



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 1, 2026 – 06:38 PM UTC

PDB ID : 2Q3T / pdb_00002q3t
Title : Ensemble refinement of the protein crystal structure of gene product from Arabidopsis thaliana At3g22680
Authors : Levin, E.J.; Kondrashov, D.A.; Wesenberg, G.E.; Phillips Jr., G.N.; Center for Eukaryotic Structural Genomics (CESG)
Deposited on : 2007-05-30
Resolution : 1.60 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 : 2022.3.0, CSD as543be (2022)
Xtrriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
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) : 2.49

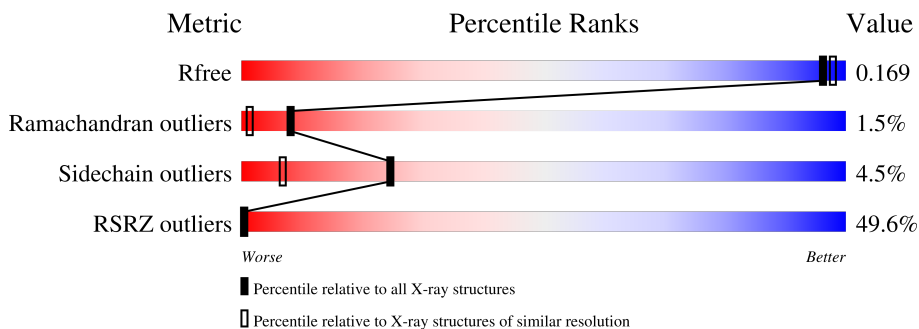
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.60 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}	180053	4673 (1.60-1.60)
Ramachandran outliers	187476	4831 (1.60-1.60)
Sidechain outliers	187428	4830 (1.60-1.60)
RSRZ outliers	180081	4672 (1.60-1.60)

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 $\leq 5\%$. 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	1-A	157	
1	10-A	157	
1	11-A	157	
1	12-A	157	
1	13-A	157	
1	14-A	157	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain			
1	15-A	157	51%	22%	•	23%
1	16-A	157	54%	19%	•	23%
1	2-A	157	54%	18%	5%	23%
1	3-A	157	58%	17%	•	23%
1	4-A	157	54%	21%	•	23%
1	5-A	157	59%	17%	•	23%
1	6-A	157	59%	17%	•	23%
1	7-A	157	58%	18%	•	23%
1	8-A	157	59%	16%	•	23%
1	9-A	157	57%	19%	•	23%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	SO4	1-A	300	-	X	-	-
2	SO4	10-A	301	-	X	-	-
2	SO4	11-A	300	-	X	-	-
2	SO4	13-A	301	-	X	-	-
2	SO4	14-A	300	-	X	-	-
2	SO4	14-A	301	-	X	-	-
2	SO4	15-A	301	-	X	-	-
2	SO4	16-A	300	-	X	-	-
2	SO4	2-A	301	-	X	-	-
2	SO4	7-A	301	-	X	-	-
2	SO4	8-A	301	-	X	-	-
2	SO4	9-A	301	-	X	-	-
3	CPS	1-A	200	X	X	-	-
3	CPS	10-A	200	X	X	-	-
3	CPS	11-A	200	X	X	-	-
3	CPS	12-A	200	X	X	-	-
3	CPS	13-A	200	X	X	-	-
3	CPS	14-A	200	X	X	-	-
3	CPS	15-A	200	X	X	-	-
3	CPS	16-A	200	X	X	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	CPS	2-A	200	X	X	-	-
3	CPS	3-A	200	X	X	-	-
3	CPS	4-A	200	X	X	-	-
3	CPS	5-A	200	X	X	-	-
3	CPS	6-A	200	X	X	-	-
3	CPS	7-A	200	X	X	-	-
3	CPS	8-A	200	X	X	-	-
3	CPS	9-A	200	X	X	-	-
4	EDO	1-A	402	-	X	-	-
4	EDO	1-A	403	-	X	-	-
4	EDO	1-A	404	-	X	-	-
4	EDO	10-A	402	-	X	-	-
4	EDO	10-A	404	-	X	-	-
4	EDO	11-A	403	-	X	-	-
4	EDO	11-A	404	-	X	-	-
4	EDO	12-A	402	-	X	-	-
4	EDO	12-A	403	-	X	-	-
4	EDO	12-A	404	-	X	-	-
4	EDO	13-A	402	-	X	-	-
4	EDO	13-A	403	-	X	-	-
4	EDO	13-A	404	-	X	-	-
4	EDO	14-A	401	-	X	-	-
4	EDO	14-A	402	-	X	-	-
4	EDO	14-A	403	-	X	-	-
4	EDO	14-A	404	-	X	-	-
4	EDO	15-A	402	-	X	-	-
4	EDO	15-A	403	-	X	-	-
4	EDO	15-A	404	-	X	-	-
4	EDO	16-A	403	-	X	-	-
4	EDO	16-A	404	-	X	-	-
4	EDO	2-A	401	-	X	-	-
4	EDO	2-A	402	-	X	-	-
4	EDO	2-A	403	-	X	-	-
4	EDO	2-A	404	-	X	-	-
4	EDO	3-A	403	-	X	-	-
4	EDO	3-A	404	-	X	-	-
4	EDO	4-A	402	-	X	-	-
4	EDO	4-A	403	-	X	-	-
4	EDO	4-A	404	-	X	-	-
4	EDO	5-A	402	-	X	-	-
4	EDO	5-A	403	-	X	-	-
4	EDO	5-A	404	-	X	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	EDO	6-A	401	-	X	-	-
4	EDO	6-A	402	-	X	-	-
4	EDO	6-A	403	-	X	-	-
4	EDO	6-A	404	-	X	-	-
4	EDO	7-A	403	-	X	-	-
4	EDO	7-A	404	-	X	-	-
4	EDO	8-A	402	-	X	-	-
4	EDO	8-A	403	-	X	-	-
4	EDO	8-A	404	-	X	-	-
4	EDO	9-A	402	-	X	-	-
4	EDO	9-A	404	-	X	-	-

2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 19808 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.

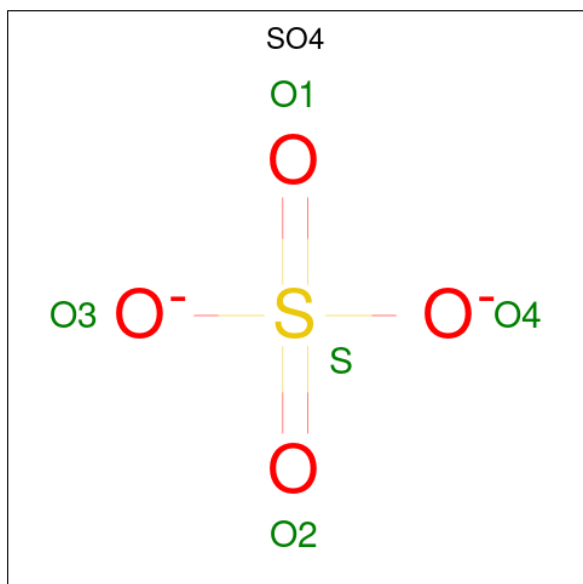
- Molecule 1 is a protein called Protein At3g22680.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	1-A	121	1003	646	173	179	5	0	0	0
1	2-A	121	1003	646	173	179	5	0	0	0
1	3-A	121	1003	646	173	179	5	0	0	0
1	4-A	121	1003	646	173	179	5	0	0	0
1	5-A	121	1003	646	173	179	5	0	0	0
1	6-A	121	1003	646	173	179	5	0	0	0
1	7-A	121	1003	646	173	179	5	0	0	0
1	8-A	121	1003	646	173	179	5	0	0	0
1	9-A	121	1003	646	173	179	5	0	0	0
1	10-A	121	1003	646	173	179	5	0	0	0
1	11-A	121	1003	646	173	179	5	0	0	0
1	12-A	121	1003	646	173	179	5	0	0	0
1	13-A	121	1003	646	173	179	5	0	0	0
1	14-A	121	1003	646	173	179	5	0	0	0
1	15-A	121	1003	646	173	179	5	0	0	0
1	16-A	121	1003	646	173	179	5	0	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	SER	-	expression tag	UNP Q9LUJ3

- Molecule 2 is SULFATE ION (CCD ID: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	O	S		
2	1-A	1	5	4	1	0	0
2	2-A	1	5	4	1	0	0
2	3-A	1	5	4	1	0	0
2	4-A	1	5	4	1	0	0
2	5-A	1	5	4	1	0	0
2	6-A	1	5	4	1	0	0
2	7-A	1	5	4	1	0	0
2	8-A	1	5	4	1	0	0
2	9-A	1	5	4	1	0	0
2	10-A	1	5	4	1	0	0

Continued on next page...

Continued from previous page...

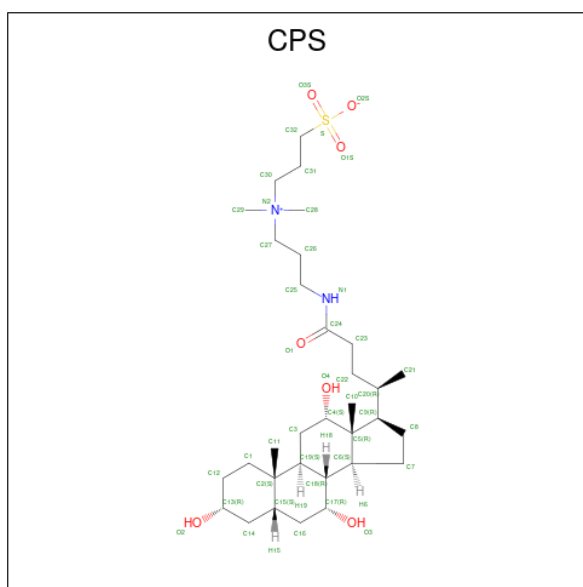
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	O	S		
2	11-A	1	5	4	1	0	0
2	12-A	1	5	4	1	0	0
2	13-A	1	5	4	1	0	0
2	14-A	1	5	4	1	0	0
2	15-A	1	5	4	1	0	0
2	16-A	1	5	4	1	0	0
2	1-A	1	5	4	1	0	0
2	2-A	1	5	4	1	0	0
2	3-A	1	5	4	1	0	0
2	4-A	1	5	4	1	0	0
2	5-A	1	5	4	1	0	0
2	6-A	1	5	4	1	0	0
2	7-A	1	5	4	1	0	0
2	8-A	1	5	4	1	0	0
2	9-A	1	5	4	1	0	0
2	10-A	1	5	4	1	0	0
2	11-A	1	5	4	1	0	0
2	12-A	1	5	4	1	0	0
2	13-A	1	5	4	1	0	0
2	14-A	1	5	4	1	0	0
2	15-A	1	5	4	1	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	O	S		
2	16-A	1	5	4	1	0	0
2	1-A	1	5	4	1	0	0
2	2-A	1	5	4	1	0	0
2	3-A	1	5	4	1	0	0
2	4-A	1	5	4	1	0	0
2	5-A	1	5	4	1	0	0
2	6-A	1	5	4	1	0	0
2	7-A	1	5	4	1	0	0
2	8-A	1	5	4	1	0	0
2	9-A	1	5	4	1	0	0
2	10-A	1	5	4	1	0	0
2	11-A	1	5	4	1	0	0
2	12-A	1	5	4	1	0	0
2	13-A	1	5	4	1	0	0
2	14-A	1	5	4	1	0	0
2	15-A	1	5	4	1	0	0
2	16-A	1	5	4	1	0	0

- Molecule 3 is 3-[(3-CHOLAMIDOPROPYL)DIMETHYLAMMONIO]-1-PROPANESULFONATE (CCD ID: CPS) (formula: C₃₂H₅₈N₂O₇S).



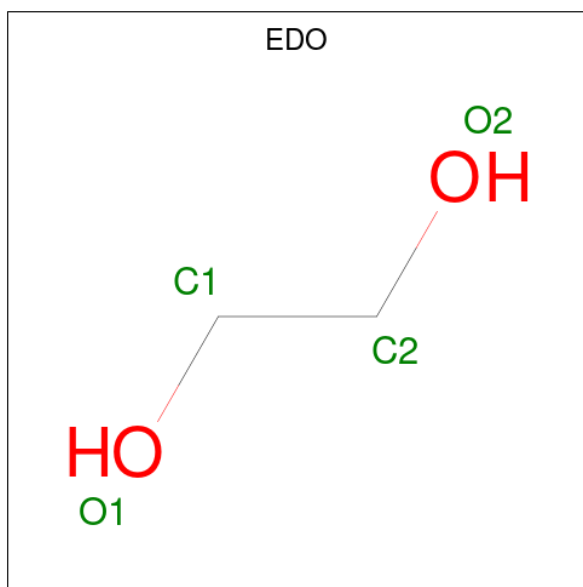
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	
3	1-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	2-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	3-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	4-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	5-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	6-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	7-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	8-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	9-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	10-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	11-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	12-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	13-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	14-A	1	Total	C	N	O	0	0
			32	27	1	4		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	15-A	1	Total	C	N	O	0	0
			32	27	1	4		
3	16-A	1	Total	C	N	O	0	0
			32	27	1	4		

- Molecule 4 is 1,2-ETHANEDIOL (CCD ID: EDO) (formula: C₂H₆O₂).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	1-A	1	Total	C	O	0	0
			4	2	2		
4	2-A	1	Total	C	O	0	0
			4	2	2		
4	3-A	1	Total	C	O	0	0
			4	2	2		
4	4-A	1	Total	C	O	0	0
			4	2	2		
4	5-A	1	Total	C	O	0	0
			4	2	2		
4	6-A	1	Total	C	O	0	0
			4	2	2		
4	7-A	1	Total	C	O	0	0
			4	2	2		
4	8-A	1	Total	C	O	0	0
			4	2	2		
4	9-A	1	Total	C	O	0	0
			4	2	2		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	10-A	1	Total	C	O	0	0
			4	2	2		
4	11-A	1	Total	C	O	0	0
			4	2	2		
4	12-A	1	Total	C	O	0	0
			4	2	2		
4	13-A	1	Total	C	O	0	0
			4	2	2		
4	14-A	1	Total	C	O	0	0
			4	2	2		
4	15-A	1	Total	C	O	0	0
			4	2	2		
4	16-A	1	Total	C	O	0	0
			4	2	2		
4	1-A	1	Total	C	O	0	0
			4	2	2		
4	2-A	1	Total	C	O	0	0
			4	2	2		
4	3-A	1	Total	C	O	0	0
			4	2	2		
4	4-A	1	Total	C	O	0	0
			4	2	2		
4	5-A	1	Total	C	O	0	0
			4	2	2		
4	6-A	1	Total	C	O	0	0
			4	2	2		
4	7-A	1	Total	C	O	0	0
			4	2	2		
4	8-A	1	Total	C	O	0	0
			4	2	2		
4	9-A	1	Total	C	O	0	0
			4	2	2		
4	10-A	1	Total	C	O	0	0
			4	2	2		
4	11-A	1	Total	C	O	0	0
			4	2	2		
4	12-A	1	Total	C	O	0	0
			4	2	2		
4	13-A	1	Total	C	O	0	0
			4	2	2		
4	14-A	1	Total	C	O	0	0
			4	2	2		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	15-A	1	Total	C	O	0	0
			4	2	2		
4	16-A	1	Total	C	O	0	0
			4	2	2		
4	1-A	1	Total	C	O	0	0
			4	2	2		
4	2-A	1	Total	C	O	0	0
			4	2	2		
4	3-A	1	Total	C	O	0	0
			4	2	2		
4	4-A	1	Total	C	O	0	0
			4	2	2		
4	5-A	1	Total	C	O	0	0
			4	2	2		
4	6-A	1	Total	C	O	0	0
			4	2	2		
4	7-A	1	Total	C	O	0	0
			4	2	2		
4	8-A	1	Total	C	O	0	0
			4	2	2		
4	9-A	1	Total	C	O	0	0
			4	2	2		
4	10-A	1	Total	C	O	0	0
			4	2	2		
4	11-A	1	Total	C	O	0	0
			4	2	2		
4	12-A	1	Total	C	O	0	0
			4	2	2		
4	13-A	1	Total	C	O	0	0
			4	2	2		
4	14-A	1	Total	C	O	0	0
			4	2	2		
4	15-A	1	Total	C	O	0	0
			4	2	2		
4	16-A	1	Total	C	O	0	0
			4	2	2		
4	1-A	1	Total	C	O	0	0
			4	2	2		
4	2-A	1	Total	C	O	0	0
			4	2	2		
4	3-A	1	Total	C	O	0	0
			4	2	2		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	4-A	1	Total C O 4 2 2	0	0
4	5-A	1	Total C O 4 2 2	0	0
4	6-A	1	Total C O 4 2 2	0	0
4	7-A	1	Total C O 4 2 2	0	0
4	8-A	1	Total C O 4 2 2	0	0
4	9-A	1	Total C O 4 2 2	0	0
4	10-A	1	Total C O 4 2 2	0	0
4	11-A	1	Total C O 4 2 2	0	0
4	12-A	1	Total C O 4 2 2	0	0
4	13-A	1	Total C O 4 2 2	0	0
4	14-A	1	Total C O 4 2 2	0	0
4	15-A	1	Total C O 4 2 2	0	0
4	16-A	1	Total C O 4 2 2	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	1-A	172	Total O 172 172	0	0
5	2-A	172	Total O 172 172	0	0
5	3-A	172	Total O 172 172	0	0
5	4-A	172	Total O 172 172	0	0
5	5-A	172	Total O 172 172	0	0
5	6-A	172	Total O 172 172	0	0

Continued on next page...

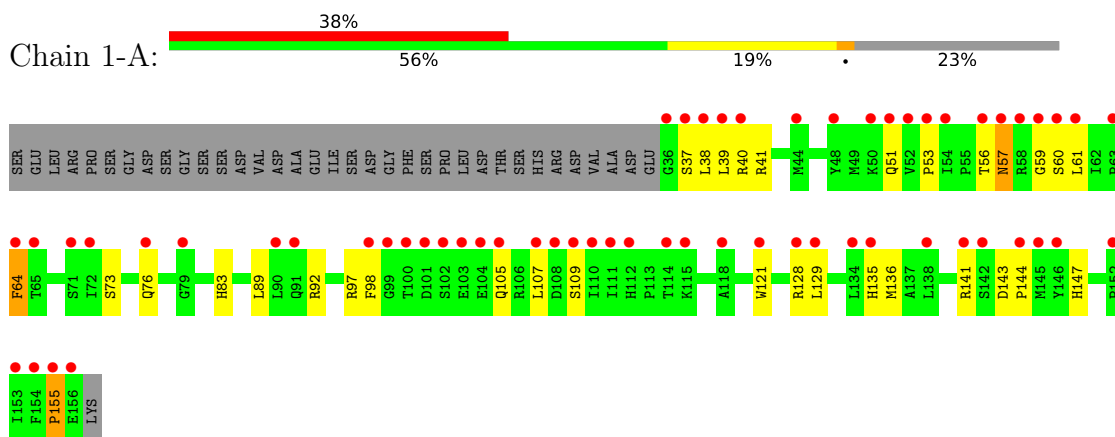
Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	7-A	172	Total 172	O 172	0	0
5	8-A	172	Total 172	O 172	0	0
5	9-A	172	Total 172	O 172	0	0
5	10-A	172	Total 172	O 172	0	0
5	11-A	172	Total 172	O 172	0	0
5	12-A	172	Total 172	O 172	0	0
5	13-A	172	Total 172	O 172	0	0
5	14-A	172	Total 172	O 172	0	0
5	15-A	172	Total 172	O 172	0	0
5	16-A	172	Total 172	O 172	0	0

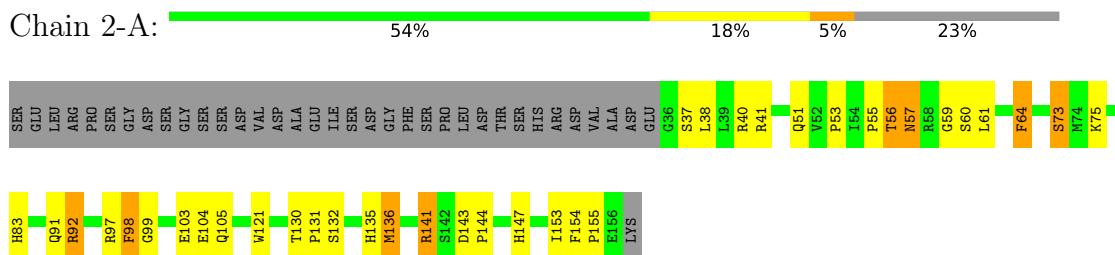
3 Residue-property plots [i](#)

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.

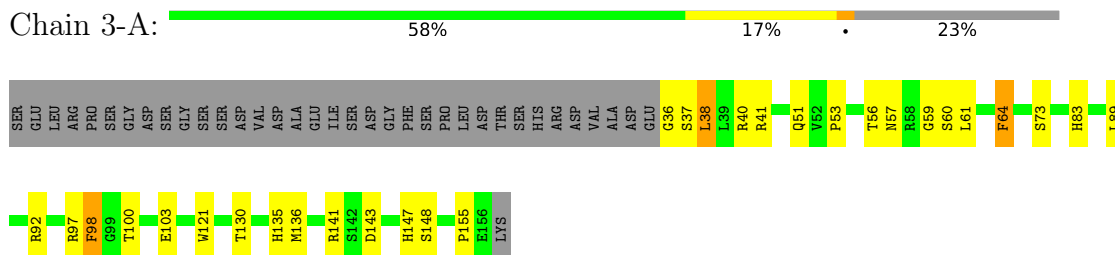
- Molecule 1: Protein At3g22680



- Molecule 1: Protein At3g22680

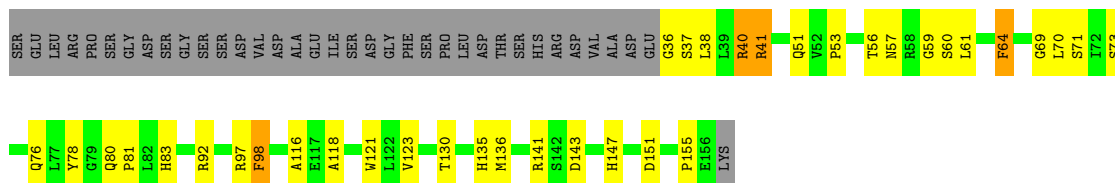


- Molecule 1: Protein At3g22680

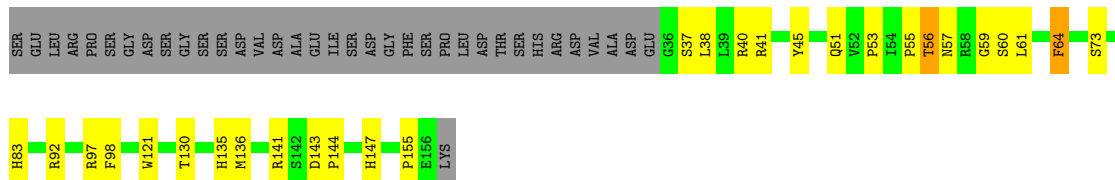


- Molecule 1: Protein At3g22680

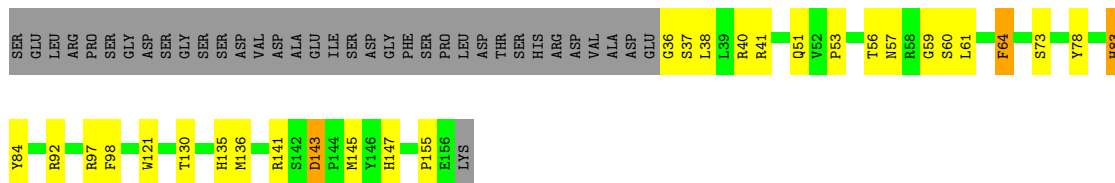




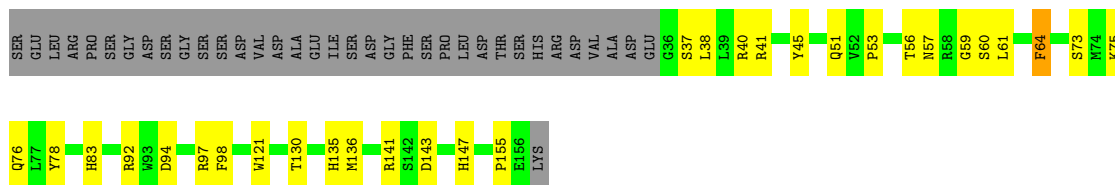
- Molecule 1: Protein At3g22680



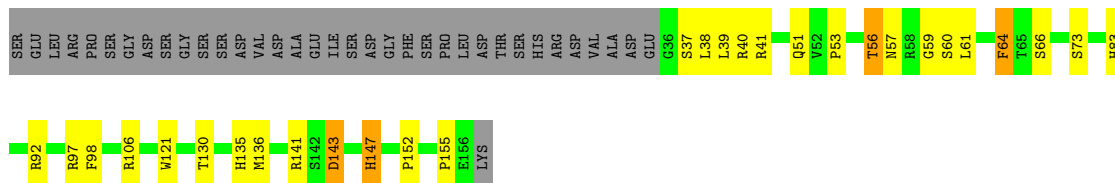
- Molecule 1: Protein At3g22680



- Molecule 1: Protein At3g22680

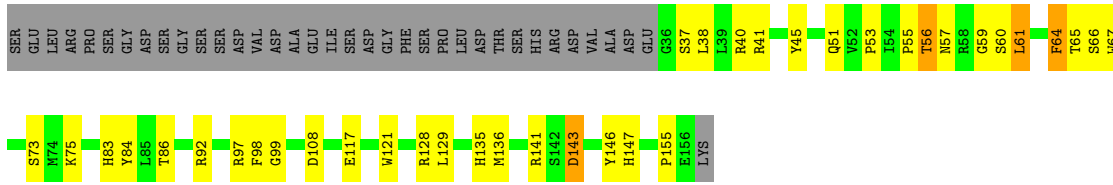


- Molecule 1: Protein At3g22680

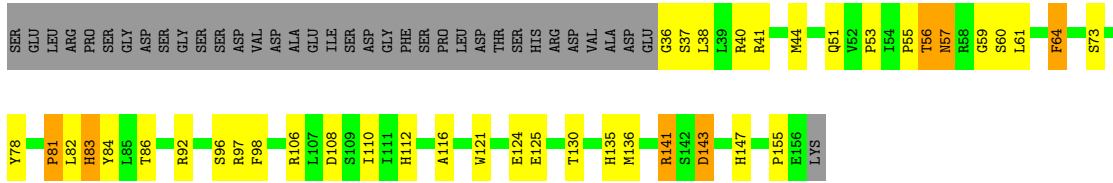


- Molecule 1: Protein At3g22680

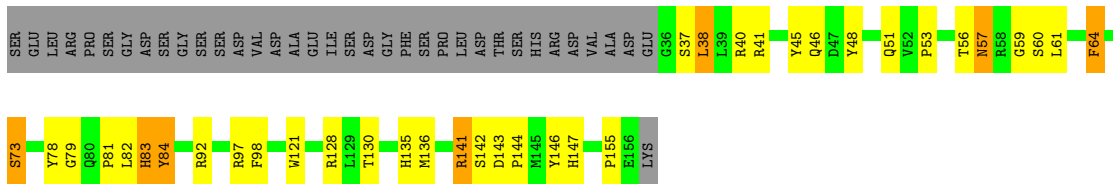




• Molecule 1: Protein At3g22680



• Molecule 1: Protein At3g22680



4 Data and refinement statistics

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α , β , γ	83.45Å 83.45Å 60.58Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	31.03 – 1.60 31.03 – 1.60	Depositor EDS
% Data completeness (in resolution range)	99.9 (31.03-1.60) 100.0 (31.03-1.60)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	8.43 (at 1.61Å)	Xtrriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.139 , 0.170 0.139 , 0.169	Depositor DCC
R_{free} test set	1633 reflections (5.07%)	wwPDB-VP
Wilson B-factor (Å ²)	18.0	Xtrriage
Anisotropy	0.019	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.03 , 64.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	0.024 for -h,-k,l	Xtrriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	19808	wwPDB-VP
Average B, all atoms (Å ²)	22.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.97% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ 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: SO4, EDO, CPS

