



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 3, 2023 – 02:33 PM EDT

PDB ID : 3T6V
Title : Crystal Structure of Laccase from *Steccherinum ochraceum*
Authors : Ferraroni, M.; Briganti, F.; Matera, I.; Kolomytseva, M.; Golovleva, L.; Scoz-zafava, A.; Chernykh, A.M.
Deposited on : 2011-07-29
Resolution : 2.00 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35

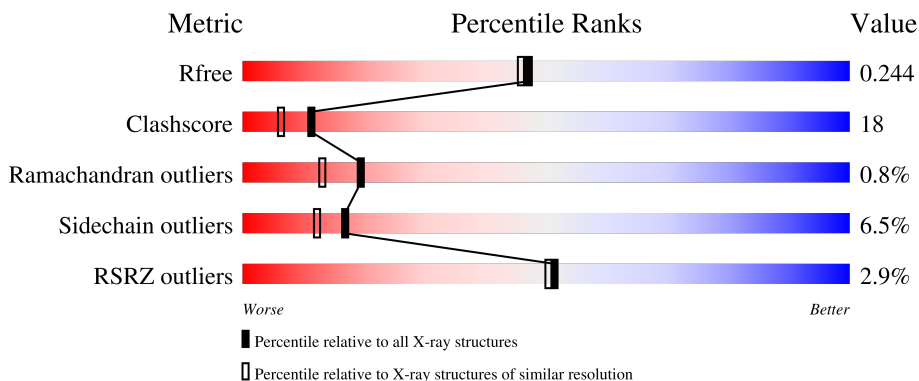
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION


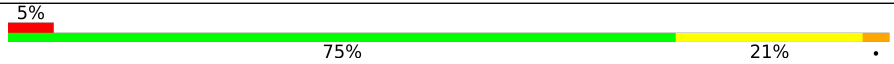
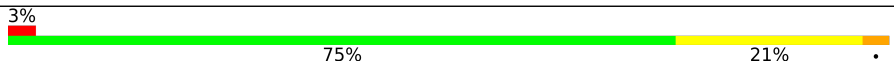
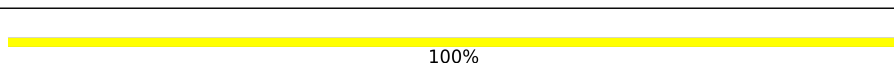
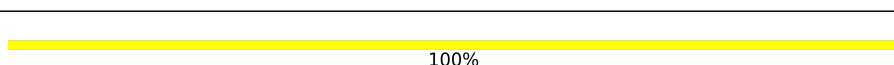
The reported resolution of this entry is 2.00 Å.

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



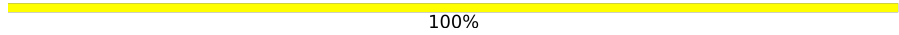


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	8085 (2.00-2.00)
Clashscore	141614	9178 (2.00-2.00)
Ramachandran outliers	138981	9054 (2.00-2.00)
Sidechain outliers	138945	9053 (2.00-2.00)
RSRZ outliers	127900	7900 (2.00-2.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	A	495	 5% 75% 21%
1	B	495	 5% 75% 21%
1	C	495	 3% 75% 21%
2	D	2	 100%
2	E	2	 100%

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Mol	Chain	Length	Quality of chain
2	F	2	 100%
2	G	2	 50% 50%
2	H	2	 50% 50%

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	NAG	F	2	-	-	-	X
2	NAG	H	1	-	-	X	-
4	SO4	C	505	-	-	X	-
4	SO4	C	506	-	-	X	-
5	GOL	A	509	-	-	X	-
5	GOL	B	506	-	-	X	-
5	GOL	C	507	-	-	X	-

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 12647 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 Laccase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	495	3734	2358	625	731	20	0	5	0
1	B	495	3739	2363	630	728	18	0	6	0
1	C	495	3731	2356	629	729	17	0	3	0

- Molecule 2 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
2	D	2	28	16	2	10	0	0	0
2	E	2	28	16	2	10	0	0	0
2	F	2	28	16	2	10	0	0	0
2	G	2	28	16	2	10	0	0	0
2	H	2	28	16	2	10	0	0	0

