S	184	CYC	C4D-C3D-CAD-CBD
4	T	184	CYC	NA-C4A-CHB-C1B
4	T	184	CYC	C3A-C4A-CHB-C1B
4	T	184	CYC	C4B-C3B-CAB-CBB
4	T	184	CYC	ND-C1D-CHD-C4C
4	T	184	CYC	C2D-C1D-CHD-C4C
4	T	255	CYC	ND-C4D-CHA-C1A
4	T	255	CYC	C3D-C4D-CHA-C1A
4	T	255	CYC	NA-C4A-CHB-C1B
4	T	255	CYC	C3A-C4A-CHB-C1B
4	T	255	CYC	C4C-C3C-CAC-CBC
4	U	184	CYC	C2C-C3C-CAC-CBC
4	U	184	CYC	C4C-C3C-CAC-CBC
4	U	184	CYC	ND-C1D-CHD-C4C
4	U	184	CYC	C2D-C1D-CHD-C4C
4	V	184	CYC	NA-C4A-CHB-C1B
4	V	184	CYC	C3A-C4A-CHB-C1B
4	V	184	CYC	ND-C1D-CHD-C4C
4	V	184	CYC	C2D-C1D-CHD-C4C
4	V	184	CYC	C4D-C3D-CAD-CBD
4	V	255	CYC	NA-C4A-CHB-C1B
4	W	184	CYC	NA-C4A-CHB-C1B
4	W	184	CYC	C3A-C4A-CHB-C1B
4	W	184	CYC	ND-C1D-CHD-C4C
4	W	184	CYC	C2D-C1D-CHD-C4C
4	X	184	CYC	NA-C4A-CHB-C1B
4	X	184	CYC	C3A-C4A-CHB-C1B
4	X	184	CYC	C2C-C3C-CAC-CBC
4	X	184	CYC	C4C-C3C-CAC-CBC
4	X	184	CYC	ND-C1D-CHD-C4C
4	X	184	CYC	C2D-C1D-CHD-C4C
4	X	184	CYC	C2D-C3D-CAD-CBD
4	X	184	CYC	C4D-C3D-CAD-CBD
4	X	255	CYC	ND-C4D-CHA-C1A
4	X	255	CYC	C4C-C3C-CAC-CBC
4	B	184	CYC	C2B-C3B-CAB-CBB
4	E	184	CYC	C2B-C3B-CAB-CBB
4	F	184	CYC	C2B-C3B-CAB-CBB
4	F	255	CYC	C2B-C3B-CAB-CBB
4	H	255	CYC	C2B-C3B-CAB-CBB
4	R	184	CYC	C2B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
4	R	255	CYC	C2B-C3B-CAB-CBB
4	X	184	CYC	C2B-C3B-CAB-CBB
4	L	255	CYC	C2B-C3B-CAB-CBB
4	N	255	CYC	C2B-C3B-CAB-CBB
4	V	255	CYC	C2B-C3B-CAB-CBB
4	N	184	CYC	C2B-C3B-CAB-CBB
4	A	184	CYC	C2B-C3B-CAB-CBB
4	T	184	CYC	C2B-C3B-CAB-CBB
4	J	184	CYC	C2B-C3B-CAB-CBB
4	P	255	CYC	C3A-C2A-CAA-CBA
4	J	255	CYC	C2B-C3B-CAB-CBB
4	T	255	CYC	C2B-C3B-CAB-CBB
4	P	255	CYC	C1A-C2A-CAA-CBA
4	G	184	CYC	C2B-C3B-CAB-CBB
4	D	255	CYC	C2B-C3B-CAB-CBB
4	A	184	CYC	C3A-C4A-CHB-C1B
4	C	184	CYC	C3A-C4A-CHB-C1B
4	O	184	CYC	C3A-C4A-CHB-C1B
4	P	184	CYC	C3A-C4A-CHB-C1B
4	R	255	CYC	C3A-C4A-CHB-C1B
4	V	255	CYC	C3A-C4A-CHB-C1B
4	P	255	CYC	C2B-C3B-CAB-CBB
4	V	255	CYC	C3D-CAD-CBD-CGD
4	J	184	CYC	NA-C1A-CHA-C4D
4	J	255	CYC	NA-C1A-CHA-C4D
4	K	184	CYC	NA-C1A-CHA-C4D
4	N	255	CYC	NA-C1A-CHA-C4D
4	P	255	CYC	NA-C1A-CHA-C4D
4	W	184	CYC	NA-C1A-CHA-C4D
4	B	184	CYC	C4B-C3B-CAB-CBB
4	F	184	CYC	C4B-C3B-CAB-CBB
4	F	255	CYC	C4B-C3B-CAB-CBB
4	H	255	CYC	C4B-C3B-CAB-CBB
4	P	184	CYC	C4B-C3B-CAB-CBB
4	R	184	CYC	C4B-C3B-CAB-CBB
4	R	255	CYC	C4B-C3B-CAB-CBB
4	T	255	CYC	C4B-C3B-CAB-CBB
4	V	255	CYC	C4B-C3B-CAB-CBB
4	X	184	CYC	C4B-C3B-CAB-CBB
4	L	255	CYC	C2A-CAA-CBA-CGA
4	V	184	CYC	C2B-C3B-CAB-CBB
4	Q	184	CYC	C2B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
4	F	255	CYC	NA-C4A-CHB-C1B
4	U	184	CYC	NA-C4A-CHB-C1B
4	X	255	CYC	NA-C4A-CHB-C1B
4	B	255	CYC	C3A-C4A-CHB-C1B
4	F	255	CYC	C3A-C4A-CHB-C1B
4	L	255	CYC	C3A-C4A-CHB-C1B
4	U	184	CYC	C3A-C4A-CHB-C1B
4	X	255	CYC	C3A-C4A-CHB-C1B
4	Q	184	CYC	NA-C1A-CHA-C4D
4	O	184	CYC	C1A-C2A-CAA-CBA
4	J	255	CYC	NB-C1B-CHB-C4A
4	X	255	CYC	C2A-CAA-CBA-CGA
4	C	184	CYC	C2C-C3C-CAC-CBC
4	F	255	CYC	C2C-C3C-CAC-CBC
4	N	184	CYC	C3D-CAD-CBD-CGD
4	X	255	CYC	C2C-C3C-CAC-CBC
4	H	184	CYC	NA-C1A-CHA-C4D
4	L	255	CYC	NA-C1A-CHA-C4D
4	O	184	CYC	C3A-C2A-CAA-CBA
4	J	255	CYC	C2A-C1A-CHA-C4D
4	W	184	CYC	C2A-C1A-CHA-C4D
4	L	255	CYC	C3D-CAD-CBD-CGD
4	E	184	CYC	C2A-CAA-CBA-CGA
4	E	184	CYC	NA-C1A-CHA-C4D
4	G	184	CYC	NA-C1A-CHA-C4D
4	W	184	CYC	C2B-C3B-CAB-CBB
4	N	255	CYC	C4C-C3C-CAC-CBC
4	W	184	CYC	C4C-C3C-CAC-CBC
4	N	255	CYC	C2A-CAA-CBA-CGA
4	V	184	CYC	C2A-CAA-CBA-CGA
4	B	184	CYC	C3D-CAD-CBD-CGD
4	S	184	CYC	NA-C1A-CHA-C4D
4	X	255	CYC	NA-C1A-CHA-C4D
4	D	255	CYC	C4B-C3B-CAB-CBB
4	R	255	CYC	C2A-CAA-CBA-CGA
4	O	184	CYC	C2C-C3C-CAC-CBC
4	S	184	CYC	C2C-C3C-CAC-CBC
4	D	184	CYC	NA-C1A-CHA-C4D
4	V	184	CYC	C2D-C3D-CAD-CBD
4	S	184	CYC	C2B-C3B-CAB-CBB
4	E	184	CYC	C2A-C1A-CHA-C4D
4	R	184	CYC	C3D-CAD-CBD-CGD

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Mol	Chain	Res	Type	Atoms
4	X	184	CYC	NA-C1A-CHA-C4D
4	A	184	CYC	C1A-C2A-CAA-CBA
4	E	184	CYC	CAD-CBD-CGD-O1D
4	V	184	CYC	NB-C1B-CHB-C4A
4	H	184	CYC	C2A-CAA-CBA-CGA
4	L	184	CYC	C2A-CAA-CBA-CGA
4	F	184	CYC	CAA-CBA-CGA-O2A
4	K	184	CYC	CAA-CBA-CGA-O2A
4	U	184	CYC	CAA-CBA-CGA-O2A
4	W	184	CYC	CAD-CBD-CGD-O1D
4	H	184	CYC	CAA-CBA-CGA-O2A
4	H	184	CYC	CAD-CBD-CGD-O1D
4	I	184	CYC	CAA-CBA-CGA-O1A
4	N	184	CYC	CAA-CBA-CGA-O2A
4	W	184	CYC	CAA-CBA-CGA-O1A
4	B	184	CYC	CAD-CBD-CGD-O1D
4	N	184	CYC	CAA-CBA-CGA-O1A
4	N	255	CYC	CAD-CBD-CGD-O1D
4	V	184	CYC	CAD-CBD-CGD-O2D
4	X	184	CYC	CAA-CBA-CGA-O2A
4	G	184	CYC	CAA-CBA-CGA-O1A
4	U	184	CYC	CAA-CBA-CGA-O1A
4	X	184	CYC	C2A-CAA-CBA-CGA
4	A	184	CYC	CAA-CBA-CGA-O1A
4	J	184	CYC	CAA-CBA-CGA-O1A
4	R	255	CYC	CAD-CBD-CGD-O1D
4	L	184	CYC	NA-C1A-CHA-C4D
4	R	184	CYC	CAD-CBD-CGD-O2D
4	W	184	CYC	CAA-CBA-CGA-O2A
4	W	184	CYC	CAD-CBD-CGD-O2D
4	X	184	CYC	NB-C1B-CHB-C4A
4	I	184	CYC	CAA-CBA-CGA-O2A
4	O	184	CYC	CAA-CBA-CGA-O1A
4	P	184	CYC	CAA-CBA-CGA-O1A
4	S	184	CYC	CAA-CBA-CGA-O2A
4	S	184	CYC	CAD-CBD-CGD-O1D
4	E	184	CYC	CAA-CBA-CGA-O2A
4	L	184	CYC	CAD-CBD-CGD-O1D
4	L	255	CYC	CAA-CBA-CGA-O2A
4	R	184	CYC	CAD-CBD-CGD-O1D
4	S	184	CYC	CAD-CBD-CGD-O2D
4	B	255	CYC	CAA-CBA-CGA-O2A

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Mol	Chain	Res	Type	Atoms
4	E	184	CYC	CAD-CBD-CGD-O2D
4	F	255	CYC	CAA-CBA-CGA-O1A
4	L	184	CYC	CAA-CBA-CGA-O1A
4	M	184	CYC	CAA-CBA-CGA-O1A
4	M	184	CYC	CAA-CBA-CGA-O2A
4	B	255	CYC	CAA-CBA-CGA-O1A
4	C	184	CYC	CAA-CBA-CGA-O2A
4	H	255	CYC	CAA-CBA-CGA-O2A
4	J	184	CYC	CAA-CBA-CGA-O2A
4	P	255	CYC	CAA-CBA-CGA-O2A
4	R	255	CYC	CAD-CBD-CGD-O2D
4	B	184	CYC	CAD-CBD-CGD-O2D
4	E	184	CYC	CAA-CBA-CGA-O1A
4	F	255	CYC	CAA-CBA-CGA-O2A
4	K	184	CYC	CAA-CBA-CGA-O1A
4	L	255	CYC	CAA-CBA-CGA-O1A
4	S	184	CYC	CAA-CBA-CGA-O1A
4	V	184	CYC	CAD-CBD-CGD-O1D
4	L	184	CYC	CAD-CBD-CGD-O2D
4	N	255	CYC	CAD-CBD-CGD-O2D
4	O	184	CYC	CAA-CBA-CGA-O2A
4	P	255	CYC	CAA-CBA-CGA-O1A
4	H	184	CYC	CAD-CBD-CGD-O2D
4	H	184	CYC	CAA-CBA-CGA-O1A
4	H	255	CYC	CAA-CBA-CGA-O1A
4	L	184	CYC	CAA-CBA-CGA-O2A
4	Q	184	CYC	CAA-CBA-CGA-O2A
4	A	184	CYC	C3A-C2A-CAA-CBA
4	D	184	CYC	CAD-CBD-CGD-O2D
4	M	184	CYC	CAD-CBD-CGD-O2D
4	X	184	CYC	CAD-CBD-CGD-O2D
4	T	255	CYC	C2C-C3C-CAC-CBC
4	C	184	CYC	CAA-CBA-CGA-O1A
4	D	184	CYC	CAD-CBD-CGD-O1D
4	F	184	CYC	CAA-CBA-CGA-O1A
4	Q	184	CYC	CAA-CBA-CGA-O1A
4	T	255	CYC	CAA-CBA-CGA-O1A
4	P	255	CYC	C2A-C1A-CHA-C4D
4	P	184	CYC	CAA-CBA-CGA-O2A
4	G	184	CYC	CAA-CBA-CGA-O2A
4	D	255	CYC	NA-C1A-CHA-C4D
4	A	184	CYC	CAA-CBA-CGA-O2A

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Mol	Chain	Res	Type	Atoms
4	D	255	CYC	CAD-CBD-CGD-O1D
4	P	255	CYC	C2A-CAA-CBA-CGA
4	M	184	CYC	CAD-CBD-CGD-O1D
4	T	255	CYC	CAA-CBA-CGA-O2A
4	P	184	CYC	CAD-CBD-CGD-O2D
4	T	184	CYC	CAA-CBA-CGA-O2A
4	X	184	CYC	CAA-CBA-CGA-O1A
4	R	184	CYC	CAA-CBA-CGA-O1A
4	J	184	CYC	CAD-CBD-CGD-O1D
4	R	184	CYC	CAA-CBA-CGA-O2A
4	D	184	CYC	CAA-CBA-CGA-O2A
4	F	184	CYC	CAD-CBD-CGD-O1D
4	D	184	CYC	CAA-CBA-CGA-O1A
4	D	255	CYC	CAA-CBA-CGA-O1A
4	J	255	CYC	CAA-CBA-CGA-O2A
4	V	255	CYC	CAA-CBA-CGA-O2A
4	X	255	CYC	CAD-CBD-CGD-O2D
4	B	184	CYC	CAA-CBA-CGA-O2A
4	X	184	CYC	CAD-CBD-CGD-O1D
4	T	255	CYC	CAD-CBD-CGD-O2D
4	B	255	CYC	CAD-CBD-CGD-O2D
4	P	184	CYC	CAD-CBD-CGD-O1D
4	X	255	CYC	CAA-CBA-CGA-O2A
4	V	184	CYC	CAA-CBA-CGA-O1A
4	V	184	CYC	CAA-CBA-CGA-O2A
4	X	255	CYC	CAA-CBA-CGA-O1A
4	J	184	CYC	C2A-C1A-CHA-C4D
4	J	255	CYC	CAA-CBA-CGA-O1A
4	T	255	CYC	CAD-CBD-CGD-O1D
4	V	255	CYC	CAA-CBA-CGA-O1A
4	X	255	CYC	CAD-CBD-CGD-O1D
4	B	255	CYC	CAD-CBD-CGD-O1D
4	F	184	CYC	CAD-CBD-CGD-O2D
4	J	255	CYC	CAD-CBD-CGD-O2D
4	T	184	CYC	CAA-CBA-CGA-O1A
4	J	184	CYC	CAD-CBD-CGD-O2D
4	D	255	CYC	CAD-CBD-CGD-O2D
4	D	255	CYC	CAA-CBA-CGA-O2A
4	U	184	CYC	NB-C1B-CHB-C4A
4	B	184	CYC	CAA-CBA-CGA-O1A
4	J	255	CYC	CAD-CBD-CGD-O1D
4	K	184	CYC	CAD-CBD-CGD-O1D

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Mol	Chain	Res	Type	Atoms
4	K	184	CYC	CAD-CBD-CGD-O2D
4	T	184	CYC	CAD-CBD-CGD-O1D
4	T	184	CYC	CAD-CBD-CGD-O2D
4	B	184	CYC	NB-C1B-CHB-C4A
4	U	184	CYC	CAD-CBD-CGD-O2D
4	B	184	CYC	NA-C1A-CHA-C4D

There are no ring outliers.

35 monomers are involved in 261 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	184	CYC	7	0
4	E	184	CYC	4	0
4	O	184	CYC	4	0
4	H	184	CYC	6	0
4	T	184	CYC	14	0
4	V	184	CYC	5	0
4	P	255	CYC	12	0
4	V	255	CYC	6	0
4	J	184	CYC	10	0
4	X	184	CYC	8	0
4	D	184	CYC	7	0
4	H	255	CYC	14	0
4	L	184	CYC	15	0
4	I	184	CYC	3	0
4	N	255	CYC	12	0
4	K	184	CYC	1	0
4	F	255	CYC	4	0
4	R	184	CYC	5	0
4	J	255	CYC	15	0
4	C	184	CYC	3	0
4	A	184	CYC	3	0
4	U	184	CYC	3	0
4	N	184	CYC	3	0
4	S	184	CYC	10	0
4	L	255	CYC	9	0
4	R	255	CYC	13	0
4	B	255	CYC	15	0
4	W	184	CYC	4	0
4	T	255	CYC	12	0
4	F	184	CYC	4	0
4	D	255	CYC	7	0

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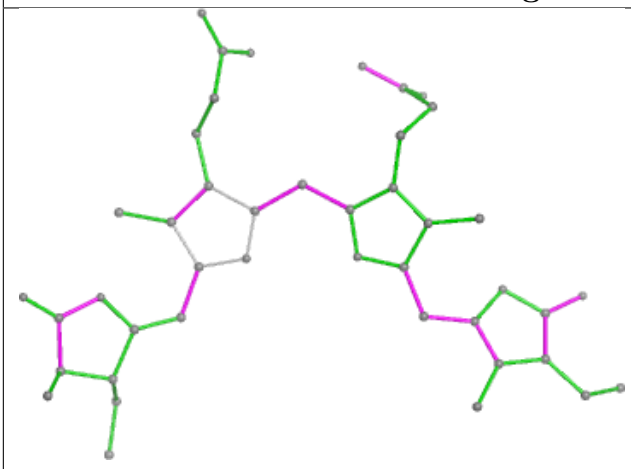
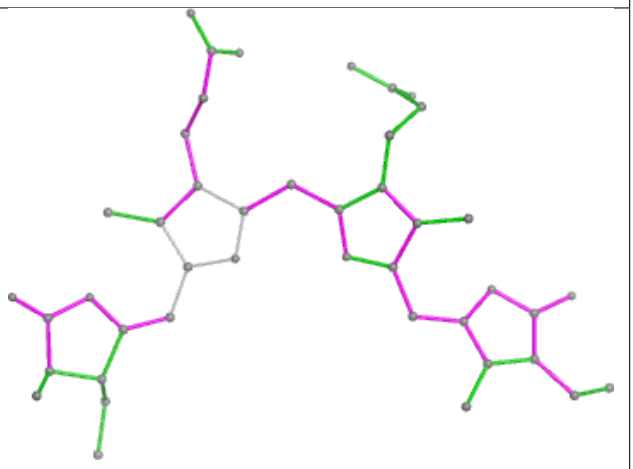
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	Q	184	CYC	4	0
4	M	184	CYC	3	0
4	P	184	CYC	12	0
4	G	184	CYC	4	0

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.

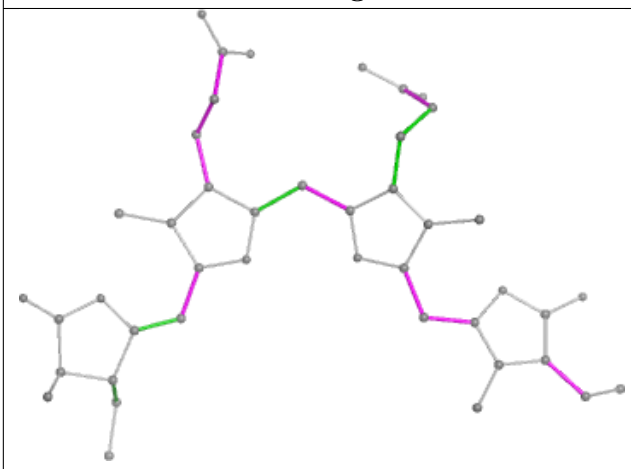
Ligand CYC B 184



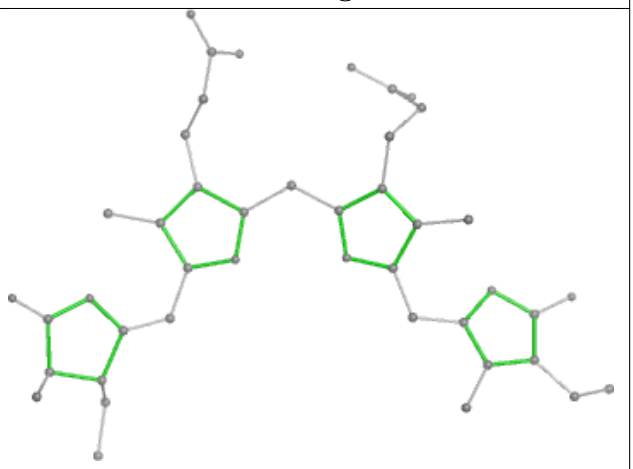
Bond lengths



Bond angles

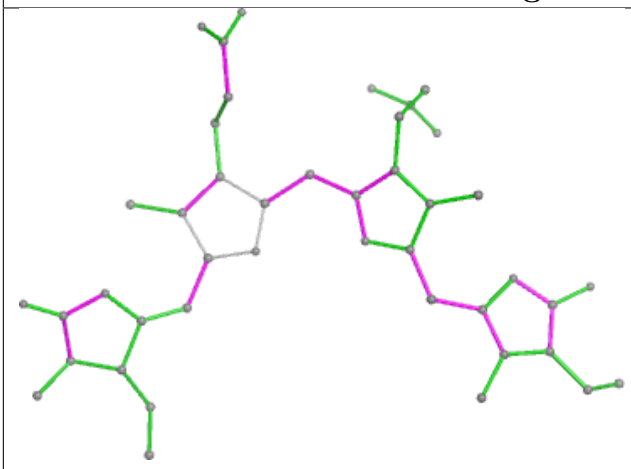


Torsions

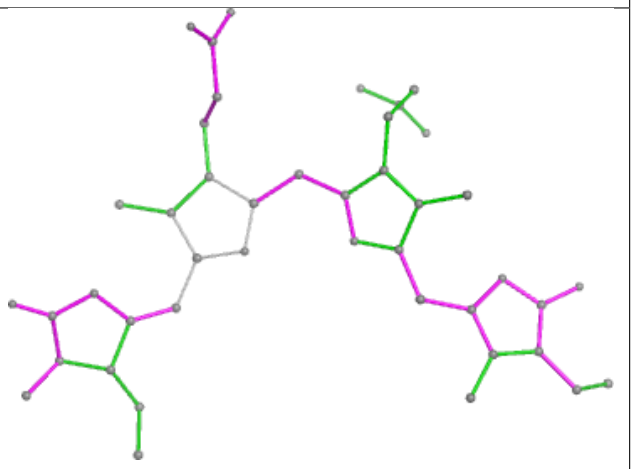


Rings

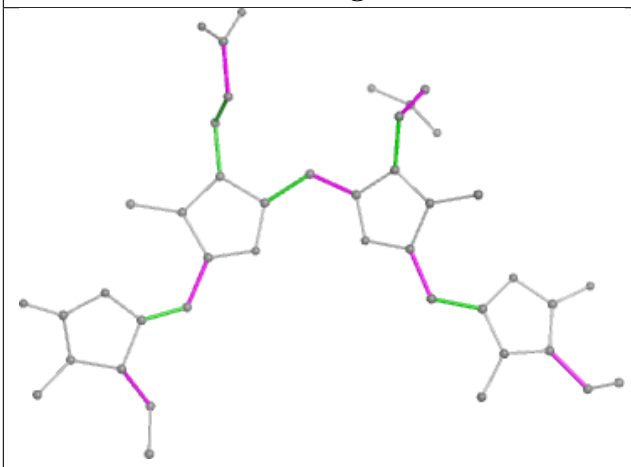
Ligand CYC E 184



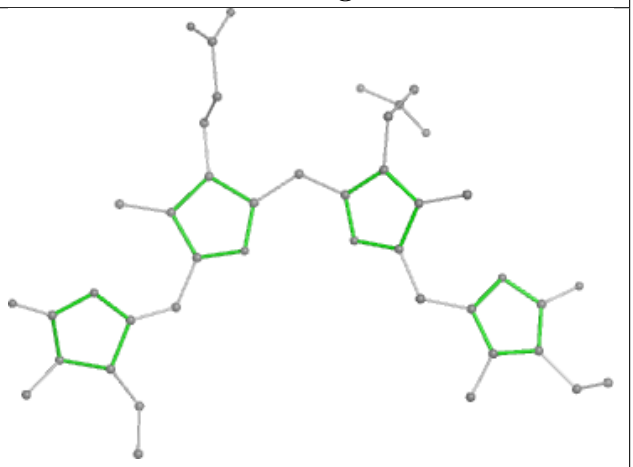
Bond lengths



Bond angles

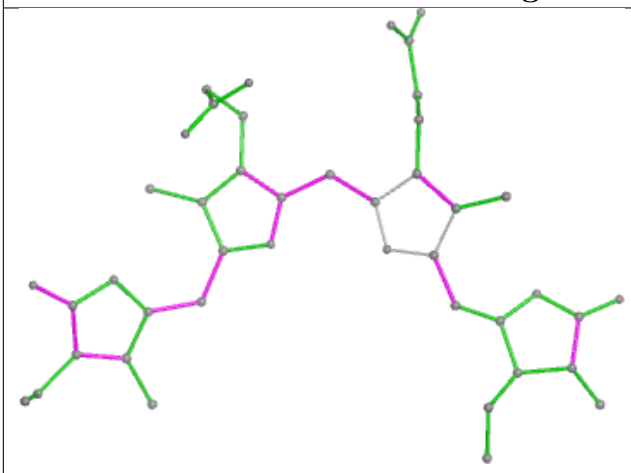


Torsions



Rings

Ligand CYC O 184



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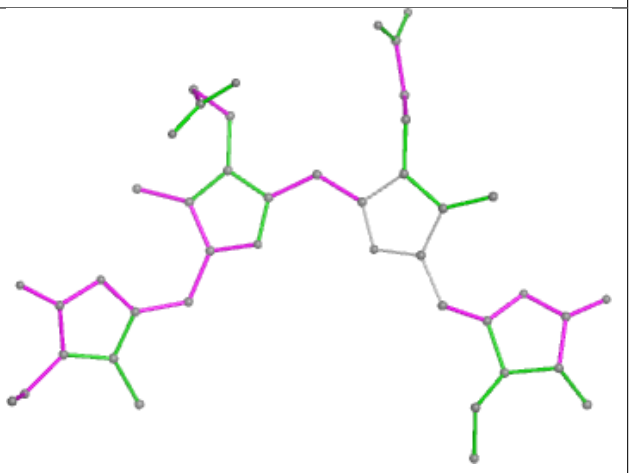
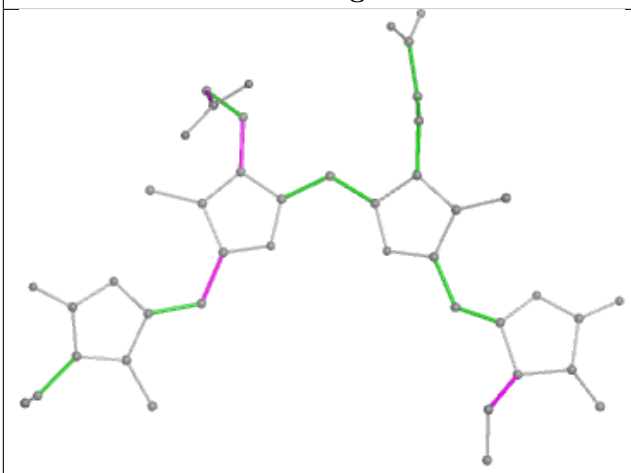
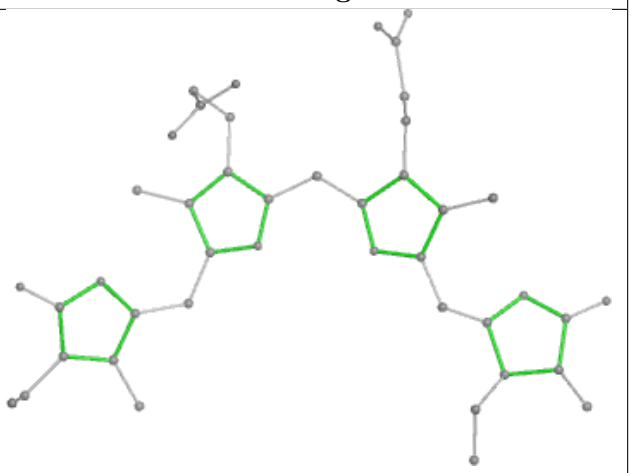