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	1-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	2-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	3-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	4-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	5-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	6-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	7-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	8-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	9-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	10-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	11-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	12-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	13-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	14-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	15-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
1	16-A	1.32	18/1034 (1.7%)	0.98	7/1407 (0.5%)
All	All	1.32	288/16544 (1.7%)	0.98	112/22512 (0.5%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	1-A	0	10
1	2-A	0	16
1	3-A	0	5
1	4-A	0	15
1	5-A	0	4
1	6-A	0	6
1	7-A	0	5

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
1	8-A	0	6
1	9-A	0	8
1	10-A	0	8
1	11-A	0	10
1	12-A	0	5
1	13-A	0	14
1	14-A	0	17
1	15-A	0	21
1	16-A	0	18
All	All	0	168

All (288) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1-A	40	ARG	CA-CB	9.09	1.67	1.53
1	2-A	40	ARG	CA-CB	9.09	1.67	1.53
1	3-A	40	ARG	CA-CB	9.09	1.67	1.53
1	4-A	40	ARG	CA-CB	9.09	1.67	1.53
1	5-A	40	ARG	CA-CB	9.09	1.67	1.53
1	6-A	40	ARG	CA-CB	9.09	1.67	1.53
1	7-A	40	ARG	CA-CB	9.09	1.67	1.53
1	8-A	40	ARG	CA-CB	9.09	1.67	1.53
1	9-A	40	ARG	CA-CB	9.09	1.67	1.53
1	10-A	40	ARG	CA-CB	9.09	1.67	1.53
1	11-A	40	ARG	CA-CB	9.09	1.67	1.53
1	12-A	40	ARG	CA-CB	9.09	1.67	1.53
1	13-A	40	ARG	CA-CB	9.09	1.67	1.53
1	14-A	40	ARG	CA-CB	9.09	1.67	1.53
1	15-A	40	ARG	CA-CB	9.09	1.67	1.53
1	16-A	40	ARG	CA-CB	9.09	1.67	1.53
1	1-A	40	ARG	CG-CD	7.55	1.75	1.52
1	2-A	40	ARG	CG-CD	7.55	1.75	1.52
1	3-A	40	ARG	CG-CD	7.55	1.75	1.52
1	4-A	40	ARG	CG-CD	7.55	1.75	1.52
1	5-A	40	ARG	CG-CD	7.55	1.75	1.52
1	6-A	40	ARG	CG-CD	7.55	1.75	1.52
1	7-A	40	ARG	CG-CD	7.55	1.75	1.52
1	8-A	40	ARG	CG-CD	7.55	1.75	1.52
1	9-A	40	ARG	CG-CD	7.55	1.75	1.52
1	10-A	40	ARG	CG-CD	7.55	1.75	1.52
1	11-A	40	ARG	CG-CD	7.55	1.75	1.52
1	12-A	40	ARG	CG-CD	7.55	1.75	1.52

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	13-A	40	ARG	CG-CD	7.55	1.75	1.52
1	14-A	40	ARG	CG-CD	7.55	1.75	1.52
1	15-A	40	ARG	CG-CD	7.55	1.75	1.52
1	16-A	40	ARG	CG-CD	7.55	1.75	1.52
1	1-A	141	ARG	CG-CD	6.95	1.73	1.52
1	2-A	141	ARG	CG-CD	6.95	1.73	1.52
1	3-A	141	ARG	CG-CD	6.95	1.73	1.52
1	4-A	141	ARG	CG-CD	6.95	1.73	1.52
1	5-A	141	ARG	CG-CD	6.95	1.73	1.52
1	6-A	141	ARG	CG-CD	6.95	1.73	1.52
1	7-A	141	ARG	CG-CD	6.95	1.73	1.52
1	8-A	141	ARG	CG-CD	6.95	1.73	1.52
1	9-A	141	ARG	CG-CD	6.95	1.73	1.52
1	10-A	141	ARG	CG-CD	6.95	1.73	1.52
1	11-A	141	ARG	CG-CD	6.95	1.73	1.52
1	12-A	141	ARG	CG-CD	6.95	1.73	1.52
1	13-A	141	ARG	CG-CD	6.95	1.73	1.52
1	14-A	141	ARG	CG-CD	6.95	1.73	1.52
1	15-A	141	ARG	CG-CD	6.95	1.73	1.52
1	16-A	141	ARG	CG-CD	6.95	1.73	1.52
1	1-A	135	HIS	CA-CB	6.61	1.63	1.53
1	2-A	135	HIS	CA-CB	6.61	1.63	1.53
1	3-A	135	HIS	CA-CB	6.61	1.63	1.53
1	4-A	135	HIS	CA-CB	6.61	1.63	1.53
1	5-A	135	HIS	CA-CB	6.61	1.63	1.53
1	6-A	135	HIS	CA-CB	6.61	1.63	1.53
1	7-A	135	HIS	CA-CB	6.61	1.63	1.53
1	8-A	135	HIS	CA-CB	6.61	1.63	1.53
1	9-A	135	HIS	CA-CB	6.61	1.63	1.53
1	10-A	135	HIS	CA-CB	6.61	1.63	1.53
1	11-A	135	HIS	CA-CB	6.61	1.63	1.53
1	12-A	135	HIS	CA-CB	6.61	1.63	1.53
1	13-A	135	HIS	CA-CB	6.61	1.63	1.53
1	14-A	135	HIS	CA-CB	6.61	1.63	1.53
1	15-A	135	HIS	CA-CB	6.61	1.63	1.53
1	16-A	135	HIS	CA-CB	6.61	1.63	1.53
1	1-A	56	THR	CA-CB	6.45	1.65	1.53
1	2-A	56	THR	CA-CB	6.45	1.65	1.53
1	3-A	56	THR	CA-CB	6.45	1.65	1.53
1	4-A	56	THR	CA-CB	6.45	1.65	1.53
1	5-A	56	THR	CA-CB	6.45	1.65	1.53
1	6-A	56	THR	CA-CB	6.45	1.65	1.53

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	7-A	56	THR	CA-CB	6.45	1.65	1.53
1	8-A	56	THR	CA-CB	6.45	1.65	1.53
1	9-A	56	THR	CA-CB	6.45	1.65	1.53
1	10-A	56	THR	CA-CB	6.45	1.65	1.53
1	11-A	56	THR	CA-CB	6.45	1.65	1.53
1	12-A	56	THR	CA-CB	6.45	1.65	1.53
1	13-A	56	THR	CA-CB	6.45	1.65	1.53
1	14-A	56	THR	CA-CB	6.45	1.65	1.53
1	15-A	56	THR	CA-CB	6.45	1.65	1.53
1	16-A	56	THR	CA-CB	6.45	1.65	1.53
1	1-A	37	SER	CA-C	6.35	1.62	1.53
1	2-A	37	SER	CA-C	6.35	1.62	1.53
1	3-A	37	SER	CA-C	6.35	1.62	1.53
1	4-A	37	SER	CA-C	6.35	1.62	1.53
1	5-A	37	SER	CA-C	6.35	1.62	1.53
1	6-A	37	SER	CA-C	6.35	1.62	1.53
1	7-A	37	SER	CA-C	6.35	1.62	1.53
1	8-A	37	SER	CA-C	6.35	1.62	1.53
1	9-A	37	SER	CA-C	6.35	1.62	1.53
1	10-A	37	SER	CA-C	6.35	1.62	1.53
1	11-A	37	SER	CA-C	6.35	1.62	1.53
1	12-A	37	SER	CA-C	6.35	1.62	1.53
1	13-A	37	SER	CA-C	6.35	1.62	1.53
1	14-A	37	SER	CA-C	6.35	1.62	1.53
1	15-A	37	SER	CA-C	6.35	1.62	1.53
1	16-A	37	SER	CA-C	6.35	1.62	1.53
1	1-A	57	ASN	CA-C	6.30	1.60	1.52
1	2-A	57	ASN	CA-C	6.30	1.60	1.52
1	3-A	57	ASN	CA-C	6.30	1.60	1.52
1	4-A	57	ASN	CA-C	6.30	1.60	1.52
1	5-A	57	ASN	CA-C	6.30	1.60	1.52
1	6-A	57	ASN	CA-C	6.30	1.60	1.52
1	7-A	57	ASN	CA-C	6.30	1.60	1.52
1	8-A	57	ASN	CA-C	6.30	1.60	1.52
1	9-A	57	ASN	CA-C	6.30	1.60	1.52
1	10-A	57	ASN	CA-C	6.30	1.60	1.52
1	11-A	57	ASN	CA-C	6.30	1.60	1.52
1	12-A	57	ASN	CA-C	6.30	1.60	1.52
1	13-A	57	ASN	CA-C	6.30	1.60	1.52
1	14-A	57	ASN	CA-C	6.30	1.60	1.52
1	15-A	57	ASN	CA-C	6.30	1.60	1.52
1	16-A	57	ASN	CA-C	6.30	1.60	1.52

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1-A	41	ARG	CA-C	6.11	1.60	1.52
1	2-A	41	ARG	CA-C	6.11	1.60	1.52
1	3-A	41	ARG	CA-C	6.11	1.60	1.52
1	4-A	41	ARG	CA-C	6.11	1.60	1.52
1	5-A	41	ARG	CA-C	6.11	1.60	1.52
1	6-A	41	ARG	CA-C	6.11	1.60	1.52
1	7-A	41	ARG	CA-C	6.11	1.60	1.52
1	8-A	41	ARG	CA-C	6.11	1.60	1.52
1	9-A	41	ARG	CA-C	6.11	1.60	1.52
1	10-A	41	ARG	CA-C	6.11	1.60	1.52
1	11-A	41	ARG	CA-C	6.11	1.60	1.52
1	12-A	41	ARG	CA-C	6.11	1.60	1.52
1	13-A	41	ARG	CA-C	6.11	1.60	1.52
1	14-A	41	ARG	CA-C	6.11	1.60	1.52
1	15-A	41	ARG	CA-C	6.11	1.60	1.52
1	16-A	41	ARG	CA-C	6.11	1.60	1.52
1	1-A	51	GLN	CA-CB	6.07	1.64	1.53
1	2-A	51	GLN	CA-CB	6.07	1.64	1.53
1	3-A	51	GLN	CA-CB	6.07	1.64	1.53
1	4-A	51	GLN	CA-CB	6.07	1.64	1.53
1	5-A	51	GLN	CA-CB	6.07	1.64	1.53
1	6-A	51	GLN	CA-CB	6.07	1.64	1.53
1	7-A	51	GLN	CA-CB	6.07	1.64	1.53
1	8-A	51	GLN	CA-CB	6.07	1.64	1.53
1	9-A	51	GLN	CA-CB	6.07	1.64	1.53
1	10-A	51	GLN	CA-CB	6.07	1.64	1.53
1	11-A	51	GLN	CA-CB	6.07	1.64	1.53
1	12-A	51	GLN	CA-CB	6.07	1.64	1.53
1	13-A	51	GLN	CA-CB	6.07	1.64	1.53
1	14-A	51	GLN	CA-CB	6.07	1.64	1.53
1	15-A	51	GLN	CA-CB	6.07	1.64	1.53
1	16-A	51	GLN	CA-CB	6.07	1.64	1.53
1	1-A	98	PHE	N-CA	5.76	1.53	1.46
1	2-A	98	PHE	N-CA	5.76	1.53	1.46
1	3-A	98	PHE	N-CA	5.76	1.53	1.46
1	4-A	98	PHE	N-CA	5.76	1.53	1.46
1	5-A	98	PHE	N-CA	5.76	1.53	1.46
1	6-A	98	PHE	N-CA	5.76	1.53	1.46
1	7-A	98	PHE	N-CA	5.76	1.53	1.46
1	8-A	98	PHE	N-CA	5.76	1.53	1.46
1	9-A	98	PHE	N-CA	5.76	1.53	1.46
1	10-A	98	PHE	N-CA	5.76	1.53	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	11-A	98	PHE	N-CA	5.76	1.53	1.46
1	12-A	98	PHE	N-CA	5.76	1.53	1.46
1	13-A	98	PHE	N-CA	5.76	1.53	1.46
1	14-A	98	PHE	N-CA	5.76	1.53	1.46
1	15-A	98	PHE	N-CA	5.76	1.53	1.46
1	16-A	98	PHE	N-CA	5.76	1.53	1.46
1	1-A	73	SER	C-N	5.66	1.41	1.33
1	2-A	73	SER	C-N	5.66	1.41	1.33
1	3-A	73	SER	C-N	5.66	1.41	1.33
1	4-A	73	SER	C-N	5.66	1.41	1.33
1	5-A	73	SER	C-N	5.66	1.41	1.33
1	6-A	73	SER	C-N	5.66	1.41	1.33
1	7-A	73	SER	C-N	5.66	1.41	1.33
1	8-A	73	SER	C-N	5.66	1.41	1.33
1	9-A	73	SER	C-N	5.66	1.41	1.33
1	10-A	73	SER	C-N	5.66	1.41	1.33
1	11-A	73	SER	C-N	5.66	1.41	1.33
1	12-A	73	SER	C-N	5.66	1.41	1.33
1	13-A	73	SER	C-N	5.66	1.41	1.33
1	14-A	73	SER	C-N	5.66	1.41	1.33
1	15-A	73	SER	C-N	5.66	1.41	1.33
1	16-A	73	SER	C-N	5.66	1.41	1.33
1	1-A	64	PHE	CA-CB	5.66	1.63	1.53
1	2-A	64	PHE	CA-CB	5.66	1.63	1.53
1	3-A	64	PHE	CA-CB	5.66	1.63	1.53
1	4-A	64	PHE	CA-CB	5.66	1.63	1.53
1	5-A	64	PHE	CA-CB	5.66	1.63	1.53
1	6-A	64	PHE	CA-CB	5.66	1.63	1.53
1	7-A	64	PHE	CA-CB	5.66	1.63	1.53
1	8-A	64	PHE	CA-CB	5.66	1.63	1.53
1	9-A	64	PHE	CA-CB	5.66	1.63	1.53
1	10-A	64	PHE	CA-CB	5.66	1.63	1.53
1	11-A	64	PHE	CA-CB	5.66	1.63	1.53
1	12-A	64	PHE	CA-CB	5.66	1.63	1.53
1	13-A	64	PHE	CA-CB	5.66	1.63	1.53
1	14-A	64	PHE	CA-CB	5.66	1.63	1.53
1	15-A	64	PHE	CA-CB	5.66	1.63	1.53
1	16-A	64	PHE	CA-CB	5.66	1.63	1.53
1	1-A	147	HIS	CA-CB	5.65	1.64	1.53
1	2-A	147	HIS	CA-CB	5.65	1.64	1.53
1	3-A	147	HIS	CA-CB	5.65	1.64	1.53
1	4-A	147	HIS	CA-CB	5.65	1.64	1.53

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	5-A	147	HIS	CA-CB	5.65	1.64	1.53
1	6-A	147	HIS	CA-CB	5.65	1.64	1.53
1	7-A	147	HIS	CA-CB	5.65	1.64	1.53
1	8-A	147	HIS	CA-CB	5.65	1.64	1.53
1	9-A	147	HIS	CA-CB	5.65	1.64	1.53
1	10-A	147	HIS	CA-CB	5.65	1.64	1.53
1	11-A	147	HIS	CA-CB	5.65	1.64	1.53
1	12-A	147	HIS	CA-CB	5.65	1.64	1.53
1	13-A	147	HIS	CA-CB	5.65	1.64	1.53
1	14-A	147	HIS	CA-CB	5.65	1.64	1.53
1	15-A	147	HIS	CA-CB	5.65	1.64	1.53
1	16-A	147	HIS	CA-CB	5.65	1.64	1.53
1	1-A	59	GLY	N-CA	5.57	1.53	1.45
1	2-A	59	GLY	N-CA	5.57	1.53	1.45
1	3-A	59	GLY	N-CA	5.57	1.53	1.45
1	4-A	59	GLY	N-CA	5.57	1.53	1.45
1	5-A	59	GLY	N-CA	5.57	1.53	1.45
1	6-A	59	GLY	N-CA	5.57	1.53	1.45
1	7-A	59	GLY	N-CA	5.57	1.53	1.45
1	8-A	59	GLY	N-CA	5.57	1.53	1.45
1	9-A	59	GLY	N-CA	5.57	1.53	1.45
1	10-A	59	GLY	N-CA	5.57	1.53	1.45
1	11-A	59	GLY	N-CA	5.57	1.53	1.45
1	12-A	59	GLY	N-CA	5.57	1.53	1.45
1	13-A	59	GLY	N-CA	5.57	1.53	1.45
1	14-A	59	GLY	N-CA	5.57	1.53	1.45
1	15-A	59	GLY	N-CA	5.57	1.53	1.45
1	16-A	59	GLY	N-CA	5.57	1.53	1.45
1	1-A	83	HIS	CA-CB	5.48	1.62	1.53
1	2-A	83	HIS	CA-CB	5.48	1.62	1.53
1	3-A	83	HIS	CA-CB	5.48	1.62	1.53
1	4-A	83	HIS	CA-CB	5.48	1.62	1.53
1	5-A	83	HIS	CA-CB	5.48	1.62	1.53
1	6-A	83	HIS	CA-CB	5.48	1.62	1.53
1	7-A	83	HIS	CA-CB	5.48	1.62	1.53
1	8-A	83	HIS	CA-CB	5.48	1.62	1.53
1	9-A	83	HIS	CA-CB	5.48	1.62	1.53
1	10-A	83	HIS	CA-CB	5.48	1.62	1.53
1	11-A	83	HIS	CA-CB	5.48	1.62	1.53
1	12-A	83	HIS	CA-CB	5.48	1.62	1.53
1	13-A	83	HIS	CA-CB	5.48	1.62	1.53
1	14-A	83	HIS	CA-CB	5.48	1.62	1.53

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	15-A	83	HIS	CA-CB	5.48	1.62	1.53
1	16-A	83	HIS	CA-CB	5.48	1.62	1.53
1	1-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	2-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	3-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	4-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	5-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	6-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	7-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	8-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	9-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	10-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	11-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	12-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	13-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	14-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	15-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	16-A	143	ASP	CA-CB	-5.44	1.44	1.53
1	1-A	97	ARG	CA-C	5.07	1.59	1.52
1	2-A	97	ARG	CA-C	5.07	1.59	1.52
1	3-A	97	ARG	CA-C	5.07	1.59	1.52
1	4-A	97	ARG	CA-C	5.07	1.59	1.52
1	5-A	97	ARG	CA-C	5.07	1.59	1.52
1	6-A	97	ARG	CA-C	5.07	1.59	1.52
1	7-A	97	ARG	CA-C	5.07	1.59	1.52
1	8-A	97	ARG	CA-C	5.07	1.59	1.52
1	9-A	97	ARG	CA-C	5.07	1.59	1.52
1	10-A	97	ARG	CA-C	5.07	1.59	1.52
1	11-A	97	ARG	CA-C	5.07	1.59	1.52
1	12-A	97	ARG	CA-C	5.07	1.59	1.52
1	13-A	97	ARG	CA-C	5.07	1.59	1.52
1	14-A	97	ARG	CA-C	5.07	1.59	1.52
1	15-A	97	ARG	CA-C	5.07	1.59	1.52
1	16-A	97	ARG	CA-C	5.07	1.59	1.52
1	1-A	60	SER	CA-CB	5.04	1.61	1.53
1	2-A	60	SER	CA-CB	5.04	1.61	1.53
1	3-A	60	SER	CA-CB	5.04	1.61	1.53
1	4-A	60	SER	CA-CB	5.04	1.61	1.53
1	5-A	60	SER	CA-CB	5.04	1.61	1.53
1	6-A	60	SER	CA-CB	5.04	1.61	1.53
1	7-A	60	SER	CA-CB	5.04	1.61	1.53
1	8-A	60	SER	CA-CB	5.04	1.61	1.53

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	9-A	60	SER	CA-CB	5.04	1.61	1.53
1	10-A	60	SER	CA-CB	5.04	1.61	1.53
1	11-A	60	SER	CA-CB	5.04	1.61	1.53
1	12-A	60	SER	CA-CB	5.04	1.61	1.53
1	13-A	60	SER	CA-CB	5.04	1.61	1.53
1	14-A	60	SER	CA-CB	5.04	1.61	1.53
1	15-A	60	SER	CA-CB	5.04	1.61	1.53
1	16-A	60	SER	CA-CB	5.04	1.61	1.53

All (112) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	2-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	3-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	4-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	5-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	6-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	7-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	8-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	9-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	10-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	11-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	12-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	13-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	14-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	15-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	16-A	41	ARG	NE-CZ-NH1	7.30	128.80	121.50
1	1-A	41	ARG	O-C-N	6.26	128.76	122.12
1	2-A	41	ARG	O-C-N	6.26	128.76	122.12
1	3-A	41	ARG	O-C-N	6.26	128.76	122.12
1	4-A	41	ARG	O-C-N	6.26	128.76	122.12
1	5-A	41	ARG	O-C-N	6.26	128.76	122.12
1	6-A	41	ARG	O-C-N	6.26	128.76	122.12
1	7-A	41	ARG	O-C-N	6.26	128.76	122.12
1	8-A	41	ARG	O-C-N	6.26	128.76	122.12
1	9-A	41	ARG	O-C-N	6.26	128.76	122.12
1	10-A	41	ARG	O-C-N	6.26	128.76	122.12
1	11-A	41	ARG	O-C-N	6.26	128.76	122.12
1	12-A	41	ARG	O-C-N	6.26	128.76	122.12
1	13-A	41	ARG	O-C-N	6.26	128.76	122.12
1	14-A	41	ARG	O-C-N	6.26	128.76	122.12

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	15-A	41	ARG	O-C-N	6.26	128.76	122.12
1	16-A	41	ARG	O-C-N	6.26	128.76	122.12
1	1-A	97	ARG	O-C-N	6.12	130.85	122.46
1	2-A	97	ARG	O-C-N	6.12	130.85	122.46
1	3-A	97	ARG	O-C-N	6.12	130.85	122.46
1	4-A	97	ARG	O-C-N	6.12	130.85	122.46
1	5-A	97	ARG	O-C-N	6.12	130.85	122.46
1	6-A	97	ARG	O-C-N	6.12	130.85	122.46
1	7-A	97	ARG	O-C-N	6.12	130.85	122.46
1	8-A	97	ARG	O-C-N	6.12	130.85	122.46
1	9-A	97	ARG	O-C-N	6.12	130.85	122.46
1	10-A	97	ARG	O-C-N	6.12	130.85	122.46
1	11-A	97	ARG	O-C-N	6.12	130.85	122.46
1	12-A	97	ARG	O-C-N	6.12	130.85	122.46
1	13-A	97	ARG	O-C-N	6.12	130.85	122.46
1	14-A	97	ARG	O-C-N	6.12	130.85	122.46
1	15-A	97	ARG	O-C-N	6.12	130.85	122.46
1	16-A	97	ARG	O-C-N	6.12	130.85	122.46
1	1-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	2-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	3-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	4-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	5-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	6-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	7-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	8-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	9-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	10-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	11-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	12-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	13-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	14-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	15-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	16-A	92	ARG	NE-CZ-NH2	-5.49	114.26	119.20
1	1-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	1-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	2-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	2-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	3-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	3-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	4-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	4-A	136	MET	C-N-CA	-5.32	112.22	120.31

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	5-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	6-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	6-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	7-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	7-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	8-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	8-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	9-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	9-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	10-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	10-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	11-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	11-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	12-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	12-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	13-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	13-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	14-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	14-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	15-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	15-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	16-A	136	MET	CA-C-N	-5.32	112.22	120.31
1	16-A	136	MET	C-N-CA	-5.32	112.22	120.31
1	1-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	2-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	3-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	4-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	5-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	6-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	7-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	8-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	9-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	10-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	11-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	12-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	13-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	14-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	15-A	53	PRO	N-CD-CG	-5.07	95.60	103.20
1	16-A	53	PRO	N-CD-CG	-5.07	95.60	103.20

There are no chirality outliers.