- Molecule 3 is COPPER (II) ION (three-letter code: CU) (formula: Cu).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	4	Total	Cu	0	0
			4	4		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	B	4	Total Cu 4 4	0	0
3	C	4	Total Cu 4 4	0	0

- Molecule 4 is SULFATE ION (three-letter code: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	B	1	Total O S 5 4 1	0	0
4	C	1	Total O S 5 4 1	0	0
4	C	1	Total O S 5 4 1	0	0

- Molecule 5 is GLYCEROL (three-letter code: GOL) (formula: C₃H₈O₃).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0
5	C	1	Total C O 6 3 3	0	0
5	C	1	Total C O 6 3 3	0	0

- Molecule 6 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
6	C	1	14	8	1	5	0	0

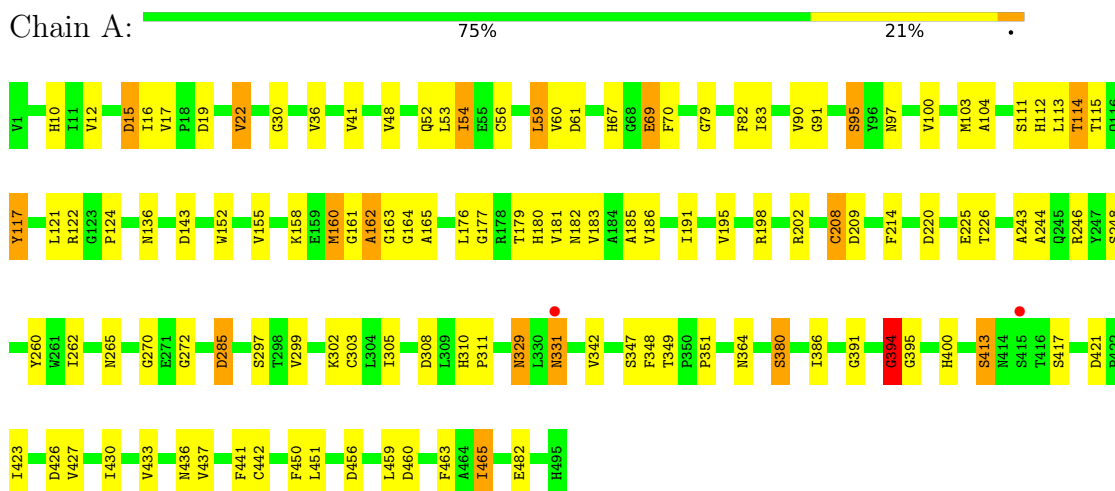
- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	478	Total	O	0	0
			478	478		
7	B	376	Total	O	0	0
			376	376		
7	C	340	Total	O	0	0
			340	340		