Bond angles

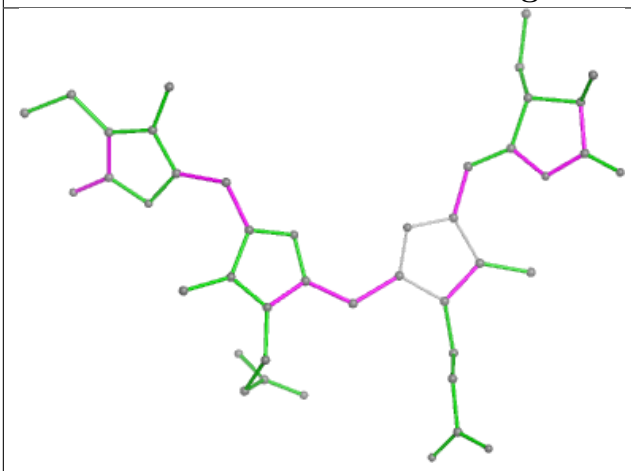


Torsions

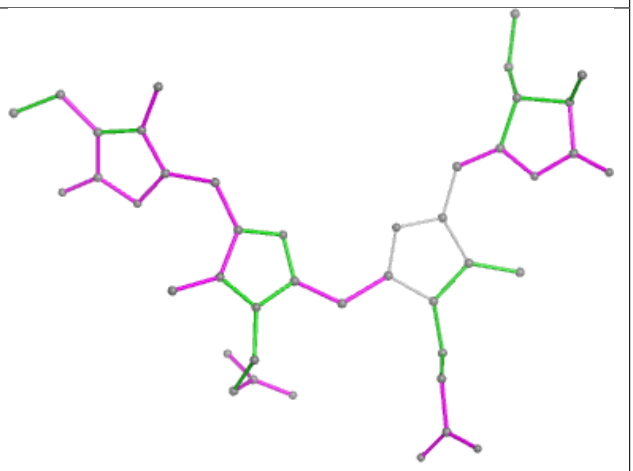


Rings

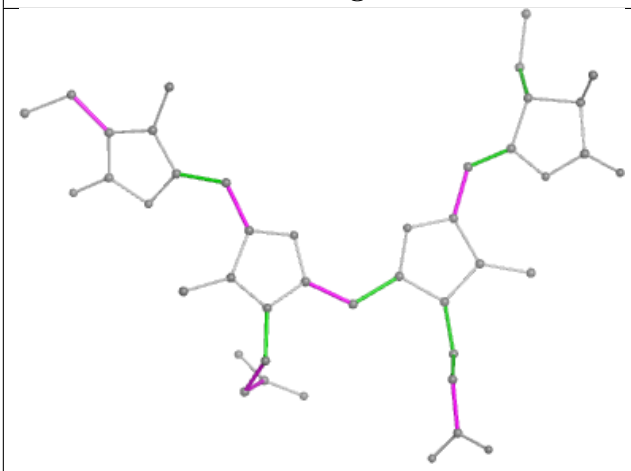
Ligand CYC H 184



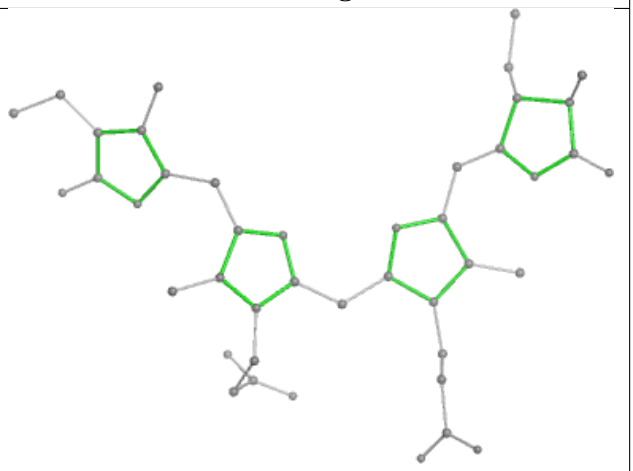
Bond lengths



Bond angles

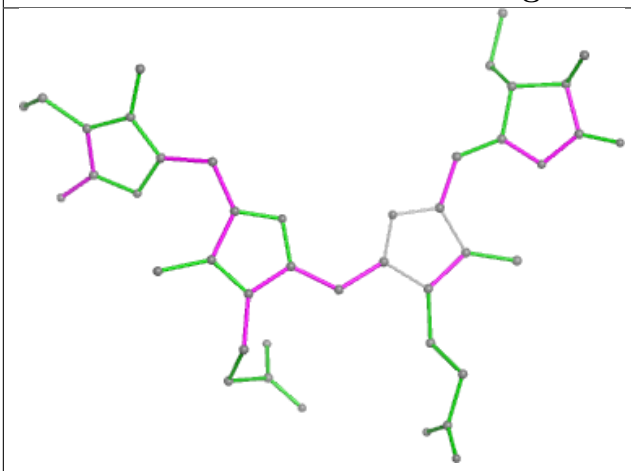


Torsions



Rings

Ligand CYC T 184



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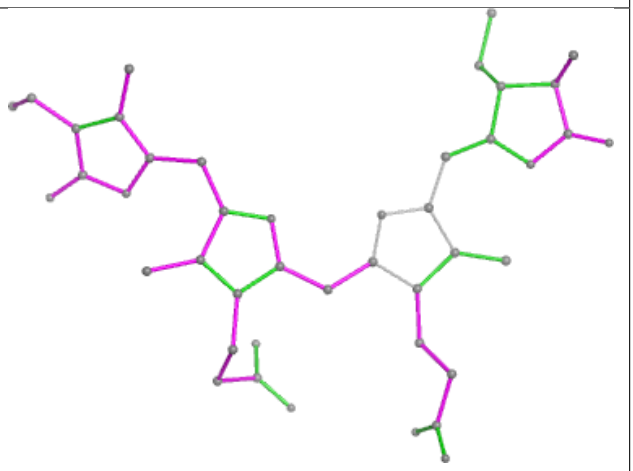
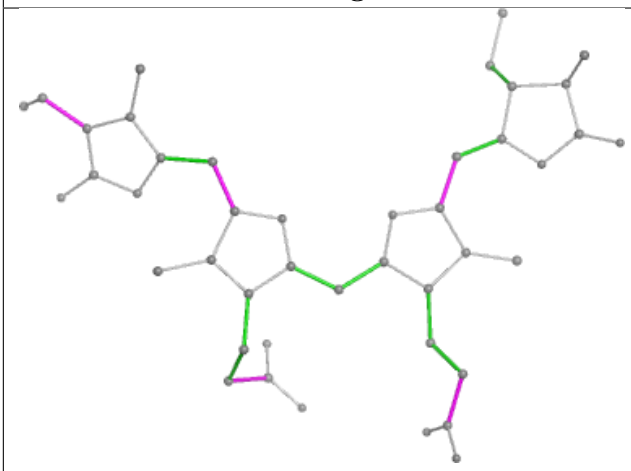


Bond angles



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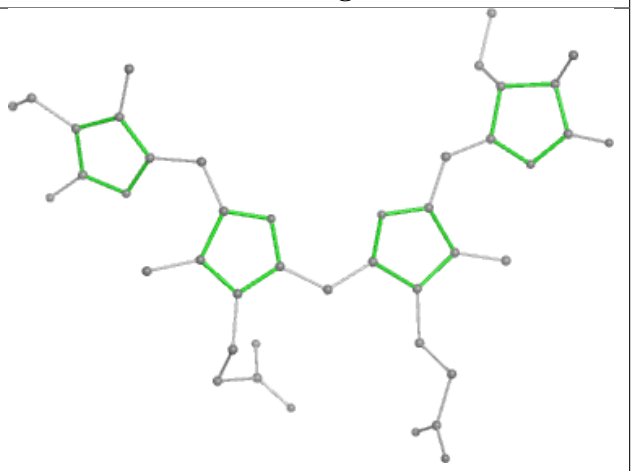
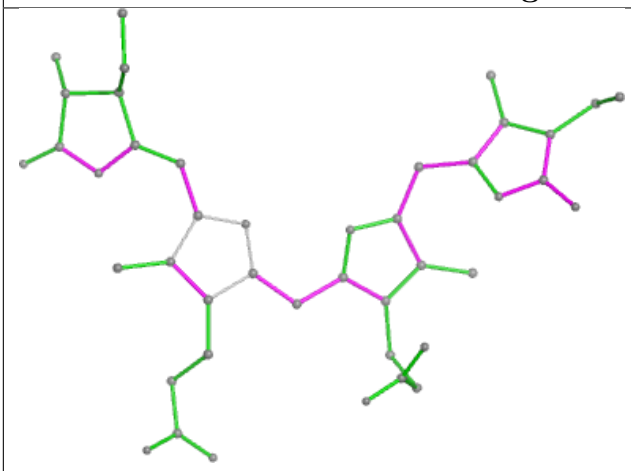


Rings

Ligand CYC V 184



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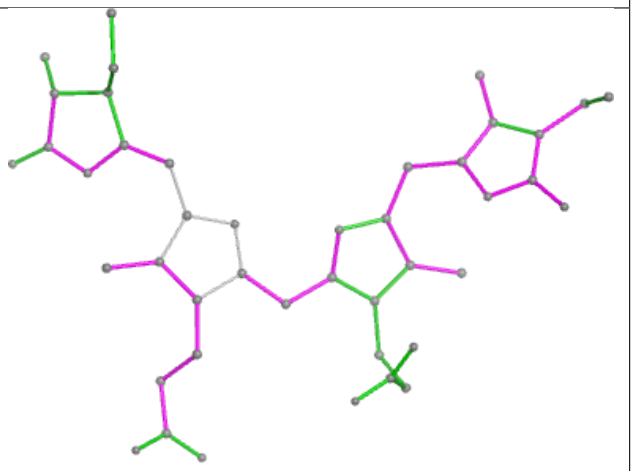
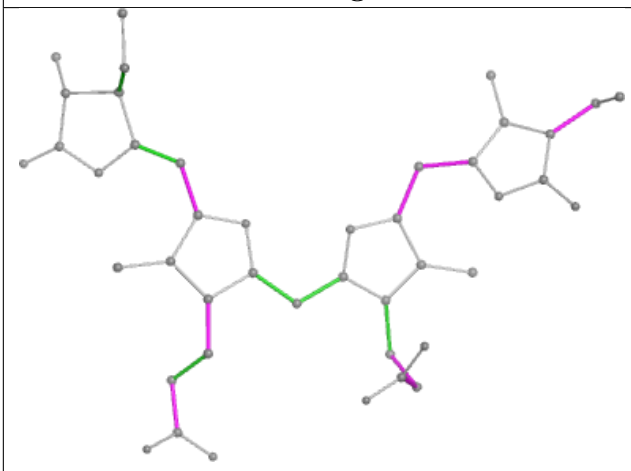


Bond angles



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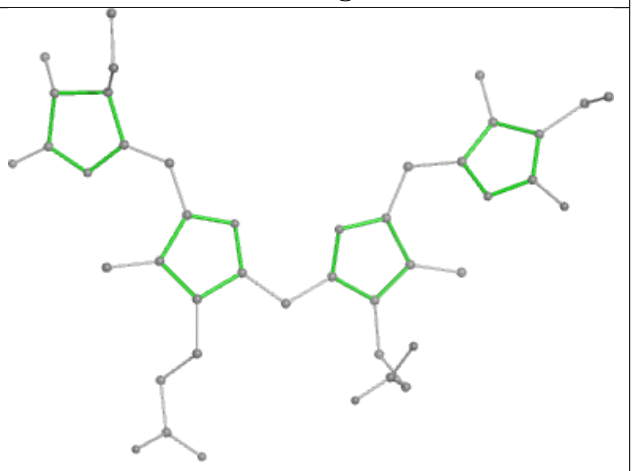
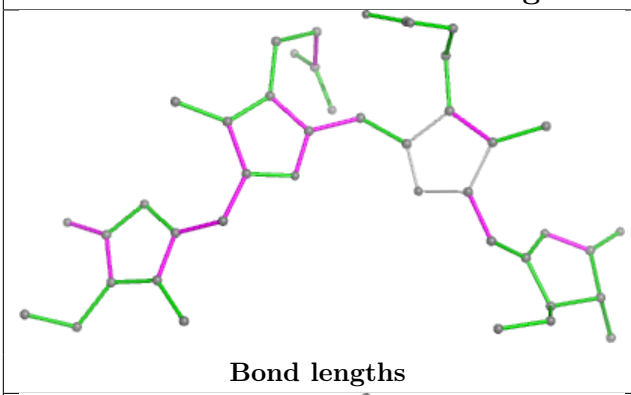


Rings

Ligand CYC P 255



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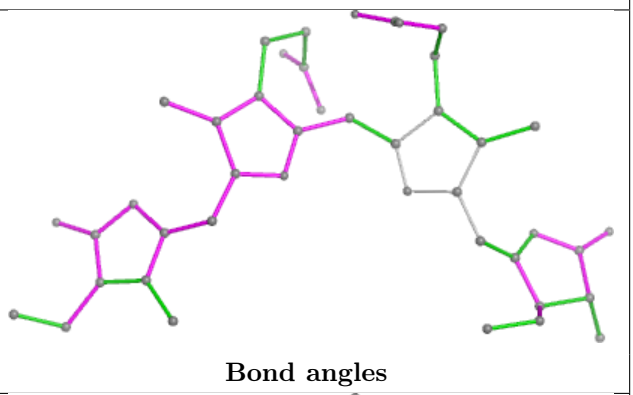

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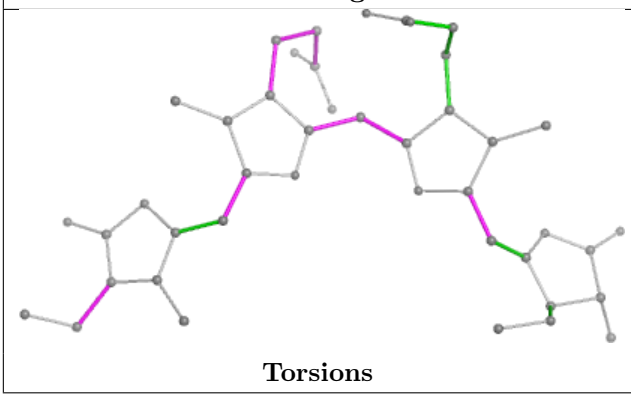

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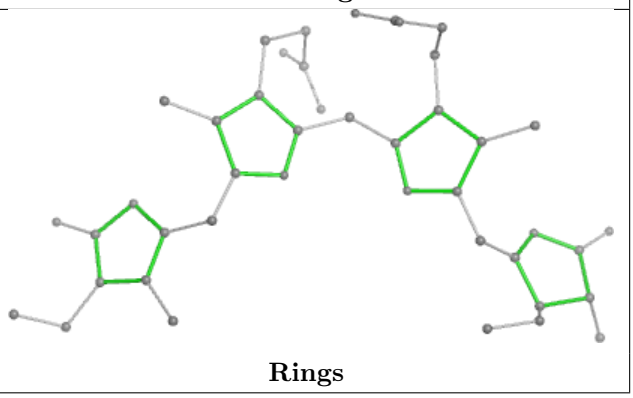
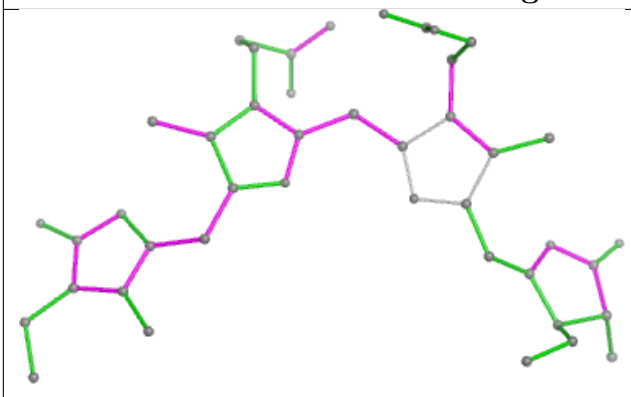


Rings

Ligand CYC V 255



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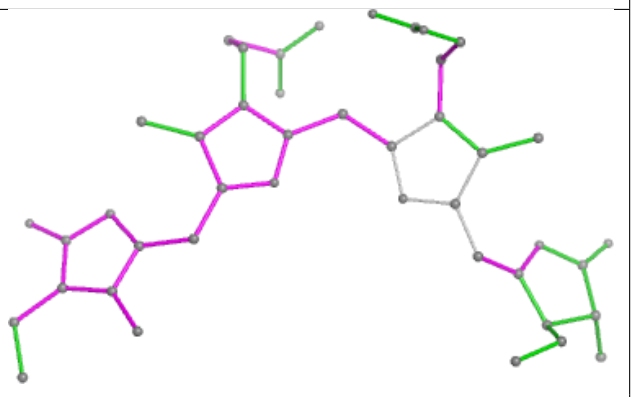
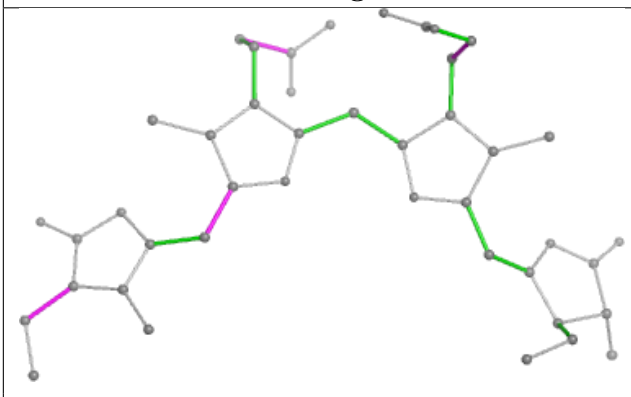
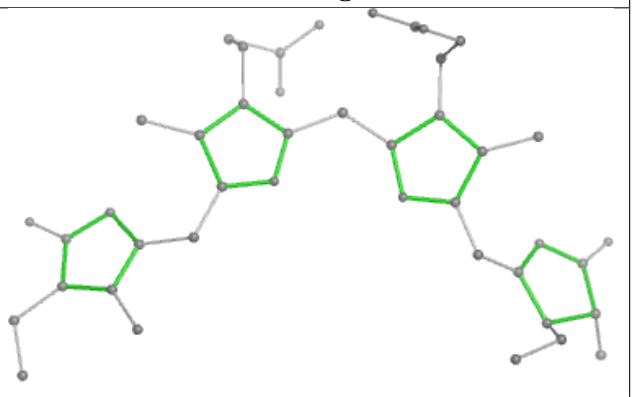


Bond angles

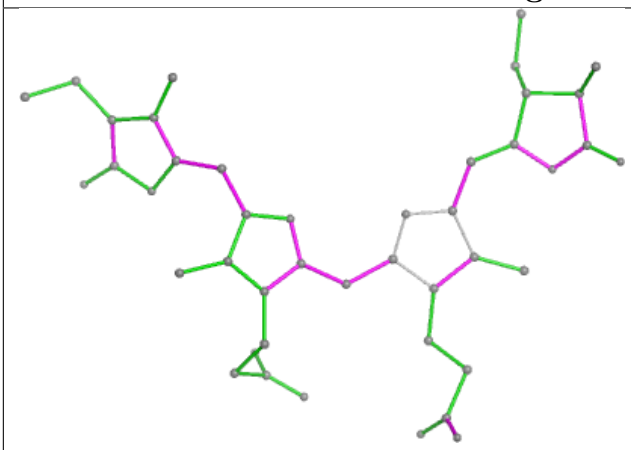


Torsions

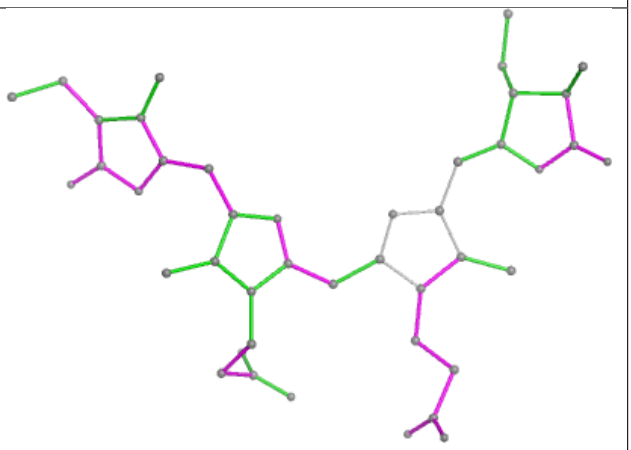


Rings

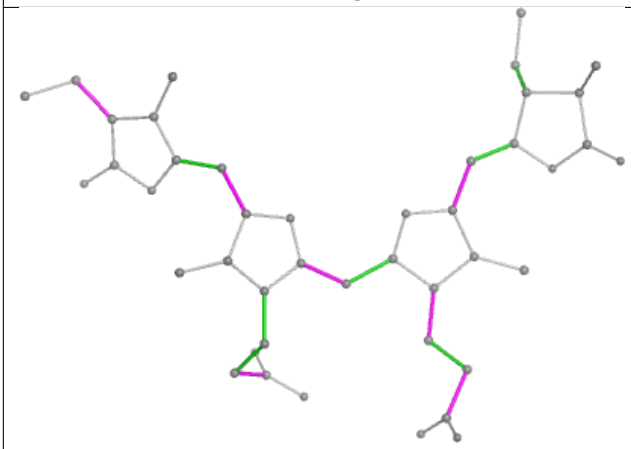
Ligand CYC J 184



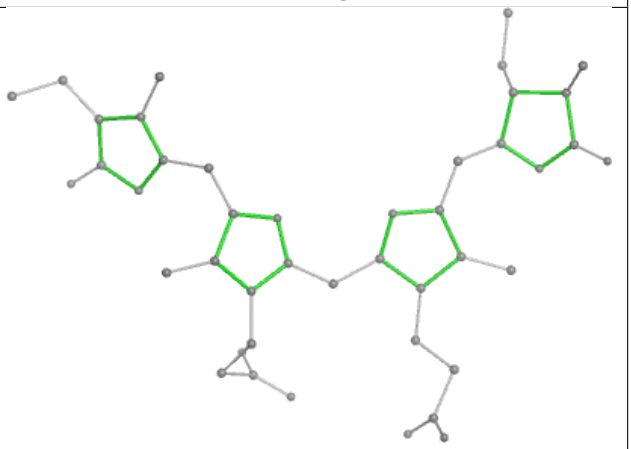
Bond lengths



Bond angles

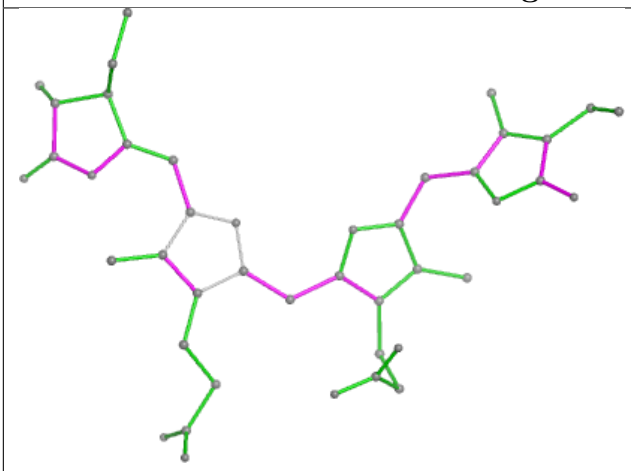


Torsions

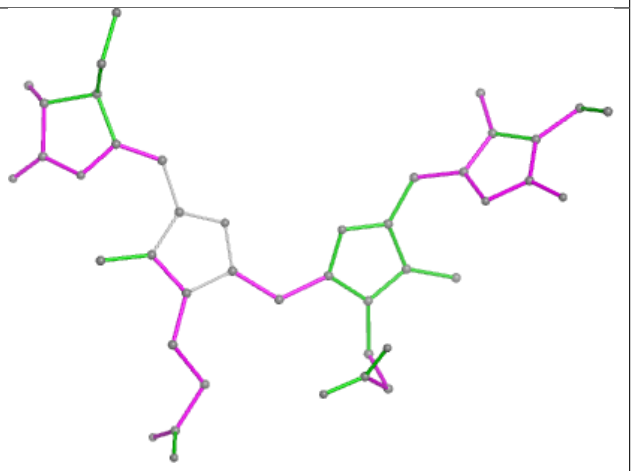


Rings

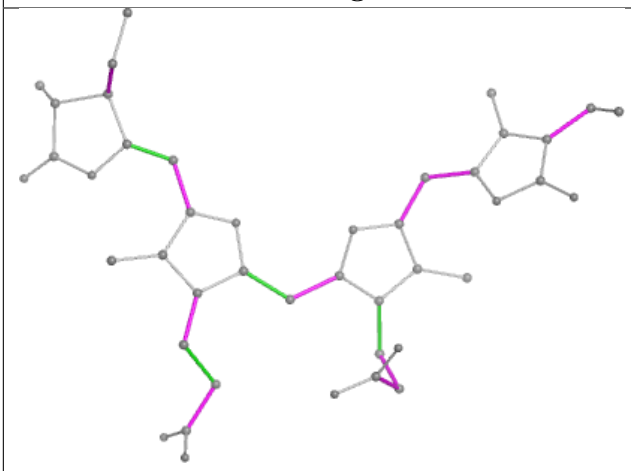
Ligand CYC X 184



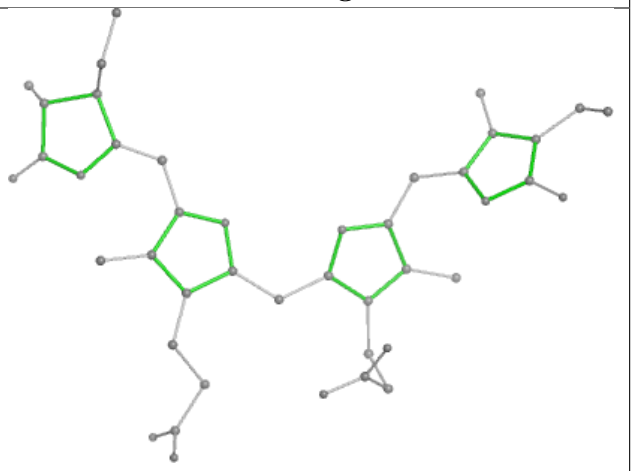
Bond lengths



Bond angles

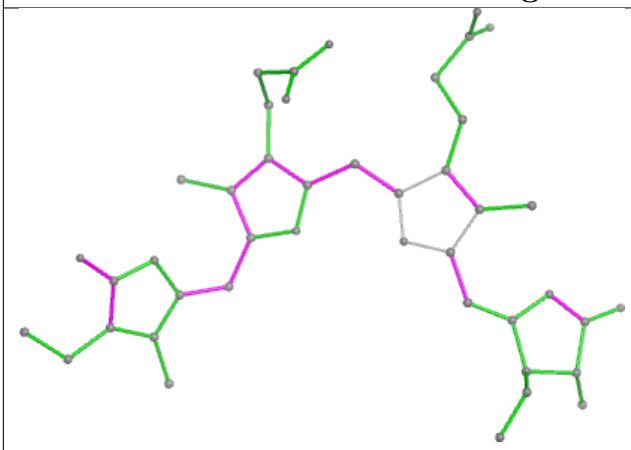


Torsions



Rings

Ligand CYC D 184



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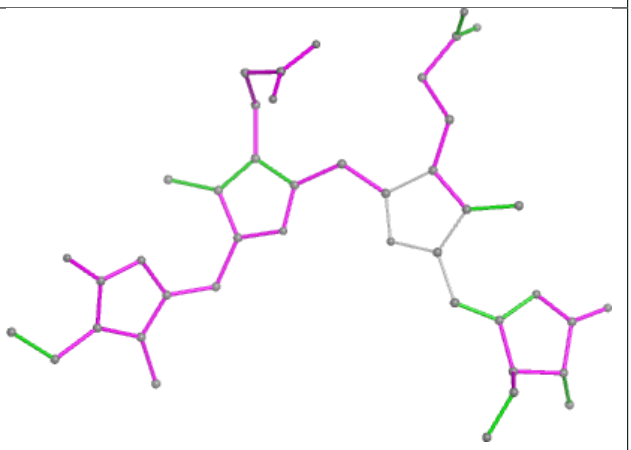
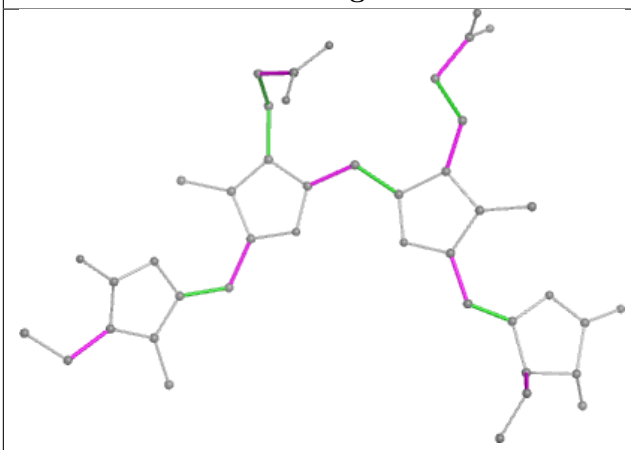