All (168) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1-A	105	GLN	Mainchain
1	1-A	107	LEU	Mainchain
1	1-A	109	SER	Mainchain
1	1-A	128	ARG	Sidechain
1	1-A	129	LEU	Mainchain
1	1-A	144	PRO	Mainchain
1	1-A	39	LEU	Mainchain
1	1-A	57	ASN	Mainchain
1	1-A	76	GLN	Mainchain
1	1-A	89	LEU	Mainchain
1	10-A	116	ALA	Mainchain
1	10-A	125	GLU	Mainchain
1	10-A	127	HIS	Mainchain
1	10-A	133	HIS	Sidechain
1	10-A	144	PRO	Mainchain
1	10-A	62	ILE	Mainchain
1	10-A	64	PHE	Sidechain
1	10-A	99	GLY	Mainchain
1	11-A	106	ARG	Sidechain
1	11-A	112	HIS	Mainchain
1	11-A	144	PRO	Mainchain
1	11-A	38	LEU	Mainchain
1	11-A	39	LEU	Mainchain
1	11-A	40	ARG	Sidechain
1	11-A	43	GLU	Mainchain
1	11-A	62	ILE	Mainchain
1	11-A	84	TYR	Sidechain
1	11-A	92	ARG	Sidechain
1	12-A	116	ALA	Mainchain
1	12-A	144	PRO	Mainchain
1	12-A	45	TYR	Sidechain
1	12-A	57	ASN	Mainchain
1	12-A	76	GLN	Mainchain
1	13-A	106	ARG	Mainchain
1	13-A	107	LEU	Mainchain
1	13-A	123	VAL	Mainchain
1	13-A	125	GLU	Mainchain,Sidechain
1	13-A	141	ARG	Sidechain
1	13-A	143	ASP	Mainchain
1	13-A	146	TYR	Sidechain
1	13-A	148	SER	Mainchain
1	13-A	43	GLU	Mainchain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	13-A	44	MET	Mainchain
1	13-A	66	SER	Mainchain
1	13-A	68	VAL	Mainchain
1	13-A	75	LYS	Mainchain
1	14-A	108	ASP	Sidechain
1	14-A	117	GLU	Mainchain
1	14-A	128	ARG	Sidechain
1	14-A	129	LEU	Mainchain
1	14-A	143	ASP	Mainchain
1	14-A	146	TYR	Sidechain
1	14-A	45	TYR	Sidechain
1	14-A	55	PRO	Mainchain
1	14-A	56	THR	Mainchain
1	14-A	61	LEU	Mainchain
1	14-A	65	THR	Mainchain
1	14-A	66	SER	Mainchain
1	14-A	67	TRP	Mainchain
1	14-A	75	LYS	Mainchain
1	14-A	84	TYR	Mainchain
1	14-A	86	THR	Mainchain
1	14-A	99	GLY	Mainchain
1	15-A	106	ARG	Mainchain
1	15-A	108	ASP	Sidechain
1	15-A	110	ILE	Mainchain
1	15-A	112	HIS	Mainchain
1	15-A	116	ALA	Mainchain
1	15-A	124	GLU	Mainchain
1	15-A	125	GLU	Mainchain
1	15-A	141	ARG	Sidechain
1	15-A	143	ASP	Mainchain
1	15-A	36	GLY	Mainchain
1	15-A	44	MET	Mainchain
1	15-A	55	PRO	Mainchain
1	15-A	56	THR	Mainchain
1	15-A	57	ASN	Mainchain
1	15-A	78	TYR	Mainchain,Sidechain
1	15-A	81	PRO	Mainchain
1	15-A	82	LEU	Mainchain
1	15-A	84	TYR	Mainchain
1	15-A	86	THR	Mainchain
1	15-A	96	SER	Mainchain
1	16-A	128	ARG	Mainchain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	16-A	141	ARG	Sidechain
1	16-A	142	SER	Mainchain
1	16-A	144	PRO	Mainchain
1	16-A	146	TYR	Mainchain,Sidechain
1	16-A	45	TYR	Sidechain
1	16-A	46	GLN	Sidechain
1	16-A	48	TYR	Sidechain
1	16-A	57	ASN	Mainchain
1	16-A	73	SER	Mainchain
1	16-A	78	TYR	Sidechain
1	16-A	79	GLY	Mainchain
1	16-A	81	PRO	Mainchain
1	16-A	82	LEU	Mainchain
1	16-A	83	HIS	Mainchain
1	16-A	84	TYR	Mainchain,Sidechain
1	2-A	105	GLN	Mainchain
1	2-A	131	PRO	Mainchain
1	2-A	136	MET	Mainchain
1	2-A	141	ARG	Sidechain
1	2-A	144	PRO	Mainchain
1	2-A	153	ILE	Mainchain
1	2-A	154	PHE	Mainchain
1	2-A	55	PRO	Mainchain
1	2-A	56	THR	Mainchain
1	2-A	57	ASN	Mainchain
1	2-A	73	SER	Mainchain
1	2-A	75	LYS	Mainchain
1	2-A	91	GLN	Mainchain
1	2-A	92	ARG	Sidechain
1	2-A	98	PHE	Sidechain
1	2-A	99	GLY	Mainchain
1	3-A	100	THR	Mainchain
1	3-A	148	SER	Mainchain
1	3-A	36	GLY	Mainchain
1	3-A	89	LEU	Mainchain
1	3-A	98	PHE	Mainchain
1	4-A	116	ALA	Mainchain
1	4-A	118	ALA	Mainchain
1	4-A	123	VAL	Mainchain
1	4-A	151	ASP	Mainchain
1	4-A	36	GLY	Mainchain
1	4-A	40	ARG	Mainchain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	4-A	41	ARG	Mainchain
1	4-A	69	GLY	Mainchain
1	4-A	70	LEU	Mainchain
1	4-A	71	SER	Mainchain
1	4-A	76	GLN	Mainchain
1	4-A	78	TYR	Mainchain
1	4-A	80	GLN	Mainchain
1	4-A	81	PRO	Mainchain
1	4-A	98	PHE	Mainchain
1	5-A	144	PRO	Mainchain
1	5-A	45	TYR	Mainchain
1	5-A	55	PRO	Mainchain
1	5-A	56	THR	Mainchain
1	6-A	143	ASP	Mainchain
1	6-A	145	MET	Mainchain
1	6-A	36	GLY	Mainchain
1	6-A	78	TYR	Sidechain
1	6-A	83	HIS	Mainchain
1	6-A	84	TYR	Mainchain
1	7-A	45	TYR	Sidechain
1	7-A	75	LYS	Mainchain
1	7-A	76	GLN	Mainchain
1	7-A	78	TYR	Sidechain
1	7-A	94	ASP	Sidechain
1	8-A	106	ARG	Sidechain
1	8-A	143	ASP	Mainchain
1	8-A	147	HIS	Sidechain
1	8-A	39	LEU	Mainchain
1	8-A	56	THR	Mainchain
1	8-A	66	SER	Mainchain
1	9-A	123	VAL	Mainchain
1	9-A	125	GLU	Mainchain
1	9-A	127	HIS	Mainchain
1	9-A	130	THR	Mainchain
1	9-A	144	PRO	Mainchain
1	9-A	36	GLY	Mainchain
1	9-A	90	LEU	Mainchain
1	9-A	94	ASP	Mainchain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1-A	1003	0	985	0	0
1	2-A	1003	0	986	0	0
1	3-A	1003	0	986	0	0
1	4-A	1003	0	986	0	0
1	5-A	1003	0	985	0	0
1	6-A	1003	0	986	0	0
1	7-A	1003	0	986	0	0
1	8-A	1003	0	986	0	0
1	9-A	1003	0	986	0	0
1	10-A	1003	0	986	0	0
1	11-A	1003	0	986	0	0
1	12-A	1003	0	986	0	0
1	13-A	1003	0	986	0	0
1	14-A	1003	0	986	0	0
1	15-A	1003	0	986	0	0
1	16-A	1003	0	986	0	0
2	1-A	15	0	0	0	0
2	2-A	15	0	0	0	0
2	3-A	15	0	0	0	0
2	4-A	15	0	0	0	0
2	5-A	15	0	0	0	0
2	6-A	15	0	0	0	0
2	7-A	15	0	0	0	0
2	8-A	15	0	0	0	0
2	9-A	15	0	0	0	0
2	10-A	15	0	0	0	0
2	11-A	15	0	0	0	0
2	12-A	15	0	0	0	0
2	13-A	15	0	0	0	0
2	14-A	15	0	0	0	0
2	15-A	15	0	0	0	0
2	16-A	15	0	0	0	0
3	1-A	32	0	33	0	0
3	2-A	32	0	33	0	0
3	3-A	32	0	19	0	0
3	4-A	32	0	38	0	0
3	5-A	32	0	28	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	6-A	32	0	31	0	0
3	7-A	32	0	30	0	0
3	8-A	32	0	38	0	0
3	9-A	32	0	39	0	0
3	10-A	32	0	28	0	0
3	11-A	32	0	34	0	0
3	12-A	32	0	29	0	0
3	13-A	32	0	37	0	0
3	14-A	32	0	23	0	0
3	15-A	32	0	38	0	0
3	16-A	32	0	27	0	0
4	1-A	16	0	23	0	0
4	2-A	16	0	22	0	0
4	3-A	16	0	22	0	0
4	4-A	16	0	22	0	0
4	5-A	16	0	22	0	0
4	6-A	16	0	23	0	0
4	7-A	16	0	22	0	0
4	8-A	16	0	22	0	0
4	9-A	16	0	22	0	0
4	10-A	16	0	22	0	0
4	11-A	16	0	23	0	0
4	12-A	16	0	22	0	0
4	13-A	16	0	22	0	0
4	14-A	16	0	23	0	0
4	15-A	16	0	22	0	0
4	16-A	16	0	23	0	0
5	1-A	172	0	0	0	0
5	2-A	172	0	0	0	0
5	3-A	172	0	0	0	0
5	4-A	172	0	0	0	0
5	5-A	172	0	0	0	0
5	6-A	172	0	0	0	0
5	7-A	172	0	0	0	0
5	8-A	172	0	0	0	0
5	9-A	172	0	0	0	0
5	10-A	172	0	0	0	0
5	11-A	172	0	0	0	0
5	12-A	172	0	0	0	0
5	13-A	172	0	0	0	0
5	14-A	172	0	0	0	0
5	15-A	172	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	16-A	172	0	0	0	0
All	All	19808	0	16636	0	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). Clashscore could not be calculated for this entry.

There are no clashes within the asymmetric unit.

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	1-A	119/157 (76%)	114 (96%)	4 (3%)	1 (1%)	16	5
1	2-A	119/157 (76%)	107 (90%)	8 (7%)	4 (3%)	3	0
1	3-A	119/157 (76%)	111 (93%)	5 (4%)	3 (2%)	4	0
1	4-A	119/157 (76%)	114 (96%)	4 (3%)	1 (1%)	16	5
1	5-A	119/157 (76%)	117 (98%)	1 (1%)	1 (1%)	16	5
1	6-A	119/157 (76%)	116 (98%)	2 (2%)	1 (1%)	16	5
1	7-A	119/157 (76%)	117 (98%)	1 (1%)	1 (1%)	16	5
1	8-A	119/157 (76%)	116 (98%)	1 (1%)	2 (2%)	7	1
1	9-A	119/157 (76%)	114 (96%)	4 (3%)	1 (1%)	16	5
1	10-A	119/157 (76%)	114 (96%)	2 (2%)	3 (2%)	4	0
1	11-A	119/157 (76%)	110 (92%)	6 (5%)	3 (2%)	4	0
1	12-A	119/157 (76%)	117 (98%)	1 (1%)	1 (1%)	16	5
1	13-A	119/157 (76%)	113 (95%)	5 (4%)	1 (1%)	16	5
1	14-A	119/157 (76%)	116 (98%)	3 (2%)	0	100	100
1	15-A	119/157 (76%)	106 (89%)	10 (8%)	3 (2%)	4	0
1	16-A	119/157 (76%)	113 (95%)	3 (2%)	3 (2%)	4	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	1904/2512 (76%)	1815 (95%)	60 (3%)	29 (2%)	8 1

All (29) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	2-A	132	SER
1	3-A	103	GLU
1	10-A	102	SER
1	11-A	83	HIS
1	15-A	83	HIS
1	16-A	84	TYR
1	2-A	104	GLU
1	9-A	130	THR
1	16-A	38	LEU
1	2-A	103	GLU
1	8-A	152	PRO
1	11-A	38	LEU
1	15-A	81	PRO
1	2-A	130	THR
1	7-A	130	THR
1	8-A	130	THR
1	16-A	130	THR
1	3-A	38	LEU
1	10-A	130	THR
1	3-A	130	THR
1	10-A	99	GLY
1	11-A	130	THR
1	12-A	130	THR
1	5-A	130	THR
1	15-A	130	THR
1	4-A	130	THR
1	6-A	130	THR
1	1-A	155	PRO
1	13-A	130	THR

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	1-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	2-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	3-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	4-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	5-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	6-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	7-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	8-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	9-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	10-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	11-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	12-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	13-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	14-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	15-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
1	16-A	112/143 (78%)	107 (96%)	5 (4%)	24	7
All	All	1792/2288 (78%)	1712 (96%)	80 (4%)	24	7

All (80) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	1-A	38	LEU
1	1-A	61	LEU
1	1-A	64	PHE
1	1-A	121	TRP
1	1-A	155	PRO
1	2-A	38	LEU
1	2-A	61	LEU
1	2-A	64	PHE
1	2-A	121	TRP
1	2-A	155	PRO
1	3-A	38	LEU
1	3-A	61	LEU
1	3-A	64	PHE
1	3-A	121	TRP
1	3-A	155	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	4-A	38	LEU
1	4-A	61	LEU
1	4-A	64	PHE
1	4-A	121	TRP
1	4-A	155	PRO
1	5-A	38	LEU
1	5-A	61	LEU
1	5-A	64	PHE
1	5-A	121	TRP
1	5-A	155	PRO
1	6-A	38	LEU
1	6-A	61	LEU
1	6-A	64	PHE
1	6-A	121	TRP
1	6-A	155	PRO
1	7-A	38	LEU
1	7-A	61	LEU
1	7-A	64	PHE
1	7-A	121	TRP
1	7-A	155	PRO
1	8-A	38	LEU
1	8-A	61	LEU
1	8-A	64	PHE
1	8-A	121	TRP
1	8-A	155	PRO
1	9-A	38	LEU
1	9-A	61	LEU
1	9-A	64	PHE
1	9-A	121	TRP
1	9-A	155	PRO
1	10-A	38	LEU
1	10-A	61	LEU
1	10-A	64	PHE
1	10-A	121	TRP
1	10-A	155	PRO
1	11-A	38	LEU
1	11-A	61	LEU
1	11-A	64	PHE
1	11-A	121	TRP
1	11-A	155	PRO
1	12-A	38	LEU
1	12-A	61	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	12-A	64	PHE
1	12-A	121	TRP
1	12-A	155	PRO
1	13-A	38	LEU
1	13-A	61	LEU
1	13-A	64	PHE
1	13-A	121	TRP
1	13-A	155	PRO
1	14-A	38	LEU
1	14-A	61	LEU
1	14-A	64	PHE
1	14-A	121	TRP
1	14-A	155	PRO
1	15-A	38	LEU
1	15-A	61	LEU
1	15-A	64	PHE
1	15-A	121	TRP
1	15-A	155	PRO
1	16-A	38	LEU
1	16-A	61	LEU
1	16-A	64	PHE
1	16-A	121	TRP
1	16-A	155	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (19) such sidechains are listed below:

Mol	Chain	Res	Type
1	1-A	91	GLN
1	3-A	91	GLN
1	3-A	147	HIS
1	4-A	80	GLN
1	4-A	133	HIS
1	5-A	105	GLN
1	6-A	91	GLN
1	6-A	95	GLN
1	6-A	105	GLN
1	9-A	105	GLN
1	10-A	95	GLN
1	11-A	95	GLN
1	13-A	135	HIS
1	14-A	95	GLN
1	14-A	105	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	14-A	133	HIS
1	15-A	80	GLN
1	15-A	95	GLN
1	15-A	105	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

128 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
2	SO4	6-A	301	-	4,4,4	0.94	0	6,6,6	1.41	1 (16%)
2	SO4	4-A	302	-	4,4,4	0.39	0	6,6,6	0.38	0
2	SO4	1-A	300	-	4,4,4	1.98	2 (50%)	6,6,6	1.98	2 (33%)
2	SO4	4-A	301	-	4,4,4	1.98	2 (50%)	6,6,6	0.49	0
2	SO4	2-A	302	-	4,4,4	0.54	0	6,6,6	0.83	0
4	EDO	9-A	402	-	3,3,3	2.37	3 (100%)	2,2,2	1.05	0
4	EDO	10-A	404	-	3,3,3	2.81	2 (66%)	2,2,2	1.95	1 (50%)
2	SO4	2-A	301	-	4,4,4	4.78	3 (75%)	6,6,6	1.35	1 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	EDO	7-A	403	-	3,3,3	2.81	2 (66%)	2,2,2	0.77	0
2	SO4	1-A	301	-	4,4,4	1.33	1 (25%)	6,6,6	0.88	0
3	CPS	1-A	200	-	35,35,45	20.47	30 (85%)	54,54,70	11.15	48 (88%)
2	SO4	15-A	302	-	4,4,4	1.05	0	6,6,6	0.44	0
4	EDO	12-A	401	-	3,3,3	1.49	1 (33%)	2,2,2	0.88	0
4	EDO	8-A	404	-	3,3,3	3.57	3 (100%)	2,2,2	0.71	0
4	EDO	16-A	404	-	3,3,3	8.17	2 (66%)	2,2,2	1.71	0
3	CPS	16-A	200	-	35,35,45	18.79	29 (82%)	54,54,70	10.40	42 (77%)
4	EDO	5-A	404	-	3,3,3	3.69	2 (66%)	2,2,2	1.83	1 (50%)
2	SO4	9-A	300	-	4,4,4	1.49	1 (25%)	6,6,6	1.80	2 (33%)
4	EDO	10-A	403	-	3,3,3	2.96	2 (66%)	2,2,2	1.27	0
2	SO4	10-A	301	-	4,4,4	3.76	2 (50%)	6,6,6	1.80	2 (33%)
4	EDO	6-A	403	-	3,3,3	4.15	2 (66%)	2,2,2	1.00	0
2	SO4	12-A	301	-	4,4,4	2.32	2 (50%)	6,6,6	0.44	0
4	EDO	10-A	402	-	3,3,3	2.31	3 (100%)	2,2,2	1.09	0
2	SO4	2-A	300	-	4,4,4	0.31	0	6,6,6	0.78	0
2	SO4	14-A	301	-	4,4,4	1.77	1 (25%)	6,6,6	4.56	4 (66%)
3	CPS	9-A	200	-	35,35,45	21.06	31 (88%)	54,54,70	16.08	46 (85%)
4	EDO	11-A	402	-	3,3,3	2.32	2 (66%)	2,2,2	1.35	0
4	EDO	11-A	404	-	3,3,3	3.23	2 (66%)	2,2,2	1.61	0
4	EDO	14-A	403	-	3,3,3	4.65	2 (66%)	2,2,2	2.16	1 (50%)
2	SO4	6-A	300	-	4,4,4	0.54	0	6,6,6	0.82	0
4	EDO	6-A	401	-	3,3,3	1.16	1 (33%)	2,2,2	2.00	1 (50%)
2	SO4	16-A	301	-	4,4,4	2.00	2 (50%)	6,6,6	0.75	0
4	EDO	14-A	404	-	3,3,3	7.56	2 (66%)	2,2,2	0.81	0
4	EDO	12-A	404	-	3,3,3	4.63	3 (100%)	2,2,2	0.63	0
3	CPS	6-A	200	-	35,35,45	14.58	28 (80%)	54,54,70	8.72	41 (75%)
4	EDO	7-A	401	-	3,3,3	0.86	0	2,2,2	0.65	0
2	SO4	7-A	300	-	4,4,4	0.22	0	6,6,6	0.80	0
3	CPS	3-A	200	-	35,35,45	36.93	30 (85%)	54,54,70	18.50	47 (87%)
2	SO4	7-A	302	-	4,4,4	0.47	0	6,6,6	0.46	0
4	EDO	9-A	403	-	3,3,3	2.67	2 (66%)	2,2,2	0.99	0
2	SO4	7-A	301	-	4,4,4	3.41	3 (75%)	6,6,6	2.68	4 (66%)
4	EDO	13-A	401	-	3,3,3	2.96	1 (33%)	2,2,2	0.69	0
4	EDO	8-A	402	-	3,3,3	2.33	3 (100%)	2,2,2	0.86	0
4	EDO	5-A	403	-	3,3,3	3.50	2 (66%)	2,2,2	0.65	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	EDO	12-A	402	-	3,3,3	2.44	3 (100%)	2,2,2	1.10	0
4	EDO	4-A	402	-	3,3,3	2.31	3 (100%)	2,2,2	0.77	0
2	SO4	9-A	302	-	4,4,4	0.42	0	6,6,6	0.32	0
4	EDO	8-A	401	-	3,3,3	1.40	0	2,2,2	0.72	0
4	EDO	2-A	402	-	3,3,3	2.23	3 (100%)	2,2,2	0.54	0
4	EDO	9-A	404	-	3,3,3	3.33	2 (66%)	2,2,2	1.95	1 (50%)
3	CPS	10-A	200	-	35,35,45	20.94	33 (94%)	54,54,70	12.03	43 (79%)
4	EDO	13-A	402	-	3,3,3	5.09	2 (66%)	2,2,2	0.84	0
2	SO4	1-A	302	-	4,4,4	0.52	0	6,6,6	0.52	0
4	EDO	10-A	401	-	3,3,3	1.36	0	2,2,2	0.33	0
4	EDO	8-A	403	-	3,3,3	3.02	2 (66%)	2,2,2	2.33	2 (100%)
2	SO4	11-A	301	-	4,4,4	1.03	0	6,6,6	1.58	1 (16%)
4	EDO	3-A	403	-	3,3,3	2.85	1 (33%)	2,2,2	2.47	2 (100%)
2	SO4	3-A	300	-	4,4,4	1.04	0	6,6,6	0.90	0
2	SO4	16-A	302	-	4,4,4	0.52	0	6,6,6	0.38	0
2	SO4	8-A	302	-	4,4,4	0.78	0	6,6,6	0.82	0
4	EDO	9-A	401	-	3,3,3	1.08	0	2,2,2	0.65	0
2	SO4	11-A	300	-	4,4,4	5.30	2 (50%)	6,6,6	5.19	6 (100%)
2	SO4	15-A	300	-	4,4,4	1.17	0	6,6,6	0.98	0
2	SO4	14-A	300	-	4,4,4	3.07	1 (25%)	6,6,6	1.70	3 (50%)
4	EDO	1-A	402	-	3,3,3	2.73	2 (66%)	2,2,2	1.97	1 (50%)
4	EDO	1-A	404	-	3,3,3	4.81	2 (66%)	2,2,2	1.12	0
4	EDO	11-A	403	-	3,3,3	3.72	2 (66%)	2,2,2	1.91	1 (50%)
2	SO4	9-A	301	-	4,4,4	2.62	2 (50%)	6,6,6	3.01	4 (66%)
2	SO4	15-A	301	-	4,4,4	2.45	3 (75%)	6,6,6	3.27	4 (66%)
3	CPS	13-A	200	-	35,35,45	22.36	30 (85%)	54,54,70	18.53	38 (70%)
3	CPS	12-A	200	-	35,35,45	14.28	28 (80%)	54,54,70	10.20	43 (79%)
4	EDO	15-A	402	-	3,3,3	4.39	2 (66%)	2,2,2	0.62	0
4	EDO	7-A	404	-	3,3,3	2.63	2 (66%)	2,2,2	1.11	0
3	CPS	4-A	200	-	35,35,45	19.51	28 (80%)	54,54,70	9.44	40 (74%)
2	SO4	3-A	302	-	4,4,4	0.43	0	6,6,6	0.34	0
2	SO4	12-A	300	-	4,4,4	0.25	0	6,6,6	0.78	0
3	CPS	2-A	200	-	35,35,45	23.06	28 (80%)	54,54,70	10.57	42 (77%)
4	EDO	13-A	403	-	3,3,3	5.23	3 (100%)	2,2,2	1.84	1 (50%)
2	SO4	4-A	300	-	4,4,4	0.50	0	6,6,6	0.85	0
4	EDO	4-A	401	-	3,3,3	1.66	1 (33%)	2,2,2	0.20	0
2	SO4	5-A	301	-	4,4,4	1.28	0	6,6,6	1.05	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	SO4	12-A	302	-	4,4,4	0.45	0	6,6,6	0.42	0
3	CPS	8-A	200	-	35,35,45	27.49	32 (91%)	54,54,70	13.82	40 (74%)
2	SO4	8-A	301	-	4,4,4	2.96	3 (75%)	6,6,6	1.59	2 (33%)
2	SO4	10-A	300	-	4,4,4	0.62	0	6,6,6	0.99	0
4	EDO	11-A	401	-	3,3,3	1.31	1 (33%)	2,2,2	1.24	0
4	EDO	15-A	403	-	3,3,3	5.00	3 (100%)	2,2,2	1.84	1 (50%)
2	SO4	13-A	300	-	4,4,4	1.16	0	6,6,6	1.03	0
2	SO4	16-A	300	-	4,4,4	2.91	1 (25%)	6,6,6	1.78	3 (50%)
4	EDO	4-A	403	-	3,3,3	4.73	2 (66%)	2,2,2	0.55	0
2	SO4	10-A	302	-	4,4,4	0.65	0	6,6,6	0.55	0
4	EDO	15-A	404	-	3,3,3	7.80	3 (100%)	2,2,2	0.66	0
2	SO4	6-A	302	-	4,4,4	0.46	0	6,6,6	0.44	0
2	SO4	5-A	300	-	4,4,4	0.90	0	6,6,6	1.09	1 (16%)
4	EDO	5-A	401	-	3,3,3	0.88	0	2,2,2	0.87	0
4	EDO	1-A	401	-	3,3,3	1.99	2 (66%)	2,2,2	0.57	0
4	EDO	2-A	403	-	3,3,3	4.68	2 (66%)	2,2,2	0.77	0
4	EDO	3-A	402	-	3,3,3	2.33	2 (66%)	2,2,2	1.48	0
4	EDO	3-A	404	-	3,3,3	3.88	3 (100%)	2,2,2	0.69	0
2	SO4	8-A	300	-	4,4,4	1.30	1 (25%)	6,6,6	1.40	0
3	CPS	11-A	200	-	35,35,45	16.52	29 (82%)	54,54,70	9.84	43 (79%)
4	EDO	13-A	404	-	3,3,3	8.31	3 (100%)	2,2,2	1.06	0
3	CPS	5-A	200	-	35,35,45	21.49	31 (88%)	54,54,70	12.09	48 (88%)
3	CPS	14-A	200	-	35,35,45	24.70	30 (85%)	54,54,70	13.74	41 (75%)
4	EDO	3-A	401	-	3,3,3	1.28	0	2,2,2	0.68	0
4	EDO	14-A	401	-	3,3,3	4.05	3 (100%)	2,2,2	0.53	0
4	EDO	16-A	402	-	3,3,3	1.27	0	2,2,2	0.94	0
4	EDO	5-A	402	-	3,3,3	2.89	3 (100%)	2,2,2	2.19	1 (50%)
4	EDO	14-A	402	-	3,3,3	2.71	2 (66%)	2,2,2	1.16	0
4	EDO	1-A	403	-	3,3,3	2.84	2 (66%)	2,2,2	0.81	0
4	EDO	4-A	404	-	3,3,3	5.30	3 (100%)	2,2,2	0.98	0
4	EDO	12-A	403	-	3,3,3	2.87	2 (66%)	2,2,2	0.74	0
4	EDO	2-A	404	-	3,3,3	4.86	2 (66%)	2,2,2	0.87	0
4	EDO	2-A	401	-	3,3,3	2.51	2 (66%)	2,2,2	0.80	0
2	SO4	3-A	301	-	4,4,4	1.98	2 (50%)	6,6,6	0.55	0
4	EDO	16-A	401	-	3,3,3	1.75	1 (33%)	2,2,2	1.53	1 (50%)
3	CPS	15-A	200	-	35,35,45	25.37	32 (91%)	54,54,70	17.64	40 (74%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	EDO	6-A	404	-	3,3,3	2.46	2 (66%)	2,2,2	1.52	0
4	EDO	15-A	401	-	3,3,3	3.23	1 (33%)	2,2,2	0.86	0
2	SO4	13-A	301	-	4,4,4	2.95	2 (50%)	6,6,6	2.17	3 (50%)
2	SO4	11-A	302	-	4,4,4	0.40	0	6,6,6	0.36	0
2	SO4	13-A	302	-	4,4,4	0.51	0	6,6,6	0.56	0
4	EDO	16-A	403	-	3,3,3	3.12	2 (66%)	2,2,2	2.56	2 (100%)
3	CPS	7-A	200	-	35,35,45	17.11	30 (85%)	54,54,70	10.25	43 (79%)
4	EDO	6-A	402	-	3,3,3	2.22	2 (66%)	2,2,2	0.30	0
2	SO4	5-A	302	-	4,4,4	0.88	0	6,6,6	0.39	0
2	SO4	14-A	302	-	4,4,4	0.33	0	6,6,6	0.33	0
4	EDO	7-A	402	-	3,3,3	2.34	2 (66%)	2,2,2	1.32	0

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	EDO	9-A	402	-	-	0/1/1/1	-
4	EDO	10-A	404	-	-	1/1/1/1	-
4	EDO	7-A	403	-	-	1/1/1/1	-
3	CPS	1-A	200	-	5/5/12/15	5/13/78/90	0/4/4/4
4	EDO	12-A	401	-	-	0/1/1/1	-
4	EDO	8-A	404	-	-	1/1/1/1	-
4	EDO	16-A	404	-	-	1/1/1/1	-
3	CPS	16-A	200	-	5/5/12/15	4/13/78/90	0/4/4/4
4	EDO	5-A	404	-	-	1/1/1/1	-
4	EDO	10-A	403	-	-	0/1/1/1	-
4	EDO	6-A	403	-	-	1/1/1/1	-
4	EDO	10-A	402	-	-	0/1/1/1	-
3	CPS	9-A	200	-	3/3/12/15	2/13/78/90	0/4/4/4
4	EDO	11-A	402	-	-	0/1/1/1	-
4	EDO	11-A	404	-	-	1/1/1/1	-
4	EDO	14-A	403	-	-	0/1/1/1	-
4	EDO	6-A	401	-	-	1/1/1/1	-
4	EDO	14-A	404	-	-	1/1/1/1	-
4	EDO	12-A	404	-	-	1/1/1/1	-
3	CPS	6-A	200	-	8/8/12/15	2/13/78/90	0/4/4/4
4	EDO	7-A	401	-	-	0/1/1/1	-
3	CPS	3-A	200	-	7/7/12/15	3/13/78/90	0/4/4/4