Bond angles



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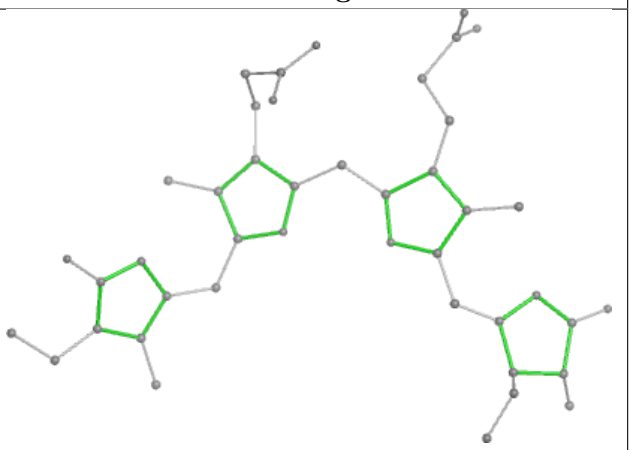
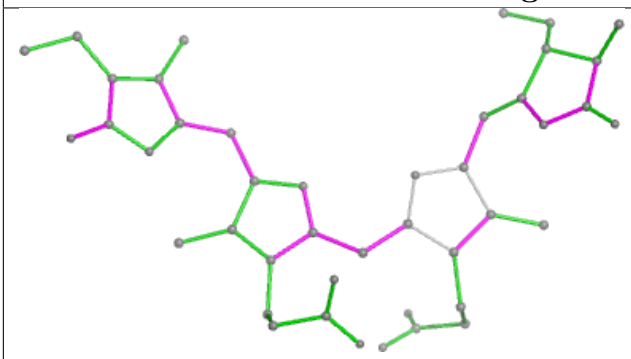


Rings

Ligand CYC H 255



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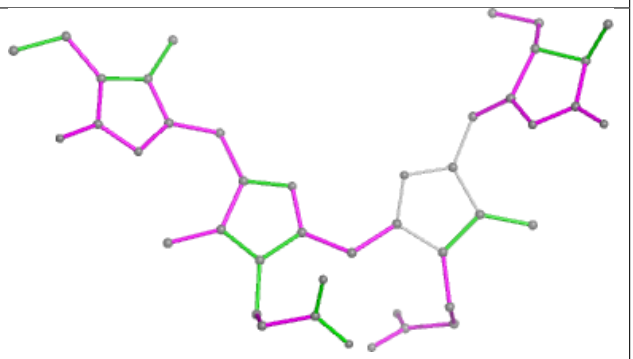

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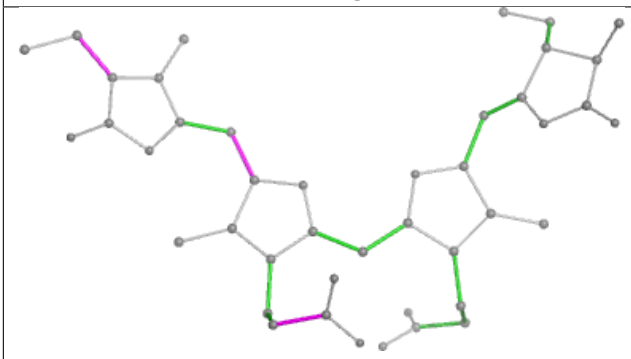

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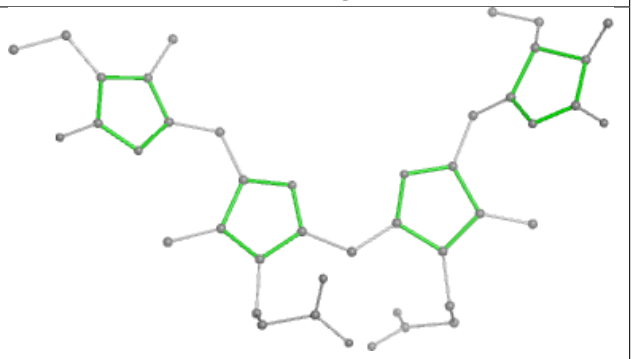

Rings

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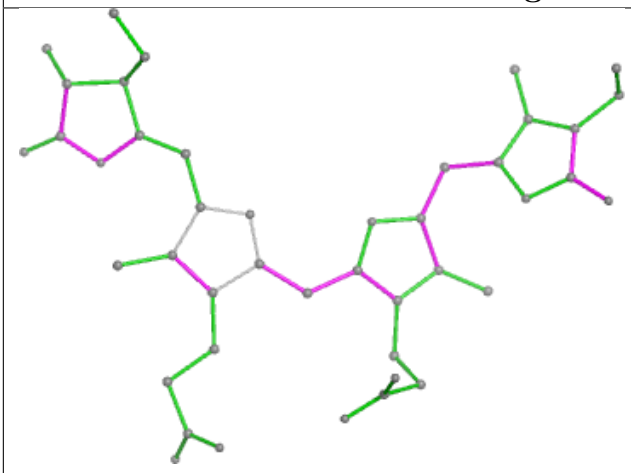

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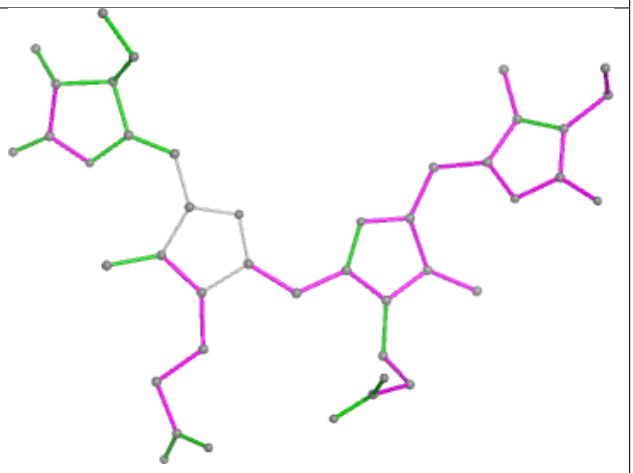

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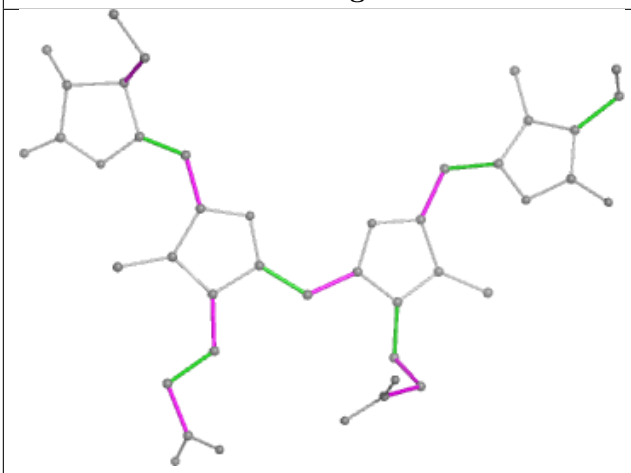

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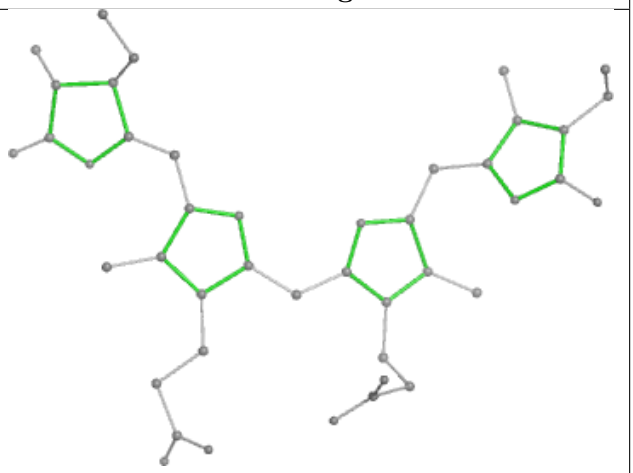
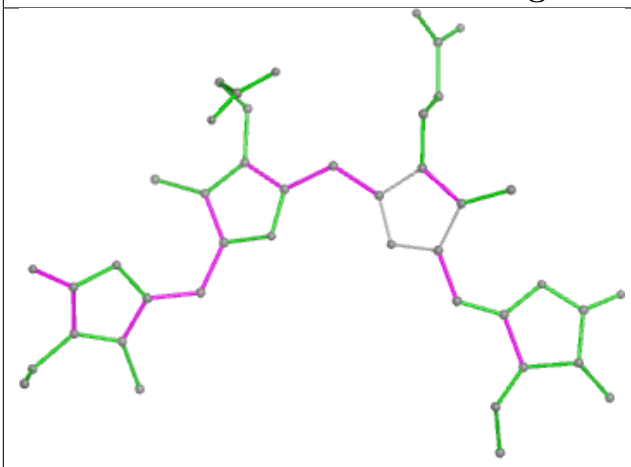


Rings

Ligand CYC I 184



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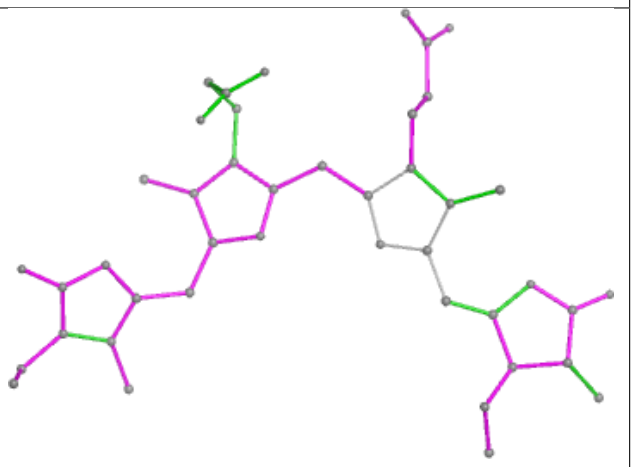

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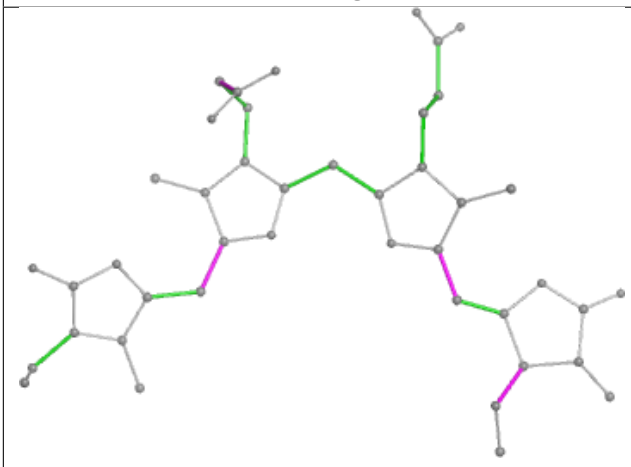

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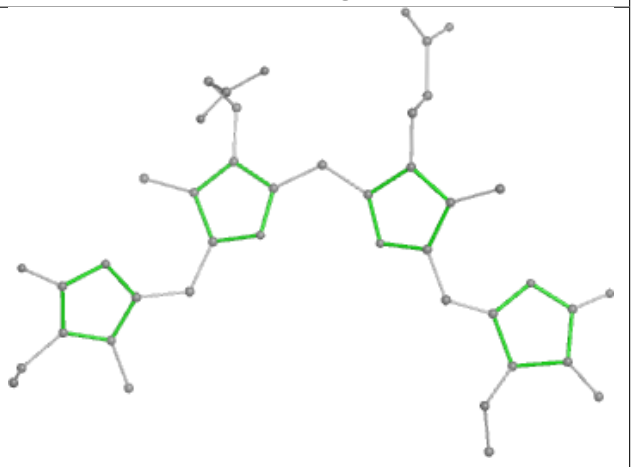
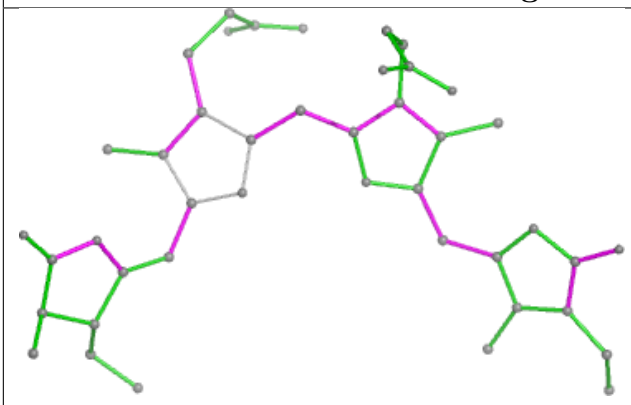


Rings

Ligand CYC N 255



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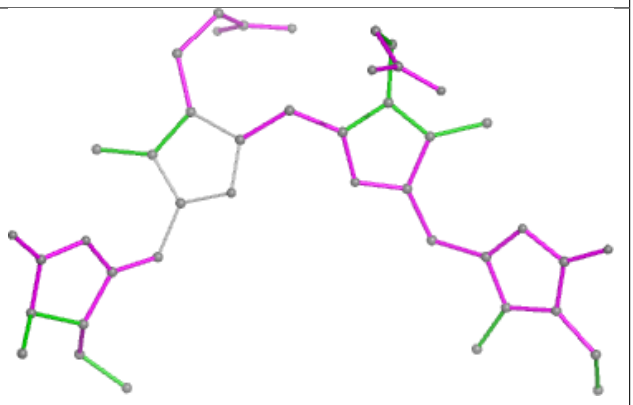

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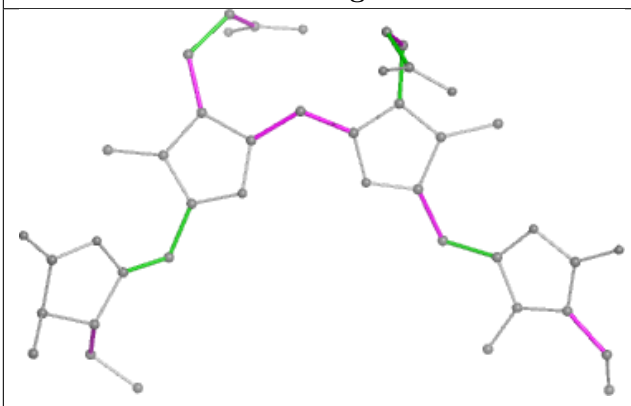

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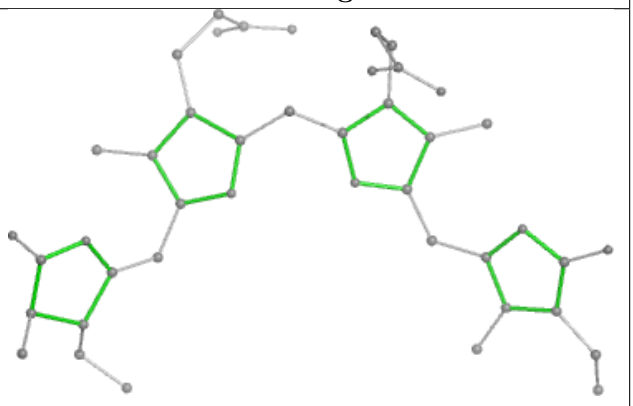
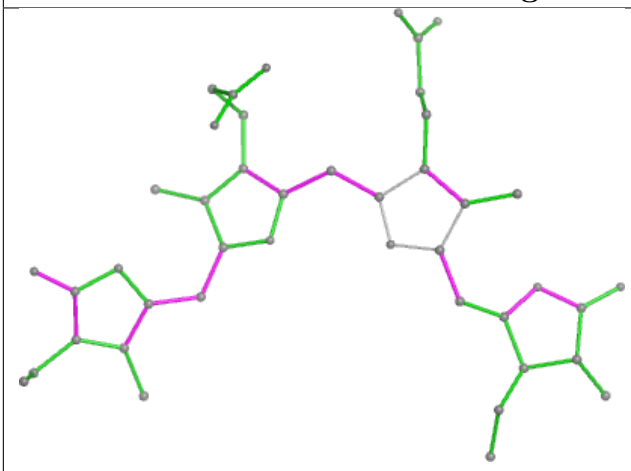


Rings

Ligand CYC K 184



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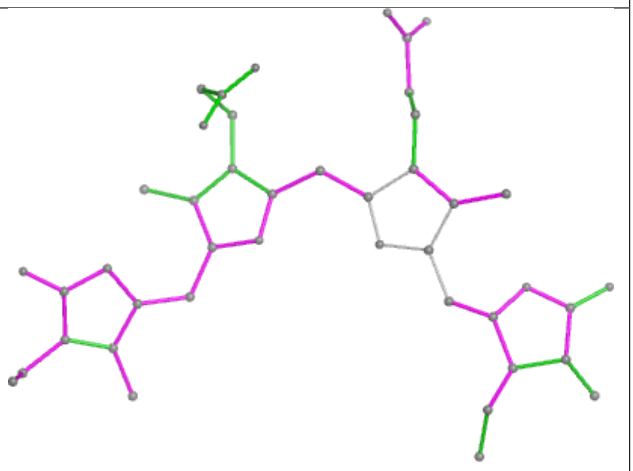

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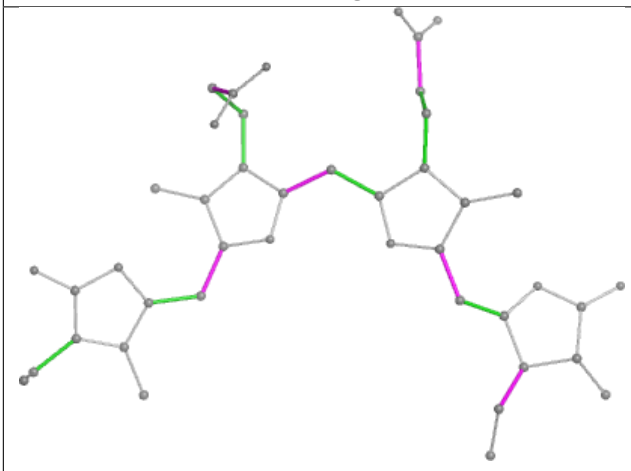

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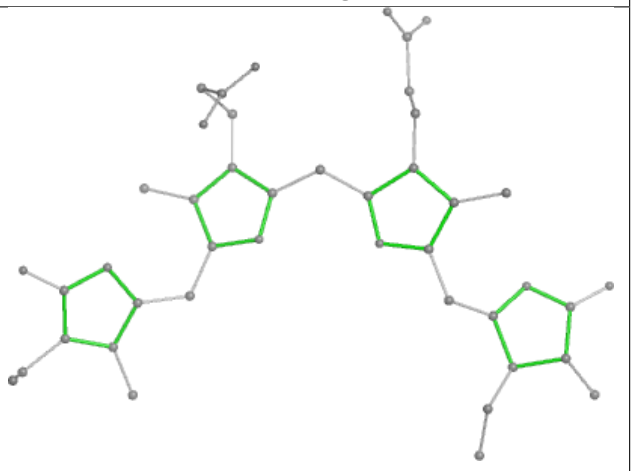

Rings

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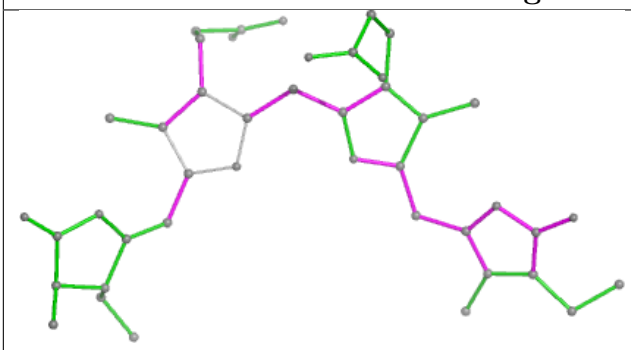

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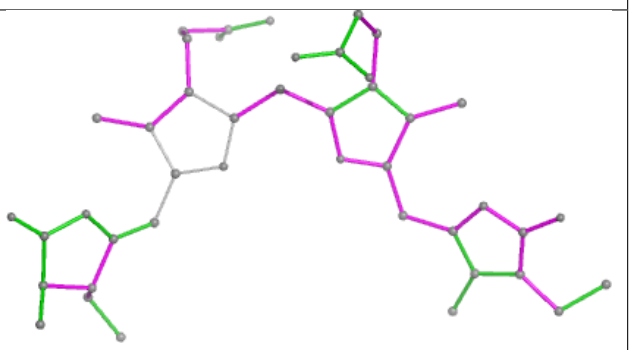

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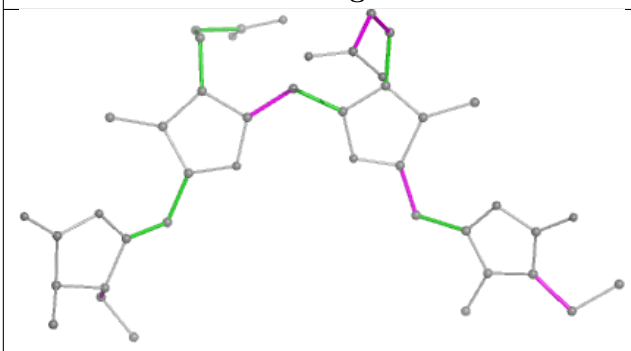

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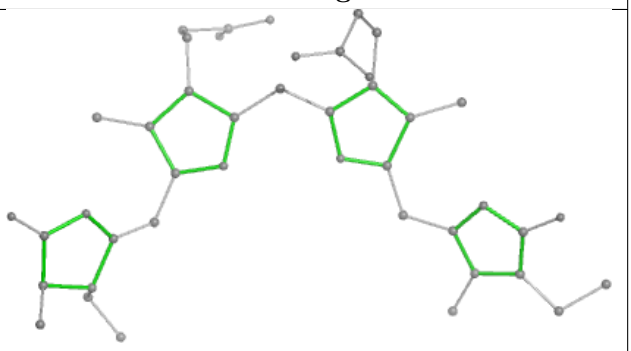
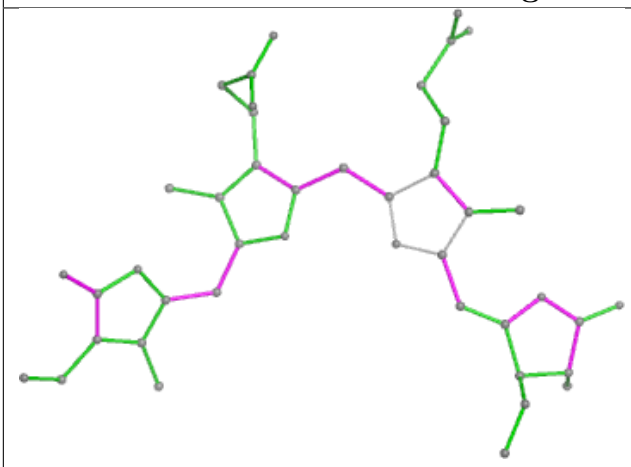


Rings

Ligand CYC R 184



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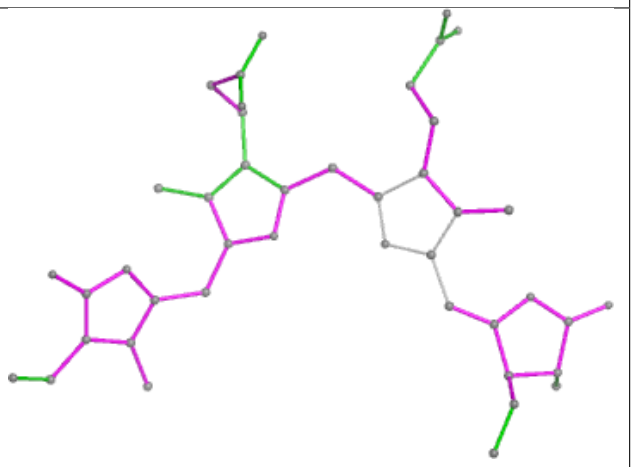

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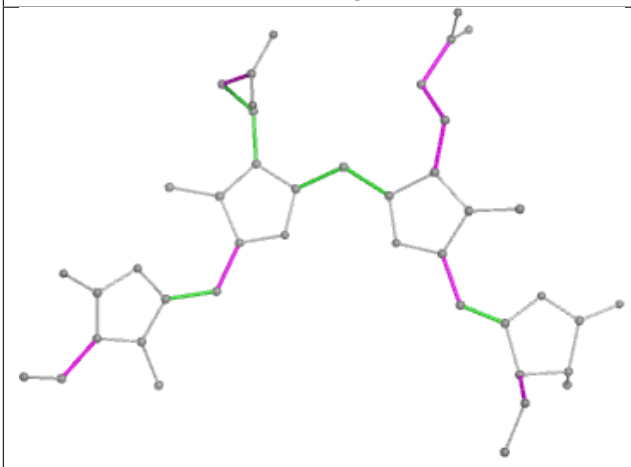

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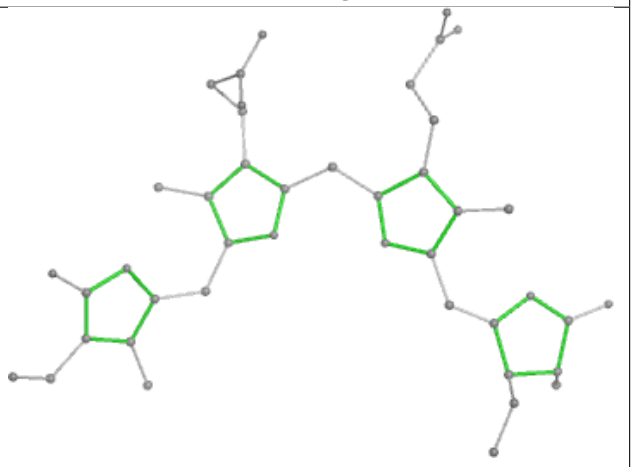
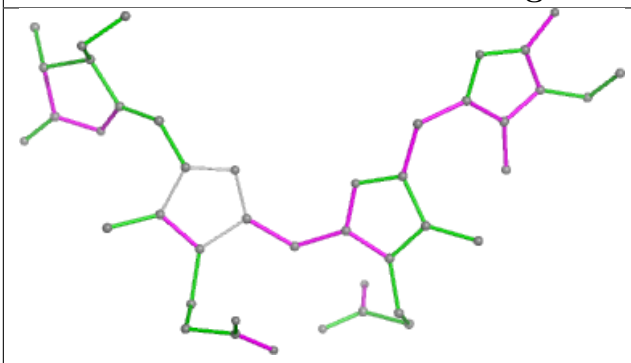


Rings

Ligand CYC J 255



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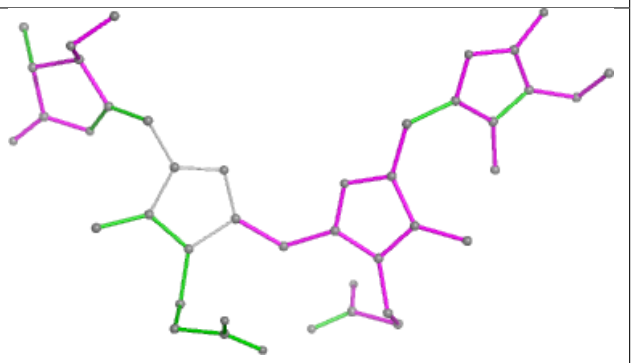

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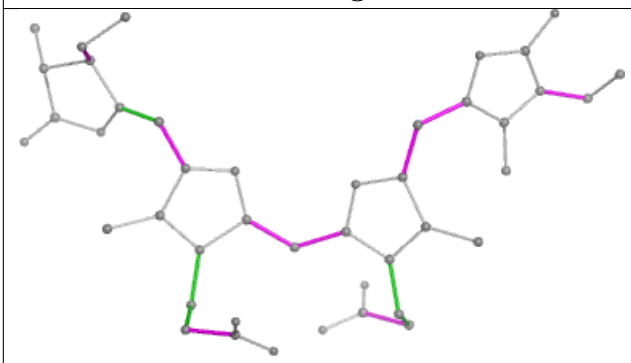

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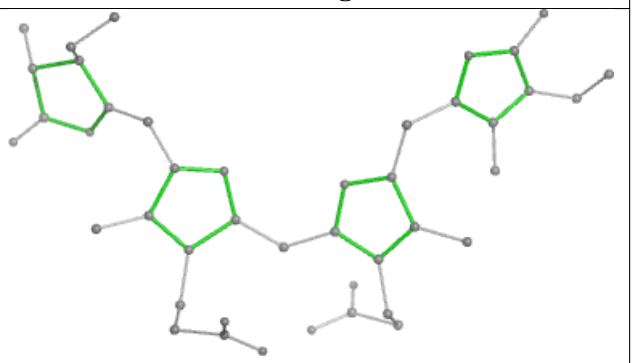
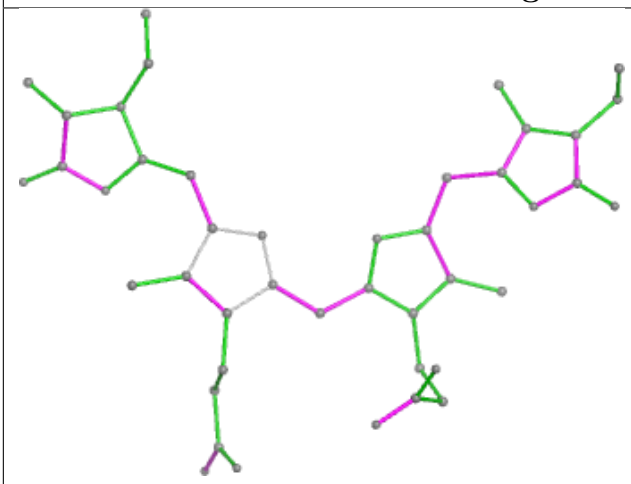


Rings

Ligand CYC C 184



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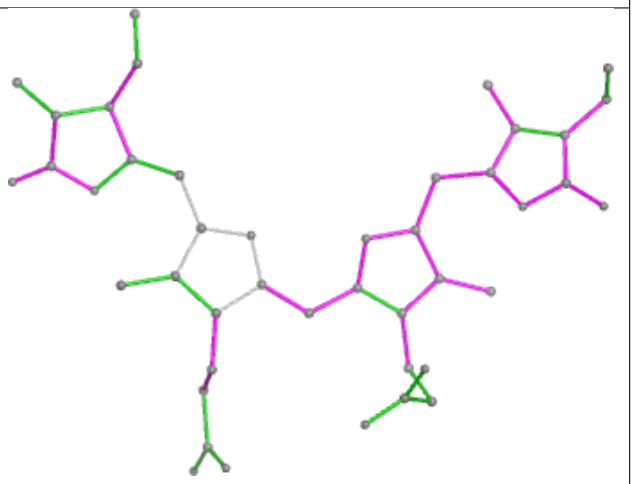