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	EDO	9-A	403	-	-	0/1/1/1	-
4	EDO	13-A	401	-	-	1/1/1/1	-
4	EDO	8-A	402	-	-	0/1/1/1	-
4	EDO	5-A	403	-	-	1/1/1/1	-
4	EDO	12-A	402	-	-	0/1/1/1	-
4	EDO	4-A	402	-	-	0/1/1/1	-
4	EDO	8-A	401	-	-	0/1/1/1	-
4	EDO	2-A	402	-	-	0/1/1/1	-
4	EDO	9-A	404	-	-	1/1/1/1	-
3	CPS	10-A	200	-	4/4/12/15	2/13/78/90	0/4/4/4
4	EDO	13-A	402	-	-	1/1/1/1	-
4	EDO	10-A	401	-	-	1/1/1/1	-
4	EDO	8-A	403	-	-	0/1/1/1	-
4	EDO	3-A	403	-	-	0/1/1/1	-
4	EDO	9-A	401	-	-	0/1/1/1	-
4	EDO	1-A	402	-	-	0/1/1/1	-
4	EDO	1-A	404	-	-	1/1/1/1	-
4	EDO	11-A	403	-	-	0/1/1/1	-
3	CPS	13-A	200	-	5/5/12/15	4/13/78/90	0/4/4/4
3	CPS	12-A	200	-	5/5/12/15	2/13/78/90	0/4/4/4
4	EDO	15-A	402	-	-	1/1/1/1	-
4	EDO	7-A	404	-	-	1/1/1/1	-
3	CPS	4-A	200	-	4/4/12/15	4/13/78/90	0/4/4/4
3	CPS	2-A	200	-	5/5/12/15	2/13/78/90	0/4/4/4
4	EDO	13-A	403	-	-	0/1/1/1	-
4	EDO	4-A	401	-	-	0/1/1/1	-
3	CPS	8-A	200	-	5/5/12/15	5/13/78/90	0/4/4/4
4	EDO	11-A	401	-	-	0/1/1/1	-
4	EDO	15-A	403	-	-	0/1/1/1	-
4	EDO	4-A	403	-	-	1/1/1/1	-
4	EDO	15-A	404	-	-	1/1/1/1	-
4	EDO	5-A	401	-	-	1/1/1/1	-
4	EDO	1-A	401	-	-	0/1/1/1	-
4	EDO	2-A	403	-	-	1/1/1/1	-
4	EDO	3-A	402	-	-	0/1/1/1	-
4	EDO	3-A	404	-	-	1/1/1/1	-
3	CPS	11-A	200	-	5/5/12/15	4/13/78/90	0/4/4/4
4	EDO	13-A	404	-	-	1/1/1/1	-
3	CPS	5-A	200	-	4/4/12/15	3/13/78/90	0/4/4/4
3	CPS	14-A	200	-	5/5/12/15	3/13/78/90	0/4/4/4

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	EDO	3-A	401	-	-	0/1/1/1	-
4	EDO	14-A	401	-	-	1/1/1/1	-
4	EDO	16-A	402	-	-	0/1/1/1	-
4	EDO	5-A	402	-	-	0/1/1/1	-
4	EDO	14-A	402	-	-	1/1/1/1	-
4	EDO	1-A	403	-	-	1/1/1/1	-
4	EDO	4-A	404	-	-	1/1/1/1	-
4	EDO	12-A	403	-	-	1/1/1/1	-
4	EDO	2-A	404	-	-	1/1/1/1	-
4	EDO	2-A	401	-	-	1/1/1/1	-
4	EDO	16-A	401	-	-	0/1/1/1	-
3	CPS	15-A	200	-	4/4/12/15	5/13/78/90	0/4/4/4
4	EDO	6-A	404	-	-	1/1/1/1	-
4	EDO	15-A	401	-	-	0/1/1/1	-
4	EDO	16-A	403	-	-	0/1/1/1	-
3	CPS	7-A	200	-	5/5/12/15	4/13/78/90	0/4/4/4
4	EDO	6-A	402	-	-	1/1/1/1	-
4	EDO	7-A	402	-	-	0/1/1/1	-

All (637) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	3-A	200	CPS	C18-C17	146.98	4.19	1.53
3	3-A	200	CPS	C12-C13	118.73	4.25	1.51
3	8-A	200	CPS	C5-C9	87.10	3.01	1.55
3	2-A	200	CPS	C3-C4	79.35	2.82	1.53
3	8-A	200	CPS	C20-C9	-76.09	0.24	1.54
3	2-A	200	CPS	C3-C19	-66.32	0.46	1.53
3	14-A	200	CPS	C20-C9	61.06	2.58	1.54
3	4-A	200	CPS	C11-C2	59.57	2.52	1.54
3	13-A	200	CPS	C20-C9	59.36	2.55	1.54
3	14-A	200	CPS	C5-C9	57.61	2.52	1.55
3	8-A	200	CPS	C8-C9	54.54	2.65	1.54
3	15-A	200	CPS	C20-C9	53.35	2.45	1.54
3	1-A	200	CPS	C20-C9	-53.09	0.63	1.54
3	1-A	200	CPS	C3-C19	-51.93	0.69	1.53
3	5-A	200	CPS	C5-C9	-50.85	0.70	1.55
3	10-A	200	CPS	C14-C13	49.44	2.38	1.52
3	15-A	200	CPS	C5-C6	47.54	2.35	1.55
3	10-A	200	CPS	C11-C2	-47.53	0.75	1.54
3	8-A	200	CPS	C22-C20	47.35	2.71	1.54
3	16-A	200	CPS	C3-C4	46.87	2.29	1.53

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	9-A	200	CPS	C3-C4	44.85	2.26	1.53
3	9-A	200	CPS	O4-C4	-44.37	0.70	1.43
3	4-A	200	CPS	C10-C5	44.31	2.25	1.54
3	6-A	200	CPS	C14-C15	-43.54	0.84	1.53
3	3-A	200	CPS	C11-C2	-43.35	0.82	1.54
3	4-A	200	CPS	C5-C6	-42.98	0.83	1.55
3	10-A	200	CPS	O4-C4	-42.29	0.74	1.43
3	15-A	200	CPS	C3-C4	-42.02	0.84	1.53
3	5-A	200	CPS	C8-C9	-41.94	0.68	1.54
3	2-A	200	CPS	C5-C4	-41.91	0.90	1.54
3	15-A	200	CPS	C18-C17	41.87	2.29	1.53
3	11-A	200	CPS	C5-C9	-41.29	0.86	1.55
3	7-A	200	CPS	C5-C4	-41.07	0.91	1.54
3	12-A	200	CPS	C10-C5	40.38	2.18	1.54
3	14-A	200	CPS	C5-C6	40.31	2.23	1.55
3	15-A	200	CPS	C1-C12	-39.72	0.74	1.53
3	15-A	200	CPS	C14-C13	-39.53	0.82	1.52
3	15-A	200	CPS	C10-C5	39.23	2.17	1.54
3	9-A	200	CPS	O1-C24	-39.10	0.45	1.23
3	1-A	200	CPS	C5-C6	38.96	2.20	1.55
3	15-A	200	CPS	C8-C9	38.84	2.33	1.54
3	13-A	200	CPS	C1-C12	-38.82	0.76	1.53
3	5-A	200	CPS	C1-C12	38.53	2.30	1.53
3	13-A	200	CPS	C18-C17	37.89	2.22	1.53
3	3-A	200	CPS	C3-C19	37.66	2.14	1.53
3	9-A	200	CPS	C1-C12	37.57	2.28	1.53
3	13-A	200	CPS	C5-C6	37.55	2.18	1.55
3	7-A	200	CPS	C10-C5	37.53	2.14	1.54
3	8-A	200	CPS	C1-C12	-37.26	0.79	1.53
3	16-A	200	CPS	C1-C12	36.94	2.27	1.53
3	13-A	200	CPS	C8-C9	36.83	2.29	1.54
3	7-A	200	CPS	C16-C17	-36.23	0.84	1.52
3	8-A	200	CPS	C21-C20	36.18	2.44	1.53
3	3-A	200	CPS	C3-C4	-35.88	0.94	1.53
3	11-A	200	CPS	C18-C17	35.84	2.18	1.53
3	16-A	200	CPS	C23-C24	35.34	2.21	1.51
3	14-A	200	CPS	O1-C24	-34.92	0.54	1.23
3	5-A	200	CPS	C18-C17	34.90	2.16	1.53
3	15-A	200	CPS	O1-C24	-34.78	0.54	1.23
3	2-A	200	CPS	C1-C2	-34.22	0.94	1.54
3	10-A	200	CPS	C5-C6	34.19	2.12	1.55
3	4-A	200	CPS	C5-C4	33.77	2.06	1.54

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	13-A	200	CPS	C14-C13	-33.76	0.92	1.52
3	13-A	200	CPS	C5-C9	33.37	2.11	1.55
3	15-A	200	CPS	C3-C19	33.30	2.07	1.53
3	2-A	200	CPS	C14-C15	33.26	2.06	1.53
3	7-A	200	CPS	O1-C24	-33.07	0.57	1.23
3	8-A	200	CPS	C10-C5	33.07	2.07	1.54
3	14-A	200	CPS	C8-C9	32.85	2.21	1.54
3	14-A	200	CPS	C2-C19	-32.37	0.99	1.56
3	14-A	200	CPS	C16-C17	32.29	2.14	1.52
3	11-A	200	CPS	C21-C20	31.99	2.34	1.53
3	16-A	200	CPS	C5-C6	31.98	2.09	1.55
3	14-A	200	CPS	O4-C4	31.71	1.95	1.43
3	10-A	200	CPS	C7-C6	-31.29	0.90	1.54
3	16-A	200	CPS	C10-C5	-31.25	1.04	1.54
3	14-A	200	CPS	C18-C17	31.21	2.09	1.53
3	11-A	200	CPS	C7-C6	30.96	2.17	1.54
3	13-A	200	CPS	C3-C19	30.39	2.02	1.53
3	1-A	200	CPS	C18-C17	-30.35	0.98	1.53
3	14-A	200	CPS	C3-C19	30.20	2.02	1.53
3	9-A	200	CPS	C5-C9	-30.18	1.04	1.55
3	1-A	200	CPS	C3-C4	30.08	2.02	1.53
3	8-A	200	CPS	O3-C17	-29.11	0.82	1.43
3	9-A	200	CPS	C5-C6	29.10	2.04	1.55
3	16-A	200	CPS	C5-C4	-29.07	1.10	1.54
3	14-A	200	CPS	C8-C7	-28.93	0.75	1.54
3	10-A	200	CPS	C2-C15	28.80	2.00	1.55
3	3-A	200	CPS	C7-C6	-28.78	0.95	1.54
3	16-A	200	CPS	O3-C17	-28.57	0.83	1.43
3	10-A	200	CPS	C3-C19	28.44	1.99	1.53
3	11-A	200	CPS	C16-C17	-28.44	0.98	1.52
3	1-A	200	CPS	C11-C2	28.32	2.01	1.54
3	12-A	200	CPS	C24-N1	-28.28	0.66	1.33
3	10-A	200	CPS	C18-C6	28.13	2.07	1.53
3	16-A	200	CPS	C2-C19	-28.00	1.07	1.56
3	7-A	200	CPS	C24-N1	-27.99	0.66	1.33
3	13-A	200	CPS	C2-C15	27.90	1.98	1.55
3	5-A	200	CPS	C11-C2	27.84	2.00	1.54
3	15-A	200	CPS	C2-C15	27.78	1.98	1.55
3	15-A	200	CPS	C11-C2	-27.49	1.08	1.54
3	6-A	200	CPS	C1-C2	27.36	2.01	1.54
3	5-A	200	CPS	C3-C19	26.95	1.97	1.53
3	5-A	200	CPS	C7-C6	-26.82	0.99	1.54

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1-A	200	CPS	O3-C17	26.71	1.99	1.43
3	4-A	200	CPS	C3-C19	26.65	1.96	1.53
3	3-A	200	CPS	C14-C13	-26.60	1.05	1.52
3	9-A	200	CPS	C16-C15	26.59	1.96	1.53
3	6-A	200	CPS	C20-C9	-26.50	1.09	1.54
3	13-A	200	CPS	C5-C4	26.48	1.95	1.54
3	1-A	200	CPS	C14-C13	-26.44	1.05	1.52
3	3-A	200	CPS	O4-C4	26.31	1.86	1.43
3	9-A	200	CPS	C3-C19	26.13	1.96	1.53
3	9-A	200	CPS	C18-C17	26.08	2.00	1.53
3	9-A	200	CPS	C24-N1	-25.97	0.71	1.33
3	3-A	200	CPS	C5-C6	25.80	1.98	1.55
3	1-A	200	CPS	C12-C13	25.67	2.10	1.51
3	15-A	200	CPS	C22-C23	-25.64	0.76	1.52
3	9-A	200	CPS	C2-C15	25.62	1.95	1.55
3	3-A	200	CPS	O3-C17	-25.61	0.89	1.43
3	3-A	200	CPS	C1-C12	-25.60	1.02	1.53
3	6-A	200	CPS	C24-N1	-25.52	0.72	1.33
3	2-A	200	CPS	C11-C2	25.48	1.96	1.54
3	5-A	200	CPS	C12-C13	25.44	2.10	1.51
3	14-A	200	CPS	C22-C23	-25.31	0.77	1.52
3	7-A	200	CPS	C1-C12	25.16	2.03	1.53
3	4-A	200	CPS	C23-C24	-24.93	1.01	1.51
3	9-A	200	CPS	C8-C7	-24.86	0.86	1.54
3	15-A	200	CPS	C16-C17	24.80	1.99	1.52
3	4-A	200	CPS	C16-C17	24.77	1.99	1.52
3	14-A	200	CPS	C3-C4	24.59	1.93	1.53
3	10-A	200	CPS	C3-C4	24.45	1.93	1.53
3	5-A	200	CPS	O4-C4	-24.33	1.03	1.43
3	11-A	200	CPS	O3-C17	-24.33	0.92	1.43
3	16-A	200	CPS	O4-C4	24.29	1.83	1.43
3	11-A	200	CPS	C14-C15	23.88	1.91	1.53
3	6-A	200	CPS	C23-C24	23.84	1.98	1.51
3	1-A	200	CPS	C14-C15	23.83	1.91	1.53
3	12-A	200	CPS	C21-C20	23.62	2.13	1.53
3	12-A	200	CPS	C5-C4	-23.56	1.18	1.54
3	13-A	200	CPS	C16-C17	23.33	1.97	1.52
3	14-A	200	CPS	C10-C5	-23.30	1.17	1.54
3	12-A	200	CPS	C20-C9	-23.12	1.14	1.54
3	10-A	200	CPS	C16-C15	-23.04	1.17	1.53
3	5-A	200	CPS	C2-C15	23.02	1.91	1.55
3	10-A	200	CPS	C22-C20	22.96	2.11	1.54

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5-A	200	CPS	O2-C13	-22.81	0.77	1.43
3	10-A	200	CPS	C5-C4	-22.80	1.19	1.54
3	8-A	200	CPS	C5-C6	22.78	1.93	1.55
3	2-A	200	CPS	C22-C23	-22.50	0.85	1.52
3	3-A	200	CPS	C22-C23	22.49	2.20	1.52
3	9-A	200	CPS	C22-C23	-22.45	0.85	1.52
3	2-A	200	CPS	C2-C15	22.43	1.90	1.55
3	13-A	200	CPS	C22-C23	-22.37	0.85	1.52
3	5-A	200	CPS	O1-C24	-22.36	0.78	1.23
3	4-A	200	CPS	C20-C9	22.34	1.92	1.54
3	13-A	200	CPS	O1-C24	-22.25	0.79	1.23
3	3-A	200	CPS	C5-C4	22.07	1.88	1.54
3	3-A	200	CPS	C5-C9	-22.05	1.18	1.55
3	11-A	200	CPS	C5-C6	21.96	1.92	1.55
3	12-A	200	CPS	O1-C24	-21.93	0.79	1.23
3	6-A	200	CPS	C21-C20	21.64	2.08	1.53
3	16-A	200	CPS	C8-C9	21.61	1.98	1.54
3	5-A	200	CPS	O3-C17	21.43	1.88	1.43
3	8-A	200	CPS	C7-C6	-21.39	1.10	1.54
3	4-A	200	CPS	C3-C4	-21.24	1.18	1.53
3	1-A	200	CPS	C1-C2	-21.23	1.17	1.54
3	10-A	200	CPS	C24-N1	-21.21	0.83	1.33
3	11-A	200	CPS	C22-C23	20.95	2.15	1.52
3	3-A	200	CPS	C21-C20	20.89	2.06	1.53
3	15-A	200	CPS	C22-C20	20.84	2.05	1.54
3	7-A	200	CPS	C2-C19	-20.54	1.20	1.56
3	12-A	200	CPS	C23-C24	20.42	1.92	1.51
3	14-A	200	CPS	C21-C20	-20.41	1.01	1.53
3	6-A	200	CPS	C22-C20	20.38	2.04	1.54
3	15-A	200	CPS	C14-C15	20.35	1.86	1.53
3	7-A	200	CPS	C22-C23	-20.29	0.92	1.52
3	5-A	200	CPS	C5-C4	20.07	1.85	1.54
3	12-A	200	CPS	C22-C23	-20.01	0.93	1.52
3	5-A	200	CPS	C16-C15	19.96	1.85	1.53
3	15-A	200	CPS	O3-C17	-19.84	1.01	1.43
3	5-A	200	CPS	C24-N1	19.81	1.80	1.33
3	4-A	200	CPS	O1-C24	-19.80	0.84	1.23
3	4-A	200	CPS	C24-N1	19.73	1.80	1.33
3	10-A	200	CPS	C1-C2	-19.72	1.19	1.54
3	5-A	200	CPS	C22-C20	19.54	2.02	1.54
3	6-A	200	CPS	O3-C17	-19.47	1.02	1.43
3	5-A	200	CPS	C16-C17	-19.39	1.15	1.52

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	7-A	200	CPS	C23-C24	19.35	1.90	1.51
3	2-A	200	CPS	C5-C9	19.15	1.87	1.55
3	16-A	200	CPS	C16-C17	-19.13	1.16	1.52
3	11-A	200	CPS	C2-C15	19.05	1.85	1.55
3	8-A	200	CPS	C18-C17	19.05	1.88	1.53
3	2-A	200	CPS	C22-C20	18.89	2.01	1.54
3	2-A	200	CPS	C12-C13	18.81	1.95	1.51
3	7-A	200	CPS	C3-C4	18.79	1.83	1.53
3	9-A	200	CPS	C10-C5	18.60	1.84	1.54
3	14-A	200	CPS	C14-C13	-18.35	1.19	1.52
3	6-A	200	CPS	O1-C24	18.29	1.59	1.23
3	15-A	200	CPS	C16-C15	-18.20	1.24	1.53
3	11-A	200	CPS	C1-C12	-18.11	1.17	1.53
3	14-A	200	CPS	C18-C6	-18.07	1.19	1.53
3	1-A	200	CPS	C18-C6	-18.00	1.19	1.53
3	12-A	200	CPS	C22-C20	17.97	1.98	1.54
3	8-A	200	CPS	C3-C19	17.86	1.82	1.53
3	13-A	200	CPS	C10-C5	17.82	1.82	1.54
3	13-A	200	CPS	C22-C20	17.72	1.98	1.54
3	9-A	200	CPS	C11-C2	17.66	1.83	1.54
3	12-A	200	CPS	O4-C4	17.43	1.72	1.43
3	7-A	200	CPS	C5-C9	-17.25	1.26	1.55
3	9-A	200	CPS	C12-C13	16.97	1.90	1.51
3	8-A	200	CPS	C3-C4	-16.79	1.25	1.53
3	14-A	200	CPS	C18-C19	16.77	1.86	1.53
3	8-A	200	CPS	C2-C19	16.68	1.85	1.56
3	1-A	200	CPS	C2-C15	16.67	1.81	1.55
3	5-A	200	CPS	C10-C5	16.51	1.80	1.54
3	10-A	200	CPS	C10-C5	16.43	1.80	1.54
3	5-A	200	CPS	C21-C20	-16.24	1.11	1.53
3	3-A	200	CPS	O1-C24	16.21	1.55	1.23
3	9-A	200	CPS	C14-C13	16.18	1.80	1.52
3	14-A	200	CPS	C25-N1	16.02	1.82	1.46
3	15-A	200	CPS	C25-N1	16.01	1.82	1.46
3	7-A	200	CPS	O3-C17	-15.97	1.09	1.43
3	3-A	200	CPS	C10-C5	-15.81	1.29	1.54
3	9-A	200	CPS	C23-C24	15.72	1.82	1.51
3	16-A	200	CPS	O1-C24	15.63	1.54	1.23
3	4-A	200	CPS	O4-C4	15.55	1.69	1.43
3	1-A	200	CPS	C10-C5	-15.50	1.29	1.54
3	7-A	200	CPS	C18-C17	15.48	1.81	1.53
3	14-A	200	CPS	C23-C24	-15.26	1.20	1.51

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	6-A	200	CPS	O4-C4	15.16	1.68	1.43
3	7-A	200	CPS	C11-C2	15.00	1.79	1.54
3	2-A	200	CPS	C16-C15	-14.98	1.29	1.53
3	4-A	200	CPS	C21-C20	14.83	1.90	1.53
3	13-A	200	CPS	C14-C15	14.81	1.77	1.53
3	5-A	200	CPS	C20-C9	14.79	1.79	1.54
3	13-A	200	CPS	C16-C15	-14.73	1.30	1.53
3	14-A	200	CPS	C7-C6	-14.63	1.24	1.54
3	4-A	200	CPS	O3-C17	14.62	1.74	1.43
3	16-A	200	CPS	C7-C6	14.35	1.83	1.54
3	8-A	200	CPS	C25-N1	14.30	1.78	1.46
3	12-A	200	CPS	O3-C17	-14.30	1.13	1.43
3	11-A	200	CPS	C23-C24	14.13	1.79	1.51
3	12-A	200	CPS	C5-C9	-14.07	1.31	1.55
3	11-A	200	CPS	C8-C9	13.77	1.82	1.54
3	13-A	200	CPS	C23-C24	-13.70	1.24	1.51
3	6-A	200	CPS	C14-C13	13.64	1.75	1.52
3	13-A	200	CPS	C7-C6	-13.60	1.26	1.54
3	2-A	200	CPS	O4-C4	-13.60	1.21	1.43
3	6-A	200	CPS	C3-C19	-13.48	1.32	1.53
3	14-A	200	CPS	O3-C17	-13.48	1.15	1.43
3	16-A	200	CPS	C18-C6	13.41	1.79	1.53
3	7-A	200	CPS	C18-C6	-13.23	1.28	1.53
3	12-A	200	CPS	C1-C12	13.17	1.79	1.53
3	6-A	200	CPS	C22-C23	-13.14	1.13	1.52
3	15-A	200	CPS	C7-C6	-12.96	1.28	1.54
3	5-A	200	CPS	C18-C6	12.89	1.78	1.53
3	16-A	200	CPS	C11-C2	12.88	1.75	1.54
4	16-A	404	EDO	O1-C1	12.88	2.07	1.42
3	5-A	200	CPS	C1-C2	-12.87	1.31	1.54
3	5-A	200	CPS	C3-C4	-12.79	1.32	1.53
3	10-A	200	CPS	C23-C24	12.78	1.76	1.51
3	9-A	200	CPS	C16-C17	-12.65	1.28	1.52
3	9-A	200	CPS	O2-C13	-12.64	1.06	1.43
3	1-A	200	CPS	C22-C20	12.61	1.85	1.54
3	13-A	200	CPS	C24-N1	12.61	1.63	1.33
3	16-A	200	CPS	C12-C13	12.60	1.80	1.51
3	14-A	200	CPS	C11-C2	-12.57	1.33	1.54
3	16-A	200	CPS	C24-N1	-12.52	1.03	1.33
3	5-A	200	CPS	C23-C24	12.48	1.76	1.51
3	9-A	200	CPS	C25-N1	12.46	1.74	1.46
3	10-A	200	CPS	C22-C23	-12.40	1.15	1.52

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	3-A	200	CPS	C23-C24	12.39	1.76	1.51
3	6-A	200	CPS	C18-C6	-12.33	1.30	1.53
3	3-A	200	CPS	C16-C17	-12.19	1.29	1.52
3	11-A	200	CPS	C3-C19	-12.12	1.34	1.53
3	3-A	200	CPS	C24-N1	11.95	1.61	1.33
3	16-A	200	CPS	C1-C2	-11.82	1.33	1.54
4	15-A	404	EDO	O2-C2	11.79	2.02	1.42
3	5-A	200	CPS	C5-C6	11.78	1.75	1.55
3	9-A	200	CPS	C1-C2	-11.77	1.33	1.54
3	4-A	200	CPS	C8-C7	11.77	1.86	1.54
4	14-A	404	EDO	O2-C2	11.73	2.01	1.42
3	13-A	200	CPS	O3-C17	-11.27	1.19	1.43
3	14-A	200	CPS	C14-C15	11.15	1.71	1.53
3	15-A	200	CPS	C18-C6	-11.03	1.32	1.53
3	16-A	200	CPS	C8-C7	-10.94	1.24	1.54
3	15-A	200	CPS	C23-C24	-10.83	1.29	1.51
3	8-A	200	CPS	C18-C19	-10.82	1.33	1.53
3	1-A	200	CPS	C7-C6	-10.79	1.32	1.54
3	10-A	200	CPS	C5-C9	-10.75	1.37	1.55
3	15-A	200	CPS	O4-C4	10.73	1.61	1.43
3	2-A	200	CPS	C25-N1	10.71	1.70	1.46
3	3-A	200	CPS	O2-C13	-10.54	1.12	1.43
3	1-A	200	CPS	C2-C19	-10.47	1.37	1.56
3	10-A	200	CPS	C12-C13	10.43	1.75	1.51
3	14-A	200	CPS	C16-C15	-10.28	1.37	1.53
3	6-A	200	CPS	O2-C13	10.13	1.72	1.43
4	13-A	404	EDO	O2-C2	10.09	1.93	1.42
3	10-A	200	CPS	C2-C19	10.06	1.73	1.56
3	4-A	200	CPS	C1-C12	9.94	1.73	1.53
3	2-A	200	CPS	C1-C12	9.94	1.73	1.53
3	7-A	200	CPS	C25-N1	9.81	1.68	1.46
3	7-A	200	CPS	C2-C15	9.60	1.70	1.55
3	1-A	200	CPS	C8-C7	9.58	1.80	1.54
3	1-A	200	CPS	C16-C15	-9.47	1.38	1.53
3	1-A	200	CPS	C22-C23	9.39	1.81	1.52
3	12-A	200	CPS	C25-N1	9.32	1.67	1.46
3	10-A	200	CPS	C8-C7	-9.31	1.28	1.54
3	16-A	200	CPS	C21-C20	9.14	1.76	1.53
3	2-A	200	CPS	C8-C9	9.02	1.72	1.54
3	3-A	200	CPS	C1-C2	-9.00	1.38	1.54
3	8-A	200	CPS	O2-C13	-8.98	1.17	1.43
3	14-A	200	CPS	C24-N1	8.93	1.54	1.33

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	13-A	200	CPS	C3-C4	8.92	1.67	1.53
3	8-A	200	CPS	C18-C6	8.83	1.70	1.53
3	1-A	200	CPS	C16-C17	-8.82	1.36	1.52
3	8-A	200	CPS	C2-C15	8.81	1.69	1.55
3	13-A	200	CPS	C21-C20	-8.73	1.30	1.53
3	8-A	200	CPS	C1-C2	8.64	1.69	1.54
3	7-A	200	CPS	C16-C15	8.55	1.67	1.53
3	12-A	200	CPS	C2-C19	-8.48	1.41	1.56
3	1-A	200	CPS	C25-N1	8.47	1.65	1.46
3	8-A	200	CPS	C22-C23	8.40	1.78	1.52
3	12-A	200	CPS	C14-C15	-8.39	1.40	1.53
3	12-A	200	CPS	C18-C19	-8.36	1.37	1.53
3	5-A	200	CPS	C22-C23	-8.32	1.28	1.52
4	13-A	404	EDO	O1-C1	8.30	1.84	1.42
4	13-A	402	EDO	O1-C1	8.21	1.83	1.42
3	2-A	200	CPS	O2-C13	8.15	1.67	1.43
3	2-A	200	CPS	C8-C7	8.11	1.76	1.54
3	13-A	200	CPS	C8-C7	-8.11	1.31	1.54
3	16-A	200	CPS	C18-C17	-8.10	1.38	1.53
3	1-A	200	CPS	O1-C24	8.01	1.39	1.23
3	11-A	200	CPS	C3-C4	7.83	1.66	1.53
3	10-A	200	CPS	O1-C24	7.78	1.38	1.23
2	11-A	300	SO4	O2-S	-7.74	0.99	1.44
3	9-A	200	CPS	C18-C6	7.73	1.68	1.53
3	12-A	200	CPS	C14-C13	7.66	1.65	1.52
3	11-A	200	CPS	C25-N1	-7.63	1.29	1.46
4	4-A	404	EDO	O2-C2	7.61	1.80	1.42
3	1-A	200	CPS	C1-C12	7.59	1.68	1.53
3	7-A	200	CPS	C18-C19	-7.58	1.39	1.53
3	15-A	200	CPS	C24-N1	7.57	1.51	1.33
3	11-A	200	CPS	C1-C2	7.33	1.66	1.54
3	13-A	200	CPS	C11-C2	7.27	1.66	1.54
4	2-A	404	EDO	O2-C2	7.25	1.79	1.42
4	1-A	404	EDO	O1-C1	7.21	1.78	1.42
2	11-A	300	SO4	O1-S	7.15	1.87	1.44
3	7-A	200	CPS	C22-C20	7.08	1.71	1.54
3	9-A	200	CPS	C20-C9	7.03	1.66	1.54
4	15-A	402	EDO	O1-C1	7.02	1.77	1.42
3	15-A	200	CPS	C1-C2	-6.99	1.42	1.54
3	9-A	200	CPS	C7-C6	-6.98	1.40	1.54
4	4-A	403	EDO	O2-C2	-6.82	1.07	1.42
3	7-A	200	CPS	C20-C9	-6.81	1.42	1.54

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	8-A	200	CPS	C16-C15	6.80	1.64	1.53
3	11-A	200	CPS	C24-N1	6.79	1.49	1.33
3	8-A	200	CPS	O4-C4	6.79	1.54	1.43
3	11-A	200	CPS	O1-C24	6.78	1.36	1.23
3	1-A	200	CPS	C5-C9	-6.77	1.44	1.55
3	10-A	200	CPS	O2-C13	-6.77	1.23	1.43
4	2-A	403	EDO	O2-C2	-6.72	1.07	1.42
3	3-A	200	CPS	C18-C19	-6.71	1.41	1.53
3	10-A	200	CPS	C8-C9	6.68	1.68	1.54
3	12-A	200	CPS	C18-C6	-6.59	1.41	1.53
3	8-A	200	CPS	C12-C13	6.52	1.66	1.51
3	6-A	200	CPS	C16-C15	-6.48	1.43	1.53
2	2-A	301	SO4	O2-S	6.40	1.82	1.44
2	10-A	301	SO4	O1-S	6.39	1.82	1.44
3	6-A	200	CPS	C11-C2	6.39	1.64	1.54
3	3-A	200	CPS	C25-N1	-6.31	1.32	1.46
3	2-A	200	CPS	C5-C6	-6.31	1.44	1.55
3	16-A	200	CPS	C22-C20	6.30	1.69	1.54
3	9-A	200	CPS	C22-C20	6.27	1.69	1.54
4	15-A	403	EDO	O1-C1	6.26	1.74	1.42
4	13-A	403	EDO	O1-C1	6.26	1.74	1.42
3	16-A	200	CPS	C25-N1	6.24	1.60	1.46
4	13-A	403	EDO	O2-C2	-6.14	1.10	1.42
3	2-A	200	CPS	O3-C17	-6.10	1.30	1.43
3	2-A	200	CPS	C20-C9	6.09	1.64	1.54
3	4-A	200	CPS	C7-C6	6.08	1.66	1.54
3	12-A	200	CPS	C16-C17	-6.07	1.41	1.52
3	7-A	200	CPS	C21-C20	6.05	1.68	1.53
3	2-A	200	CPS	C23-C24	-6.03	1.39	1.51
4	13-A	404	EDO	C2-C1	6.02	1.95	1.48
3	6-A	200	CPS	C2-C19	-6.01	1.45	1.56
3	11-A	200	CPS	C10-C5	-6.01	1.44	1.54
3	2-A	200	CPS	C14-C13	-6.00	1.41	1.52
3	2-A	200	CPS	C7-C6	-5.99	1.42	1.54
3	3-A	200	CPS	C14-C15	5.97	1.63	1.53
3	2-A	200	CPS	C21-C20	-5.91	1.38	1.53
4	14-A	404	EDO	C2-C1	5.80	1.94	1.48
2	14-A	300	SO4	O4-S	5.74	1.95	1.48
3	8-A	200	CPS	C16-C17	-5.71	1.41	1.52
4	14-A	403	EDO	O1-C1	5.67	1.71	1.42
4	15-A	404	EDO	C2-C1	5.65	1.92	1.48
4	16-A	404	EDO	C2-C1	5.59	1.92	1.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	7-A	200	CPS	C1-C2	-5.57	1.44	1.54
2	2-A	301	SO4	O4-S	5.57	1.93	1.48
3	4-A	200	CPS	C5-C9	5.57	1.64	1.55
3	4-A	200	CPS	C22-C23	5.55	1.69	1.52
4	15-A	403	EDO	O2-C2	-5.54	1.13	1.42
4	14-A	401	EDO	O1-C1	5.52	1.70	1.42
3	6-A	200	CPS	C10-C5	-5.51	1.45	1.54
2	16-A	300	SO4	O4-S	5.48	1.93	1.48
3	1-A	200	CPS	C8-C9	-5.46	1.43	1.54
2	7-A	301	SO4	O4-S	5.46	1.92	1.48
4	6-A	403	EDO	O2-C2	-5.45	1.14	1.42
3	1-A	200	CPS	C18-C19	5.42	1.64	1.53
3	1-A	200	CPS	C5-C4	-5.42	1.46	1.54
4	14-A	403	EDO	O2-C2	-5.39	1.14	1.42
3	12-A	200	CPS	O2-C13	5.34	1.58	1.43
4	12-A	404	EDO	O2-C2	5.30	1.69	1.42
3	4-A	200	CPS	C2-C15	5.27	1.63	1.55
3	13-A	200	CPS	C1-C2	-5.27	1.45	1.54
3	12-A	200	CPS	C12-C13	5.26	1.63	1.51
3	15-A	200	CPS	C8-C7	-5.21	1.39	1.54
3	8-A	200	CPS	C5-C4	-5.20	1.46	1.54
3	10-A	200	CPS	C20-C9	5.16	1.63	1.54
4	15-A	401	EDO	O2-C2	5.16	1.68	1.42
3	11-A	200	CPS	C22-C20	-5.16	1.41	1.54
3	8-A	200	CPS	C14-C15	5.04	1.61	1.53
3	15-A	200	CPS	C12-C13	5.02	1.63	1.51
4	5-A	404	EDO	O1-C1	4.99	1.67	1.42
3	5-A	200	CPS	C18-C19	4.99	1.63	1.53
3	11-A	200	CPS	C11-C2	4.97	1.62	1.54
3	10-A	200	CPS	C1-C12	4.95	1.63	1.53
4	13-A	401	EDO	O1-C1	4.95	1.67	1.42
3	2-A	200	CPS	C18-C17	-4.92	1.44	1.53
3	6-A	200	CPS	C5-C4	-4.84	1.47	1.54
4	5-A	403	EDO	O2-C2	-4.83	1.17	1.42
3	7-A	200	CPS	C14-C13	4.80	1.60	1.52
3	5-A	200	CPS	C2-C19	-4.78	1.47	1.56
4	12-A	404	EDO	O1-C1	-4.75	1.17	1.42
3	16-A	200	CPS	C5-C9	-4.73	1.47	1.55
4	3-A	404	EDO	O2-C2	4.66	1.65	1.42
3	8-A	200	CPS	C24-N1	4.65	1.44	1.33
2	13-A	301	SO4	O1-S	4.62	1.72	1.44
4	11-A	403	EDO	O2-C2	-4.61	1.18	1.42

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	14-A	200	CPS	C2-C15	4.58	1.62	1.55
3	5-A	200	CPS	C14-C15	4.56	1.61	1.53
4	6-A	403	EDO	O1-C1	4.51	1.65	1.42
3	12-A	200	CPS	C11-C2	4.50	1.61	1.54
3	4-A	200	CPS	C14-C15	-4.50	1.46	1.53
3	15-A	200	CPS	C5-C4	4.49	1.61	1.54
3	2-A	200	CPS	C18-C19	-4.49	1.45	1.53
3	4-A	200	CPS	C16-C15	-4.49	1.46	1.53
3	15-A	200	CPS	O2-C13	4.48	1.56	1.43
4	4-A	403	EDO	O1-C1	4.45	1.64	1.42
3	16-A	200	CPS	C14-C15	-4.44	1.46	1.53
3	15-A	200	CPS	C2-C19	-4.41	1.48	1.56
3	8-A	200	CPS	C14-C13	4.39	1.59	1.52
3	9-A	200	CPS	C2-C19	-4.38	1.48	1.56
4	2-A	403	EDO	O1-C1	4.36	1.64	1.42
4	1-A	403	EDO	O2-C2	-4.32	1.20	1.42
4	12-A	403	EDO	O2-C2	-4.30	1.20	1.42
4	11-A	403	EDO	O1-C1	4.27	1.63	1.42
4	3-A	403	EDO	O1-C1	4.26	1.63	1.42
2	9-A	301	SO4	O1-S	-4.23	1.19	1.44
4	8-A	403	EDO	O1-C1	4.17	1.63	1.42
2	8-A	301	SO4	O1-S	4.17	1.69	1.44
3	15-A	200	CPS	C21-C20	-4.16	1.42	1.53
4	16-A	403	EDO	O1-C1	4.16	1.63	1.42
2	2-A	301	SO4	O1-S	4.16	1.69	1.44
3	11-A	200	CPS	C2-C19	-4.11	1.48	1.56
4	11-A	404	EDO	O1-C1	4.11	1.63	1.42
4	9-A	404	EDO	O1-C1	4.09	1.62	1.42
3	11-A	200	CPS	C12-C13	-4.09	1.42	1.51
4	10-A	403	EDO	O1-C1	4.09	1.62	1.42
4	7-A	403	EDO	O2-C2	-4.08	1.21	1.42
3	11-A	200	CPS	C14-C13	-4.06	1.44	1.52
3	7-A	200	CPS	C12-C13	4.03	1.61	1.51
3	16-A	200	CPS	C14-C13	4.02	1.59	1.52
4	8-A	404	EDO	O2-C2	4.02	1.62	1.42
4	2-A	404	EDO	C2-C1	4.00	1.79	1.48
3	4-A	200	CPS	C8-C9	-3.99	1.46	1.54
3	6-A	200	CPS	C16-C17	-3.95	1.45	1.52
3	11-A	200	CPS	C16-C15	3.94	1.60	1.53
4	1-A	404	EDO	C2-C1	3.93	1.79	1.48
3	14-A	200	CPS	C12-C13	-3.89	1.42	1.51
3	11-A	200	CPS	C8-C7	-3.87	1.43	1.54

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	10-A	301	SO4	O2-S	3.83	1.67	1.44
4	4-A	404	EDO	C2-C1	3.79	1.78	1.48
3	10-A	200	CPS	C14-C15	3.78	1.59	1.53
4	6-A	404	EDO	C2-C1	3.75	1.77	1.48
3	8-A	200	CPS	C26-C25	-3.73	1.30	1.50
4	5-A	402	EDO	O1-C1	3.73	1.61	1.42
4	14-A	402	EDO	O1-C1	3.73	1.61	1.42
3	3-A	200	CPS	C27-C26	-3.73	1.23	1.50
4	5-A	404	EDO	C2-C1	3.71	1.77	1.48
4	9-A	404	EDO	C2-C1	3.70	1.77	1.48
4	11-A	404	EDO	C2-C1	3.69	1.77	1.48
4	12-A	404	EDO	C2-C1	3.68	1.77	1.48
4	8-A	404	EDO	C2-C1	3.67	1.77	1.48
4	3-A	404	EDO	C2-C1	3.66	1.77	1.48
2	13-A	301	SO4	O2-S	3.65	1.66	1.44
4	10-A	404	EDO	C2-C1	3.63	1.76	1.48
4	7-A	404	EDO	C2-C1	3.62	1.76	1.48
3	9-A	200	CPS	C5-C4	-3.59	1.49	1.54
3	6-A	200	CPS	C18-C17	-3.57	1.47	1.53
3	7-A	200	CPS	C3-C19	3.56	1.59	1.53
3	11-A	200	CPS	O2-C13	3.56	1.53	1.43
4	5-A	403	EDO	O1-C1	3.55	1.60	1.42
4	2-A	401	EDO	C2-C1	3.54	1.76	1.48
3	7-A	200	CPS	C14-C15	-3.49	1.48	1.53
4	1-A	402	EDO	O1-C1	3.49	1.59	1.42
4	4-A	404	EDO	O1-C1	-3.48	1.24	1.42
3	13-A	200	CPS	C2-C19	-3.47	1.50	1.56
3	8-A	200	CPS	C27-C26	3.47	1.75	1.50
3	12-A	200	CPS	C5-C6	3.45	1.61	1.55
3	4-A	200	CPS	C18-C19	-3.45	1.47	1.53
2	8-A	301	SO4	O2-S	3.43	1.65	1.44
4	15-A	404	EDO	O1-C1	-3.41	1.24	1.42
4	9-A	403	EDO	O1-C1	3.41	1.59	1.42
3	9-A	200	CPS	C8-C9	-3.39	1.47	1.54
3	3-A	200	CPS	C16-C15	3.38	1.59	1.53
3	1-A	200	CPS	O4-C4	3.36	1.49	1.43
3	9-A	200	CPS	C27-C26	3.35	1.74	1.50
3	10-A	200	CPS	C16-C17	-3.30	1.46	1.52
4	14-A	401	EDO	O2-C2	3.29	1.58	1.42
3	15-A	200	CPS	C5-C9	3.27	1.61	1.55
2	12-A	301	SO4	O3-S	3.23	1.74	1.48
2	16-A	301	SO4	O3-S	3.23	1.74	1.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	3-A	404	EDO	O1-C1	-3.18	1.25	1.42
3	4-A	200	CPS	C22-C20	-3.16	1.46	1.54
3	10-A	200	CPS	C25-N1	-3.06	1.39	1.46
3	6-A	200	CPS	C18-C19	-3.03	1.48	1.53
3	12-A	200	CPS	C1-C2	3.03	1.59	1.54
2	15-A	301	SO4	O2-S	3.03	1.62	1.44
3	4-A	200	CPS	C25-N1	-3.01	1.39	1.46
4	13-A	402	EDO	C2-C1	2.98	1.71	1.48
3	3-A	200	CPS	C22-C20	-2.98	1.47	1.54
4	8-A	404	EDO	O1-C1	-2.95	1.27	1.42
2	3-A	301	SO4	O3-S	2.95	1.72	1.48
4	16-A	403	EDO	O2-C2	-2.95	1.27	1.42
3	6-A	200	CPS	C2-C15	-2.92	1.50	1.55
4	9-A	403	EDO	O2-C2	-2.92	1.27	1.42
4	11-A	402	EDO	O1-C1	2.91	1.56	1.42
2	7-A	301	SO4	O1-S	-2.90	1.27	1.44
3	6-A	200	CPS	C8-C9	2.89	1.60	1.54
4	10-A	403	EDO	O2-C2	-2.88	1.27	1.42
2	4-A	301	SO4	O3-S	2.87	1.71	1.48
4	7-A	402	EDO	O1-C1	2.83	1.56	1.42
4	3-A	402	EDO	O1-C1	2.83	1.56	1.42
4	12-A	402	EDO	O1-C1	2.82	1.56	1.42
2	7-A	301	SO4	O2-S	2.82	1.61	1.44
4	14-A	401	EDO	C2-C1	2.82	1.70	1.48
3	7-A	200	CPS	C8-C7	2.77	1.61	1.54
4	10-A	404	EDO	O1-C1	2.77	1.56	1.42
3	13-A	200	CPS	C27-C26	2.77	1.70	1.50
3	6-A	200	CPS	C3-C4	2.75	1.57	1.53
2	9-A	301	SO4	O4-S	2.73	1.70	1.48
3	11-A	200	CPS	O4-C4	-2.71	1.39	1.43
3	2-A	200	CPS	C18-C6	-2.71	1.48	1.53
4	5-A	402	EDO	C2-C1	2.66	1.69	1.48
2	12-A	301	SO4	O1-S	2.65	1.60	1.44
3	10-A	200	CPS	C18-C19	2.65	1.59	1.53
4	15-A	402	EDO	C2-C1	2.65	1.69	1.48
4	9-A	402	EDO	O1-C1	2.62	1.55	1.42
4	8-A	403	EDO	O2-C2	-2.62	1.28	1.42
3	7-A	200	CPS	O4-C4	-2.61	1.39	1.43
3	4-A	200	CPS	C27-C26	2.61	1.68	1.50
3	13-A	200	CPS	C18-C19	2.61	1.58	1.53
4	10-A	402	EDO	O1-C1	2.61	1.55	1.42
2	15-A	301	SO4	O4-S	2.60	1.69	1.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	15-A	301	SO4	O1-S	-2.59	1.29	1.44
2	14-A	301	SO4	O4-S	2.58	1.69	1.48
4	8-A	402	EDO	O1-C1	2.56	1.55	1.42
4	6-A	402	EDO	O1-C1	2.55	1.55	1.42
3	14-A	200	CPS	C22-C20	2.55	1.60	1.54
4	7-A	403	EDO	C2-C1	2.55	1.68	1.48
4	1-A	402	EDO	C2-C1	2.52	1.68	1.48
4	7-A	404	EDO	O1-C1	-2.49	1.29	1.42
3	14-A	200	CPS	C26-C25	2.49	1.63	1.50
4	4-A	402	EDO	O1-C1	2.47	1.54	1.42
3	16-A	200	CPS	C27-C26	-2.47	1.32	1.50
3	7-A	200	CPS	C27-C26	2.46	1.67	1.50
3	10-A	200	CPS	O3-C17	2.44	1.48	1.43
4	2-A	402	EDO	O1-C1	2.43	1.54	1.42
2	9-A	300	SO4	O1-S	2.39	1.59	1.44
4	12-A	402	EDO	C2-C1	2.38	1.67	1.48
4	9-A	402	EDO	C2-C1	2.38	1.67	1.48
3	16-A	200	CPS	C16-C15	-2.38	1.50	1.53
3	6-A	200	CPS	C25-N1	2.38	1.51	1.46
3	5-A	200	CPS	C8-C7	-2.37	1.47	1.54
2	1-A	300	SO4	O1-S	2.36	1.58	1.44
3	12-A	200	CPS	C8-C7	2.36	1.60	1.54
2	8-A	301	SO4	O3-S	2.35	1.67	1.48
4	12-A	401	EDO	O2-C2	2.33	1.54	1.42
4	4-A	402	EDO	C2-C1	2.33	1.66	1.48
4	2-A	401	EDO	O1-C1	2.32	1.53	1.42
3	9-A	200	CPS	C26-C25	2.31	1.62	1.50
4	8-A	402	EDO	C2-C1	2.31	1.66	1.48
2	4-A	301	SO4	O1-S	2.30	1.58	1.44
2	3-A	301	SO4	O1-S	2.30	1.58	1.44
3	16-A	200	CPS	C26-C25	-2.30	1.37	1.50
4	15-A	403	EDO	C2-C1	2.29	1.66	1.48
2	1-A	300	SO4	O3-S	-2.29	1.29	1.48
4	1-A	401	EDO	C2-C1	2.28	1.66	1.48
4	10-A	402	EDO	C2-C1	2.27	1.66	1.48
3	3-A	200	CPS	C8-C9	2.26	1.59	1.54
4	13-A	403	EDO	C2-C1	2.25	1.66	1.48
3	3-A	200	CPS	C8-C7	-2.24	1.47	1.54
3	10-A	200	CPS	C18-C17	-2.23	1.49	1.53
3	12-A	200	CPS	C3-C4	2.22	1.56	1.53
4	7-A	402	EDO	C2-C1	2.21	1.65	1.48
4	6-A	402	EDO	C2-C1	2.20	1.65	1.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	12-A	403	EDO	C2-C1	2.19	1.65	1.48
4	3-A	402	EDO	C2-C1	2.19	1.65	1.48
4	4-A	401	EDO	C2-C1	2.18	1.65	1.48
4	2-A	402	EDO	C2-C1	2.17	1.65	1.48
4	16-A	401	EDO	C2-C1	2.16	1.65	1.48
3	8-A	200	CPS	C23-C24	-2.14	1.47	1.51
4	4-A	402	EDO	O2-C2	2.13	1.52	1.42
4	14-A	402	EDO	O2-C2	2.12	1.52	1.42
3	13-A	200	CPS	O4-C4	-2.10	1.40	1.43
4	8-A	402	EDO	O2-C2	2.09	1.52	1.42
4	11-A	402	EDO	C2-C1	2.09	1.64	1.48
3	12-A	200	CPS	C27-C26	2.09	1.65	1.50
4	9-A	402	EDO	O2-C2	2.09	1.52	1.42
3	4-A	200	CPS	C2-C19	-2.06	1.52	1.56
4	2-A	402	EDO	O2-C2	2.06	1.52	1.42
2	16-A	301	SO4	O1-S	2.06	1.57	1.44
2	1-A	301	SO4	O3-S	2.06	1.65	1.48
3	1-A	200	CPS	C21-C20	-2.04	1.47	1.53
3	6-A	200	CPS	C1-C12	2.04	1.57	1.53
3	10-A	200	CPS	C27-C26	2.04	1.64	1.50
4	12-A	402	EDO	O2-C2	2.04	1.52	1.42
4	11-A	401	EDO	C2-C1	2.04	1.64	1.48
4	10-A	402	EDO	O2-C2	2.02	1.52	1.42
2	8-A	300	SO4	O3-S	-2.02	1.31	1.48
4	1-A	401	EDO	O1-C1	2.02	1.52	1.42
4	1-A	403	EDO	C2-C1	2.01	1.64	1.48
4	6-A	401	EDO	C2-C1	2.01	1.64	1.48
4	5-A	402	EDO	O2-C2	2.01	1.52	1.42
4	6-A	404	EDO	O1-C1	2.01	1.52	1.42

All (745) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	3-A	200	CPS	C14-C13-C12	-57.61	40.34	110.62
3	3-A	200	CPS	C1-C12-C13	-54.04	38.91	110.48
3	8-A	200	CPS	C8-C9-C5	-51.48	53.61	103.54
3	13-A	200	CPS	C7-C6-C5	-48.04	56.95	103.54
3	5-A	200	CPS	C7-C6-C5	-45.36	59.55	103.54
3	15-A	200	CPS	C6-C5-C4	-44.47	66.77	107.42
3	13-A	200	CPS	C10-C5-C4	-41.34	67.67	109.06
3	9-A	200	CPS	C7-C6-C5	-40.32	64.43	103.54
3	16-A	200	CPS	C21-C20-C22	-40.29	47.99	110.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	14-A	200	CPS	C11-C2-C19	-39.18	58.52	111.18
3	13-A	200	CPS	C8-C9-C5	-38.65	66.05	103.54
3	9-A	200	CPS	C14-C15-C2	-37.96	72.26	112.66
3	13-A	200	CPS	C5-C9-C20	-36.03	75.84	119.48
3	5-A	200	CPS	C14-C15-C2	-35.85	74.50	112.66
3	7-A	200	CPS	C10-C5-C9	-35.68	55.29	111.20
3	12-A	200	CPS	C10-C5-C9	-35.62	55.39	111.20
3	15-A	200	CPS	C3-C19-C18	-35.38	58.53	110.89
3	14-A	200	CPS	C8-C9-C5	-35.35	69.26	103.54
3	3-A	200	CPS	C19-C18-C17	-35.27	67.46	111.86
3	9-A	200	CPS	C9-C5-C4	34.94	149.11	117.67
3	13-A	200	CPS	C6-C5-C4	-34.75	75.65	107.42
3	3-A	200	CPS	C3-C19-C18	-33.76	60.94	110.89
3	9-A	200	CPS	C3-C19-C2	-33.57	79.64	113.70
3	8-A	200	CPS	C16-C17-C18	-33.32	75.12	111.50
3	13-A	200	CPS	C6-C18-C17	-32.81	68.32	111.85
3	13-A	200	CPS	C16-C15-C14	-32.79	73.76	111.23
3	14-A	200	CPS	C16-C15-C14	-32.47	74.13	111.23
3	15-A	200	CPS	C7-C6-C5	-32.29	72.22	103.54
3	13-A	200	CPS	C3-C19-C18	-32.20	63.24	110.89
3	15-A	200	CPS	C16-C15-C14	-32.20	74.44	111.23
3	9-A	200	CPS	C15-C16-C17	-32.06	76.28	114.40
3	2-A	200	CPS	C9-C5-C6	-32.04	67.97	100.11
3	3-A	200	CPS	C6-C5-C4	-31.86	78.29	107.42
3	9-A	200	CPS	C2-C19-C18	31.77	147.25	111.84
3	13-A	200	CPS	C19-C2-C15	-31.69	64.50	108.51
3	14-A	200	CPS	C5-C9-C20	-31.65	81.14	119.48
3	15-A	200	CPS	C19-C2-C15	-31.57	64.67	108.51
3	15-A	200	CPS	C6-C18-C17	-31.50	70.05	111.85
3	1-A	200	CPS	C16-C15-C2	-31.49	79.15	112.66
3	3-A	200	CPS	C6-C18-C17	31.45	153.59	111.85
3	15-A	200	CPS	C14-C15-C2	-31.26	79.39	112.66
3	10-A	200	CPS	O4-C4-C5	-31.16	58.39	111.02
3	7-A	200	CPS	C9-C5-C4	30.76	145.34	117.67
3	9-A	200	CPS	C19-C18-C17	-30.74	73.17	111.86
3	3-A	200	CPS	C3-C4-C5	30.05	141.83	111.26
3	3-A	200	CPS	C16-C17-C18	-29.91	78.84	111.50
3	15-A	200	CPS	C16-C17-C18	-29.76	79.00	111.50
3	15-A	200	CPS	C5-C9-C20	-29.72	83.48	119.48
3	13-A	200	CPS	C3-C4-C5	-29.68	81.07	111.26
3	13-A	200	CPS	C10-C5-C9	29.64	157.66	111.20
3	15-A	200	CPS	C5-C6-C18	-29.54	77.30	114.72