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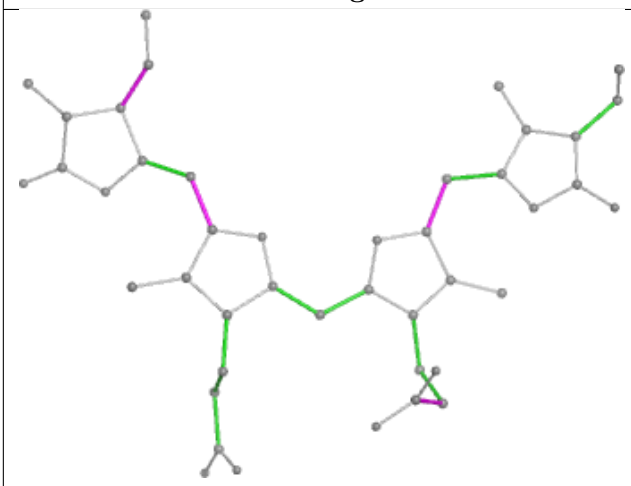

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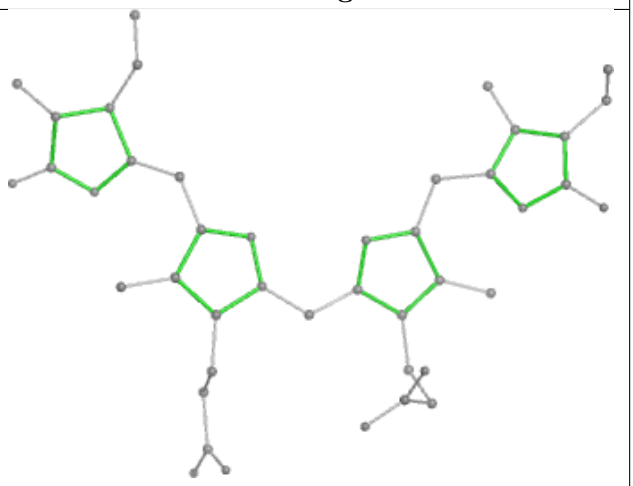
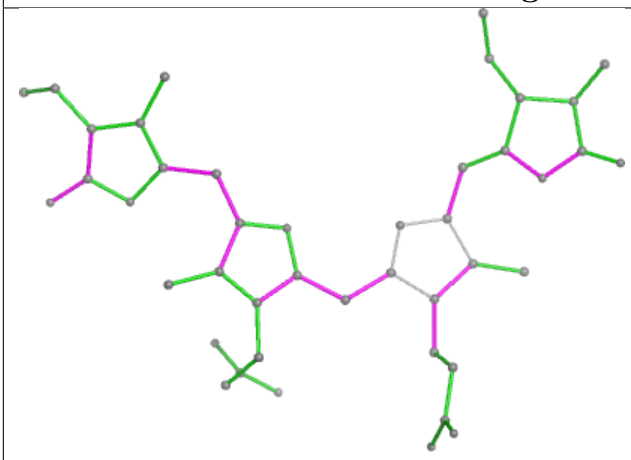


Rings

Ligand CYC A 184



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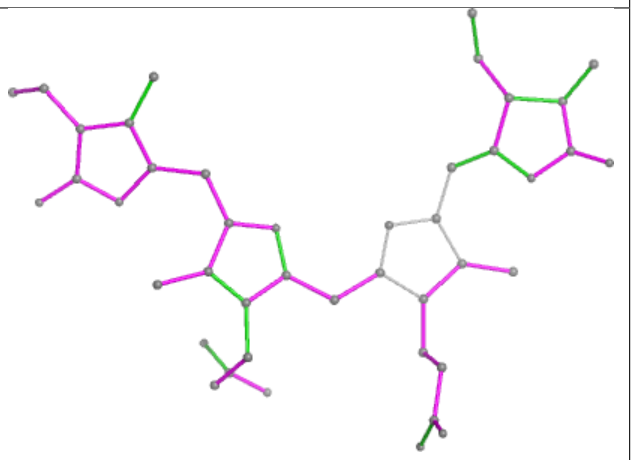

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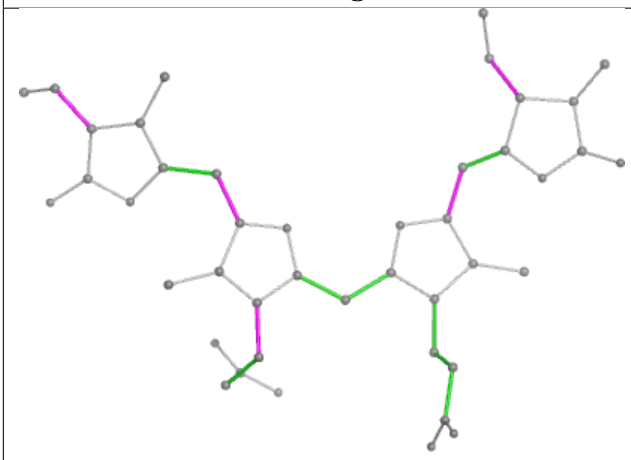

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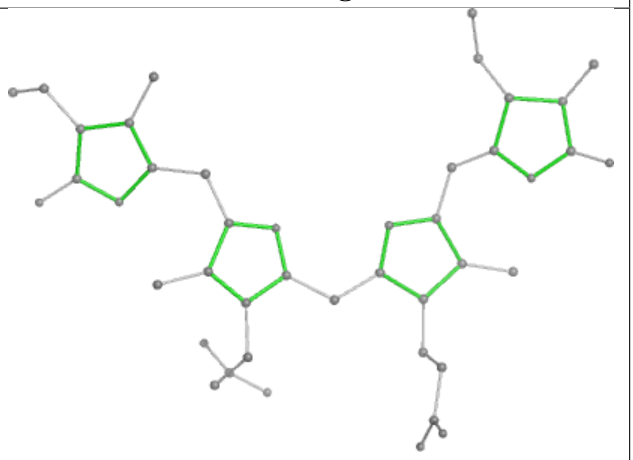
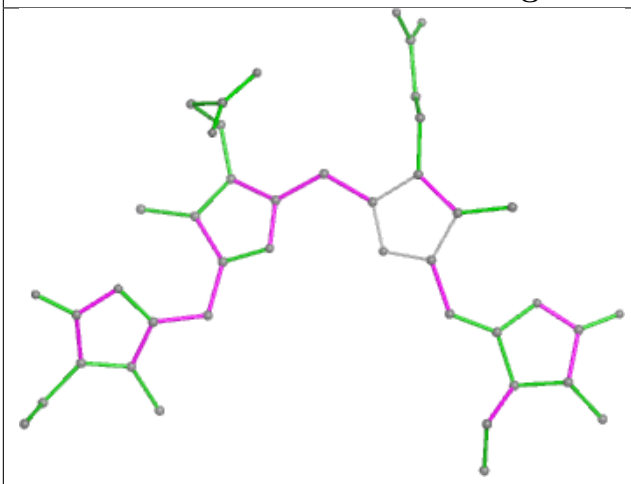


Rings

Ligand CYC U 184



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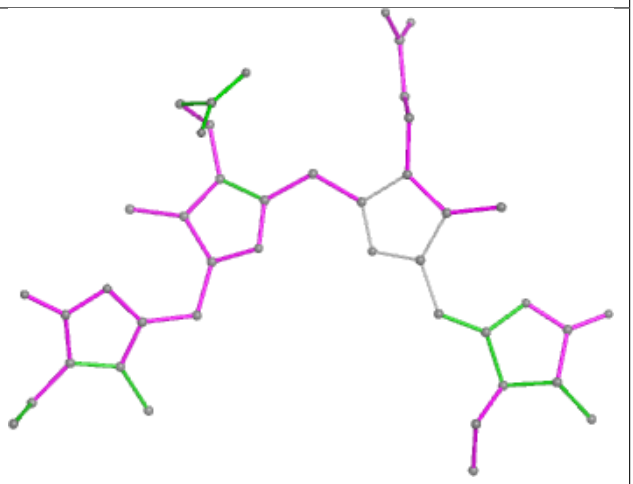
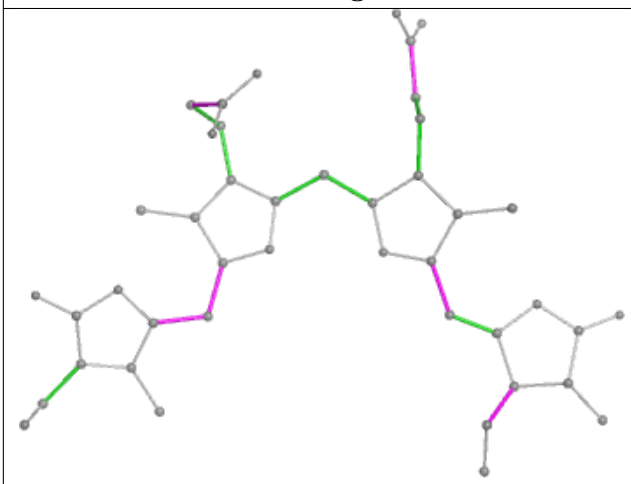


Bond angles



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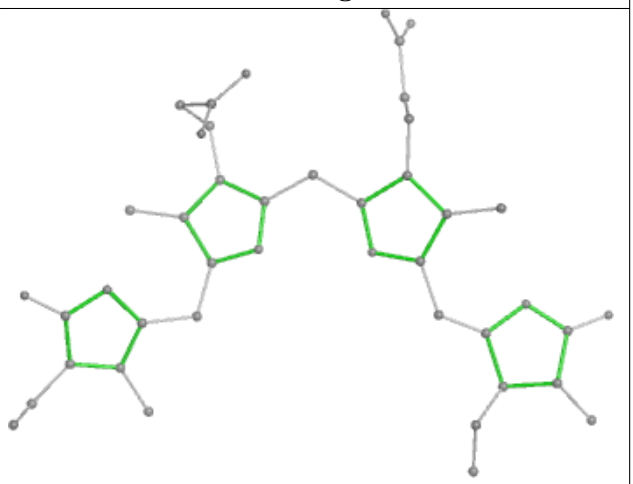
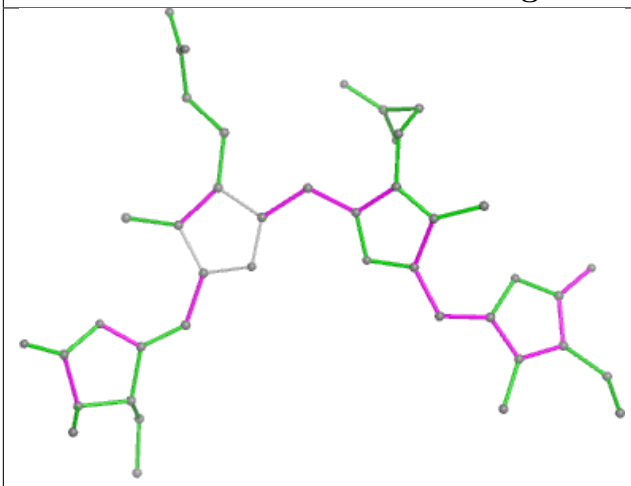


Rings

Ligand CYC N 184



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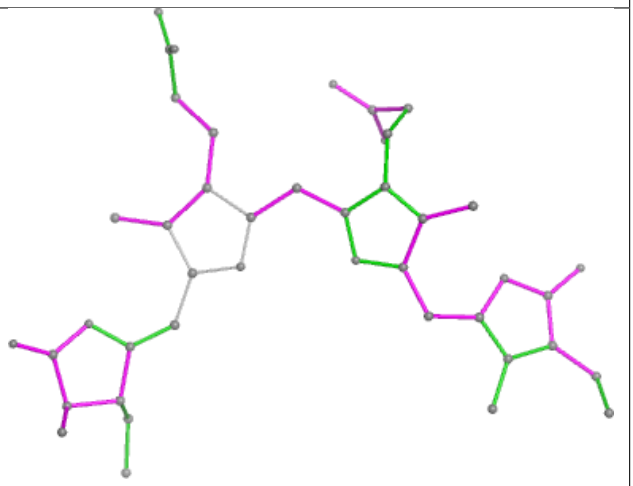

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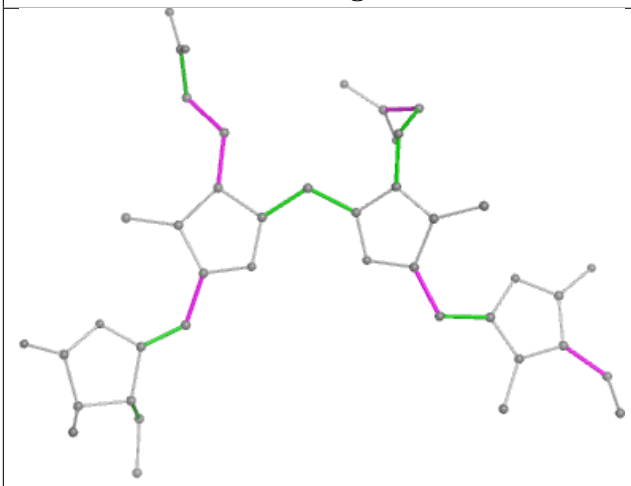

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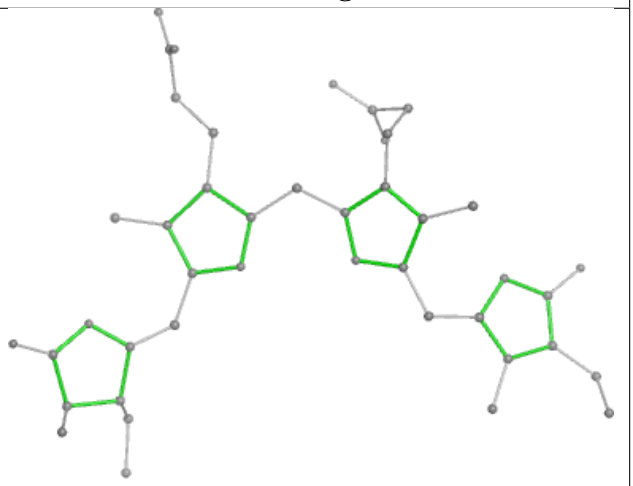
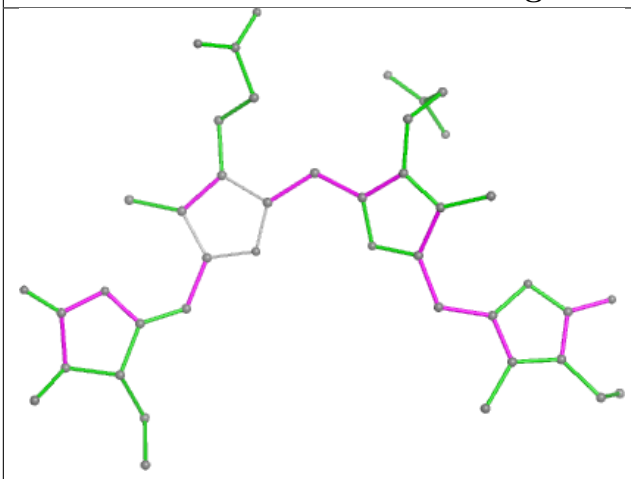
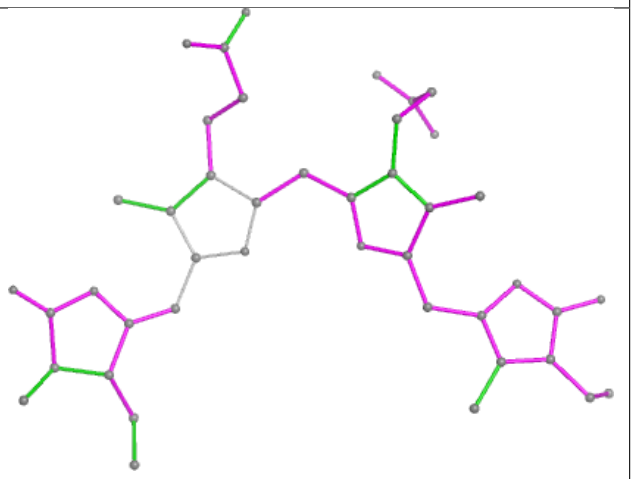


Rings

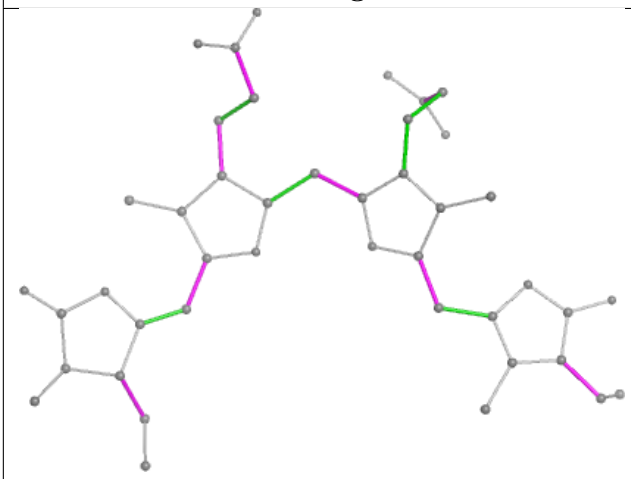
Ligand CYC S 184



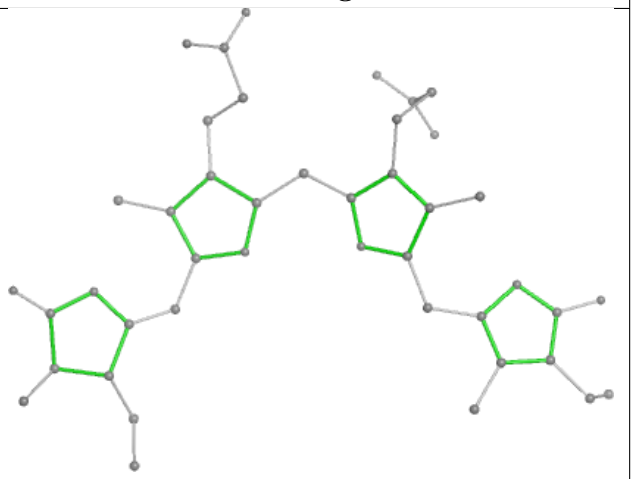
Bond lengths



Bond angles

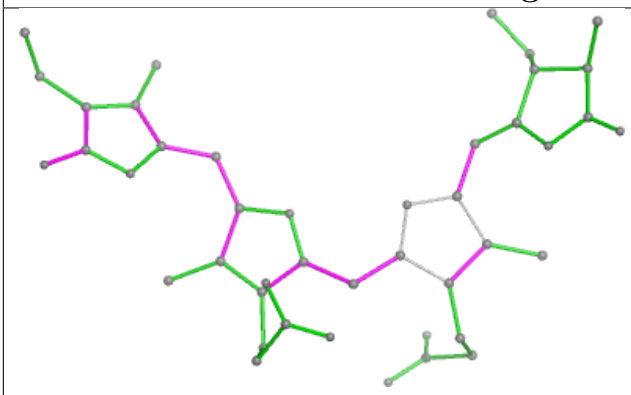


Torsions



Rings

Ligand CYC X 255



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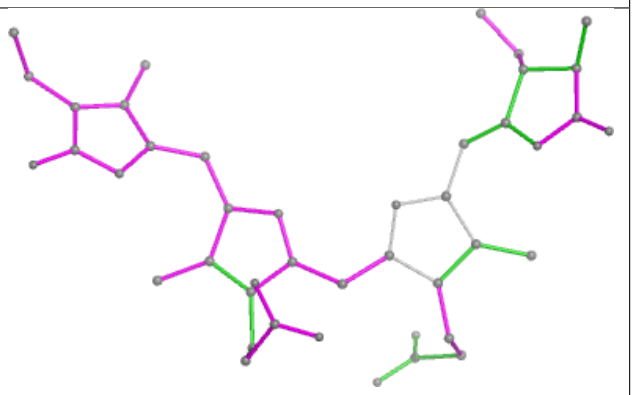

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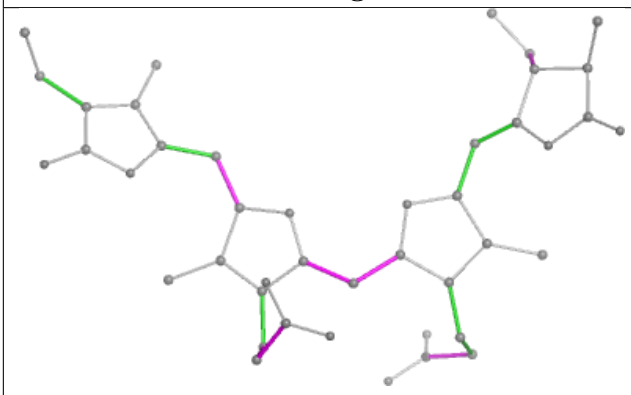

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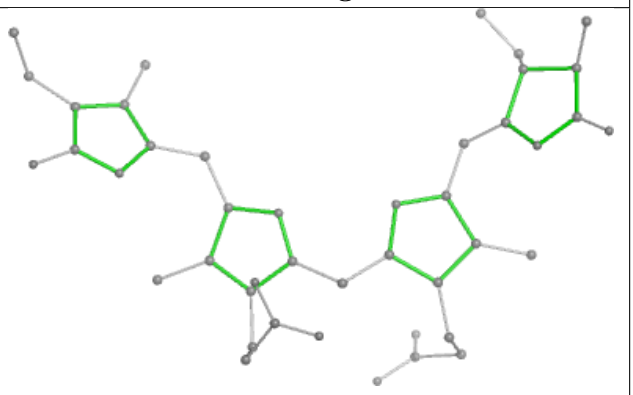

Rings

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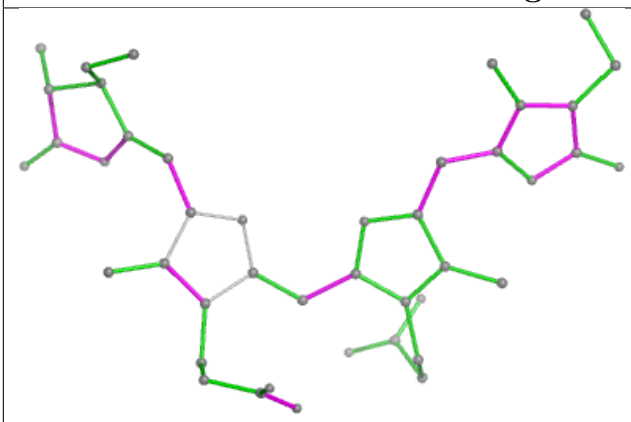

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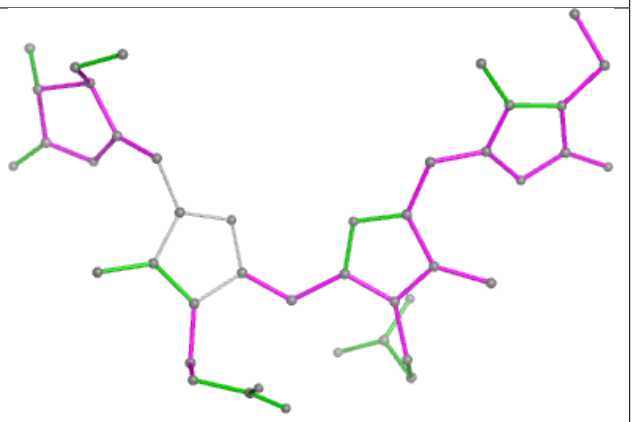
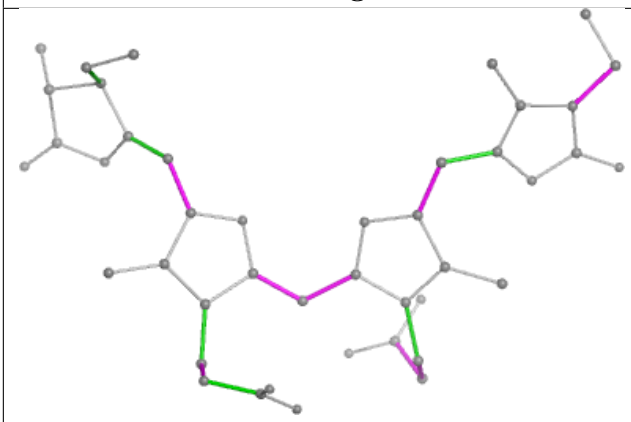


Bond angles



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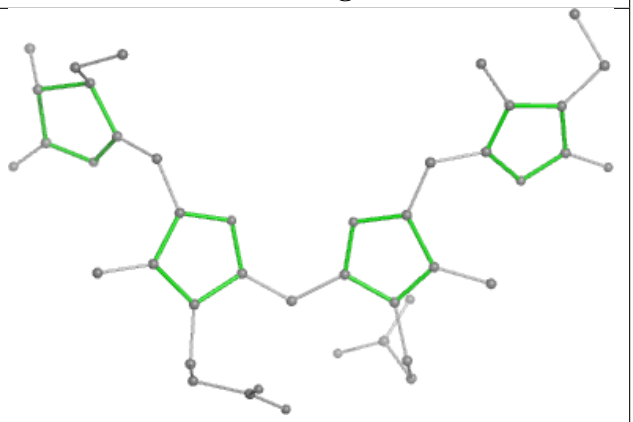
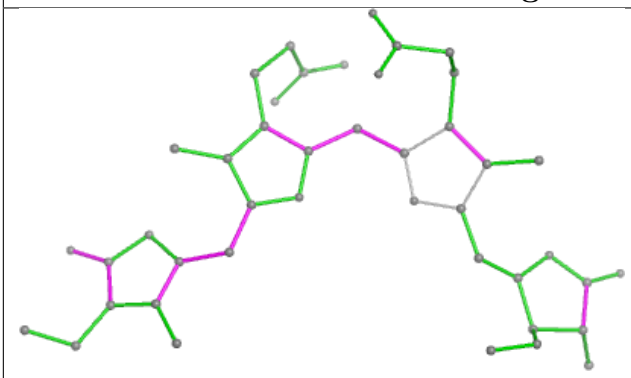


Rings

Ligand CYC R 255



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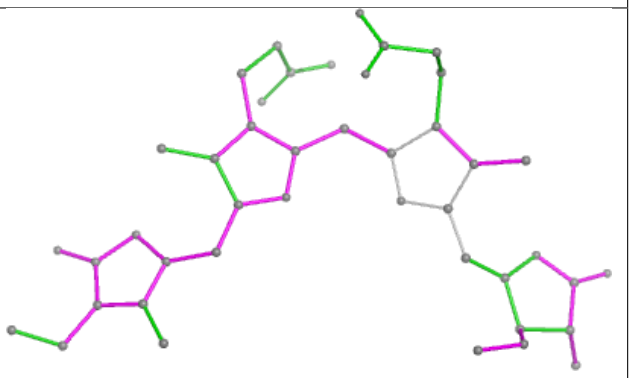
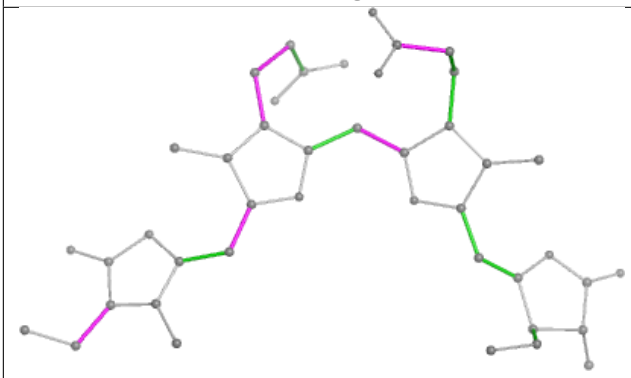


Bond angles



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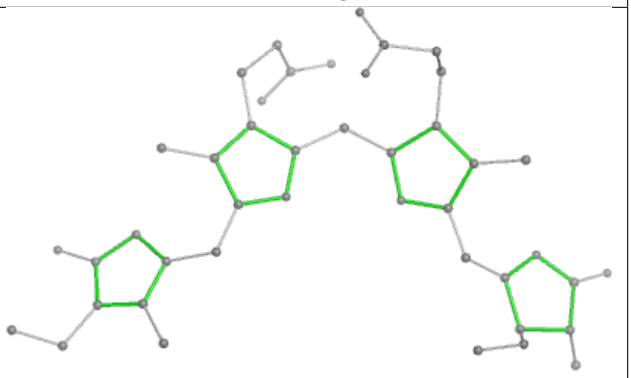
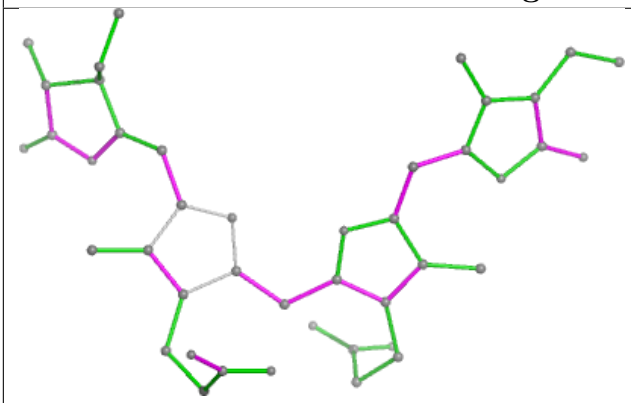
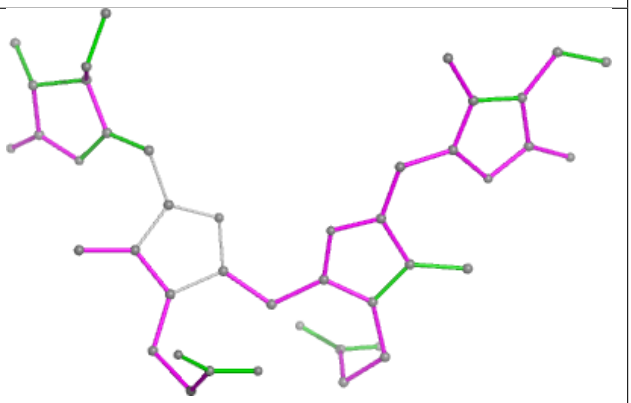