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1-A	200	CPS	C6-C5-C4	-29.09	80.82	107.42
3	13-A	200	CPS	C14-C15-C2	-29.06	81.73	112.66
3	10-A	200	CPS	C14-C15-C2	-29.06	81.74	112.66
3	1-A	200	CPS	C7-C6-C5	-28.99	75.42	103.54
3	10-A	200	CPS	C19-C3-C4	-28.81	76.60	114.29
3	3-A	200	CPS	C10-C5-C4	28.58	137.67	109.06
3	4-A	200	CPS	C8-C9-C20	-28.09	69.67	112.18
3	8-A	200	CPS	C9-C5-C4	28.08	142.93	117.67
3	9-A	200	CPS	C19-C3-C4	-27.93	77.75	114.29
3	9-A	200	CPS	C5-C6-C18	-27.51	79.86	114.72
3	8-A	200	CPS	C2-C19-C18	-27.36	81.33	111.84
3	3-A	200	CPS	O3-C17-C18	26.83	171.00	109.52
3	8-A	200	CPS	C21-C20-C22	-26.74	68.96	110.34
3	8-A	200	CPS	C3-C19-C2	-26.71	86.60	113.70
3	14-A	200	CPS	C7-C6-C5	-26.54	77.80	103.54
3	10-A	200	CPS	C3-C19-C2	-26.53	86.78	113.70
3	10-A	200	CPS	C21-C20-C22	-26.51	69.31	110.34
3	16-A	200	CPS	C16-C17-C18	26.30	140.22	111.50
3	13-A	200	CPS	C16-C17-C18	-25.35	83.82	111.50
3	14-A	200	CPS	C16-C17-C18	-25.19	83.99	111.50
3	11-A	200	CPS	C8-C9-C5	25.10	127.88	103.54
3	3-A	200	CPS	C9-C5-C4	-24.80	95.35	117.67
3	4-A	200	CPS	C2-C19-C18	24.71	139.39	111.84
3	15-A	200	CPS	C10-C5-C4	-24.50	84.53	109.06
3	10-A	200	CPS	C22-C20-C9	24.24	160.59	110.33
3	1-A	200	CPS	C1-C12-C13	-24.03	78.65	110.48
3	13-A	200	CPS	C21-C20-C22	-23.23	74.40	110.34
3	4-A	200	CPS	C9-C5-C4	-23.06	96.92	117.67
3	14-A	200	CPS	C9-C5-C6	-22.79	77.25	100.11
3	2-A	200	CPS	C16-C15-C14	22.69	137.15	111.23
3	5-A	200	CPS	C5-C6-C18	-22.67	86.00	114.72
3	15-A	200	CPS	C8-C9-C5	-22.07	82.14	103.54
3	12-A	200	CPS	C16-C17-C18	21.84	135.35	111.50
3	14-A	200	CPS	C9-C5-C4	21.74	137.23	117.67
3	16-A	200	CPS	C1-C2-C19	-21.41	78.09	111.34
3	15-A	200	CPS	C10-C5-C6	-21.35	77.75	111.20
3	10-A	200	CPS	C19-C2-C15	-21.09	79.23	108.51
3	11-A	200	CPS	C15-C16-C17	-21.00	89.43	114.40
3	4-A	200	CPS	C9-C5-C6	20.88	121.06	100.11
3	9-A	200	CPS	C11-C2-C1	20.72	141.25	108.31
3	15-A	200	CPS	C3-C4-C5	-20.38	90.54	111.26
3	8-A	200	CPS	C15-C16-C17	20.37	138.62	114.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	2-A	200	CPS	C10-C5-C4	20.30	129.38	109.06
3	13-A	200	CPS	C5-C6-C18	-20.29	89.01	114.72
3	6-A	200	CPS	C10-C5-C9	-20.29	79.41	111.20
3	2-A	200	CPS	C22-C20-C9	20.02	151.84	110.33
3	3-A	200	CPS	C23-C22-C20	-19.93	77.23	114.46
3	8-A	200	CPS	C6-C18-C17	-19.92	85.42	111.85
3	8-A	200	CPS	C5-C6-C18	-19.88	89.54	114.72
3	15-A	200	CPS	C9-C5-C4	19.75	135.44	117.67
3	1-A	200	CPS	C3-C4-C5	19.60	131.20	111.26
3	12-A	200	CPS	O2-C13-C14	-19.54	70.93	109.84
3	16-A	200	CPS	C8-C9-C20	-19.36	82.87	112.18
3	2-A	200	CPS	C16-C17-C18	19.23	132.50	111.50
3	9-A	200	CPS	C1-C2-C19	-19.08	81.70	111.34
3	9-A	200	CPS	O2-C13-C14	-19.04	71.93	109.84
3	11-A	200	CPS	C15-C14-C13	-19.04	83.99	112.71
3	14-A	200	CPS	C10-C5-C4	-19.03	90.01	109.06
3	14-A	200	CPS	C15-C16-C17	-18.99	91.82	114.40
3	15-A	200	CPS	C3-C19-C2	-18.95	94.47	113.70
3	10-A	200	CPS	C5-C6-C18	-18.93	90.73	114.72
3	12-A	200	CPS	C1-C2-C19	-18.93	81.95	111.34
3	5-A	200	CPS	C3-C4-C5	18.91	130.50	111.26
3	3-A	200	CPS	C3-C19-C2	-18.89	94.54	113.70
3	13-A	200	CPS	C15-C16-C17	-18.73	92.13	114.40
3	7-A	200	CPS	C10-C5-C6	18.71	140.52	111.20
3	15-A	200	CPS	C21-C20-C22	-18.61	81.54	110.34
3	2-A	200	CPS	C15-C14-C13	-18.57	84.70	112.71
3	10-A	200	CPS	C9-C5-C6	-18.41	81.64	100.11
3	6-A	200	CPS	C16-C17-C18	18.38	131.57	111.50
3	13-A	200	CPS	C19-C18-C17	-18.37	88.74	111.86
3	12-A	200	CPS	C11-C2-C1	-18.09	79.54	108.31
3	3-A	200	CPS	C5-C9-C20	18.02	141.31	119.48
3	3-A	200	CPS	C7-C6-C18	-17.73	94.04	118.36
3	9-A	200	CPS	C19-C2-C15	-17.72	83.91	108.51
3	6-A	200	CPS	C1-C12-C13	-17.69	87.05	110.48
3	8-A	200	CPS	C16-C15-C2	-17.63	93.90	112.66
3	5-A	200	CPS	C9-C5-C6	17.62	117.79	100.11
3	11-A	200	CPS	C10-C5-C6	-17.58	83.65	111.20
3	5-A	200	CPS	C1-C12-C13	-17.55	87.23	110.48
3	15-A	200	CPS	C10-C5-C9	17.54	138.68	111.20
3	2-A	200	CPS	C3-C19-C2	17.45	131.42	113.70
3	6-A	200	CPS	O2-C13-C14	17.39	144.47	109.84
3	4-A	200	CPS	C7-C6-C18	-17.34	94.58	118.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	12-A	200	CPS	C3-C4-C5	17.22	128.78	111.26
3	4-A	200	CPS	C21-C20-C9	-17.21	87.05	112.88
3	14-A	200	CPS	C1-C2-C19	17.17	138.00	111.34
3	15-A	200	CPS	C15-C14-C13	17.16	138.60	112.71
3	5-A	200	CPS	C19-C18-C17	-17.00	90.45	111.86
3	7-A	200	CPS	C3-C19-C2	16.94	130.90	113.70
3	8-A	200	CPS	C10-C5-C6	-16.87	84.77	111.20
3	15-A	200	CPS	O4-C4-C5	-16.85	82.55	111.02
3	2-A	200	CPS	C14-C15-C2	-16.69	94.90	112.66
3	16-A	200	CPS	C12-C1-C2	-16.64	84.66	112.74
3	11-A	200	CPS	C1-C2-C15	-16.54	84.00	107.75
3	14-A	200	CPS	C3-C4-C5	-16.50	94.48	111.26
3	16-A	200	CPS	C7-C6-C18	-16.47	95.76	118.36
3	14-A	200	CPS	C6-C18-C17	-16.35	90.16	111.85
3	5-A	200	CPS	C19-C2-C15	-16.29	85.88	108.51
3	12-A	200	CPS	C21-C20-C22	-16.28	85.14	110.34
3	2-A	200	CPS	C11-C2-C1	-16.28	82.42	108.31
3	16-A	200	CPS	C7-C6-C5	-16.24	87.79	103.54
3	1-A	200	CPS	C10-C5-C6	16.10	136.43	111.20
3	6-A	200	CPS	C16-C15-C2	16.09	129.78	112.66
3	1-A	200	CPS	C10-C5-C4	15.85	124.92	109.06
3	11-A	200	CPS	C19-C2-C15	15.68	130.29	108.51
3	4-A	200	CPS	C11-C2-C19	15.44	131.93	111.18
3	15-A	200	CPS	C19-C3-C4	-15.36	94.20	114.29
3	15-A	200	CPS	C23-C22-C20	-15.34	85.80	114.46
3	15-A	200	CPS	O2-C13-C14	15.30	140.31	109.84
3	3-A	200	CPS	C19-C2-C15	-15.25	87.33	108.51
3	9-A	200	CPS	C1-C12-C13	-15.21	90.34	110.48
3	9-A	200	CPS	C16-C15-C2	-15.12	96.57	112.66
3	11-A	200	CPS	C6-C5-C4	15.11	121.22	107.42
3	3-A	200	CPS	C16-C15-C2	-15.04	96.66	112.66
3	7-A	200	CPS	C16-C15-C2	-14.99	96.70	112.66
3	6-A	200	CPS	C6-C5-C4	14.95	121.08	107.42
3	7-A	200	CPS	C12-C1-C2	-14.94	87.53	112.74
3	3-A	200	CPS	C11-C2-C15	-14.91	85.52	110.44
3	8-A	200	CPS	C10-C5-C4	-14.89	94.15	109.06
3	12-A	200	CPS	C10-C5-C6	14.87	134.50	111.20
3	2-A	200	CPS	C1-C2-C15	14.86	129.08	107.75
3	1-A	200	CPS	C6-C18-C17	-14.81	92.21	111.85
3	7-A	200	CPS	C1-C2-C19	-14.79	88.37	111.34
3	10-A	200	CPS	C14-C13-C12	-14.78	92.59	110.62
3	2-A	200	CPS	C5-C9-C20	-14.72	101.66	119.48

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	15-A	200	CPS	C19-C18-C17	-14.67	93.39	111.86
3	6-A	200	CPS	C21-C20-C22	-14.66	87.65	110.34
3	2-A	200	CPS	C19-C18-C6	14.53	130.04	109.75
3	1-A	200	CPS	C11-C2-C15	-14.53	86.16	110.44
3	6-A	200	CPS	C10-C5-C4	14.44	123.51	109.06
3	4-A	200	CPS	C12-C1-C2	-14.38	88.47	112.74
3	5-A	200	CPS	C21-C20-C9	14.21	134.21	112.88
3	11-A	200	CPS	C1-C12-C13	14.09	129.14	110.48
3	1-A	200	CPS	C11-C2-C19	-14.01	92.34	111.18
3	3-A	200	CPS	C14-C15-C2	-13.98	97.78	112.66
3	1-A	200	CPS	C5-C9-C20	13.93	136.36	119.48
3	11-A	200	CPS	C23-C22-C20	-13.90	88.49	114.46
3	4-A	200	CPS	C11-C2-C1	-13.76	86.42	108.31
3	12-A	200	CPS	C3-C19-C2	13.71	127.62	113.70
3	6-A	200	CPS	C1-C2-C15	-13.65	88.15	107.75
3	13-A	200	CPS	C3-C19-C2	-13.53	99.97	113.70
3	12-A	200	CPS	C16-C15-C2	13.52	127.04	112.66
3	6-A	200	CPS	C1-C2-C19	-13.45	90.46	111.34
3	11-A	200	CPS	O2-C13-C12	13.42	145.26	110.17
3	11-A	200	CPS	C10-C5-C4	13.40	122.47	109.06
3	5-A	200	CPS	C7-C6-C18	13.37	136.70	118.36
3	5-A	200	CPS	C15-C16-C17	-13.31	98.58	114.40
3	13-A	200	CPS	C9-C5-C4	13.26	129.60	117.67
3	4-A	200	CPS	C16-C15-C14	13.21	126.32	111.23
3	4-A	200	CPS	C15-C16-C17	-13.21	98.69	114.40
3	5-A	200	CPS	C10-C5-C9	-13.17	90.57	111.20
3	12-A	200	CPS	C9-C5-C4	13.17	129.52	117.67
3	7-A	200	CPS	O2-C13-C14	-13.14	83.68	109.84
3	1-A	200	CPS	C19-C18-C6	13.10	128.04	109.75
3	10-A	200	CPS	C11-C2-C1	13.08	129.10	108.31
3	1-A	200	CPS	C15-C16-C17	13.06	129.93	114.40
3	8-A	200	CPS	C3-C19-C18	-13.05	91.58	110.89
3	11-A	200	CPS	C21-C20-C22	13.01	130.47	110.34
3	10-A	200	CPS	C10-C5-C9	12.99	131.56	111.20
3	9-A	200	CPS	C6-C18-C17	-12.97	94.64	111.85
3	16-A	200	CPS	C11-C2-C19	12.96	128.60	111.18
3	1-A	200	CPS	C11-C2-C1	12.95	128.89	108.31
3	15-A	200	CPS	C15-C16-C17	-12.87	99.10	114.40
3	7-A	200	CPS	C15-C16-C17	12.84	129.66	114.40
3	7-A	200	CPS	C11-C2-C19	12.82	128.41	111.18
3	14-A	200	CPS	C3-C19-C2	12.73	126.63	113.70
3	12-A	200	CPS	C11-C2-C19	12.72	128.27	111.18

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	9-A	200	CPS	C6-C5-C4	-12.71	95.80	107.42
3	14-A	200	CPS	C23-C22-C20	-12.67	90.80	114.46
3	5-A	200	CPS	C6-C5-C4	-12.55	95.95	107.42
3	11-A	200	CPS	C3-C19-C18	12.44	129.31	110.89
3	8-A	200	CPS	C9-C5-C6	12.39	112.54	100.11
3	2-A	200	CPS	C5-C6-C18	12.32	130.32	114.72
3	9-A	200	CPS	C8-C9-C5	-12.27	91.64	103.54
3	14-A	200	CPS	C2-C19-C18	-12.21	98.23	111.84
3	3-A	200	CPS	C12-C1-C2	12.10	133.16	112.74
3	12-A	200	CPS	C12-C1-C2	-12.09	92.34	112.74
3	7-A	200	CPS	C1-C2-C15	12.09	125.10	107.75
3	11-A	200	CPS	C7-C6-C18	-12.08	101.78	118.36
3	11-A	200	CPS	C5-C6-C18	-12.07	99.42	114.72
3	14-A	200	CPS	C10-C5-C9	11.94	129.92	111.20
3	2-A	200	CPS	C15-C16-C17	-11.92	100.23	114.40
3	16-A	200	CPS	C9-C5-C4	-11.86	107.00	117.67
3	3-A	200	CPS	C16-C15-C14	-11.80	97.74	111.23
3	10-A	200	CPS	C8-C9-C20	-11.79	94.33	112.18
3	9-A	200	CPS	C16-C15-C14	11.79	124.69	111.23
3	13-A	200	CPS	C23-C22-C20	-11.66	92.67	114.46
3	1-A	200	CPS	C14-C15-C2	-11.63	100.28	112.66
3	8-A	200	CPS	C8-C7-C6	11.61	127.87	105.14
3	6-A	200	CPS	C3-C19-C18	11.56	128.00	110.89
3	10-A	200	CPS	C3-C4-C5	11.56	123.02	111.26
3	15-A	200	CPS	C1-C2-C19	11.55	129.27	111.34
3	12-A	200	CPS	C15-C16-C17	-11.53	100.69	114.40
3	9-A	200	CPS	C19-C18-C6	11.51	125.83	109.75
3	16-A	200	CPS	C10-C5-C4	11.49	120.56	109.06
3	5-A	200	CPS	C8-C9-C5	-11.48	92.41	103.54
3	9-A	200	CPS	C7-C6-C18	11.46	134.08	118.36
3	7-A	200	CPS	C21-C20-C9	11.45	130.06	112.88
3	3-A	200	CPS	O4-C4-C5	-11.42	91.73	111.02
3	3-A	200	CPS	C8-C9-C5	-11.40	92.48	103.54
3	6-A	200	CPS	C7-C6-C5	11.37	114.57	103.54
3	13-A	200	CPS	C11-C2-C1	11.29	126.24	108.31
3	16-A	200	CPS	C5-C6-C18	-11.28	100.42	114.72
3	16-A	200	CPS	C22-C20-C9	11.28	133.72	110.33
3	8-A	200	CPS	C11-C2-C19	-11.23	96.08	111.18
3	2-A	200	CPS	C7-C6-C5	11.02	114.23	103.54
3	10-A	200	CPS	C12-C1-C2	10.97	131.25	112.74
3	5-A	200	CPS	C10-C5-C6	10.90	128.28	111.20
3	12-A	200	CPS	O1-C24-N1	-10.89	101.66	123.03

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	11-A	200	CPS	C9-C5-C4	-10.88	107.88	117.67
3	2-A	200	CPS	C8-C9-C20	-10.86	95.74	112.18
3	9-A	200	CPS	C12-C1-C2	-10.84	94.45	112.74
3	3-A	200	CPS	C15-C16-C17	10.83	127.28	114.40
3	11-A	200	CPS	C8-C7-C6	-10.79	84.02	105.14
3	16-A	200	CPS	C1-C2-C15	10.79	123.23	107.75
3	7-A	200	CPS	C5-C6-C18	10.62	128.17	114.72
3	16-A	200	CPS	C10-C5-C6	-10.59	94.61	111.20
3	6-A	200	CPS	C25-N1-C24	-10.57	103.14	122.82
3	8-A	200	CPS	C15-C14-C13	-10.56	96.77	112.71
3	8-A	200	CPS	C7-C8-C9	10.52	125.73	105.14
3	11-A	200	CPS	C7-C6-C5	-10.52	93.34	103.54
3	10-A	200	CPS	C3-C19-C18	-10.50	95.36	110.89
3	1-A	200	CPS	C21-C20-C9	10.47	128.60	112.88
3	7-A	200	CPS	C11-C2-C1	-10.45	91.69	108.31
3	8-A	200	CPS	C1-C2-C19	10.45	127.57	111.34
3	9-A	200	CPS	C10-C5-C9	-10.44	94.85	111.20
3	15-A	200	CPS	O4-C4-C3	10.41	130.30	109.12
3	14-A	200	CPS	C21-C20-C22	-10.38	94.28	110.34
3	15-A	200	CPS	C1-C12-C13	-10.37	96.74	110.48
3	7-A	200	CPS	C3-C4-C5	10.26	121.70	111.26
3	13-A	200	CPS	C10-C5-C6	-10.04	95.46	111.20
3	2-A	200	CPS	C1-C12-C13	-9.99	97.25	110.48
3	16-A	200	CPS	C19-C3-C4	-9.98	101.23	114.29
3	11-A	200	CPS	C25-N1-C24	-9.95	104.29	122.82
3	7-A	200	CPS	O1-C24-N1	-9.93	103.55	123.03
3	6-A	200	CPS	C5-C9-C20	9.92	131.50	119.48
3	5-A	200	CPS	C2-C19-C18	9.90	122.87	111.84
3	10-A	200	CPS	C10-C5-C6	-9.89	95.71	111.20
3	1-A	200	CPS	C12-C1-C2	-9.86	96.11	112.74
3	3-A	200	CPS	C10-C5-C6	9.81	126.58	111.20
3	10-A	200	CPS	C15-C14-C13	9.79	127.48	112.71
3	7-A	200	CPS	O3-C17-C16	-9.79	85.52	109.86
3	12-A	200	CPS	C19-C2-C15	9.78	122.09	108.51
3	7-A	200	CPS	C19-C2-C15	9.74	122.04	108.51
3	9-A	200	CPS	C16-C17-C18	-9.69	100.91	111.50
3	15-A	200	CPS	C14-C13-C12	-9.67	98.82	110.62
3	5-A	200	CPS	C23-C22-C20	-9.65	96.43	114.46
3	9-A	200	CPS	O3-C17-C18	-9.63	87.45	109.52
3	2-A	200	CPS	C21-C20-C22	-9.57	95.53	110.34
3	9-A	200	CPS	C21-C20-C22	9.53	125.08	110.34
3	8-A	200	CPS	C3-C4-C5	-9.53	101.58	111.26

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	14-A	200	CPS	C3-C19-C18	-9.52	96.81	110.89
3	11-A	200	CPS	C19-C18-C6	-9.52	96.46	109.75
3	9-A	200	CPS	C3-C19-C18	-9.51	96.82	110.89
3	16-A	200	CPS	C15-C16-C17	-9.50	103.10	114.40
3	6-A	200	CPS	C8-C9-C5	9.48	112.73	103.54
3	10-A	200	CPS	C6-C18-C17	-9.41	99.37	111.85
3	2-A	200	CPS	C25-N1-C24	-9.33	105.45	122.82
3	13-A	200	CPS	O2-C13-C14	9.33	128.42	109.84
3	13-A	200	CPS	C23-C24-N1	9.32	133.33	116.34
3	1-A	200	CPS	C8-C9-C5	9.27	112.53	103.54
3	3-A	200	CPS	C22-C23-C24	-9.18	92.60	113.06
3	7-A	200	CPS	C7-C6-C18	9.16	130.92	118.36
3	3-A	200	CPS	O2-C13-C12	9.11	133.97	110.17
3	4-A	200	CPS	O4-C4-C3	-9.06	90.68	109.12
3	13-A	200	CPS	O1-C24-C23	-9.06	105.60	122.02
3	2-A	200	CPS	C10-C5-C9	-9.02	97.07	111.20
3	2-A	200	CPS	C10-C5-C6	8.95	125.22	111.20
3	14-A	200	CPS	O1-C24-C23	-8.94	105.83	122.02
3	4-A	200	CPS	C5-C9-C20	8.93	130.30	119.48
3	3-A	200	CPS	C21-C20-C22	8.92	124.15	110.34
3	5-A	200	CPS	C21-C20-C22	8.90	124.11	110.34
3	13-A	200	CPS	C15-C14-C13	8.89	126.12	112.71
3	5-A	200	CPS	C11-C2-C1	8.89	122.44	108.31
3	12-A	200	CPS	C1-C2-C15	8.88	120.50	107.75
3	14-A	200	CPS	C1-C12-C13	8.87	122.23	110.48
3	5-A	200	CPS	C9-C5-C4	8.84	125.62	117.67
3	10-A	200	CPS	C1-C12-C13	-8.84	98.78	110.48
3	7-A	200	CPS	C19-C18-C6	8.82	122.07	109.75
3	6-A	200	CPS	O4-C4-C5	8.72	125.75	111.02
3	11-A	200	CPS	C1-C2-C19	-8.67	97.88	111.34
3	3-A	200	CPS	C1-C2-C15	8.67	120.19	107.75
3	11-A	200	CPS	C21-C20-C9	8.64	125.85	112.88
3	3-A	200	CPS	C11-C2-C19	8.64	122.78	111.18
3	16-A	200	CPS	C10-C5-C9	8.63	124.73	111.20
3	3-A	200	CPS	C7-C8-C9	8.59	121.95	105.14
3	16-A	200	CPS	C25-N1-C24	-8.56	106.88	122.82
3	1-A	200	CPS	C16-C17-C18	8.54	120.82	111.50
3	4-A	200	CPS	O4-C4-C5	8.52	125.41	111.02
3	12-A	200	CPS	O4-C4-C3	8.51	126.43	109.12
3	7-A	200	CPS	C15-C14-C13	8.49	125.51	112.71
3	10-A	200	CPS	C9-C5-C4	-8.41	110.10	117.67
2	11-A	300	SO4	O4-S-O1	-8.39	65.71	109.56

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	13-A	200	CPS	C1-C2-C15	-8.39	95.71	107.75
3	11-A	200	CPS	C3-C4-C5	-8.33	102.79	111.26
3	3-A	200	CPS	C11-C2-C1	8.32	121.52	108.31
3	9-A	200	CPS	C5-C9-C20	-8.30	109.43	119.48
3	6-A	200	CPS	C15-C14-C13	-8.29	100.20	112.71
3	5-A	200	CPS	C10-C5-C4	-8.29	100.76	109.06
3	1-A	200	CPS	O3-C17-C16	-8.25	89.33	109.86
3	10-A	200	CPS	C16-C15-C14	-8.18	101.88	111.23
3	5-A	200	CPS	C3-C19-C18	-8.18	98.80	110.89
3	6-A	200	CPS	C12-C1-C2	-8.15	98.99	112.74
3	10-A	200	CPS	C15-C16-C17	8.14	124.08	114.40
3	11-A	200	CPS	C5-C9-C20	-8.13	109.64	119.48
3	3-A	200	CPS	C9-C5-C6	8.11	108.25	100.11
3	16-A	200	CPS	C6-C18-C17	-8.10	101.11	111.85
3	5-A	200	CPS	C14-C13-C12	-8.08	100.76	110.62
3	15-A	200	CPS	C1-C2-C15	-8.07	96.16	107.75
2	14-A	301	SO4	O4-S-O1	-8.07	67.36	109.56
3	5-A	200	CPS	O3-C17-C18	-8.04	91.10	109.52
3	8-A	200	CPS	C6-C5-C4	-8.02	100.09	107.42
3	1-A	200	CPS	C10-C5-C9	-8.01	98.65	111.20
3	4-A	200	CPS	C19-C18-C17	-8.00	101.79	111.86
3	14-A	200	CPS	C14-C15-C2	-7.96	104.19	112.66
3	5-A	200	CPS	C25-N1-C24	-7.89	108.14	122.82
3	2-A	200	CPS	C6-C5-C4	-7.88	100.21	107.42
3	9-A	200	CPS	O3-C17-C16	7.87	129.43	109.86
3	7-A	200	CPS	C8-C9-C20	7.87	124.08	112.18
3	4-A	200	CPS	C14-C15-C2	-7.87	104.29	112.66
3	6-A	200	CPS	C23-C22-C20	-7.80	99.89	114.46
3	8-A	200	CPS	C11-C2-C1	7.74	120.61	108.31
3	9-A	200	CPS	O4-C4-C5	-7.67	98.06	111.02
3	11-A	200	CPS	C3-C19-C2	7.67	121.48	113.70
3	4-A	200	CPS	C1-C2-C15	7.64	118.72	107.75
3	6-A	200	CPS	C15-C16-C17	-7.63	105.33	114.40
3	11-A	200	CPS	C14-C15-C2	7.59	120.73	112.66
3	5-A	200	CPS	C16-C15-C2	-7.58	104.59	112.66
3	15-A	200	CPS	C7-C6-C18	7.54	128.70	118.36
3	14-A	200	CPS	O2-C13-C14	7.53	124.83	109.84
3	15-A	200	CPS	C12-C1-C2	-7.50	100.09	112.74
3	15-A	200	CPS	O1-C24-C23	-7.50	108.44	122.02
3	16-A	200	CPS	O1-C24-N1	-7.49	108.34	123.03
3	11-A	200	CPS	O4-C4-C5	7.46	123.63	111.02
3	6-A	200	CPS	C11-C2-C19	7.44	121.18	111.18

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	12-A	200	CPS	C7-C6-C18	7.44	128.56	118.36
3	1-A	200	CPS	C16-C15-C14	-7.43	102.74	111.23
3	11-A	200	CPS	C19-C3-C4	7.42	124.01	114.29
3	13-A	200	CPS	C19-C3-C4	-7.42	104.59	114.29
3	12-A	200	CPS	C5-C9-C20	7.35	128.38	119.48
3	6-A	200	CPS	C19-C2-C15	7.34	118.71	108.51
3	14-A	200	CPS	C15-C14-C13	7.28	123.69	112.71
3	16-A	200	CPS	C19-C2-C15	7.26	118.60	108.51
3	5-A	200	CPS	C1-C2-C19	-7.26	100.06	111.34
3	6-A	200	CPS	C14-C15-C2	7.25	120.38	112.66
3	12-A	200	CPS	C19-C18-C6	7.20	119.81	109.75
3	11-A	200	CPS	C19-C18-C17	-7.18	102.82	111.86
3	12-A	200	CPS	C5-C6-C18	7.17	123.80	114.72
3	9-A	200	CPS	C10-C5-C4	-7.13	101.92	109.06
3	10-A	200	CPS	C1-C2-C15	-7.12	97.52	107.75
3	2-A	200	CPS	O2-C13-C12	7.07	128.64	110.17
3	10-A	200	CPS	C10-C5-C4	7.07	116.13	109.06
3	2-A	200	CPS	C7-C8-C9	-7.06	91.32	105.14
3	2-A	200	CPS	C19-C3-C4	-7.05	105.07	114.29
3	8-A	200	CPS	C19-C18-C17	-7.04	102.99	111.86
3	13-A	200	CPS	C1-C2-C19	7.03	122.26	111.34
3	16-A	200	CPS	O3-C17-C18	-7.00	93.48	109.52
3	11-A	200	CPS	C16-C15-C2	-6.99	105.22	112.66
3	5-A	200	CPS	O3-C17-C16	6.96	127.15	109.86
3	12-A	200	CPS	C23-C24-N1	6.94	128.99	116.34
3	16-A	200	CPS	C16-C15-C2	6.93	120.04	112.66
3	6-A	200	CPS	C6-C18-C17	6.90	121.01	111.85
3	14-A	200	CPS	C6-C5-C4	-6.90	101.11	107.42
3	9-A	200	CPS	O1-C24-N1	-6.85	109.59	123.03
3	8-A	200	CPS	C19-C2-C15	-6.85	99.00	108.51
3	9-A	200	CPS	C25-N1-C24	6.84	135.55	122.82
2	14-A	301	SO4	O4-S-O2	-6.82	73.90	109.56
3	3-A	200	CPS	C15-C14-C13	6.78	122.94	112.71
3	1-A	200	CPS	C9-C5-C4	-6.77	111.57	117.67
3	14-A	200	CPS	C23-C24-N1	6.76	128.66	116.34
3	12-A	200	CPS	C8-C9-C20	6.74	122.38	112.18
3	10-A	200	CPS	C22-C23-C24	-6.73	98.05	113.06
3	4-A	200	CPS	C3-C19-C2	-6.69	106.91	113.70
3	2-A	200	CPS	C8-C7-C6	-6.68	92.08	105.14
3	7-A	200	CPS	C11-C2-C15	-6.64	99.34	110.44
3	5-A	200	CPS	C19-C18-C6	6.60	118.97	109.75
3	6-A	200	CPS	C7-C6-C18	6.52	127.30	118.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	11-A	200	CPS	C22-C20-C9	-6.51	96.83	110.33
3	9-A	200	CPS	C11-C2-C15	-6.51	99.56	110.44
3	5-A	200	CPS	C11-C2-C19	6.49	119.90	111.18
3	15-A	200	CPS	C23-C24-N1	6.47	128.14	116.34
3	7-A	200	CPS	C23-C24-N1	6.47	128.14	116.34
3	7-A	200	CPS	C19-C3-C4	-6.43	105.88	114.29
3	1-A	200	CPS	O4-C4-C3	-6.43	96.05	109.12
3	4-A	200	CPS	C19-C18-C6	6.34	118.61	109.75
3	8-A	200	CPS	O2-C13-C14	6.32	122.43	109.84
3	3-A	200	CPS	C8-C9-C20	-6.27	102.69	112.18
3	16-A	200	CPS	C16-C15-C14	-6.26	104.07	111.23
3	7-A	200	CPS	C1-C12-C13	-6.22	102.24	110.48
3	1-A	200	CPS	C23-C22-C20	-6.21	102.86	114.46
3	5-A	200	CPS	C22-C20-C9	-6.20	97.48	110.33
3	13-A	200	CPS	C21-C20-C9	6.17	122.15	112.88
3	10-A	200	CPS	O2-C13-C14	6.11	122.01	109.84
3	12-A	200	CPS	C15-C14-C13	6.09	121.89	112.71
3	8-A	200	CPS	C8-C9-C20	-6.07	102.99	112.18
3	1-A	200	CPS	C22-C20-C9	6.05	122.88	110.33
3	5-A	200	CPS	C7-C8-C9	6.04	116.95	105.14
3	4-A	200	CPS	C7-C8-C9	-6.01	93.38	105.14
3	2-A	200	CPS	C12-C1-C2	6.00	122.87	112.74
3	7-A	200	CPS	C16-C17-C18	-6.00	104.94	111.50
3	6-A	200	CPS	C11-C2-C1	-5.99	98.78	108.31
3	13-A	200	CPS	C22-C23-C24	5.98	126.41	113.06
3	1-A	200	CPS	O2-C13-C14	5.98	121.75	109.84
3	10-A	200	CPS	C5-C9-C20	-5.96	112.27	119.48
3	6-A	200	CPS	C22-C23-C24	-5.95	99.79	113.06
3	15-A	200	CPS	C11-C2-C1	5.95	117.76	108.31
3	4-A	200	CPS	C10-C5-C4	-5.93	103.11	109.06
3	5-A	200	CPS	C3-C19-C2	-5.87	107.75	113.70
3	4-A	200	CPS	C19-C2-C15	-5.84	100.40	108.51
3	9-A	200	CPS	C1-C2-C15	5.82	116.11	107.75
3	16-A	200	CPS	O4-C4-C3	-5.82	97.28	109.12
3	16-A	200	CPS	C19-C18-C6	5.82	117.87	109.75
3	14-A	200	CPS	C22-C23-C24	5.79	125.98	113.06
3	1-A	200	CPS	C14-C13-C12	5.78	117.67	110.62
3	12-A	200	CPS	C6-C5-C4	5.77	112.69	107.42
3	12-A	200	CPS	C8-C9-C5	5.76	109.12	103.54
3	7-A	200	CPS	O2-C13-C12	-5.65	95.41	110.17
3	6-A	200	CPS	O1-C24-N1	-5.64	111.95	123.03
3	9-A	200	CPS	C7-C8-C9	5.62	116.14	105.14

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	13-A	200	CPS	C1-C12-C13	-5.57	103.11	110.48
3	8-A	200	CPS	C14-C15-C2	5.56	118.58	112.66
3	9-A	200	CPS	C15-C14-C13	5.54	121.07	112.71
3	6-A	200	CPS	C19-C18-C6	5.54	117.49	109.75
3	7-A	200	CPS	C10-C5-C4	-5.52	103.53	109.06
3	15-A	200	CPS	C9-C5-C6	5.49	105.62	100.11
3	9-A	200	CPS	O2-C13-C12	5.46	124.44	110.17
3	1-A	200	CPS	C2-C19-C18	-5.45	105.77	111.84
3	6-A	200	CPS	C11-C2-C15	5.45	119.54	110.44
3	9-A	200	CPS	C11-C2-C19	5.44	118.48	111.18
3	11-A	200	CPS	C2-C19-C18	-5.40	105.82	111.84
3	12-A	200	CPS	C19-C18-C17	5.39	118.64	111.86
3	12-A	200	CPS	C6-C18-C17	5.33	118.93	111.85
3	5-A	200	CPS	O1-C24-N1	5.33	133.49	123.03
3	10-A	200	CPS	C8-C7-C6	-5.32	94.73	105.14
3	5-A	200	CPS	O2-C13-C14	-5.31	99.27	109.84
3	3-A	200	CPS	O2-C13-C14	5.24	120.27	109.84
3	5-A	200	CPS	C15-C14-C13	5.21	120.56	112.71
3	4-A	200	CPS	C6-C18-C17	5.21	118.76	111.85
3	8-A	200	CPS	C19-C3-C4	-5.19	107.50	114.29
3	1-A	200	CPS	C8-C7-C6	5.16	115.24	105.14
3	16-A	200	CPS	C2-C19-C18	5.15	117.58	111.84
3	11-A	200	CPS	C14-C13-C12	-5.13	104.35	110.62
3	13-A	200	CPS	C12-C1-C2	-5.12	104.09	112.74
3	3-A	200	CPS	C26-C25-N1	-5.12	95.18	112.23
3	4-A	200	CPS	C22-C20-C9	-5.09	99.79	110.33
3	10-A	200	CPS	C7-C6-C5	-5.03	98.66	103.54
3	14-A	200	CPS	C12-C1-C2	5.02	121.20	112.74
3	4-A	200	CPS	C6-C5-C4	4.99	111.98	107.42
3	2-A	200	CPS	C9-C5-C4	4.98	122.15	117.67
3	8-A	200	CPS	C23-C24-N1	4.96	125.38	116.34
3	8-A	200	CPS	C7-C6-C18	-4.95	111.57	118.36
3	1-A	200	CPS	C25-N1-C24	-4.93	113.64	122.82
3	12-A	200	CPS	C22-C23-C24	-4.92	102.09	113.06
3	16-A	200	CPS	C11-C2-C15	-4.91	102.23	110.44
3	15-A	200	CPS	C11-C2-C15	-4.90	102.25	110.44
3	7-A	200	CPS	C9-C5-C6	4.89	105.02	100.11
3	4-A	200	CPS	C14-C13-C12	4.88	116.57	110.62
3	5-A	200	CPS	C12-C1-C2	-4.87	104.52	112.74
3	1-A	200	CPS	C22-C23-C24	-4.84	102.27	113.06
2	11-A	300	SO4	O4-S-O3	-4.81	82.01	108.54
3	6-A	200	CPS	C19-C18-C17	4.80	117.90	111.86

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	9-A	301	SO4	O4-S-O3	-4.78	82.18	108.54
3	16-A	200	CPS	C3-C19-C2	4.78	118.55	113.70
3	14-A	200	CPS	O2-C13-C12	4.77	122.63	110.17
3	13-A	200	CPS	O4-C4-C5	-4.77	102.97	111.02
3	16-A	200	CPS	C23-C22-C20	4.76	123.36	114.46
3	10-A	200	CPS	C16-C17-C18	-4.76	106.31	111.50
3	9-A	200	CPS	C14-C13-C12	-4.74	104.83	110.62
3	1-A	200	CPS	O1-C24-C23	-4.66	113.58	122.02
3	1-A	200	CPS	C1-C2-C19	4.66	118.57	111.34
3	5-A	200	CPS	C1-C2-C15	4.65	114.42	107.75
3	2-A	200	CPS	O4-C4-C3	-4.65	99.66	109.12
3	6-A	200	CPS	O1-C24-C23	4.63	130.42	122.02
3	3-A	200	CPS	C2-C19-C18	4.61	116.97	111.84
3	4-A	200	CPS	C16-C17-C18	-4.58	106.50	111.50
3	6-A	200	CPS	C9-C5-C6	-4.58	95.52	100.11
3	14-A	200	CPS	C21-C20-C9	4.56	119.73	112.88
3	1-A	200	CPS	C23-C24-N1	4.56	124.64	116.34
3	5-A	200	CPS	O4-C4-C5	-4.51	103.39	111.02
3	7-A	200	CPS	O3-C17-C18	-4.50	99.20	109.52
3	12-A	200	CPS	C1-C12-C13	-4.50	104.52	110.48
3	16-A	200	CPS	C23-C24-N1	4.47	124.50	116.34
3	10-A	200	CPS	C11-C2-C15	4.47	117.90	110.44
3	8-A	200	CPS	C1-C2-C15	-4.44	101.37	107.75
3	11-A	200	CPS	O1-C24-N1	-4.40	114.40	123.03
3	8-A	200	CPS	O1-C24-N1	-4.38	114.44	123.03
2	15-A	301	SO4	O4-S-O3	-4.37	84.45	108.54
3	8-A	200	CPS	O3-C17-C18	4.37	119.53	109.52
3	1-A	200	CPS	C21-C20-C22	-4.36	103.58	110.34
2	11-A	300	SO4	O2-S-O1	-4.34	78.48	109.06
3	1-A	200	CPS	C19-C3-C4	-4.33	108.62	114.29
2	15-A	301	SO4	O3-S-O1	-4.29	87.13	109.56
3	12-A	200	CPS	C3-C19-C18	4.29	117.24	110.89
3	16-A	200	CPS	C9-C5-C6	-4.27	95.83	100.11
3	1-A	200	CPS	C1-C2-C15	4.27	113.87	107.75
3	14-A	200	CPS	C11-C2-C1	4.25	115.06	108.31
3	14-A	200	CPS	C16-C15-C2	4.23	117.16	112.66
3	7-A	200	CPS	O4-C4-C3	4.19	117.65	109.12
2	11-A	300	SO4	O4-S-O2	4.19	131.48	109.56
3	2-A	200	CPS	C19-C18-C17	4.19	117.13	111.86
3	1-A	200	CPS	C7-C8-C9	-4.19	96.94	105.14
2	15-A	301	SO4	O2-S-O1	4.16	138.34	109.06
3	11-A	200	CPS	O3-C17-C16	-4.14	99.57	109.86

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	11-A	200	CPS	C10-C5-C9	4.13	117.68	111.20
3	14-A	200	CPS	O3-C17-C18	-4.13	100.05	109.52
2	11-A	300	SO4	O3-S-O1	-4.11	88.10	109.56
3	2-A	200	CPS	O3-C17-C16	4.10	120.05	109.86
3	5-A	200	CPS	C22-C23-C24	-4.08	103.95	113.06
3	12-A	200	CPS	C14-C13-C12	-4.07	105.65	110.62
3	8-A	200	CPS	C22-C20-C9	4.07	118.77	110.33
3	5-A	200	CPS	C23-C24-N1	-4.05	108.97	116.34
3	7-A	200	CPS	C8-C7-C6	-4.01	97.30	105.14
3	3-A	200	CPS	C21-C20-C9	-4.00	106.89	112.88
3	11-A	200	CPS	C7-C8-C9	3.98	112.93	105.14
3	4-A	200	CPS	C7-C6-C5	-3.96	99.70	103.54
3	12-A	200	CPS	O4-C4-C5	-3.96	104.34	111.02
3	2-A	200	CPS	C14-C13-C12	3.94	115.43	110.62
3	7-A	200	CPS	C5-C9-C20	3.94	124.25	119.48
3	7-A	200	CPS	C3-C19-C18	-3.94	105.07	110.89
3	15-A	200	CPS	C7-C8-C9	-3.93	97.46	105.14
2	11-A	300	SO4	O3-S-O2	3.89	129.90	109.56
3	12-A	200	CPS	C22-C20-C9	3.89	118.39	110.33
3	2-A	200	CPS	C1-C2-C19	-3.88	105.31	111.34
3	10-A	200	CPS	O1-C24-C23	-3.84	115.07	122.02
3	8-A	200	CPS	O4-C4-C3	-3.83	101.32	109.12
2	1-A	300	SO4	O4-S-O2	3.83	129.58	109.56
3	4-A	200	CPS	C8-C7-C6	-3.82	97.66	105.14
3	4-A	200	CPS	C19-C3-C4	-3.81	109.31	114.29
3	9-A	200	CPS	C23-C24-N1	3.80	123.26	116.34
3	12-A	200	CPS	O1-C24-C23	3.80	128.90	122.02
3	12-A	200	CPS	O2-C13-C12	3.78	120.05	110.17
2	9-A	300	SO4	O4-S-O2	-3.75	89.98	109.56
3	7-A	200	CPS	C22-C23-C24	-3.74	104.72	113.06
3	3-A	200	CPS	C10-C5-C9	-3.72	105.38	111.20
3	5-A	200	CPS	C16-C15-C14	3.72	115.47	111.23
3	3-A	200	CPS	O4-C4-C3	3.69	116.63	109.12
3	2-A	200	CPS	C2-C19-C18	3.68	115.94	111.84
3	6-A	200	CPS	C3-C4-C5	-3.67	107.53	111.26
3	16-A	200	CPS	C14-C13-C12	-3.67	106.15	110.62
3	3-A	200	CPS	C5-C6-C18	-3.66	110.08	114.72
3	13-A	200	CPS	O3-C17-C16	-3.65	100.78	109.86
3	8-A	200	CPS	C10-C5-C9	-3.62	105.53	111.20
3	9-A	200	CPS	C23-C22-C20	-3.60	107.74	114.46
3	2-A	200	CPS	C21-C20-C9	-3.59	107.50	112.88
3	4-A	200	CPS	C16-C15-C2	-3.58	108.85	112.66

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	5-A	200	CPS	O4-C4-C3	-3.52	101.96	109.12
3	12-A	200	CPS	C8-C7-C6	-3.52	98.26	105.14
3	6-A	200	CPS	C14-C13-C12	-3.50	106.35	110.62
3	7-A	200	CPS	C16-C15-C14	-3.49	107.24	111.23
3	4-A	200	CPS	C22-C23-C24	3.48	120.82	113.06
3	16-A	200	CPS	C22-C23-C24	3.48	120.81	113.06
3	11-A	200	CPS	C8-C9-C20	-3.47	106.93	112.18
3	16-A	200	CPS	C15-C14-C13	3.47	117.93	112.71
3	3-A	200	CPS	C25-N1-C24	-3.46	116.38	122.82
3	12-A	200	CPS	C10-C5-C4	3.46	112.52	109.06
3	10-A	200	CPS	C8-C9-C5	3.44	106.88	103.54
3	8-A	200	CPS	O2-C13-C12	3.43	119.13	110.17
3	14-A	200	CPS	C7-C8-C9	3.43	111.85	105.14
3	9-A	200	CPS	C10-C5-C6	3.41	116.55	111.20
2	7-A	301	SO4	O4-S-O3	-3.41	89.75	108.54
2	9-A	301	SO4	O3-S-O1	-3.39	91.84	109.56
3	3-A	200	CPS	C19-C18-C6	3.38	114.47	109.75
3	2-A	200	CPS	C3-C4-C5	-3.35	107.85	111.26
3	8-A	200	CPS	C25-N1-C24	-3.35	116.58	122.82
3	7-A	200	CPS	C22-C20-C9	3.30	117.17	110.33
3	6-A	200	CPS	C21-C20-C9	3.29	117.83	112.88
3	15-A	200	CPS	C8-C7-C6	3.27	111.53	105.14
3	8-A	200	CPS	C26-C25-N1	3.26	123.07	112.23
2	13-A	301	SO4	O3-S-O1	3.24	126.48	109.56
3	10-A	200	CPS	C16-C15-C2	-3.23	109.22	112.66
3	5-A	200	CPS	C8-C7-C6	-3.21	98.86	105.14
3	7-A	200	CPS	C7-C6-C5	-3.20	100.44	103.54
2	7-A	301	SO4	O2-S-O1	3.20	131.59	109.06
3	8-A	200	CPS	C22-C23-C24	3.17	120.14	113.06
3	2-A	200	CPS	C11-C2-C15	3.17	115.73	110.44
3	1-A	200	CPS	C15-C14-C13	3.15	117.46	112.71
3	1-A	200	CPS	C8-C9-C20	-3.15	107.42	112.18
2	13-A	301	SO4	O4-S-O1	-3.11	93.28	109.56
2	10-A	301	SO4	O4-S-O2	-3.11	93.31	109.56
2	7-A	301	SO4	O4-S-O1	3.11	125.80	109.56
3	11-A	200	CPS	C16-C15-C14	-3.08	107.71	111.23
2	9-A	301	SO4	O4-S-O1	3.08	125.66	109.56
3	4-A	200	CPS	C23-C24-N1	-3.08	110.74	116.34
3	16-A	200	CPS	C26-C25-N1	-3.05	102.07	112.23
3	6-A	200	CPS	C3-C19-C2	3.02	116.77	113.70
3	16-A	200	CPS	C3-C19-C18	3.02	115.36	110.89
3	3-A	200	CPS	O1-C24-C23	-3.02	116.55	122.02

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	6-A	200	CPS	C2-C19-C18	3.00	115.18	111.84
3	7-A	200	CPS	O1-C24-C23	2.99	127.44	122.02
3	1-A	200	CPS	C5-C6-C18	-2.95	110.98	114.72
3	7-A	200	CPS	C23-C22-C20	-2.94	108.97	114.46
3	16-A	200	CPS	C5-C9-C20	2.93	123.03	119.48
2	16-A	300	SO4	O4-S-O3	-2.92	92.43	108.54
3	11-A	200	CPS	C16-C17-C18	-2.92	108.31	111.50
3	1-A	200	CPS	O2-C13-C12	-2.91	102.55	110.17
3	14-A	200	CPS	O3-C17-C16	2.91	117.10	109.86
3	11-A	200	CPS	C23-C24-N1	2.91	121.65	116.34
3	2-A	200	CPS	O1-C24-C23	2.90	127.27	122.02
3	14-A	200	CPS	O4-C4-C3	-2.86	103.30	109.12
3	5-A	200	CPS	C16-C17-C18	2.86	114.62	111.50
2	8-A	301	SO4	O2-S-O1	-2.85	88.99	109.06
3	11-A	200	CPS	C11-C2-C15	2.84	115.19	110.44
3	5-A	200	CPS	C8-C9-C20	-2.84	107.88	112.18
3	16-A	200	CPS	O1-C24-C23	2.83	127.15	122.02
3	9-A	200	CPS	C26-C25-N1	2.83	121.65	112.23
3	15-A	200	CPS	C8-C9-C20	-2.81	107.93	112.18
3	10-A	200	CPS	C1-C2-C19	-2.76	107.06	111.34
2	7-A	301	SO4	O4-S-O2	-2.76	95.15	109.56
3	12-A	200	CPS	C21-C20-C9	2.75	117.02	112.88
3	14-A	200	CPS	C25-N1-C24	-2.75	117.70	122.82
3	6-A	200	CPS	C16-C15-C14	-2.75	108.08	111.23
3	10-A	200	CPS	C21-C20-C9	-2.73	108.79	112.88
3	1-A	200	CPS	C9-C5-C6	2.72	102.84	100.11
4	14-A	403	EDO	O1-C1-C2	-2.71	91.73	112.39
3	5-A	200	CPS	C6-C18-C17	-2.70	108.27	111.85
3	10-A	200	CPS	C25-N1-C24	-2.70	117.80	122.82
2	1-A	300	SO4	O4-S-O3	-2.69	93.69	108.54
3	6-A	200	CPS	C5-C6-C18	2.69	118.12	114.72
3	4-A	200	CPS	C10-C5-C6	-2.68	107.01	111.20
3	14-A	200	CPS	C10-C5-C6	2.67	115.38	111.20
3	4-A	200	CPS	O1-C24-N1	2.65	128.23	123.03
3	12-A	200	CPS	C25-N1-C24	-2.64	117.90	122.82
3	5-A	200	CPS	O1-C24-C23	-2.62	117.27	122.02
3	7-A	200	CPS	C14-C15-C2	-2.62	109.88	112.66
4	16-A	403	EDO	O2-C2-C1	2.61	132.30	112.39
4	3-A	403	EDO	O1-C1-C2	-2.60	92.57	112.39
4	15-A	403	EDO	O1-C1-C2	-2.60	92.58	112.39
2	14-A	301	SO4	O3-S-O2	2.58	123.07	109.56
4	13-A	403	EDO	O1-C1-C2	-2.58	92.74	112.39

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1-A	200	CPS	C3-C19-C18	2.57	114.70	110.89
3	3-A	200	CPS	C7-C6-C5	2.56	106.03	103.54
3	9-A	200	CPS	O1-C24-C23	2.56	126.66	122.02
2	10-A	301	SO4	O2-S-O1	2.56	127.08	109.06
4	8-A	403	EDO	O1-C1-C2	-2.55	92.97	112.39
3	1-A	200	CPS	C19-C18-C17	-2.54	108.66	111.86
3	16-A	200	CPS	C8-C9-C5	2.52	105.99	103.54
3	1-A	200	CPS	C3-C19-C2	2.52	116.26	113.70
3	4-A	200	CPS	C3-C4-C5	-2.51	108.71	111.26
3	10-A	200	CPS	O3-C17-C18	-2.51	103.76	109.52
3	6-A	200	CPS	O3-C17-C16	2.51	116.09	109.86
3	14-A	200	CPS	C19-C18-C6	2.51	113.25	109.75
4	16-A	403	EDO	O1-C1-C2	-2.50	93.34	112.39
3	4-A	200	CPS	C25-N1-C24	-2.47	118.22	122.82
4	11-A	403	EDO	O1-C1-C2	-2.46	93.67	112.39
2	14-A	300	SO4	O4-S-O2	2.45	122.36	109.56
3	4-A	200	CPS	C10-C5-C9	2.43	115.00	111.20
3	1-A	200	CPS	C19-C2-C15	2.42	111.88	108.51
2	14-A	300	SO4	O4-S-O3	-2.41	95.26	108.54
3	13-A	200	CPS	C2-C19-C18	2.41	114.52	111.84
3	16-A	200	CPS	C14-C15-C2	-2.40	110.11	112.66
3	4-A	200	CPS	O3-C17-C16	-2.40	103.89	109.86
2	9-A	301	SO4	O3-S-O2	2.40	122.09	109.56
2	14-A	301	SO4	O2-S-O1	2.38	125.84	109.06
3	12-A	200	CPS	C23-C22-C20	-2.38	110.01	114.46
3	14-A	200	CPS	C11-C2-C15	2.38	114.41	110.44
3	13-A	200	CPS	C9-C5-C6	2.38	102.50	100.11
4	5-A	402	EDO	O2-C2-C1	-2.37	94.34	112.39
2	16-A	300	SO4	O4-S-O2	2.35	121.87	109.56
2	13-A	301	SO4	O2-S-O1	-2.35	92.49	109.06
2	8-A	301	SO4	O3-S-O2	2.35	121.85	109.56
4	3-A	403	EDO	O2-C2-C1	2.34	130.18	112.39
3	2-A	200	CPS	C22-C23-C24	-2.30	107.92	113.06
3	12-A	200	CPS	C9-C5-C6	-2.30	97.80	100.11
3	16-A	200	CPS	C1-C12-C13	-2.30	107.44	110.48
4	10-A	404	EDO	O2-C2-C1	-2.29	94.94	112.39
4	9-A	404	EDO	O2-C2-C1	-2.27	95.07	112.39
2	15-A	301	SO4	O4-S-O1	2.26	121.39	109.56
3	10-A	200	CPS	C11-C2-C19	2.26	114.22	111.18
4	6-A	401	EDO	O2-C2-C1	-2.25	95.24	112.39
3	10-A	200	CPS	C6-C5-C4	2.25	109.47	107.42
3	11-A	200	CPS	O4-C4-C3	-2.23	104.59	109.12

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	10-A	200	CPS	C7-C8-C9	-2.18	100.89	105.14
2	11-A	301	SO4	O3-S-O1	-2.17	98.19	109.56
4	1-A	402	EDO	O2-C2-C1	-2.17	95.85	112.39
3	3-A	200	CPS	C19-C3-C4	-2.17	111.46	114.29
3	13-A	200	CPS	O4-C4-C3	2.16	113.51	109.12
3	2-A	200	CPS	C7-C6-C18	-2.12	115.45	118.36
2	2-A	301	SO4	O4-S-O2	2.11	120.59	109.56
3	7-A	200	CPS	C26-C25-N1	2.11	119.25	112.23
2	6-A	301	SO4	O3-S-O1	-2.08	98.66	109.56
3	2-A	200	CPS	C23-C22-C20	-2.08	110.57	114.46
4	8-A	403	EDO	O2-C2-C1	2.08	128.23	112.39
2	9-A	300	SO4	O4-S-O1	2.08	120.42	109.56
4	16-A	401	EDO	O1-C1-C2	-2.07	96.63	112.39
3	2-A	200	CPS	C26-C25-N1	2.06	119.09	112.23
4	5-A	404	EDO	O2-C2-C1	-2.05	96.74	112.39
3	4-A	200	CPS	O2-C13-C12	2.04	115.50	110.17
2	14-A	300	SO4	O4-S-O1	2.04	120.22	109.56
2	5-A	300	SO4	O4-S-O2	-2.04	98.91	109.56
3	10-A	200	CPS	O4-C4-C3	2.04	113.26	109.12
2	16-A	300	SO4	O4-S-O1	2.03	120.17	109.56
3	9-A	200	CPS	C8-C7-C6	-2.02	101.18	105.14
3	14-A	200	CPS	C8-C9-C20	-2.01	109.14	112.18