Rings

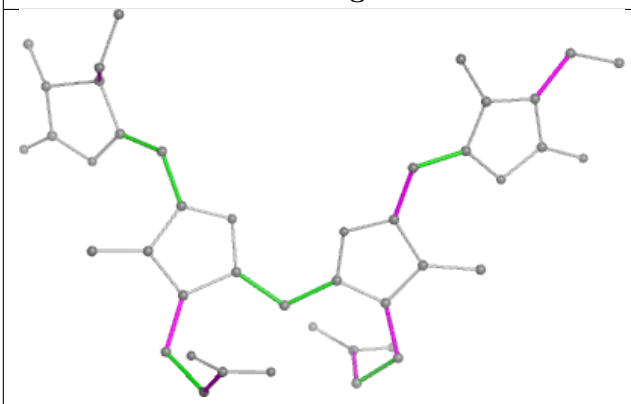
Ligand CYC B 255



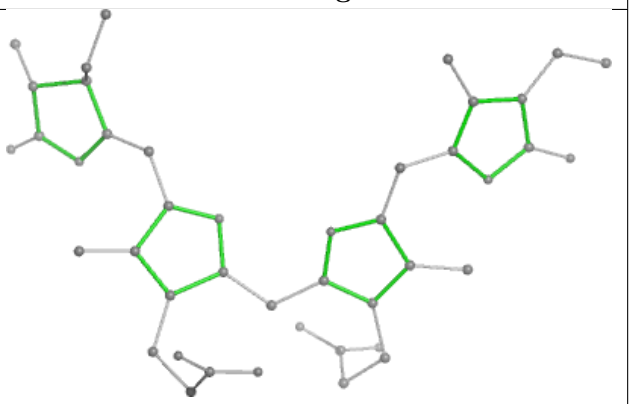
Bond lengths



Bond angles

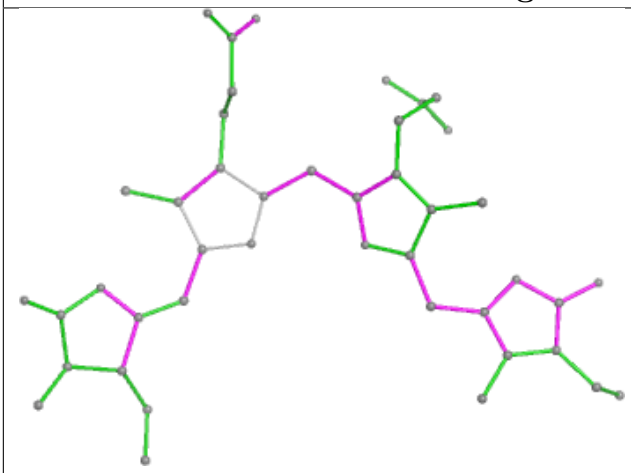


Torsions

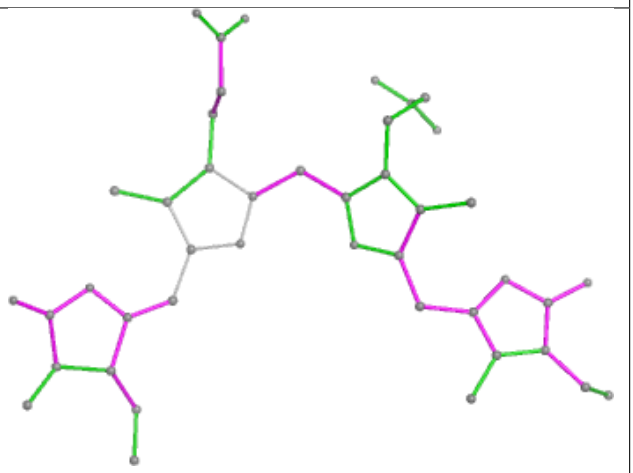


Rings

Ligand CYC W 184



Bond lengths



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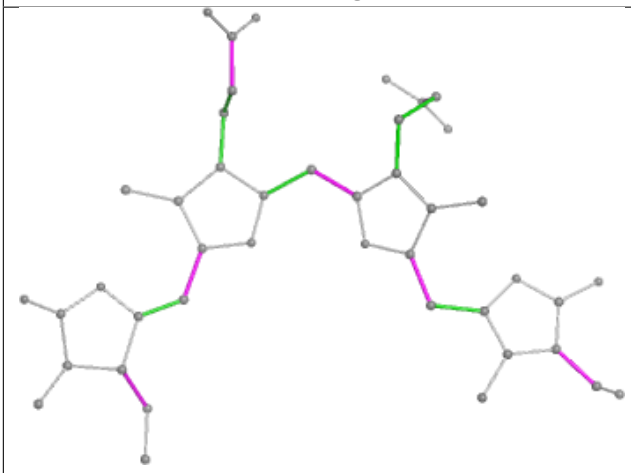

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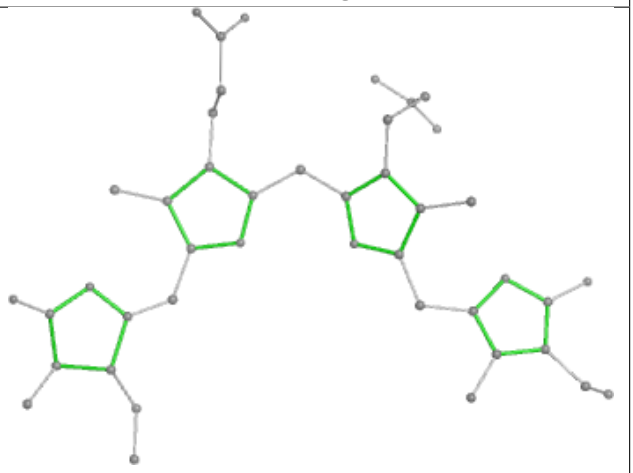
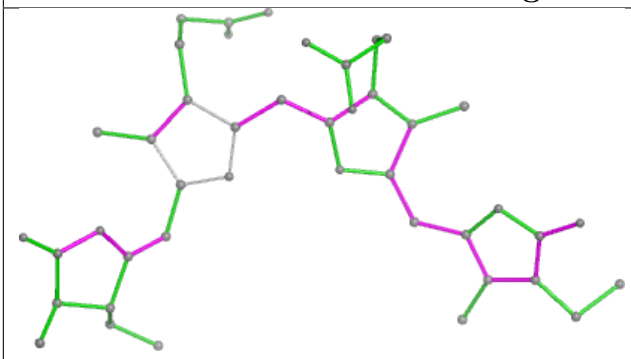


Rings

Ligand CYC T 255



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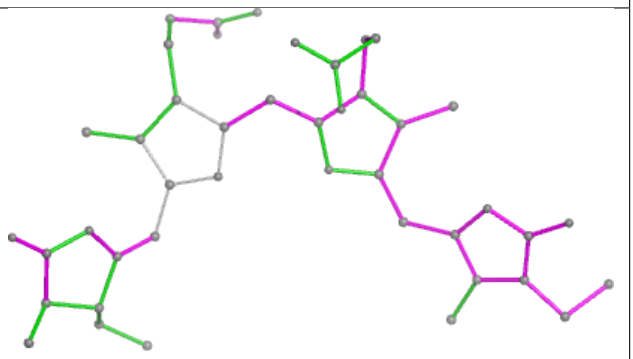
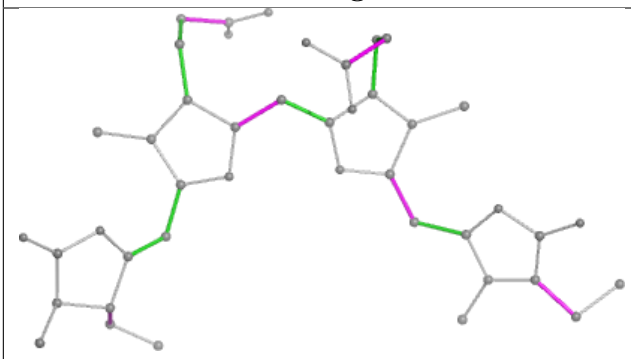


Bond angles



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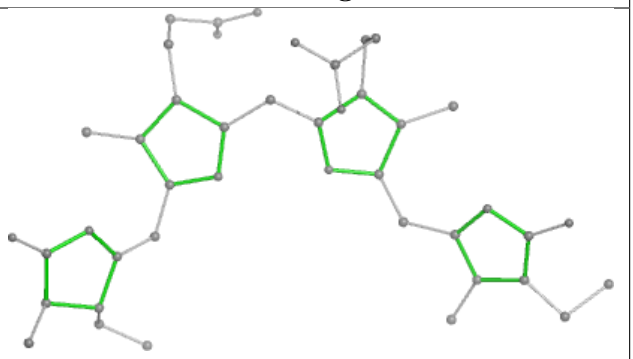
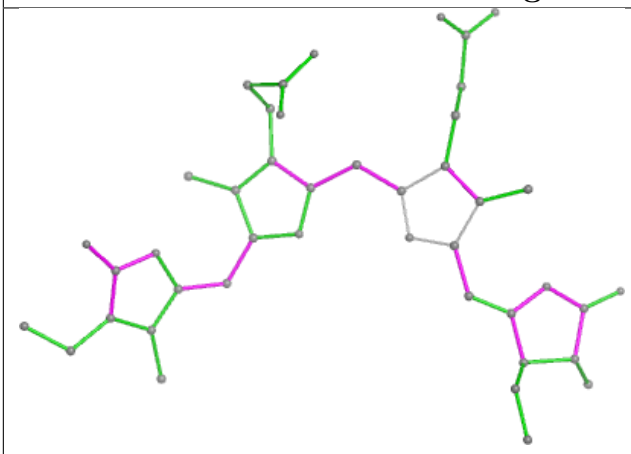


Rings

Ligand CYC F 184



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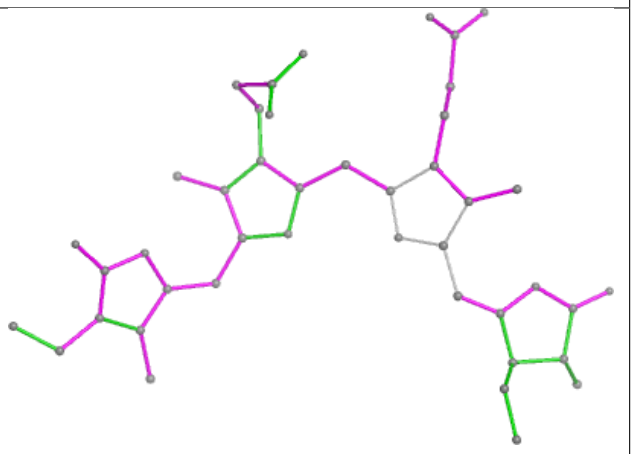

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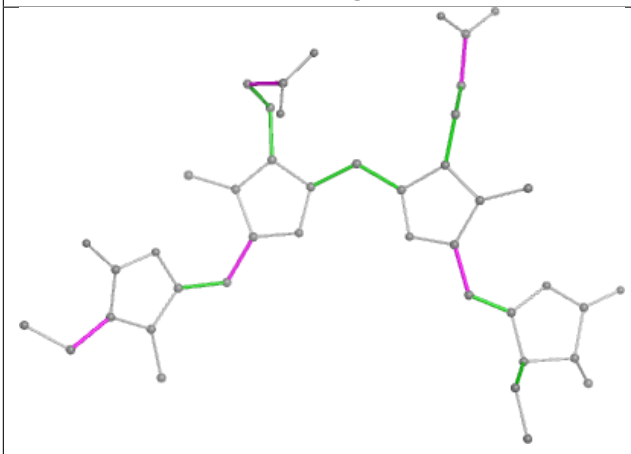

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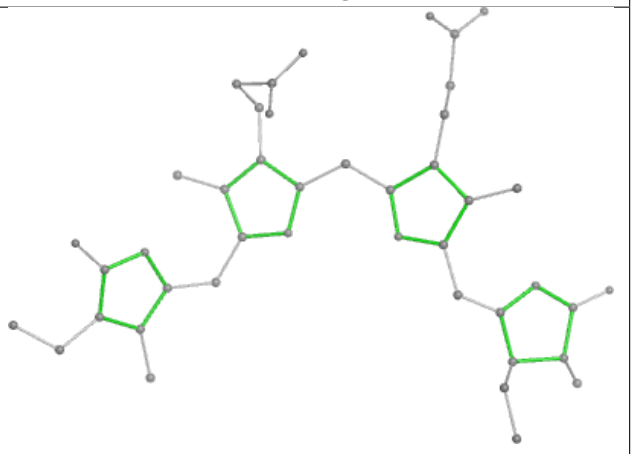
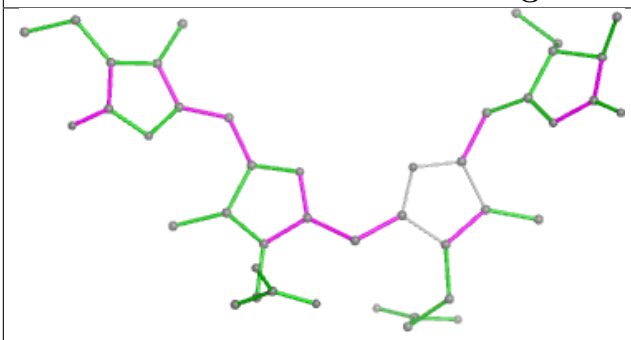


Rings

Ligand CYC D 255



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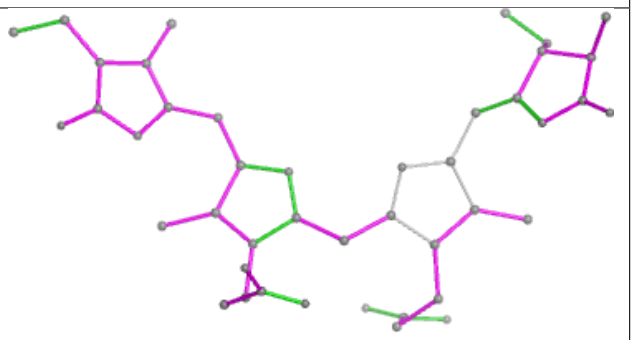
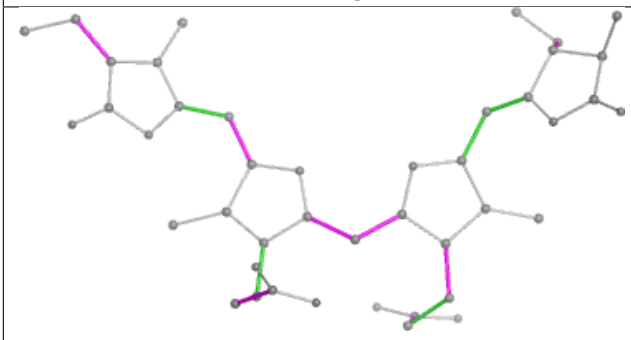


Bond angles



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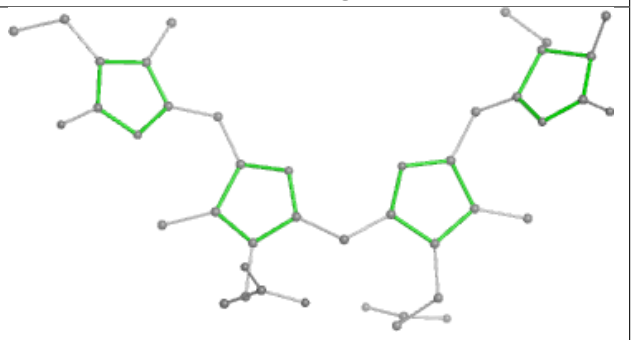
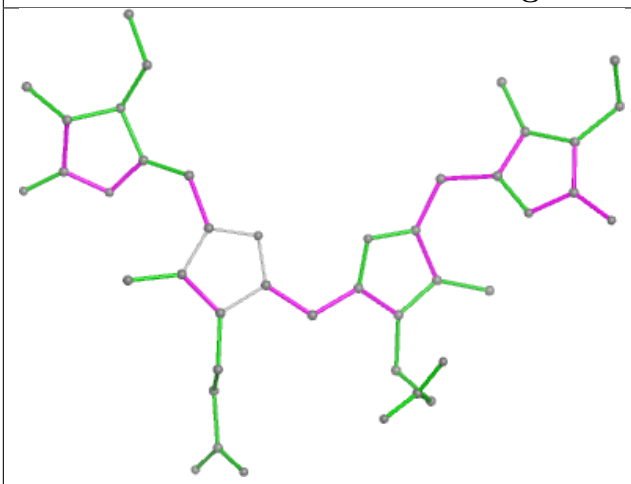


Rings

Ligand CYC Q 184



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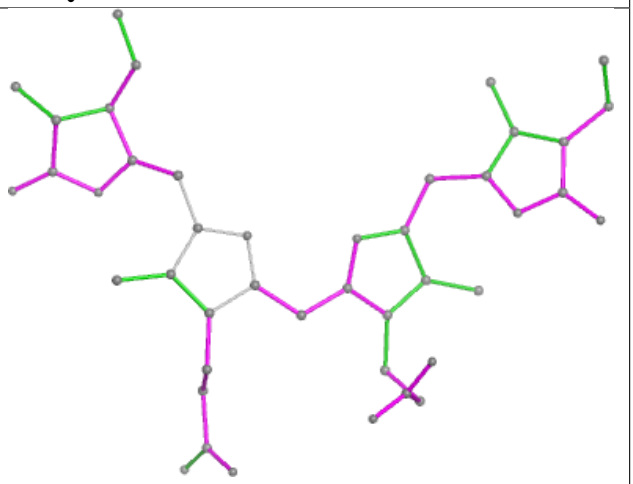
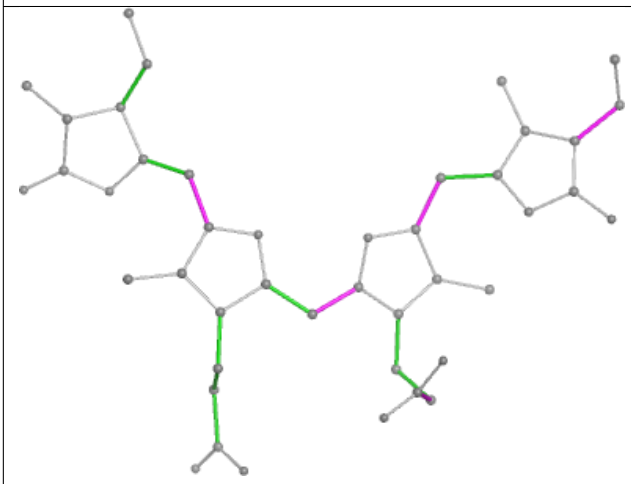


Bond angles



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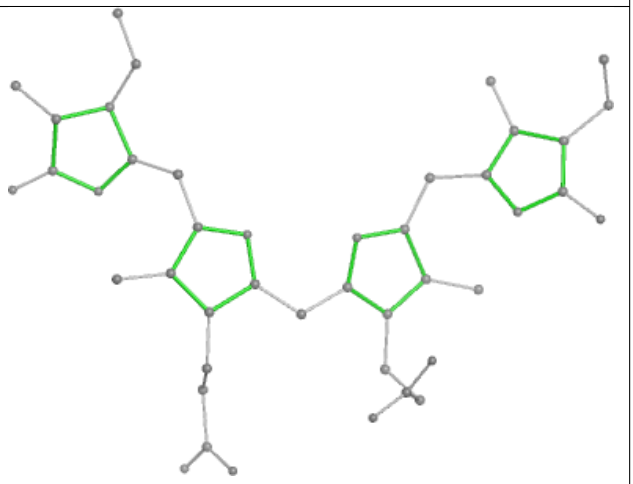
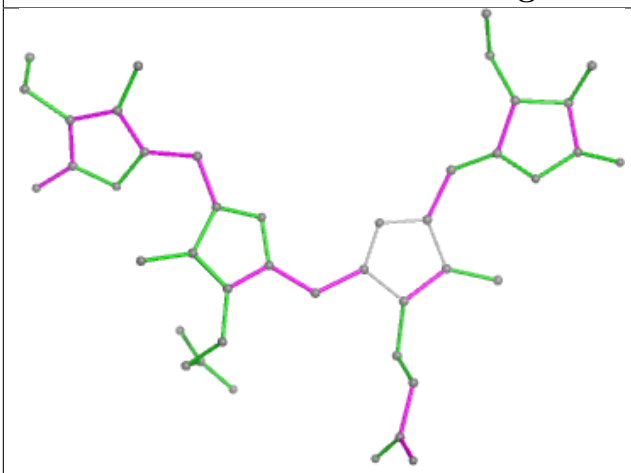


Rings

Ligand CYC M 184



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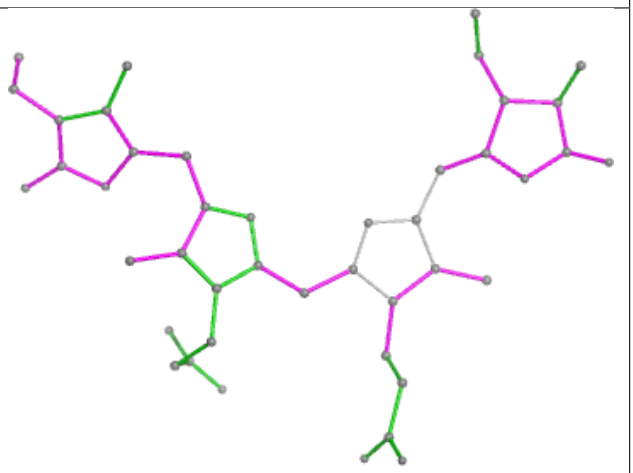
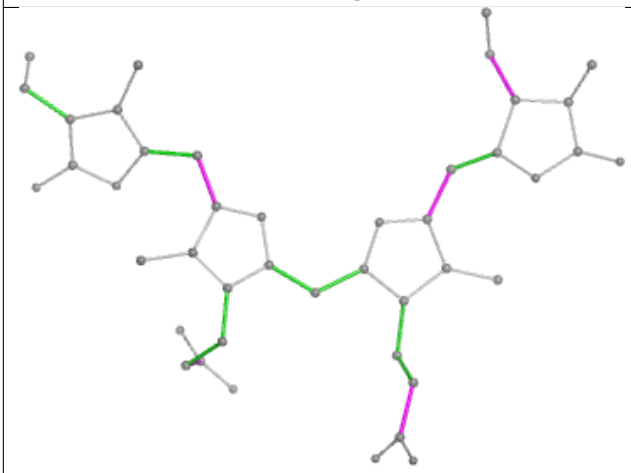
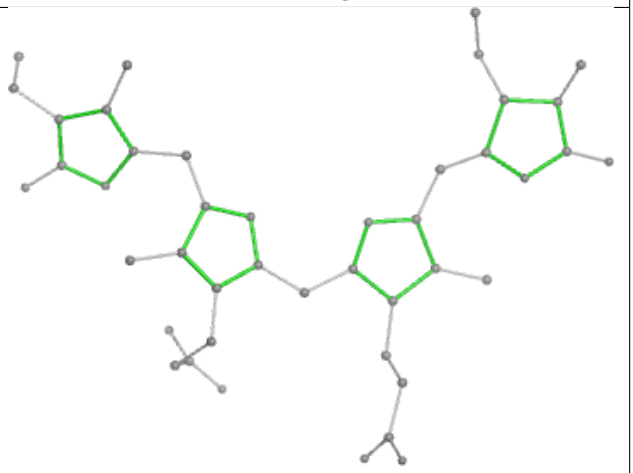


Bond angles

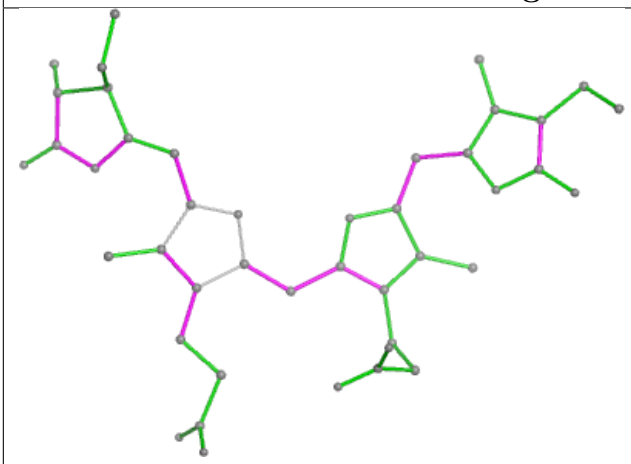


Torsions



Rings

Ligand CYC P 184



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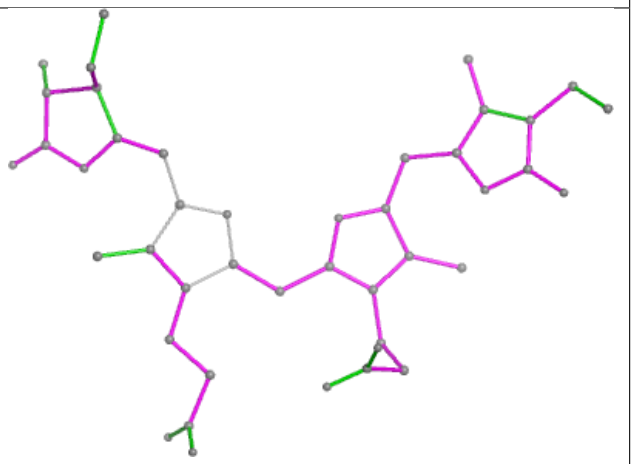
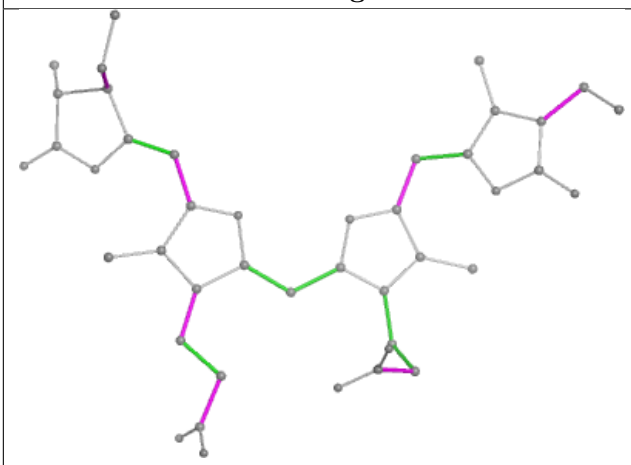
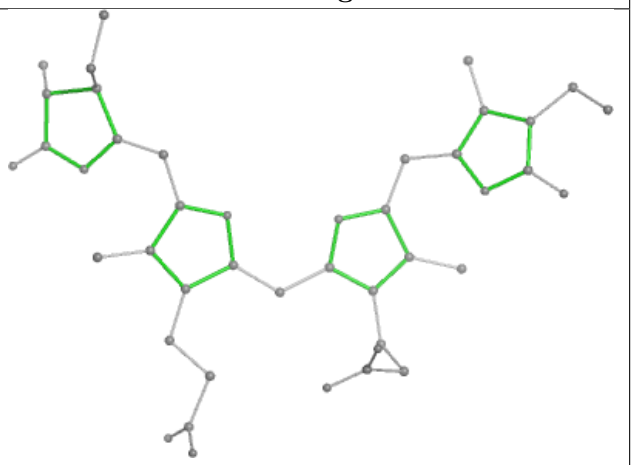