All (79) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	1-A	200	CPS	C20
3	1-A	200	CPS	C18
3	1-A	200	CPS	C6
3	1-A	200	CPS	C19
3	1-A	200	CPS	C9
3	2-A	200	CPS	C20
3	2-A	200	CPS	C19
3	2-A	200	CPS	C17
3	2-A	200	CPS	C18
3	2-A	200	CPS	C6
3	3-A	200	CPS	C18
3	3-A	200	CPS	C6
3	3-A	200	CPS	C20
3	3-A	200	CPS	C15
3	3-A	200	CPS	C13
3	3-A	200	CPS	C17

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atom
3	3-A	200	CPS	C19
3	4-A	200	CPS	C18
3	4-A	200	CPS	C6
3	4-A	200	CPS	C19
3	4-A	200	CPS	C20
3	5-A	200	CPS	C18
3	5-A	200	CPS	C6
3	5-A	200	CPS	C19
3	5-A	200	CPS	C20
3	6-A	200	CPS	C15
3	6-A	200	CPS	C18
3	6-A	200	CPS	C19
3	6-A	200	CPS	C20
3	6-A	200	CPS	C17
3	6-A	200	CPS	C4
3	6-A	200	CPS	C6
3	6-A	200	CPS	C9
3	7-A	200	CPS	C20
3	7-A	200	CPS	C18
3	7-A	200	CPS	C19
3	7-A	200	CPS	C5
3	7-A	200	CPS	C6
3	8-A	200	CPS	C18
3	8-A	200	CPS	C6
3	8-A	200	CPS	C20
3	8-A	200	CPS	C13
3	8-A	200	CPS	C19
3	9-A	200	CPS	C18
3	9-A	200	CPS	C6
3	9-A	200	CPS	C19
3	10-A	200	CPS	C18
3	10-A	200	CPS	C6
3	10-A	200	CPS	C19
3	10-A	200	CPS	C20
3	11-A	200	CPS	C18
3	11-A	200	CPS	C6
3	11-A	200	CPS	C13
3	11-A	200	CPS	C20
3	11-A	200	CPS	C19
3	12-A	200	CPS	C18
3	12-A	200	CPS	C20
3	12-A	200	CPS	C19

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atom
3	12-A	200	CPS	C4
3	12-A	200	CPS	C9
3	13-A	200	CPS	C18
3	13-A	200	CPS	C6
3	13-A	200	CPS	C13
3	13-A	200	CPS	C20
3	13-A	200	CPS	C19
3	14-A	200	CPS	C18
3	14-A	200	CPS	C6
3	14-A	200	CPS	C13
3	14-A	200	CPS	C20
3	14-A	200	CPS	C19
3	15-A	200	CPS	C18
3	15-A	200	CPS	C6
3	15-A	200	CPS	C19
3	15-A	200	CPS	C20
3	16-A	200	CPS	C18
3	16-A	200	CPS	C6
3	16-A	200	CPS	C20
3	16-A	200	CPS	C17
3	16-A	200	CPS	C19

All (87) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	4-A	200	CPS	C22-C20-C9-C5
3	8-A	200	CPS	C22-C20-C9-C5
3	10-A	200	CPS	C22-C20-C9-C5
3	13-A	200	CPS	C22-C20-C9-C5
3	14-A	200	CPS	C21-C20-C9-C8
3	16-A	200	CPS	C22-C20-C9-C5
3	11-A	200	CPS	C21-C20-C22-C23
3	1-A	200	CPS	C21-C20-C9-C8
3	12-A	200	CPS	C21-C20-C9-C8
3	7-A	200	CPS	C21-C20-C9-C5
3	16-A	200	CPS	C22-C20-C9-C8
3	11-A	200	CPS	C22-C20-C9-C5
3	1-A	200	CPS	C21-C20-C22-C23
3	9-A	200	CPS	C21-C20-C22-C23
3	15-A	200	CPS	C21-C20-C9-C8
3	4-A	200	CPS	C21-C20-C9-C5
3	5-A	200	CPS	C22-C20-C9-C8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
3	6-A	200	CPS	C22-C20-C9-C5
3	9-A	200	CPS	C22-C20-C9-C5
3	12-A	200	CPS	C22-C20-C9-C5
3	11-A	200	CPS	C21-C20-C9-C5
3	14-A	200	CPS	C22-C20-C9-C8
3	15-A	200	CPS	C21-C20-C9-C5
3	10-A	200	CPS	C22-C20-C9-C8
3	13-A	200	CPS	C22-C20-C9-C8
3	3-A	200	CPS	C21-C20-C22-C23
3	5-A	200	CPS	C21-C20-C22-C23
3	7-A	200	CPS	C21-C20-C22-C23
3	8-A	200	CPS	C22-C20-C9-C8
3	11-A	200	CPS	C22-C20-C9-C8
3	1-A	200	CPS	C22-C20-C9-C5
3	2-A	200	CPS	C22-C20-C9-C5
3	5-A	200	CPS	C22-C20-C9-C5
3	14-A	200	CPS	C22-C20-C9-C5
3	4-A	200	CPS	C21-C20-C22-C23
3	15-A	200	CPS	C22-C20-C9-C8
3	13-A	200	CPS	C21-C20-C9-C8
3	8-A	200	CPS	C21-C20-C9-C8
3	1-A	200	CPS	C22-C20-C9-C8
3	7-A	200	CPS	C22-C20-C9-C8
3	15-A	200	CPS	C22-C20-C9-C5
3	3-A	200	CPS	C22-C20-C9-C5
4	7-A	403	EDO	O1-C1-C2-O2
4	2-A	404	EDO	O1-C1-C2-O2
4	12-A	404	EDO	O1-C1-C2-O2
4	15-A	404	EDO	O1-C1-C2-O2
3	16-A	200	CPS	C21-C20-C22-C23
3	2-A	200	CPS	C22-C20-C9-C8
3	7-A	200	CPS	C21-C20-C9-C8
4	13-A	402	EDO	O1-C1-C2-O2
4	1-A	403	EDO	O1-C1-C2-O2
4	12-A	403	EDO	O1-C1-C2-O2
4	1-A	404	EDO	O1-C1-C2-O2
4	5-A	404	EDO	O1-C1-C2-O2
4	6-A	404	EDO	O1-C1-C2-O2
4	9-A	404	EDO	O1-C1-C2-O2
4	10-A	404	EDO	O1-C1-C2-O2
4	11-A	404	EDO	O1-C1-C2-O2
4	16-A	404	EDO	O1-C1-C2-O2

Continued on next page...

Continued from previous page...

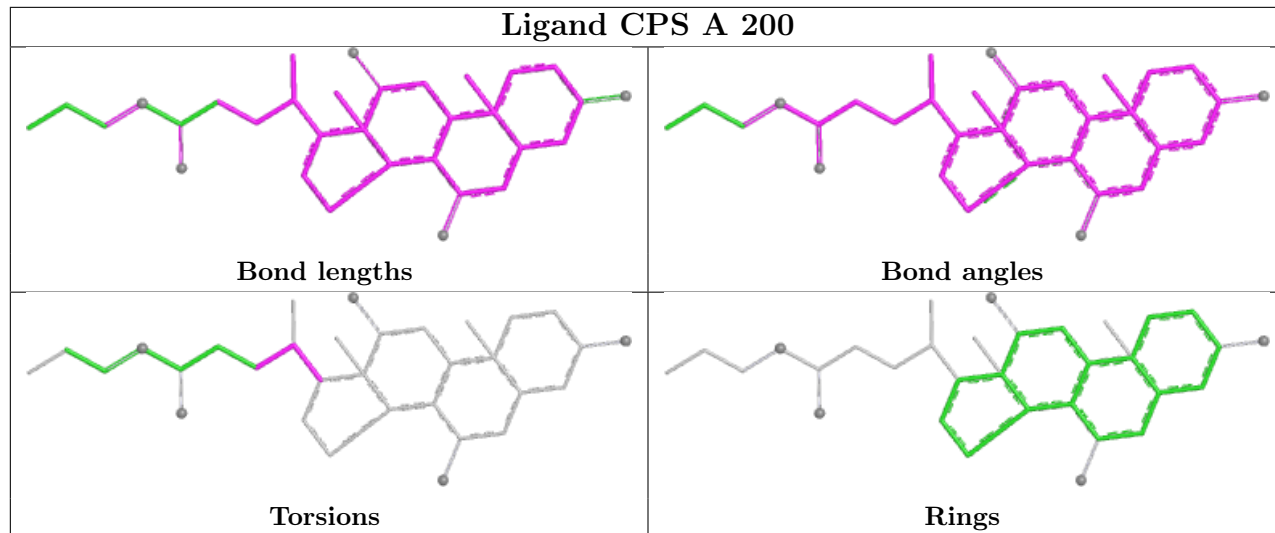
Mol	Chain	Res	Type	Atoms
3	8-A	200	CPS	C20-C22-C23-C24
3	13-A	200	CPS	C20-C22-C23-C24
3	15-A	200	CPS	C20-C22-C23-C24
3	16-A	200	CPS	C20-C22-C23-C24
4	13-A	401	EDO	O1-C1-C2-O2
4	15-A	402	EDO	O1-C1-C2-O2
4	3-A	404	EDO	O1-C1-C2-O2
4	4-A	404	EDO	O1-C1-C2-O2
4	7-A	404	EDO	O1-C1-C2-O2
4	8-A	404	EDO	O1-C1-C2-O2
4	14-A	404	EDO	O1-C1-C2-O2
3	6-A	200	CPS	C21-C20-C9-C8
4	13-A	404	EDO	O1-C1-C2-O2
3	3-A	200	CPS	C21-C20-C9-C5
4	5-A	401	EDO	O1-C1-C2-O2
3	4-A	200	CPS	C22-C20-C9-C8
3	8-A	200	CPS	C21-C20-C9-C5
4	10-A	401	EDO	O1-C1-C2-O2
4	14-A	401	EDO	O1-C1-C2-O2
4	4-A	403	EDO	O1-C1-C2-O2
4	5-A	403	EDO	O1-C1-C2-O2
3	1-A	200	CPS	C21-C20-C9-C5
4	2-A	401	EDO	O1-C1-C2-O2
4	6-A	402	EDO	O1-C1-C2-O2
4	14-A	402	EDO	O1-C1-C2-O2
4	2-A	403	EDO	O1-C1-C2-O2
4	6-A	403	EDO	O1-C1-C2-O2
4	6-A	401	EDO	O1-C1-C2-O2

There are no ring outliers.

No monomer is involved in short contacts.

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 than 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.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	8-A	2
1	15-A	2
1	13-A	1
1	16-A	1
1	5-A	1
1	2-A	1
1	7-A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
13	A	65:THR	C	66:SER	N	1.67
16	A	144:PRO	C	145:MET	N	1.62
5	A	56:THR	C	57:ASN	N	1.20
8	A	147:HIS	C	148:SER	N	1.18
2	A	76:GLN	C	77:LEU	N	1.17
7	A	76:GLN	C	77:LEU	N	1.17
8	A	56:THR	C	57:ASN	N	1.16
15	A	56:THR	C	57:ASN	N	1.16

Continued on next page...

Continued from previous page...

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
15	A	81:PRO	C	82:LEU	N	1.10

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, 95th 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	1-A	121/157 (77%)	2.42	60 (49%) 0 0	1, 1, 2, 3	121 (100%)
1	2-A	0/157	-	-	-	-
1	3-A	0/157	-	-	-	-
1	4-A	0/157	-	-	-	-
1	5-A	0/157	-	-	-	-
1	6-A	0/157	-	-	-	-
1	7-A	0/157	-	-	-	-
1	8-A	0/157	-	-	-	-
1	9-A	0/157	-	-	-	-
1	10-A	0/157	-	-	-	-
1	11-A	0/157	-	-	-	-
1	12-A	0/157	-	-	-	-
1	13-A	0/157	-	-	-	-
1	14-A	0/157	-	-	-	-
1	15-A	0/157	-	-	-	-
1	16-A	0/157	-	-	-	-
All	All	121/2512 (4%)	2.42	60 (49%) 0 0	1, 1, 2, 3	121 (100%)

All (60) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	1-A	39	LEU	8.0
1	1-A	114	THR	8.0
1	1-A	153	ILE	7.2
1	1-A	36	GLY	6.5
1	1-A	155	PRO	6.1
1	1-A	156	GLU	6.0
1	1-A	38	LEU	5.9
1	1-A	103	GLU	5.9
1	1-A	121	TRP	5.6
1	1-A	108	ASP	5.6
1	1-A	154	PHE	5.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	1-A	98	PHE	5.5
1	1-A	37	SER	5.0
1	1-A	51	GLN	4.8
1	1-A	91	GLN	4.7
1	1-A	61	LEU	4.7
1	1-A	101	ASP	4.6
1	1-A	110	ILE	4.3
1	1-A	56	THR	4.3
1	1-A	59	GLY	4.3
1	1-A	141	ARG	4.1
1	1-A	90	LEU	4.0
1	1-A	138	LEU	3.9
1	1-A	115	LYS	3.9
1	1-A	135	HIS	3.9
1	1-A	102	SER	3.8
1	1-A	100	THR	3.8
1	1-A	109	SER	3.5
1	1-A	60	SER	3.5
1	1-A	104	GLU	3.4
1	1-A	146	TYR	3.4
1	1-A	65	THR	3.3
1	1-A	99	GLY	3.3
1	1-A	145	MET	3.3
1	1-A	112	HIS	3.2
1	1-A	40	ARG	3.2
1	1-A	111	ILE	3.2
1	1-A	128	ARG	3.0
1	1-A	134	LEU	3.0
1	1-A	105	GLN	3.0
1	1-A	64	PHE	2.9
1	1-A	76	GLN	2.9
1	1-A	71	SER	2.9
1	1-A	107	LEU	2.7
1	1-A	142	SER	2.7
1	1-A	50	LYS	2.7
1	1-A	44	MET	2.6
1	1-A	118	ALA	2.5
1	1-A	57	ASN	2.5
1	1-A	129	LEU	2.5
1	1-A	54	ILE	2.5
1	1-A	63	PRO	2.4
1	1-A	144	PRO	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	1-A	53	PRO	2.3
1	1-A	48	TYR	2.3
1	1-A	152	PRO	2.2
1	1-A	52	VAL	2.1
1	1-A	79	GLY	2.0
1	1-A	58	ARG	2.0
1	1-A	72	ILE	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	SO4	1-A	302	5/5	0.56	0.26	85,85,85,85	5
2	SO4	2-A	300	5/5	-	-	17,17,19,21	5
2	SO4	3-A	300	5/5	-	-	17,18,20,21	5
2	SO4	4-A	300	5/5	-	-	17,17,19,20	5
2	SO4	5-A	300	5/5	-	-	17,17,19,20	5
2	SO4	6-A	300	5/5	-	-	17,17,19,21	5
2	SO4	7-A	300	5/5	-	-	17,17,19,20	5
2	SO4	8-A	300	5/5	-	-	18,19,21,21	5
2	SO4	9-A	300	5/5	-	-	17,17,19,20	5
2	SO4	10-A	300	5/5	-	-	17,17,19,20	5
2	SO4	11-A	300	5/5	-	-	16,19,21,21	5
2	SO4	12-A	300	5/5	-	-	17,17,19,21	5
2	SO4	13-A	300	5/5	-	-	17,18,20,20	5
2	SO4	14-A	300	5/5	-	-	16,17,19,21	5
2	SO4	15-A	300	5/5	-	-	17,18,20,21	5
2	SO4	16-A	300	5/5	-	-	16,17,19,21	5

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	SO4	1-A	300	5/5	0.64	0.27	19,19,21,21	5
2	SO4	2-A	301	5/5	-	-	28,30,32,33	5
2	SO4	3-A	301	5/5	-	-	27,29,33,33	5
2	SO4	4-A	301	5/5	-	-	27,29,33,33	5
2	SO4	5-A	301	5/5	-	-	27,29,33,33	5
2	SO4	6-A	301	5/5	-	-	27,29,33,33	5
2	SO4	7-A	301	5/5	-	-	29,29,32,33	5
2	SO4	8-A	301	5/5	-	-	28,29,31,33	5
2	SO4	9-A	301	5/5	-	-	28,29,32,33	5
2	SO4	10-A	301	5/5	-	-	30,31,32,32	5
2	SO4	11-A	301	5/5	-	-	27,29,33,33	5
2	SO4	12-A	301	5/5	-	-	27,29,32,33	5
2	SO4	13-A	301	5/5	-	-	30,31,32,32	5
2	SO4	14-A	301	5/5	-	-	29,30,31,32	5
2	SO4	15-A	301	5/5	-	-	27,29,32,33	5
2	SO4	16-A	301	5/5	-	-	27,28,33,33	5
3	CPS	1-A	200	32/42	0.67	0.25	8,14,47,55	32
2	SO4	2-A	302	5/5	-	-	85,85,85,85	5
2	SO4	3-A	302	5/5	-	-	85,85,85,85	5
2	SO4	4-A	302	5/5	-	-	85,85,85,85	5
2	SO4	5-A	302	5/5	-	-	85,85,85,85	5
2	SO4	6-A	302	5/5	-	-	85,85,85,85	5
2	SO4	7-A	302	5/5	-	-	85,85,85,85	5
2	SO4	8-A	302	5/5	-	-	85,85,85,85	5
2	SO4	9-A	302	5/5	-	-	85,85,85,85	5
2	SO4	10-A	302	5/5	-	-	85,85,85,85	5
2	SO4	11-A	302	5/5	-	-	85,85,85,85	5
2	SO4	12-A	302	5/5	-	-	85,85,85,85	5
2	SO4	13-A	302	5/5	-	-	85,85,85,85	5
2	SO4	14-A	302	5/5	-	-	85,85,85,85	5
2	SO4	15-A	302	5/5	-	-	85,85,85,85	5
2	SO4	16-A	302	5/5	-	-	85,85,85,85	5
4	EDO	1-A	404	4/4	0.67	0.26	28,31,34,35	4
3	CPS	2-A	200	32/42	-	-	8,14,47,55	32
3	CPS	3-A	200	32/42	-	-	7,14,47,55	32
3	CPS	4-A	200	32/42	-	-	8,15,47,55	32
3	CPS	5-A	200	32/42	-	-	9,15,47,55	32
3	CPS	6-A	200	32/42	-	-	3,14,47,55	32
3	CPS	7-A	200	32/42	-	-	8,14,47,55	32
3	CPS	8-A	200	32/42	-	-	5,14,47,55	32
3	CPS	9-A	200	32/42	-	-	8,15,47,55	32
3	CPS	10-A	200	32/42	-	-	9,14,47,55	32

Continued on next page...

Continued from previous page...

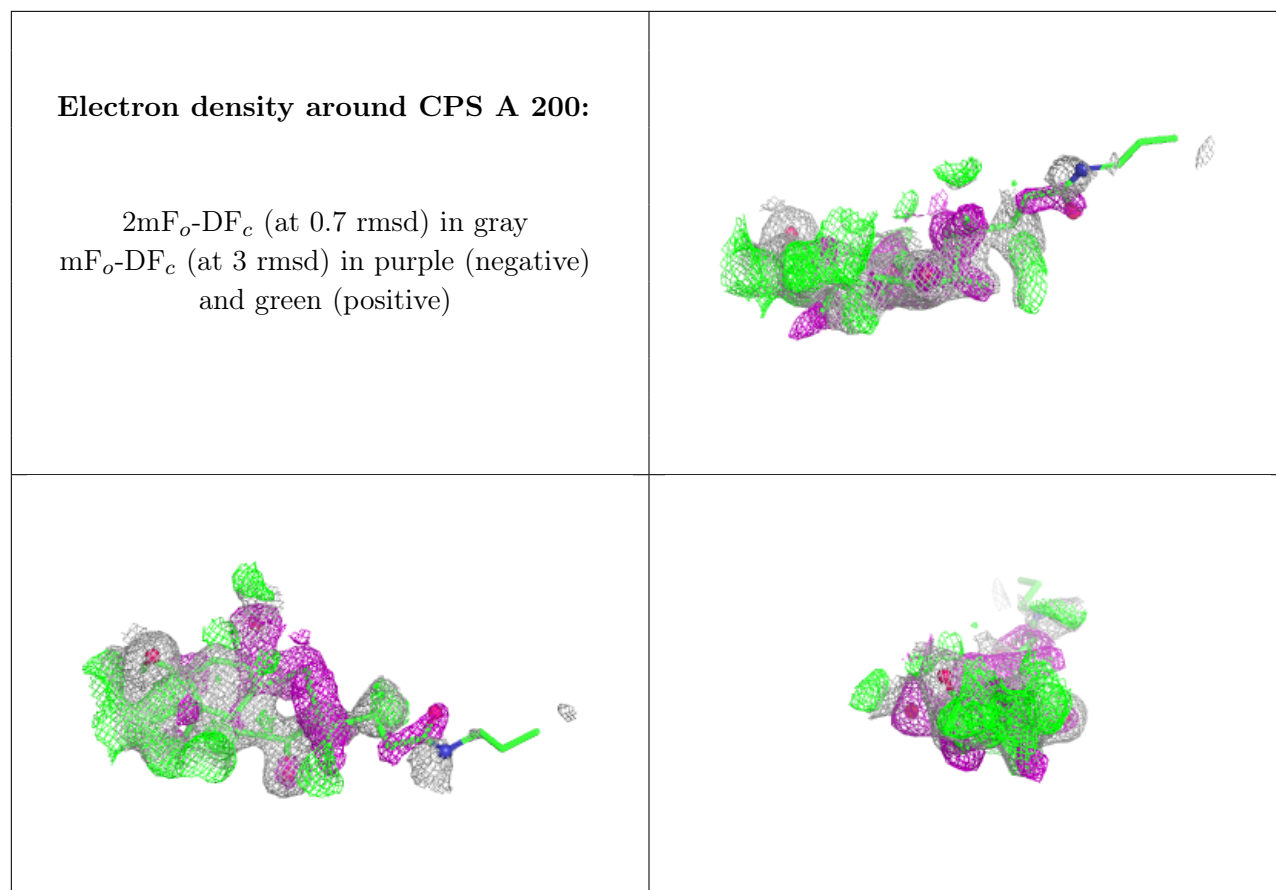
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	CPS	11-A	200	32/42	-	-	1,14,47,55	32
3	CPS	12-A	200	32/42	-	-	7,14,47,55	32
3	CPS	13-A	200	32/42	-	-	1,13,46,55	32
3	CPS	14-A	200	32/42	-	-	1,13,46,55	32
3	CPS	15-A	200	32/42	-	-	1,13,46,55	32
3	CPS	16-A	200	32/42	-	-	1,13,47,55	32
4	EDO	1-A	403	4/4	0.76	0.19	27,32,32,35	4
4	EDO	2-A	401	4/4	-	-	16,17,18,20	4
4	EDO	3-A	401	4/4	-	-	16,17,18,20	4
4	EDO	4-A	401	4/4	-	-	16,17,18,20	4
4	EDO	5-A	401	4/4	-	-	16,17,18,20	4
4	EDO	6-A	401	4/4	-	-	16,17,18,20	4
4	EDO	7-A	401	4/4	-	-	16,17,18,20	4
4	EDO	8-A	401	4/4	-	-	16,17,19,20	4
4	EDO	9-A	401	4/4	-	-	16,17,18,20	4
4	EDO	10-A	401	4/4	-	-	16,17,18,20	4
4	EDO	11-A	401	4/4	-	-	16,17,18,20	4
4	EDO	12-A	401	4/4	-	-	16,17,19,20	4
4	EDO	13-A	401	4/4	-	-	16,17,18,20	4
4	EDO	14-A	401	4/4	-	-	16,17,18,21	4
4	EDO	15-A	401	4/4	-	-	15,17,19,20	4
4	EDO	16-A	401	4/4	-	-	15,17,18,20	4
4	EDO	1-A	401	4/4	0.85	0.16	16,17,18,20	4
4	EDO	2-A	402	4/4	-	-	18,22,22,26	4
4	EDO	3-A	402	4/4	-	-	18,22,22,26	4
4	EDO	4-A	402	4/4	-	-	18,22,22,26	4
4	EDO	5-A	402	4/4	-	-	18,22,22,26	4
4	EDO	6-A	402	4/4	-	-	18,22,22,26	4
4	EDO	7-A	402	4/4	-	-	18,22,22,26	4
4	EDO	8-A	402	4/4	-	-	18,22,22,26	4
4	EDO	9-A	402	4/4	-	-	18,22,22,26	4
4	EDO	10-A	402	4/4	-	-	18,22,22,26	4
4	EDO	11-A	402	4/4	-	-	18,22,22,26	4
4	EDO	12-A	402	4/4	-	-	18,22,22,26	4
4	EDO	13-A	402	4/4	-	-	18,22,22,25	4
4	EDO	14-A	402	4/4	-	-	18,22,22,26	4
4	EDO	15-A	402	4/4	-	-	18,22,22,26	4
4	EDO	16-A	402	4/4	-	-	18,22,22,26	4
4	EDO	1-A	402	4/4	0.88	0.16	18,22,22,26	4
4	EDO	2-A	403	4/4	-	-	27,32,32,35	4
4	EDO	3-A	403	4/4	-	-	27,32,33,35	4
4	EDO	4-A	403	4/4	-	-	28,32,32,35	4

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
4	EDO	5-A	403	4/4	-	-	28,32,32,35	4
4	EDO	6-A	403	4/4	-	-	27,32,33,35	4
4	EDO	7-A	403	4/4	-	-	28,32,32,35	4
4	EDO	8-A	403	4/4	-	-	27,32,33,35	4
4	EDO	9-A	403	4/4	-	-	28,32,32,35	4
4	EDO	10-A	403	4/4	-	-	28,32,32,35	4
4	EDO	11-A	403	4/4	-	-	28,32,33,35	4
4	EDO	12-A	403	4/4	-	-	28,32,32,35	4
4	EDO	13-A	403	4/4	-	-	27,32,33,34	4
4	EDO	14-A	403	4/4	-	-	28,32,33,35	4
4	EDO	15-A	403	4/4	-	-	27,33,33,34	4
4	EDO	16-A	403	4/4	-	-	27,31,33,35	4
2	SO4	1-A	301	5/5	0.92	0.23	27,29,33,33	5
4	EDO	2-A	404	4/4	-	-	28,31,34,35	4
4	EDO	3-A	404	4/4	-	-	28,31,34,35	4
4	EDO	4-A	404	4/4	-	-	28,31,34,35	4
4	EDO	5-A	404	4/4	-	-	27,31,34,35	4
4	EDO	6-A	404	4/4	-	-	27,31,34,35	4
4	EDO	7-A	404	4/4	-	-	27,31,34,35	4
4	EDO	8-A	404	4/4	-	-	28,31,34,35	4
4	EDO	9-A	404	4/4	-	-	27,31,34,35	4
4	EDO	10-A	404	4/4	-	-	27,31,34,35	4
4	EDO	11-A	404	4/4	-	-	27,31,34,35	4
4	EDO	12-A	404	4/4	-	-	28,31,34,35	4
4	EDO	13-A	404	4/4	-	-	27,31,34,35	4
4	EDO	14-A	404	4/4	-	-	27,31,33,35	4
4	EDO	15-A	404	4/4	-	-	27,31,33,35	4
4	EDO	16-A	404	4/4	-	-	27,31,34,35	4

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.



6.5 Other polymers [\(i\)](#)

There are no such residues in this entry.