Bond angles

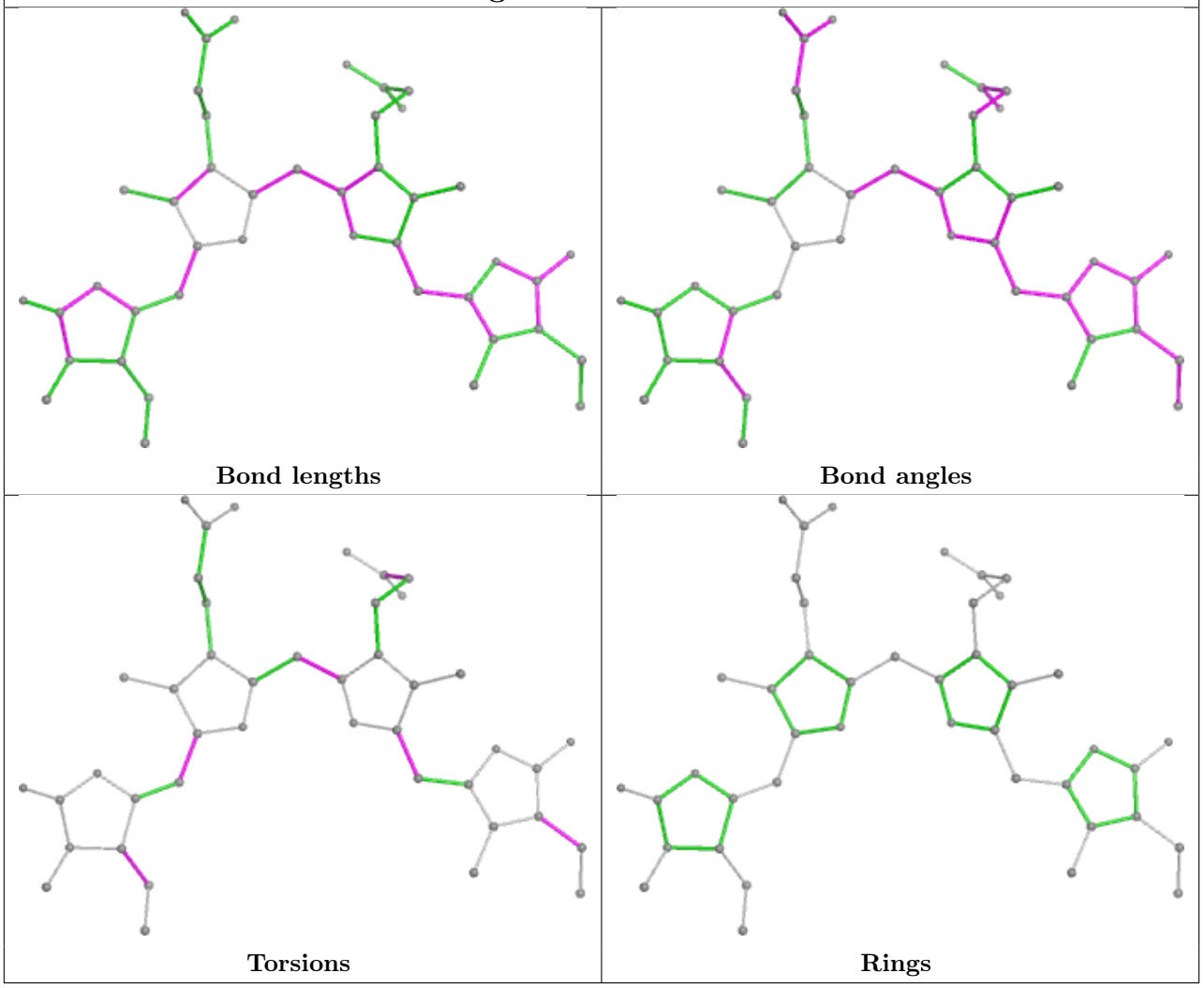


Torsions



Rings

Ligand CYC G 184



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 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	162/162 (100%)	-0.27	2 (1%)	76	56	2, 2, 2, 10	0
1	C	162/162 (100%)	-0.31	1 (0%)	85	71	2, 2, 2, 10	0
1	E	162/162 (100%)	-0.27	2 (1%)	76	56	2, 2, 2, 10	0
1	G	162/162 (100%)	-0.33	1 (0%)	85	71	2, 2, 2, 10	0
1	I	162/162 (100%)	-0.30	2 (1%)	76	56	2, 2, 2, 10	0
1	K	162/162 (100%)	-0.25	1 (0%)	85	71	2, 2, 2, 10	0
1	M	162/162 (100%)	-0.34	1 (0%)	85	71	2, 2, 2, 10	0
1	O	162/162 (100%)	-0.27	1 (0%)	85	71	2, 2, 2, 10	0
1	Q	162/162 (100%)	-0.20	2 (1%)	76	56	2, 2, 2, 10	0
1	S	162/162 (100%)	-0.22	1 (0%)	85	71	2, 2, 2, 10	0
1	U	162/162 (100%)	-0.31	2 (1%)	76	56	2, 2, 2, 10	0
1	W	162/162 (100%)	-0.28	1 (0%)	85	71	2, 2, 2, 10	0
2	B	172/172 (100%)	-0.24	0	100	100	2, 2, 2, 11	0
2	F	172/172 (100%)	-0.35	0	100	100	2, 2, 2, 11	0
2	H	172/172 (100%)	-0.34	1 (0%)	85	71	2, 2, 2, 11	0
2	J	172/172 (100%)	-0.32	2 (1%)	76	56	2, 2, 2, 11	0
2	L	172/172 (100%)	-0.30	2 (1%)	76	56	2, 2, 2, 11	0
2	N	172/172 (100%)	-0.26	0	100	100	2, 2, 2, 11	0
2	P	172/172 (100%)	-0.28	0	100	100	2, 2, 2, 11	0
2	R	172/172 (100%)	-0.15	1 (0%)	85	71	2, 2, 2, 11	0
2	T	172/172 (100%)	-0.23	0	100	100	2, 2, 2, 11	0
2	V	172/172 (100%)	-0.29	1 (0%)	85	71	2, 2, 2, 11	0
2	X	172/172 (100%)	-0.33	1 (0%)	85	71	2, 2, 2, 11	0
3	D	172/172 (100%)	-0.22	1 (0%)	85	71	2, 2, 2, 11	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
All	All	4008/4008 (100%)	-0.28	26 (0%)	85	71	2, 2, 2, 11	0

All (26) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	162	SER	5.0
1	M	162	SER	5.0
1	W	162	SER	4.7
1	K	162	SER	4.4
1	I	162	SER	4.2
1	C	162	SER	4.2
1	O	162	SER	3.7
1	U	162	SER	3.7
1	A	162	SER	3.4
1	G	162	SER	3.3
1	I	61	ASN	3.2
2	J	172	SER	3.1
2	H	172	SER	2.9
1	E	57	GLN	2.9
1	S	162	SER	2.6
3	D	172	SER	2.5
2	L	172	SER	2.5
2	R	172	SER	2.4
1	A	68	CYS	2.3
1	Q	162	SER	2.2
1	Q	68	CYS	2.2
2	X	65	GLN	2.2
2	V	172	SER	2.2
2	L	34	ALA	2.1
2	J	10	ALA	2.0
1	U	68	CYS	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

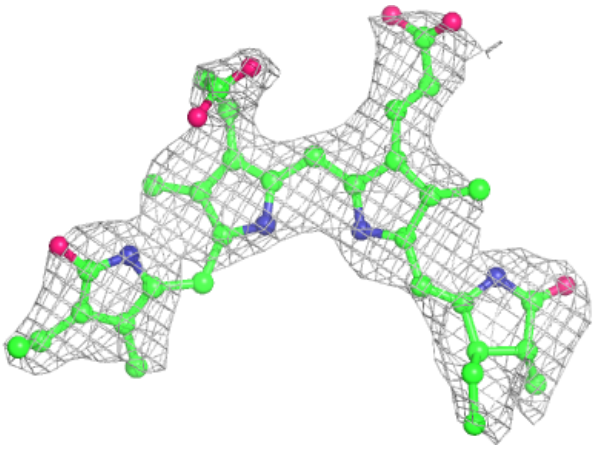
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

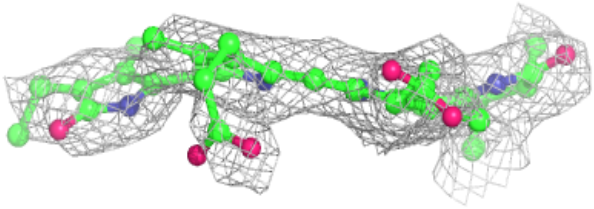
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	CYC	V	184	43/43	0.90	0.11	7,16,24,29	0
4	CYC	N	255	43/43	0.91	0.11	2,10,23,28	0
4	CYC	D	184	43/43	0.91	0.11	2,11,23,26	0
4	CYC	X	184	43/43	0.92	0.10	2,2,7,10	0
4	CYC	N	184	43/43	0.93	0.10	2,5,12,14	0
4	CYC	F	184	43/43	0.93	0.10	2,2,13,15	0
4	CYC	R	184	43/43	0.93	0.10	2,4,19,24	0
4	CYC	T	184	43/43	0.93	0.10	2,3,10,15	0
4	CYC	J	255	43/43	0.93	0.11	2,2,2,7	0
4	CYC	V	255	43/43	0.93	0.11	2,2,10,15	0
4	CYC	L	255	43/43	0.93	0.10	2,2,2,11	0
4	CYC	D	255	43/43	0.94	0.10	3,8,17,18	0
4	CYC	B	255	43/43	0.94	0.09	2,4,9,15	0
4	CYC	P	184	43/43	0.94	0.10	2,2,11,18	0
4	CYC	H	184	43/43	0.94	0.10	2,6,19,28	0
4	CYC	S	184	43/43	0.94	0.10	2,6,11,14	0
4	CYC	J	184	43/43	0.94	0.09	2,2,9,10	0
4	CYC	C	184	43/43	0.94	0.10	2,2,3,4	0
4	CYC	L	184	43/43	0.94	0.09	2,5,15,23	0
4	CYC	B	184	43/43	0.94	0.09	2,3,10,13	0
4	CYC	X	255	43/43	0.94	0.09	2,2,7,10	0
4	CYC	Q	184	43/43	0.95	0.09	2,2,5,7	0
4	CYC	G	184	43/43	0.95	0.09	2,2,2,2	0
4	CYC	R	255	43/43	0.95	0.08	2,2,7,9	0
4	CYC	M	184	43/43	0.95	0.09	2,2,3,5	0
4	CYC	F	255	43/43	0.95	0.10	2,2,2,2	0
4	CYC	T	255	43/43	0.95	0.08	2,2,5,8	0
4	CYC	U	184	43/43	0.95	0.08	2,2,2,5	0
4	CYC	K	184	43/43	0.95	0.09	2,2,3,6	0
4	CYC	O	184	43/43	0.95	0.09	2,2,2,2	0
4	CYC	I	184	43/43	0.95	0.09	2,2,2,3	0
4	CYC	P	255	43/43	0.95	0.09	2,3,10,11	0
4	CYC	H	255	43/43	0.96	0.08	2,2,7,10	0
4	CYC	W	184	43/43	0.96	0.08	2,2,2,2	0
4	CYC	A	184	43/43	0.96	0.08	2,2,2,3	0
4	CYC	E	184	43/43	0.96	0.09	2,2,2,2	0

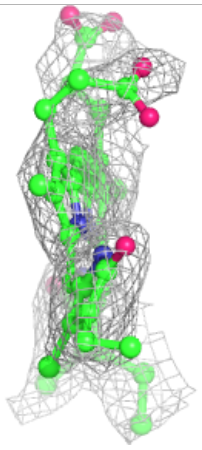
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around CYC V 184:

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

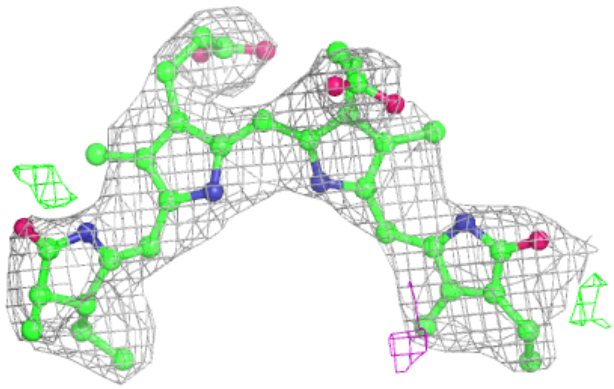


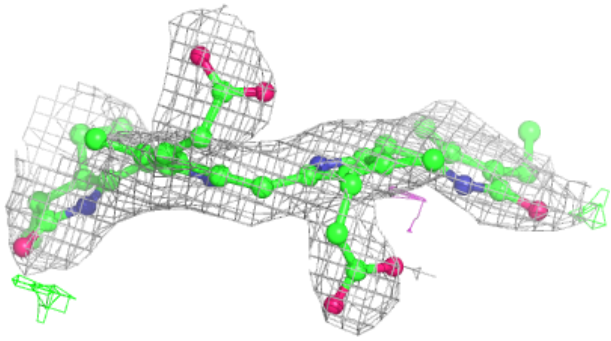


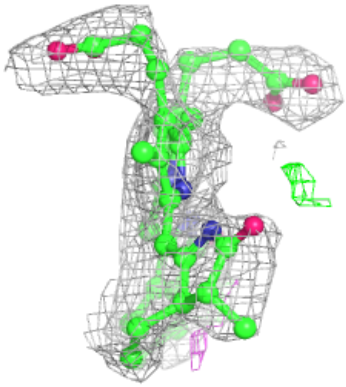


Electron density around CYC N 255:

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

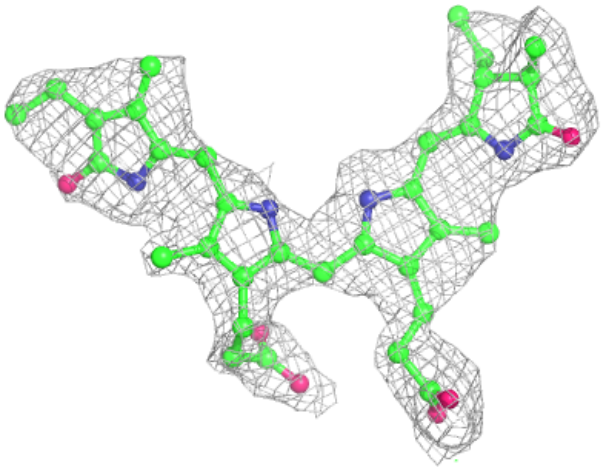


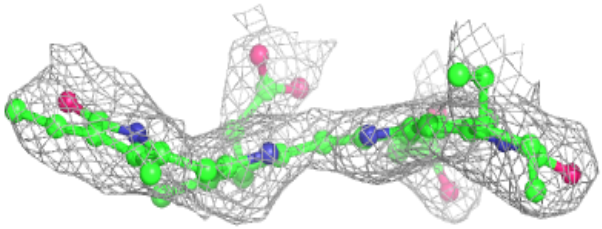


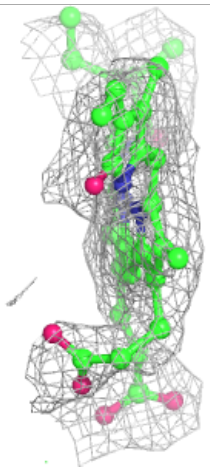


Electron density around CYC D 184:

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

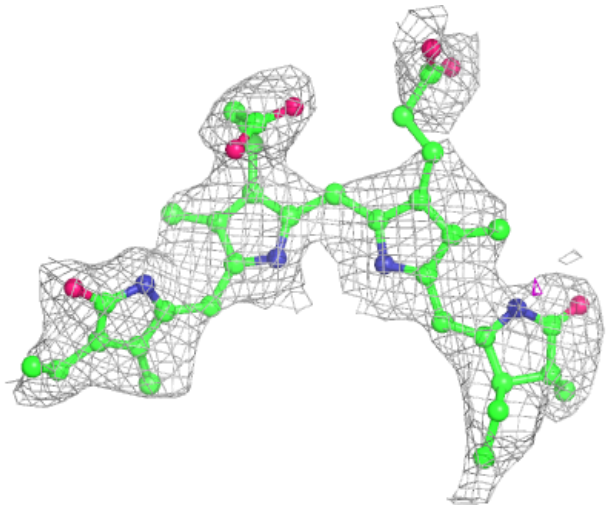


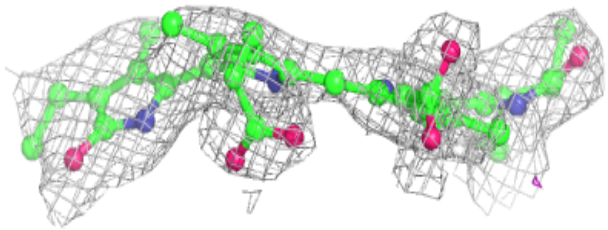


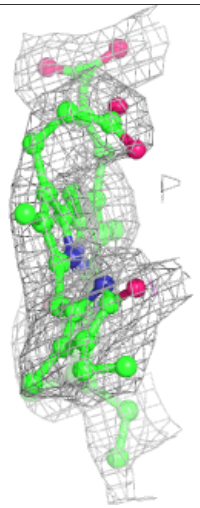


Electron density around CYC X 184:

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

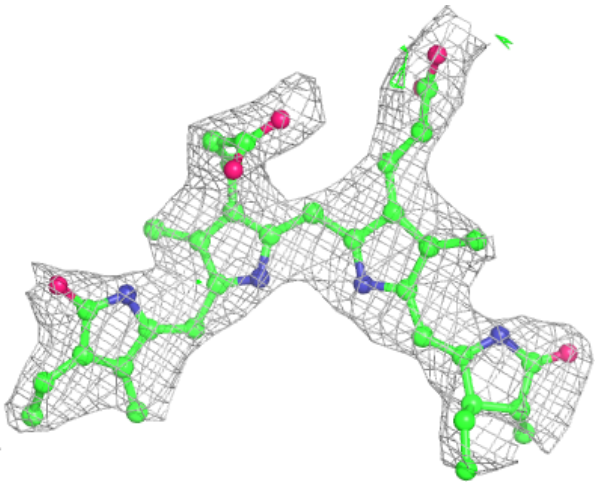


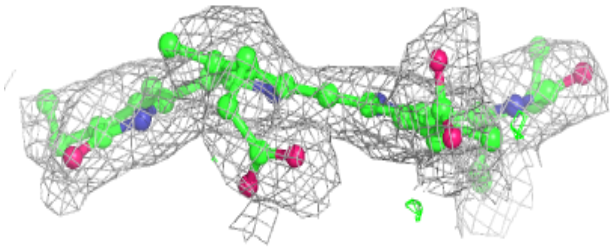


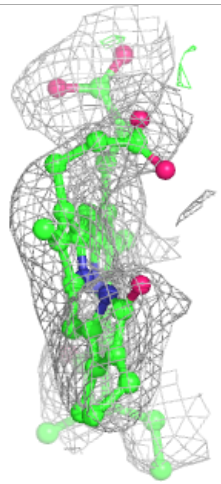


Electron density around CYC N 184:

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

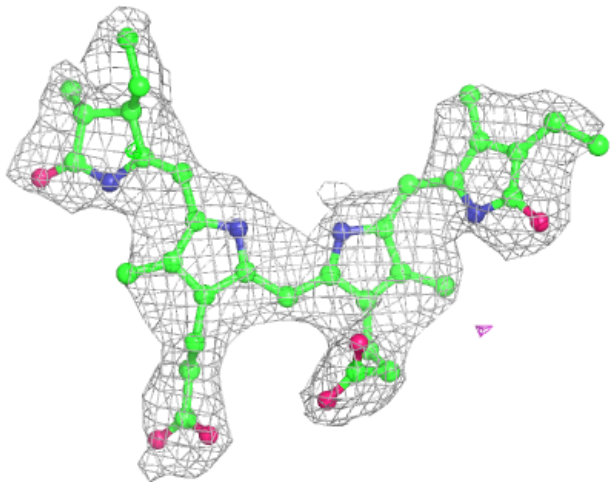


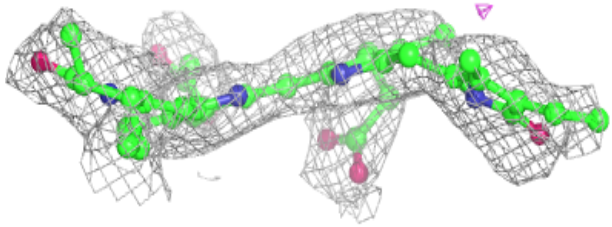


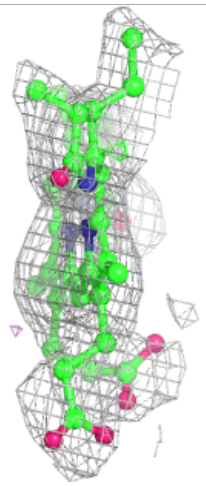


Electron density around CYC F 184:

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

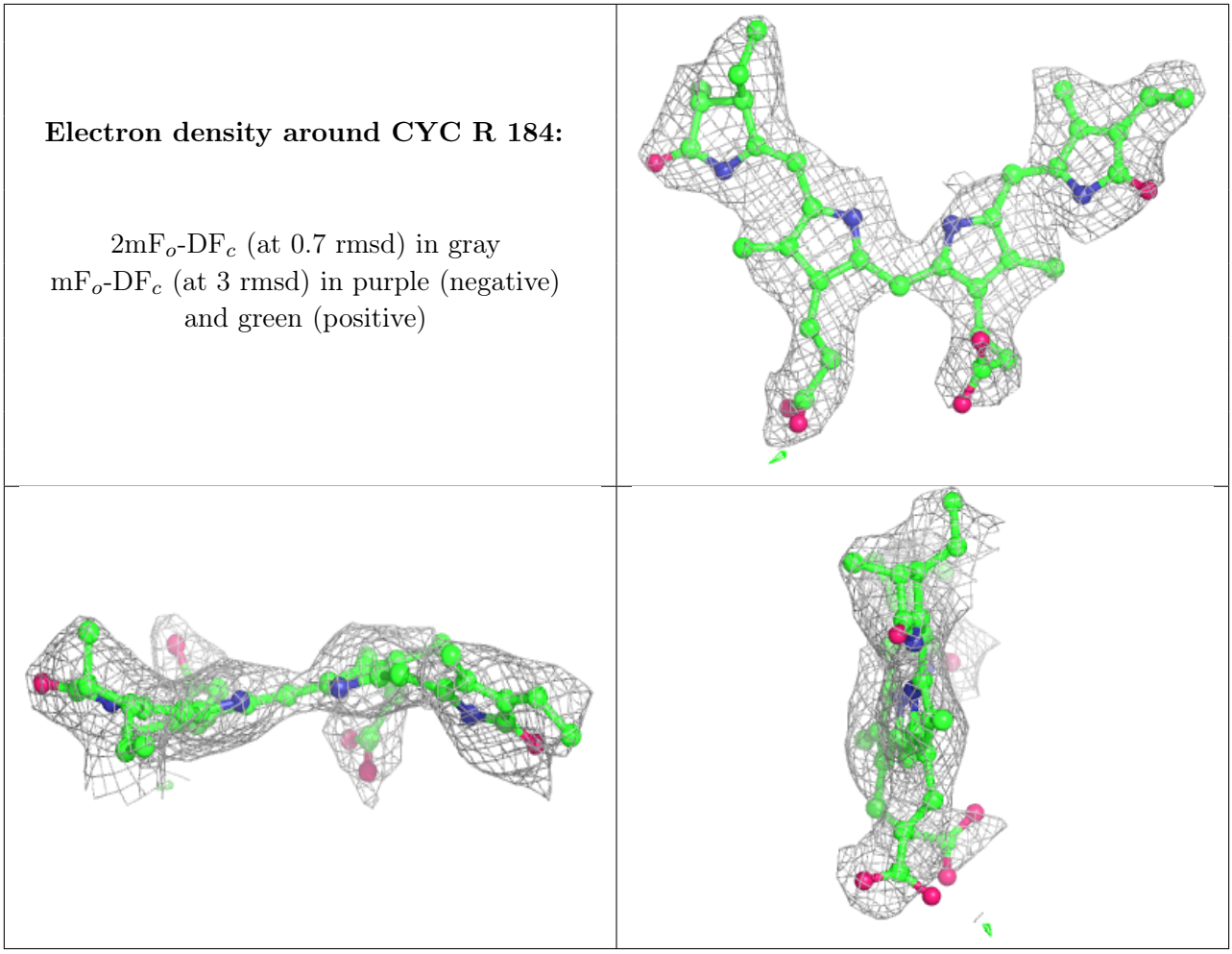






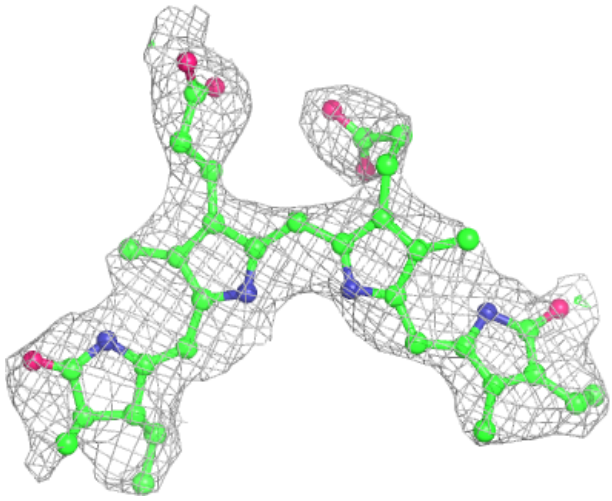
Electron density around CYC R 184:

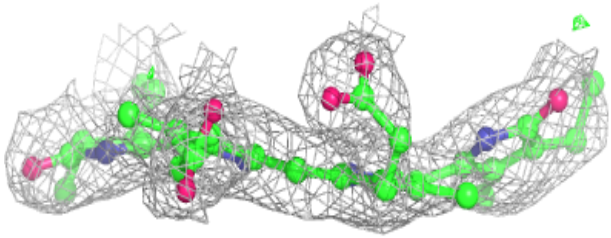
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

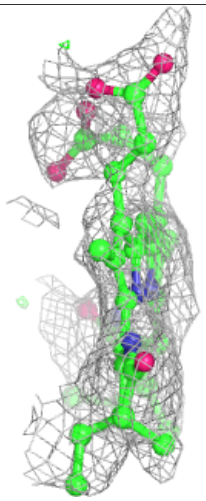


Electron density around CYC T 184:

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

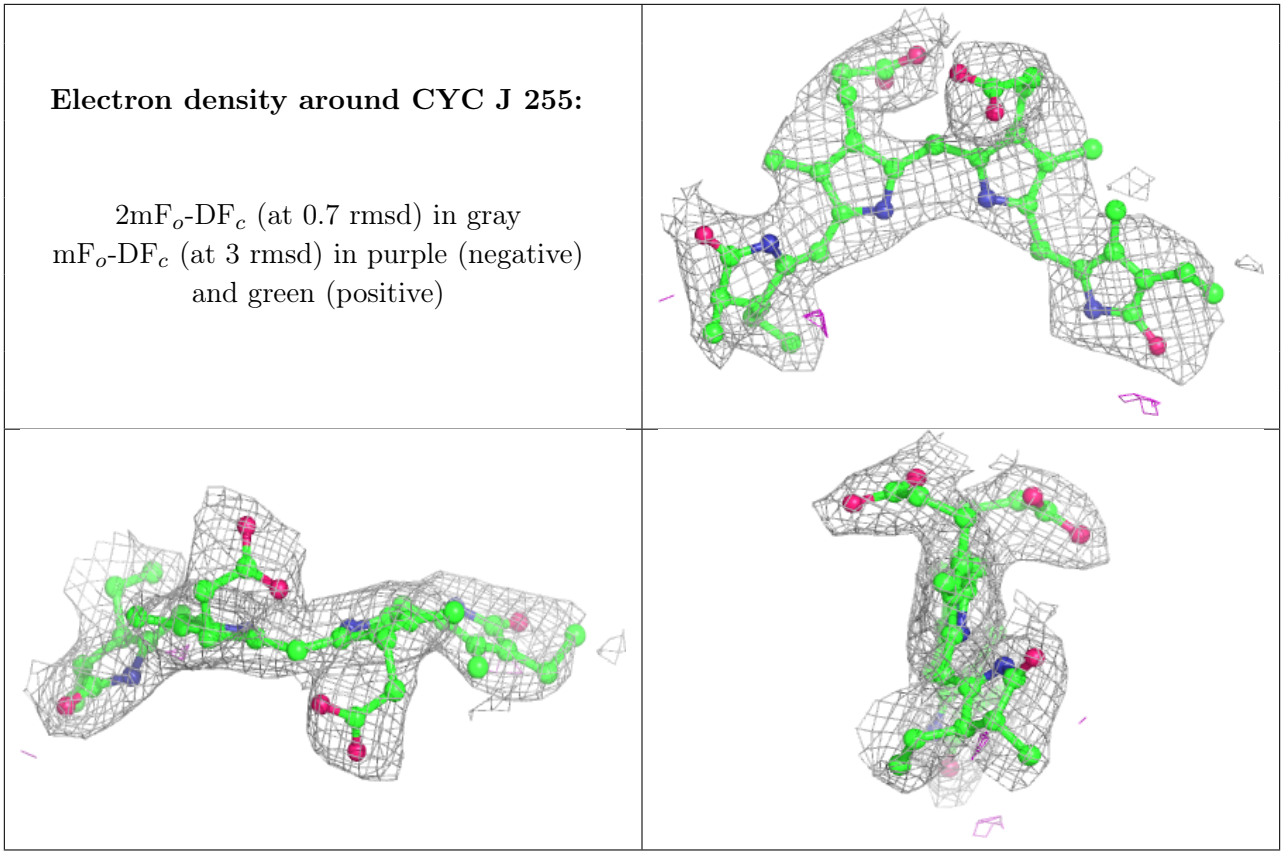






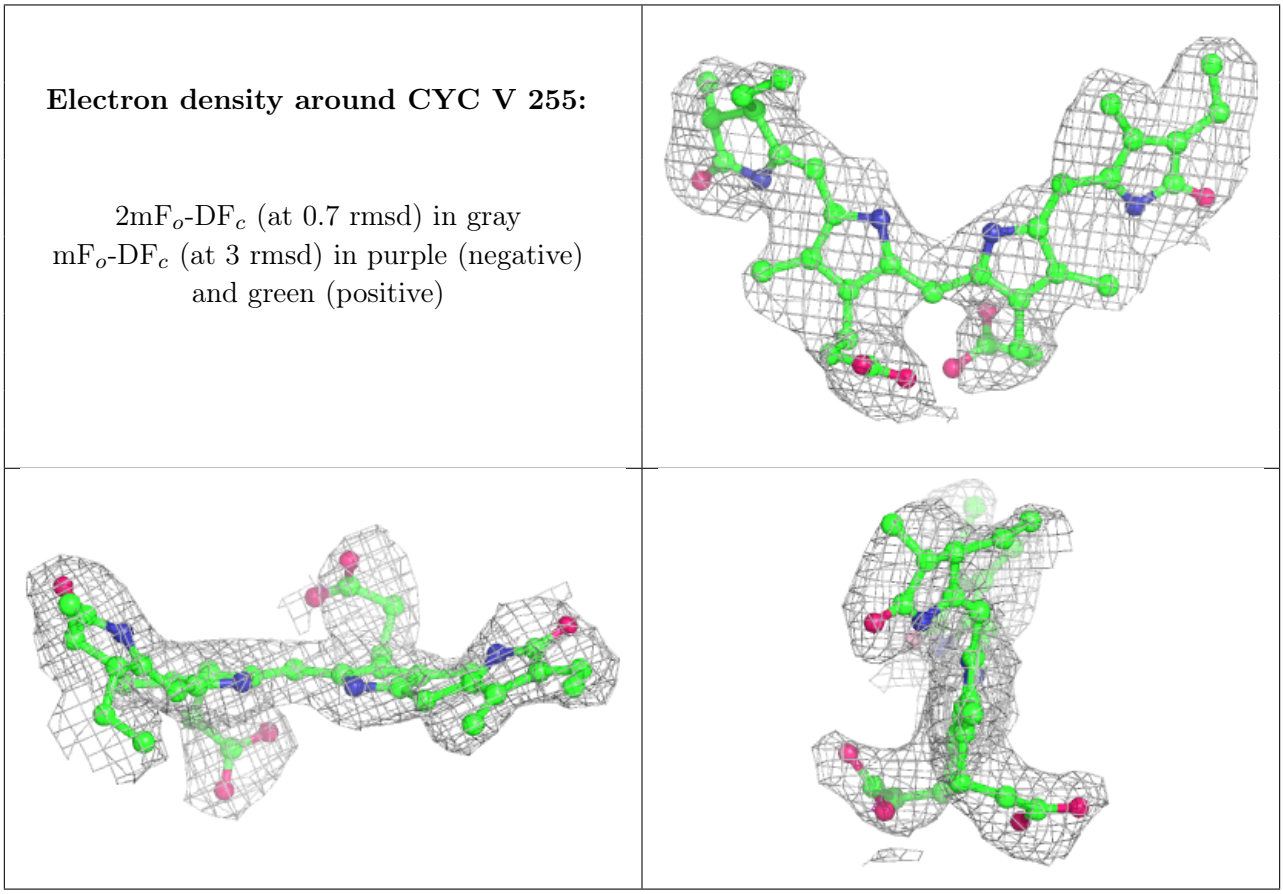
Electron density around CYC J 255:

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



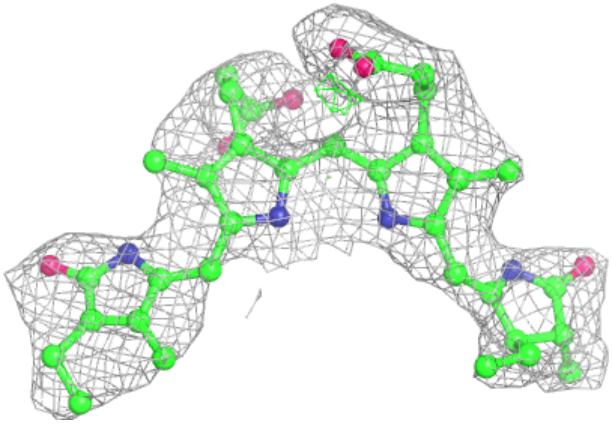
Electron density around CYC V 255:

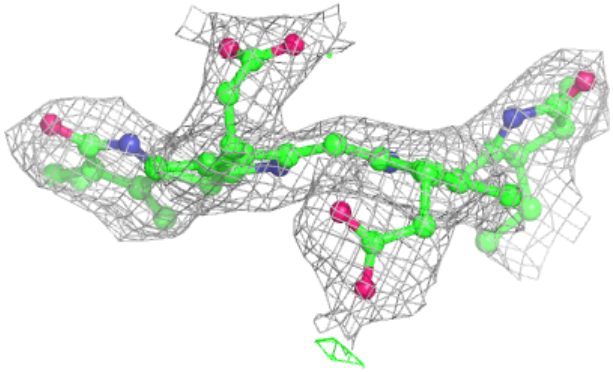
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

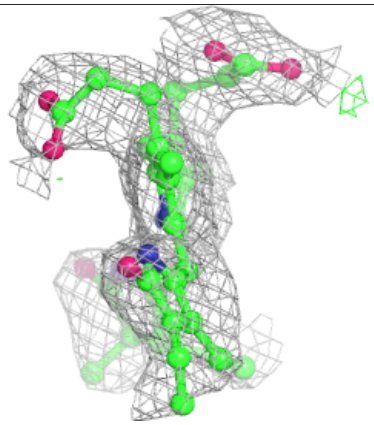


Electron density around CYC L 255:

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

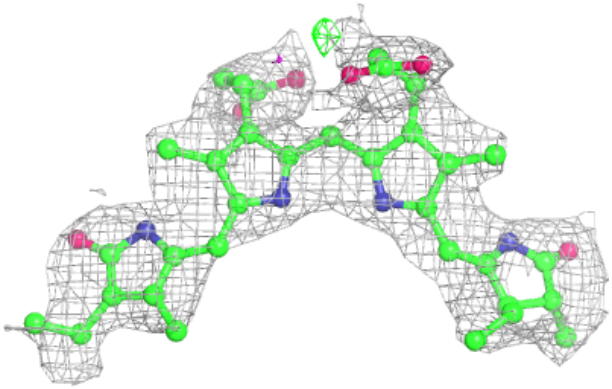


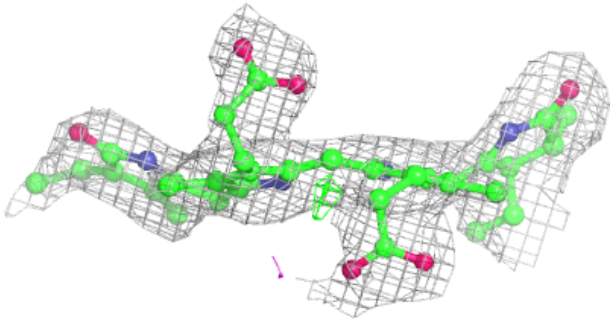


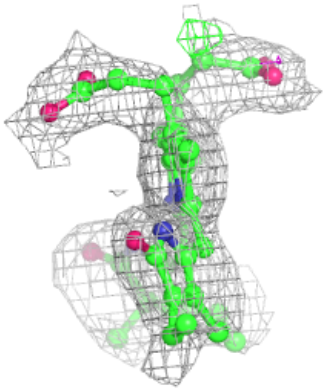


Electron density around CYC D 255:

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

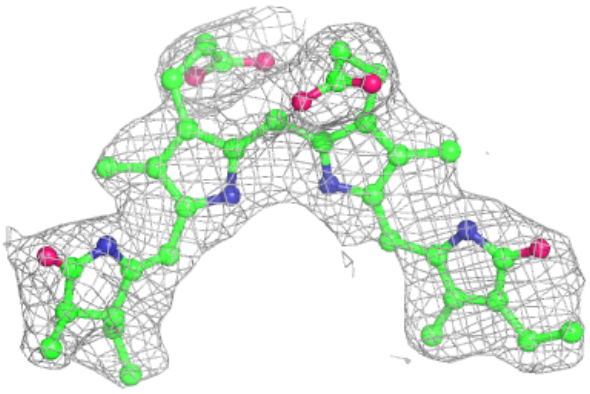


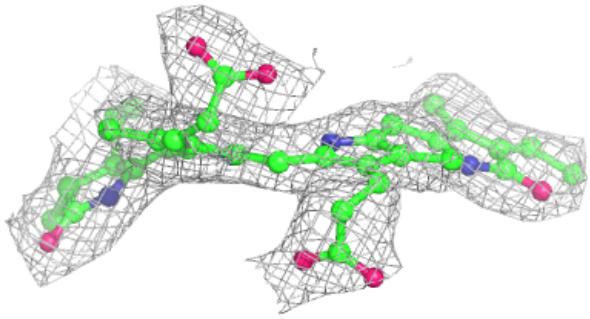


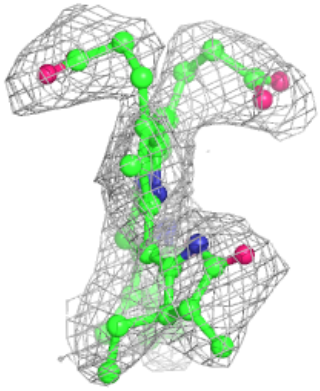


Electron density around CYC B 255:

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

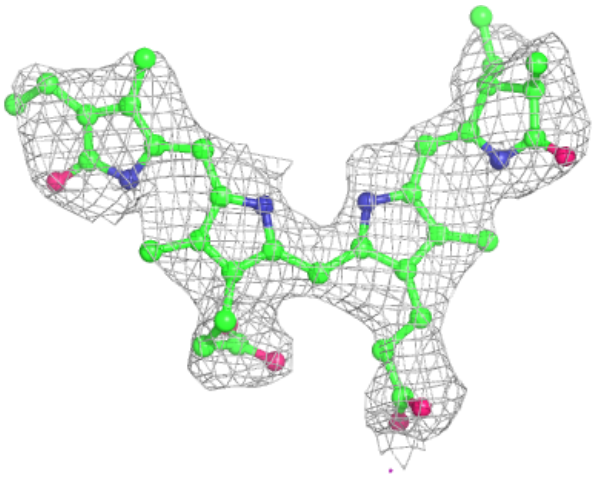


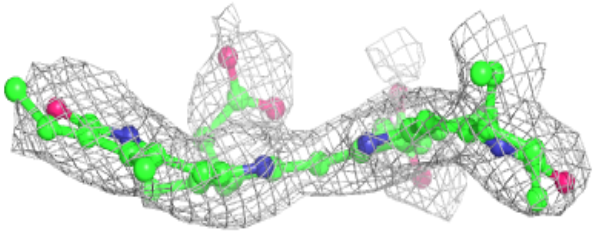


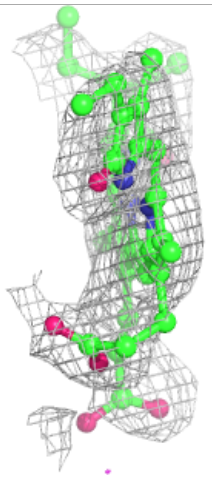


Electron density around CYC P 184:

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

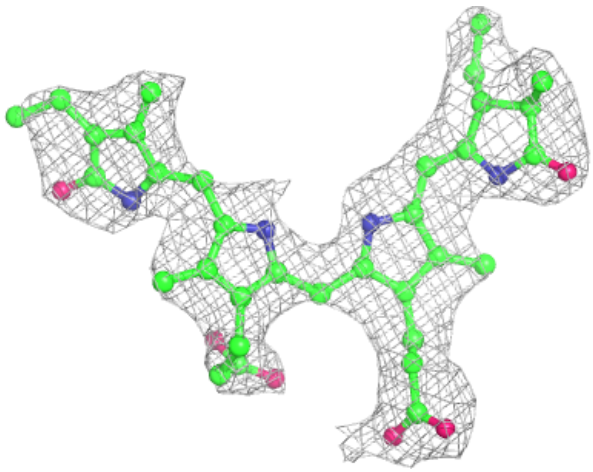


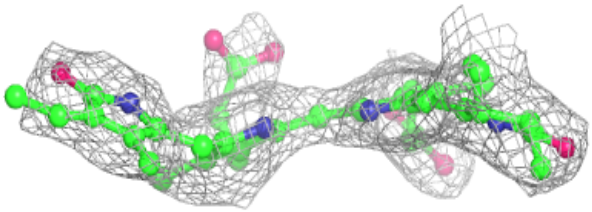


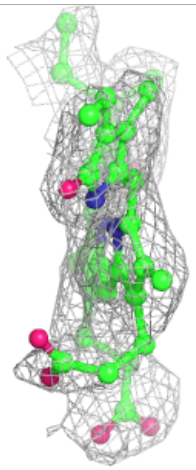


Electron density around CYC H 184:

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

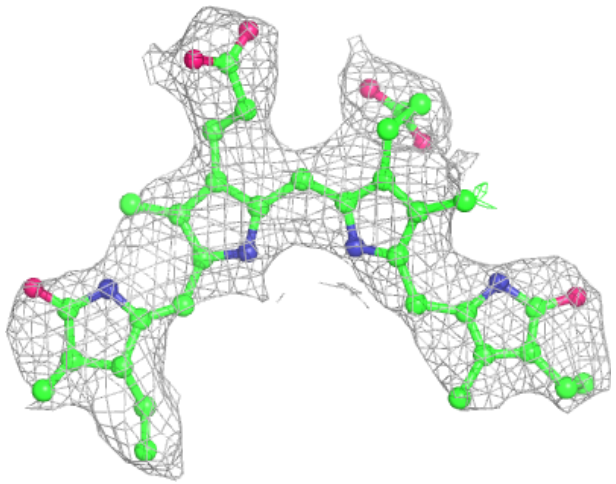


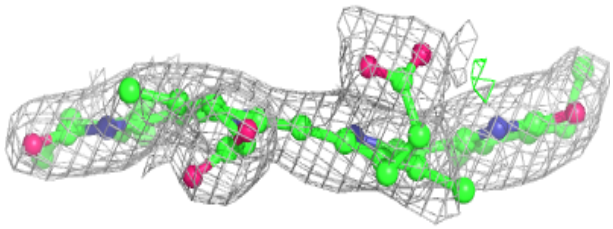


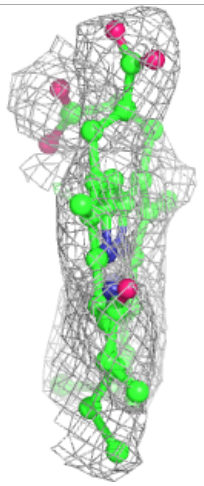


Electron density around CYC S 184:

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

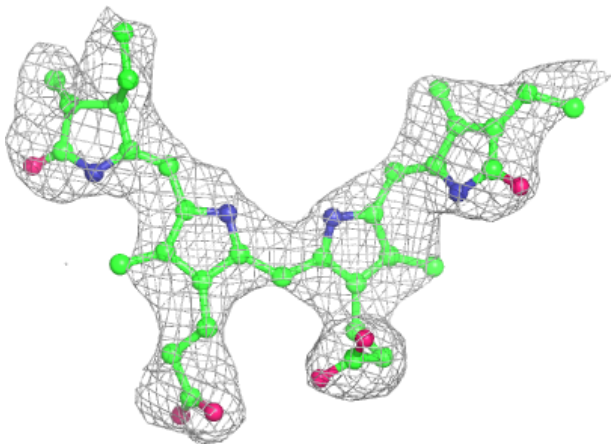


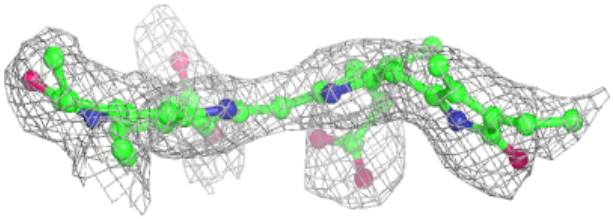


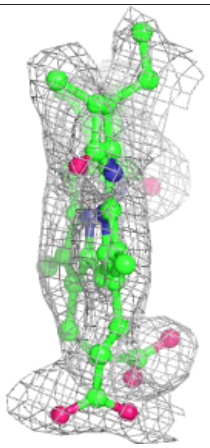


Electron density around CYC J 184:

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

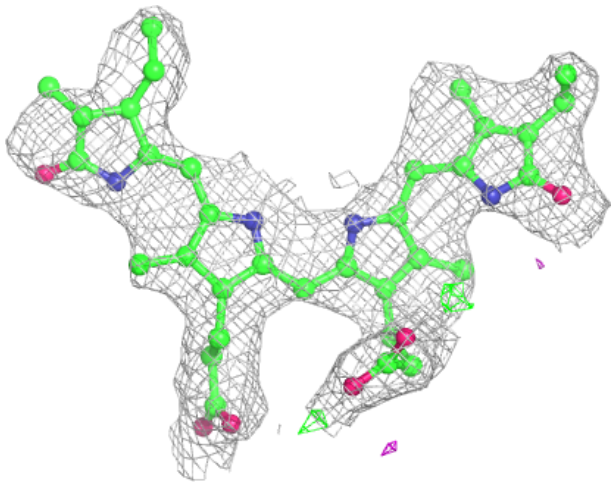


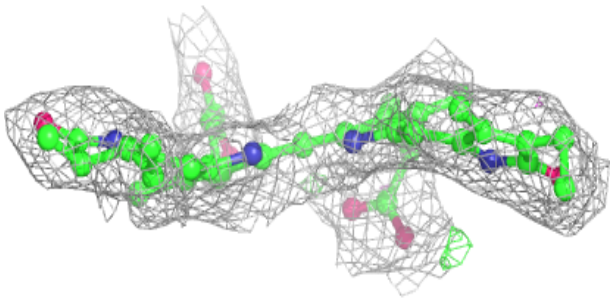


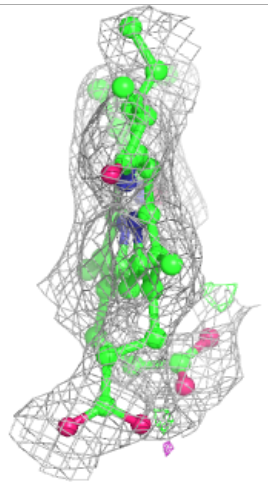


Electron density around CYC C 184:

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

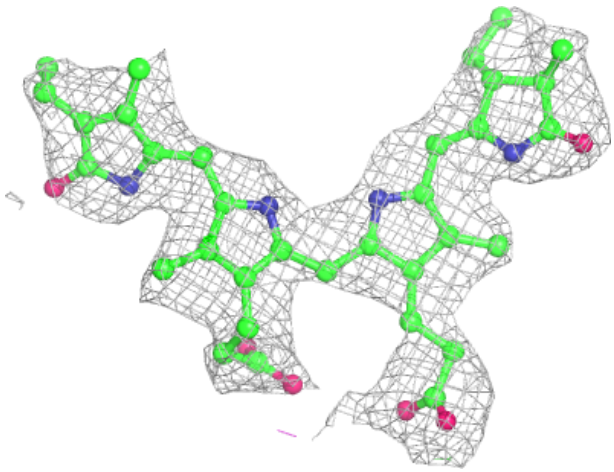


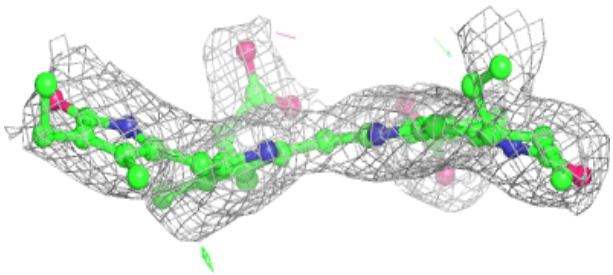


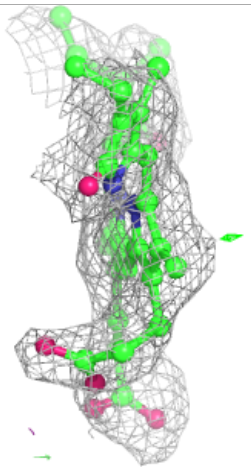


Electron density around CYC L 184:

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

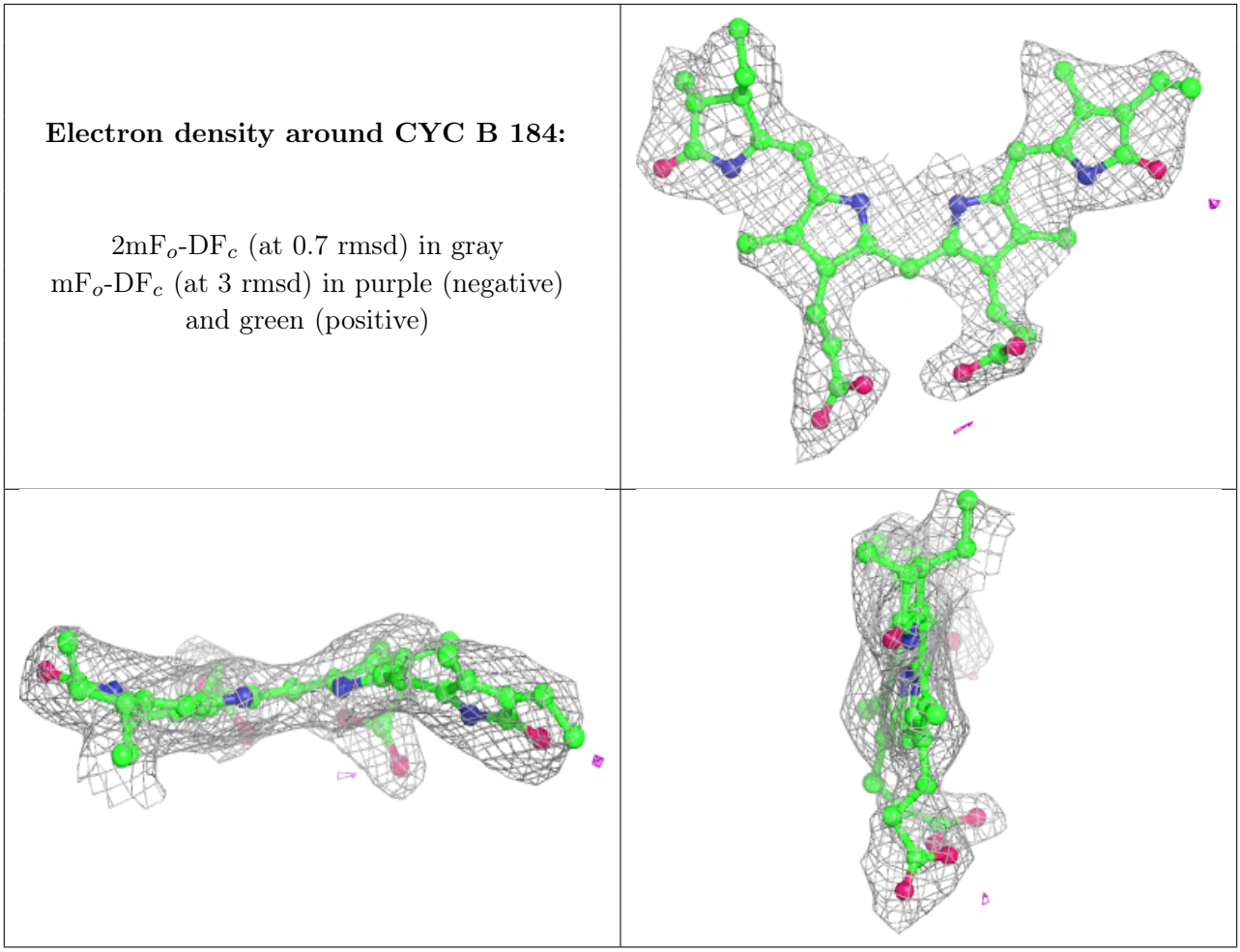






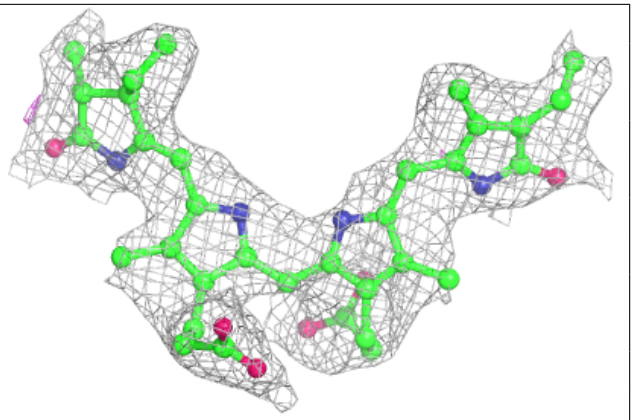
Electron density around CYC B 184:

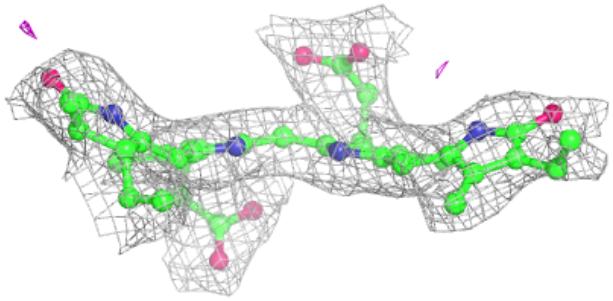
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

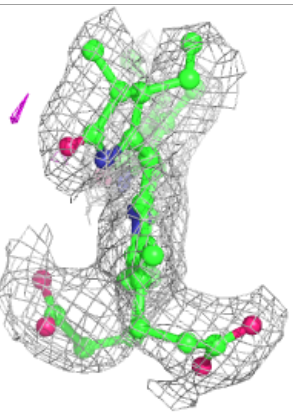


Electron density around CYC X 255:

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

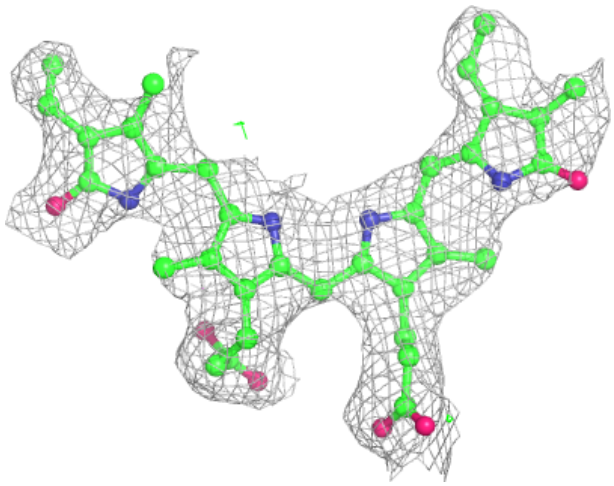


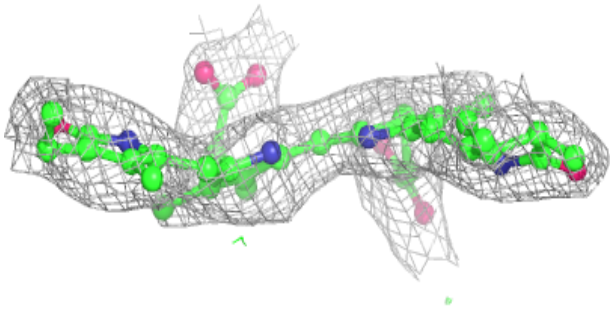


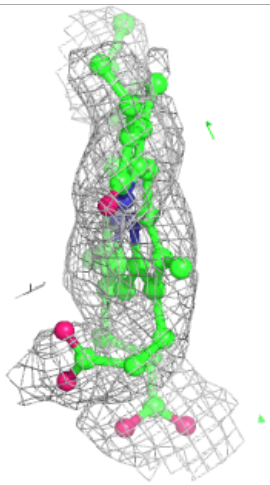


Electron density around CYC Q 184:

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

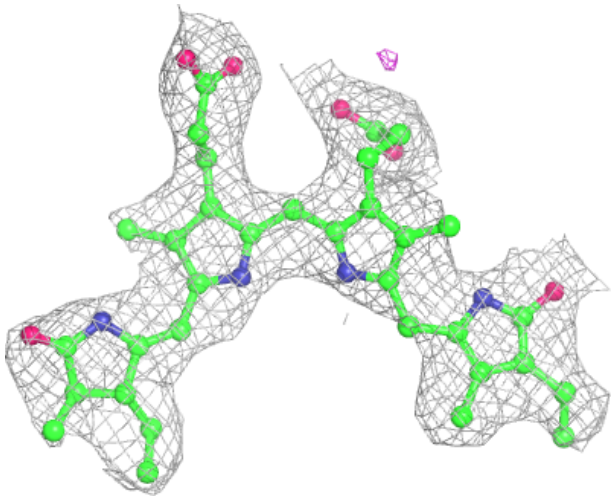


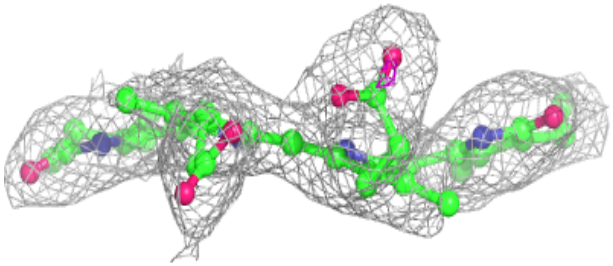


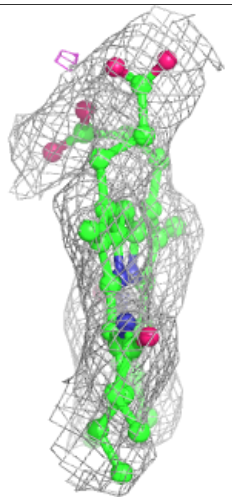


Electron density around CYC G 184:

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

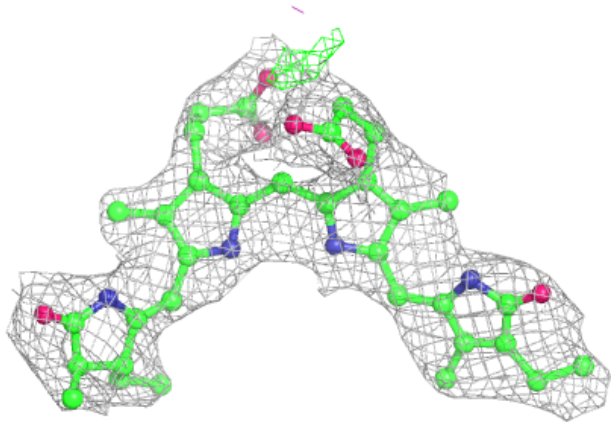


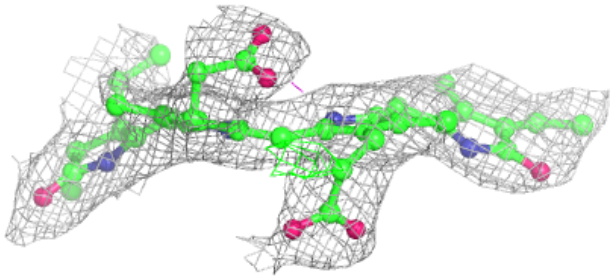


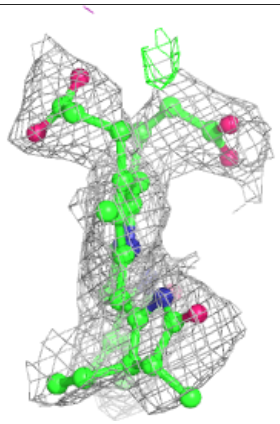


Electron density around CYC R 255:

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

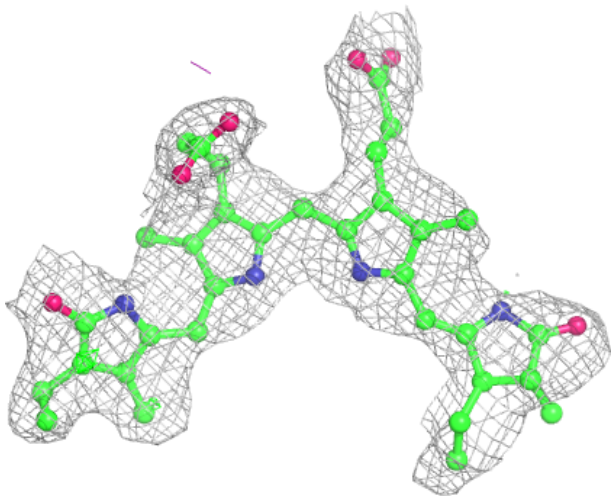


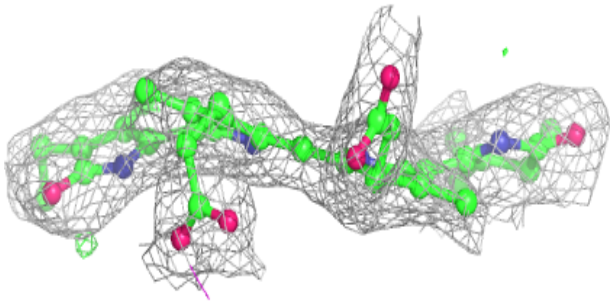


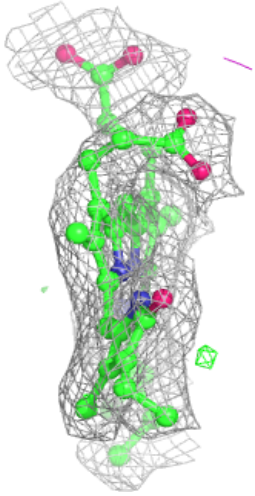


Electron density around CYC M 184:

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

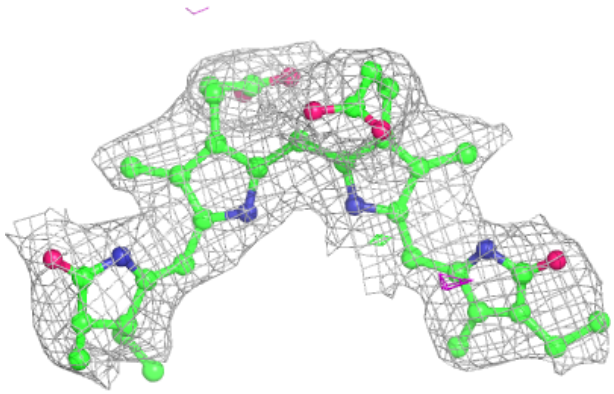


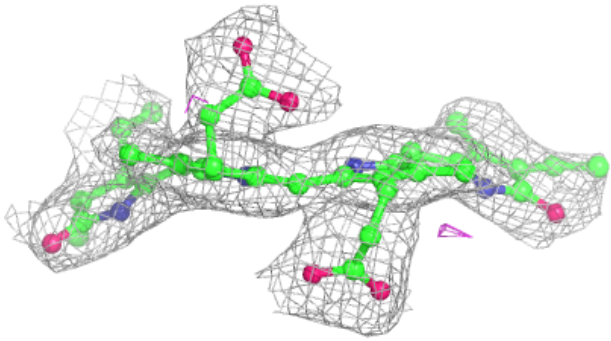


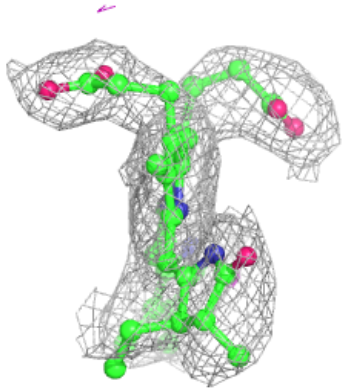


Electron density around CYC F 255:

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

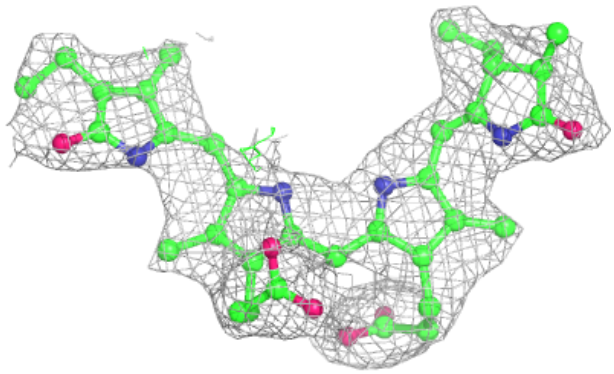


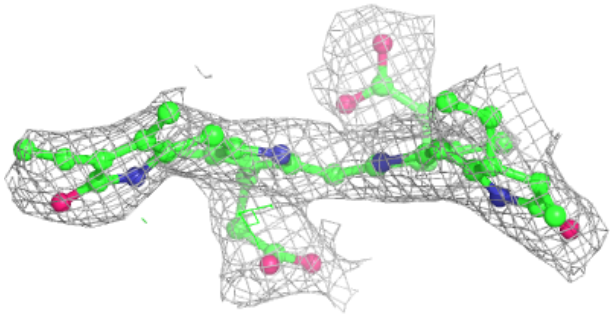


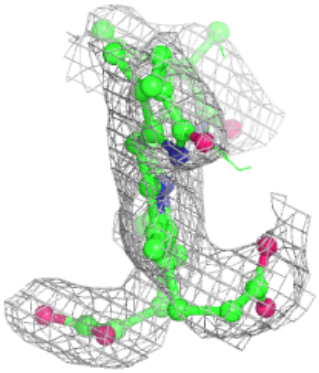


Electron density around CYC T 255:

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

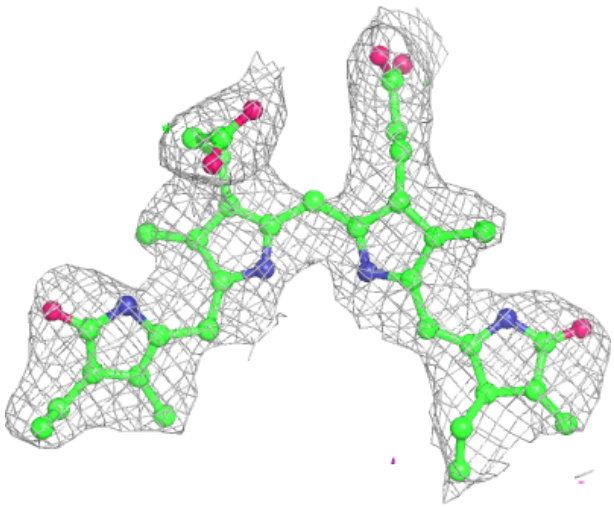


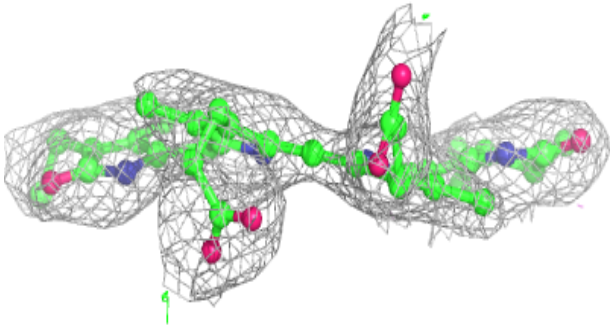


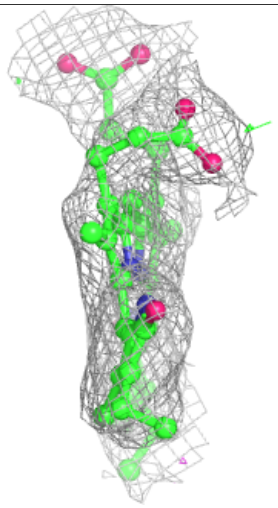


Electron density around CYC U 184:

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

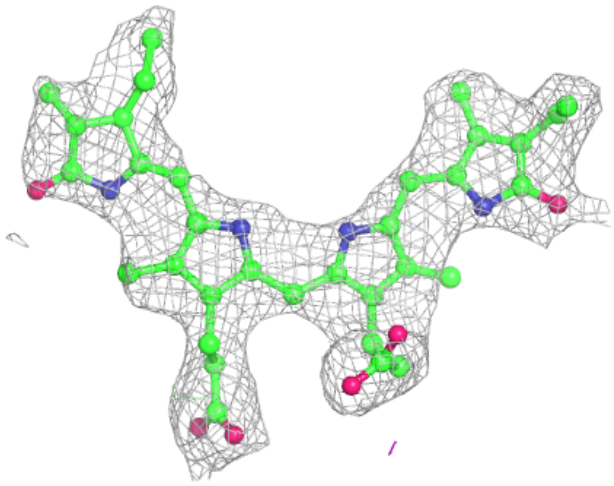


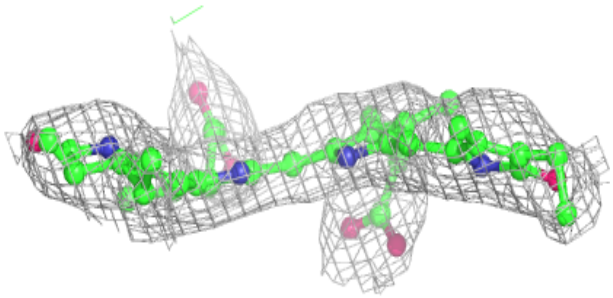


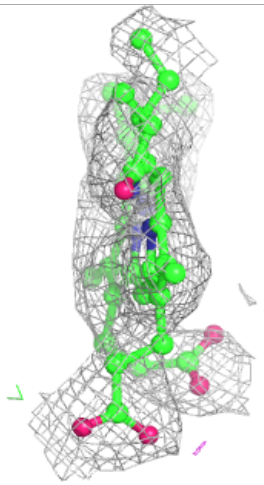


Electron density around CYC K 184:

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

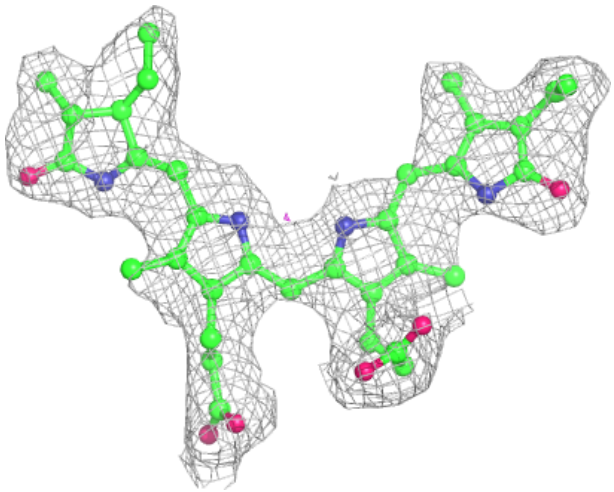


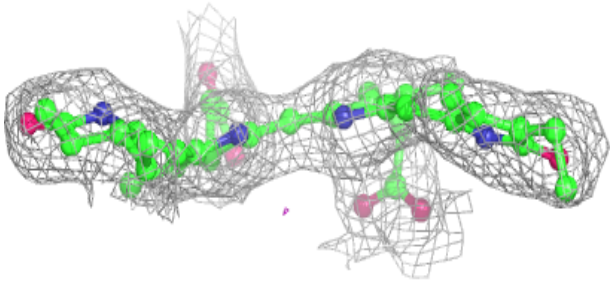


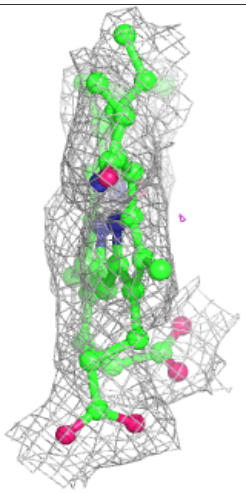


Electron density around CYC O 184:

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

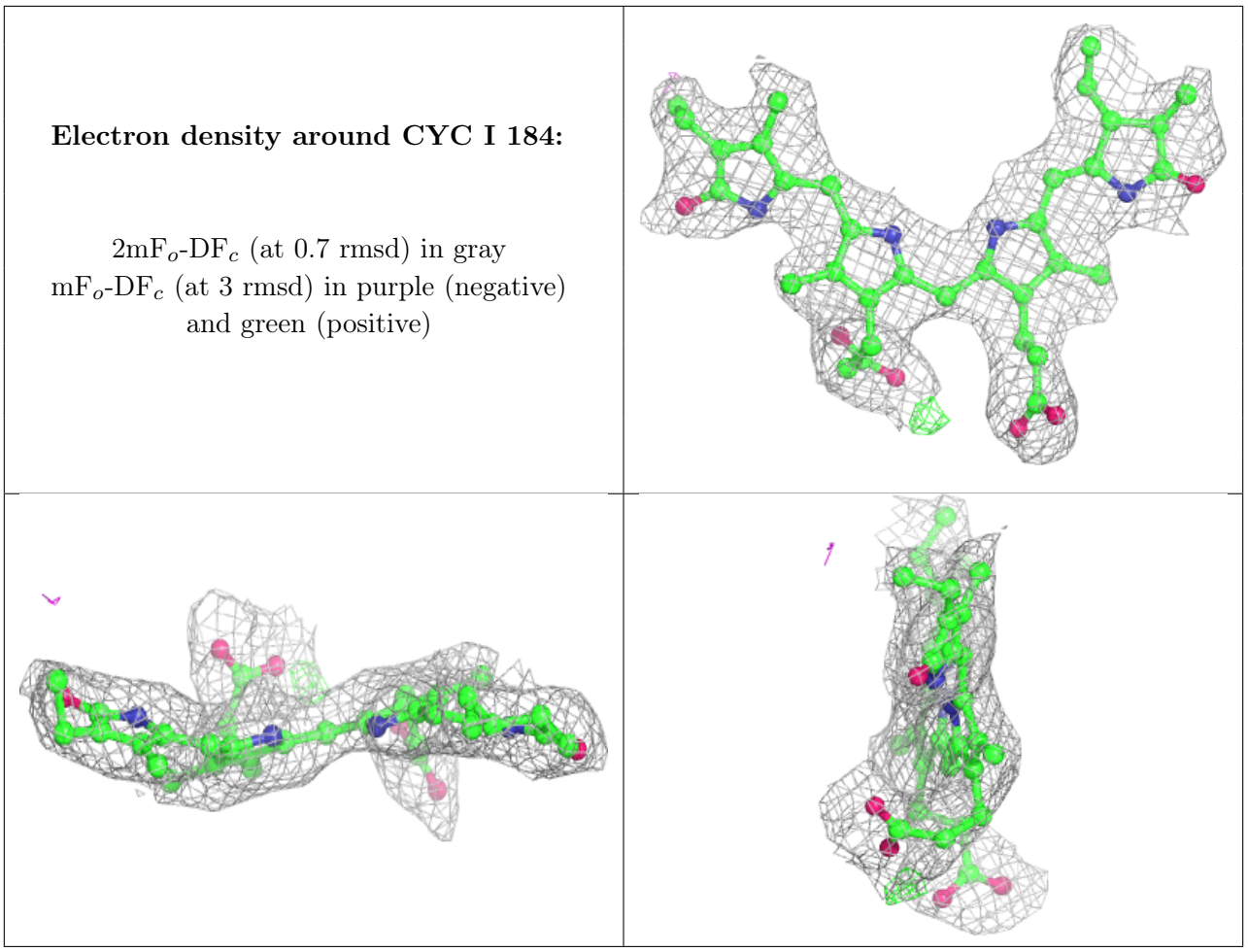






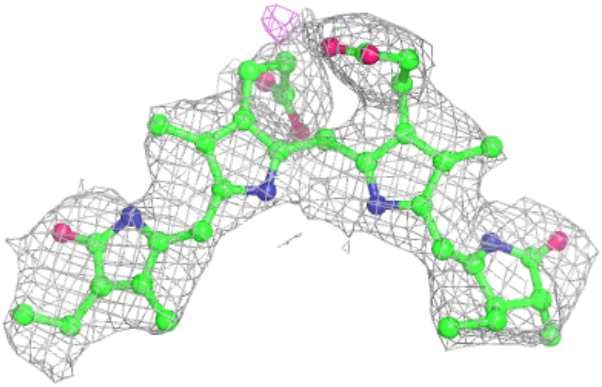
Electron density around CYC I 184:

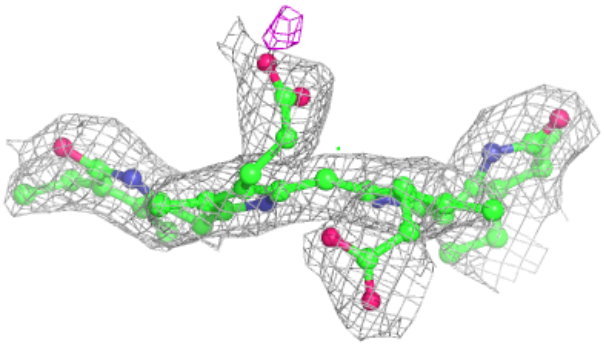
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

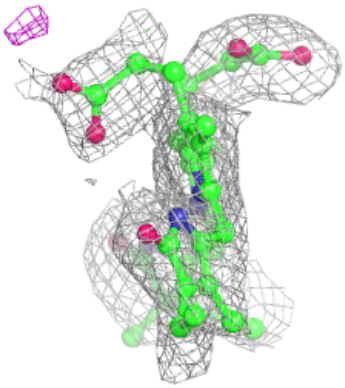


Electron density around CYC P 255:

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

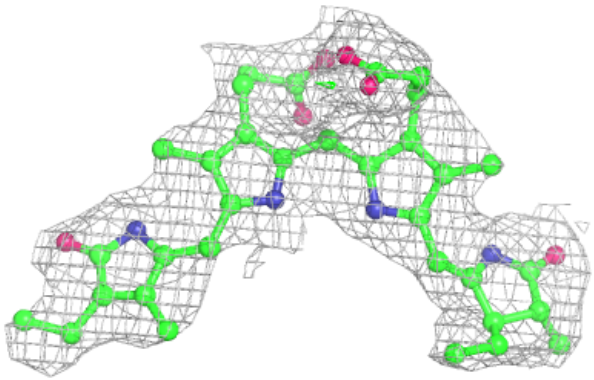


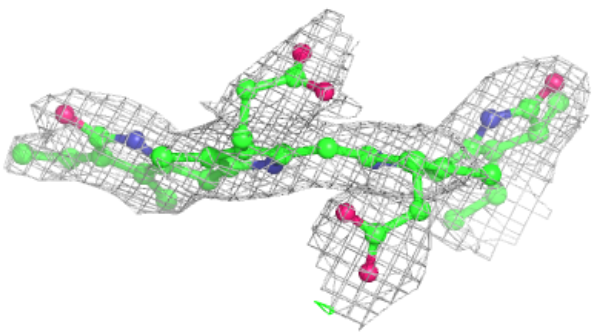


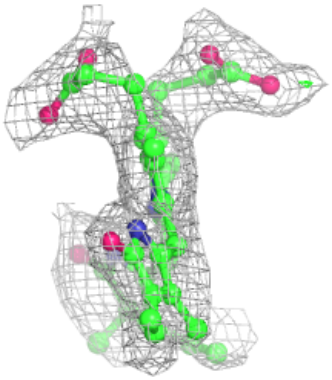


Electron density around CYC H 255:

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

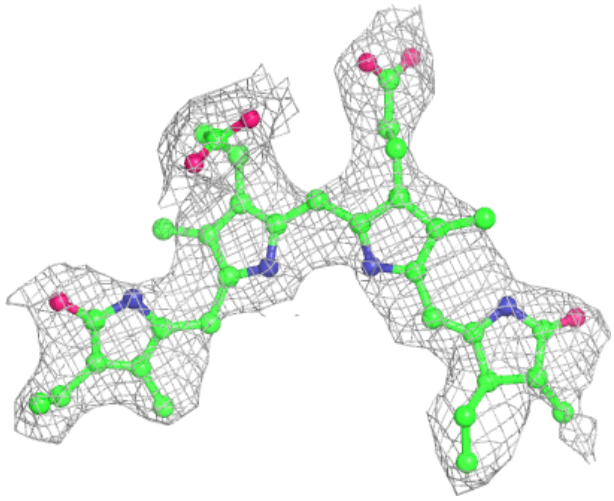


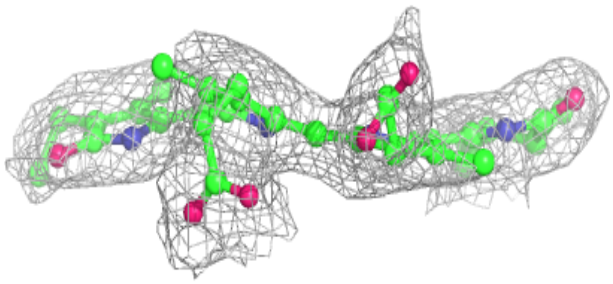


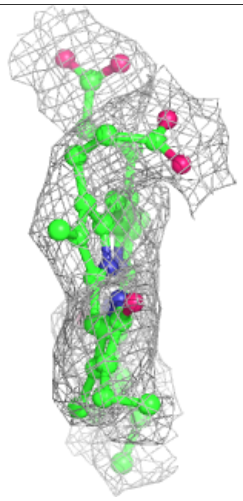


Electron density around CYC W 184:

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

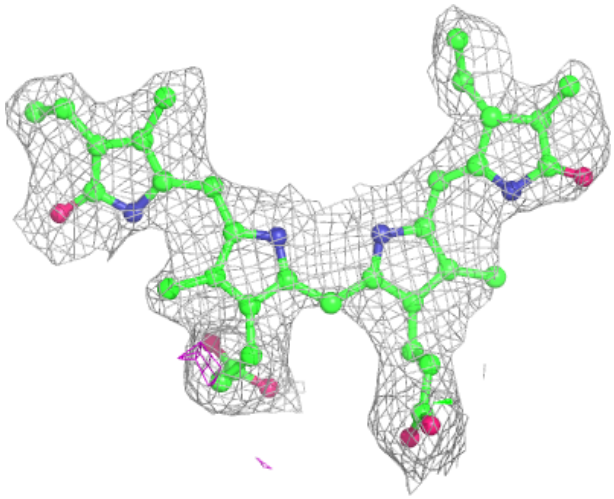


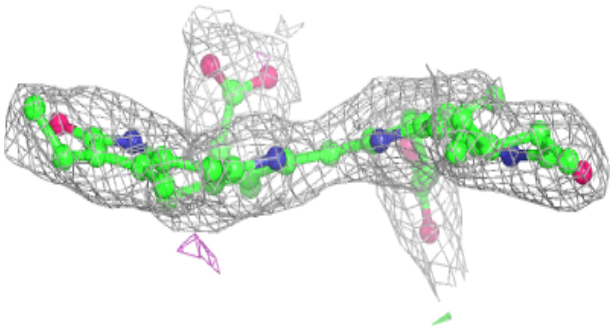


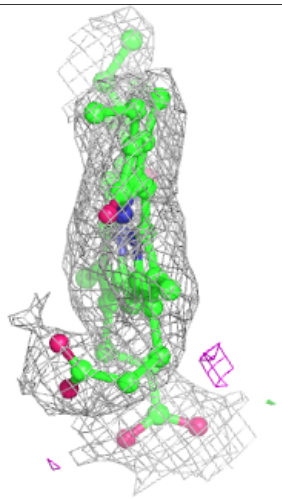


Electron density around CYC A 184:

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

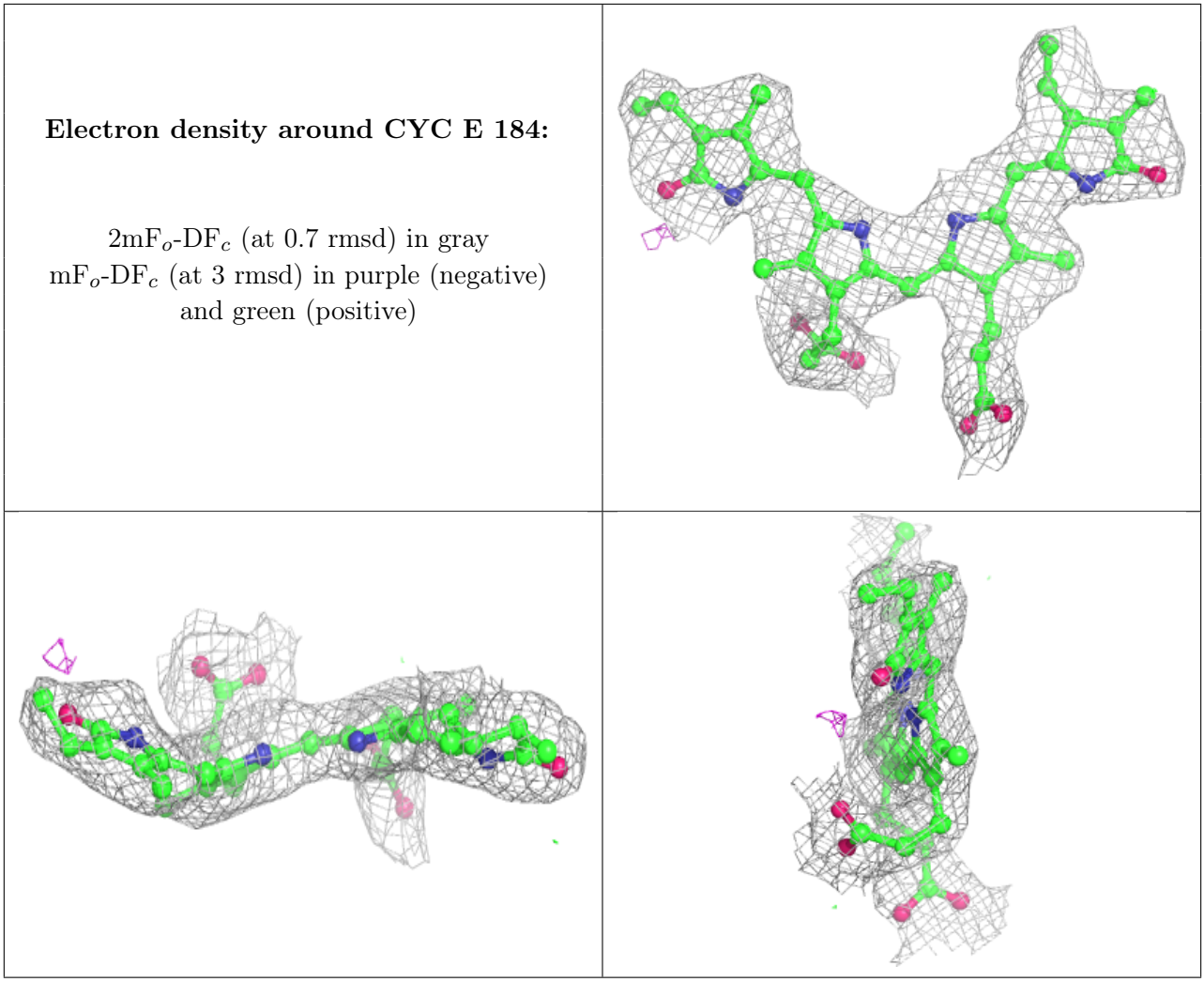






Electron density around CYC E 184:

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



6.5 Other polymers

There are no such residues in this entry.