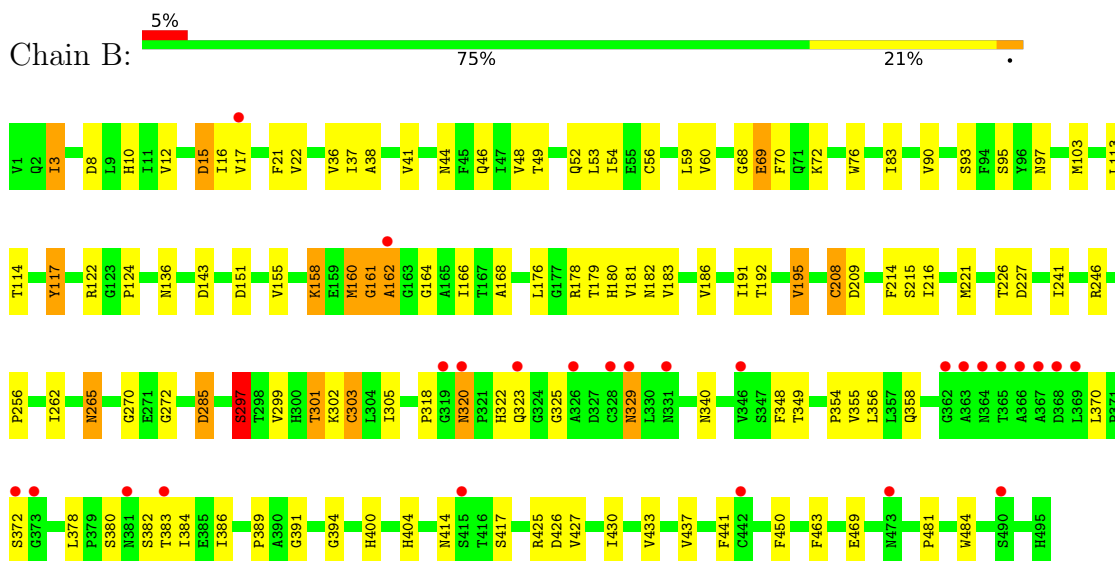
3 Residue-property plots

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.

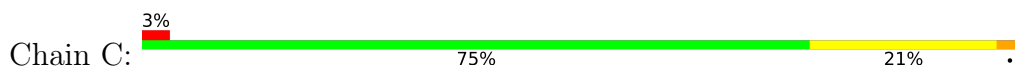
- Molecule 1: Laccase

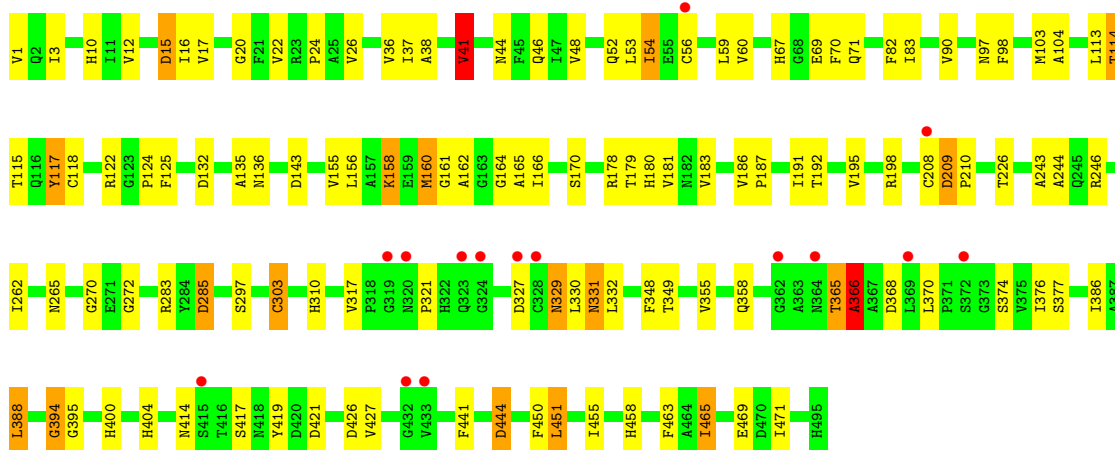


- Molecule 1: Laccase



- Molecule 1: Laccase





- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain D:  100%

MAG1
MAG2

- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain E:  100%

MAG1
MAG2

- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain F:  100%

MAG1
MAG2

- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain G:  50%

MAG1
MAG2

- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain H:  50%

MAG1
MAG2

4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	73.53Å 140.66Å 174.18Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 – 2.00 70.33 – 2.00	Depositor EDS
% Data completeness (in resolution range)	98.3 (30.00-2.00) 98.3 (70.33-2.00)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	0.08	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.69 (at 2.00Å)	Xtrriage
Refinement program	REFMAC	Depositor
R, R_{free}	0.181 , 0.241 0.186 , 0.244	Depositor DCC
R_{free} test set	6068 reflections (5.04%)	wwPDB-VP
Wilson B-factor (Å ²)	20.8	Xtrriage
Anisotropy	0.485	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.40 , 62.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.43$, $\langle L^2 \rangle = 0.26$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	12647	wwPDB-VP
Average B, all atoms (Å ²)	25.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.17% 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: NAG, SO4, GOL, CU

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	1.12	12/3857 (0.3%)	0.96	5/5297 (0.1%)
1	B	1.03	7/3865 (0.2%)	0.95	5/5307 (0.1%)
1	C	1.01	1/3850 (0.0%)	0.96	9/5287 (0.2%)
All	All	1.05	20/11572 (0.2%)	0.95	19/15891 (0.1%)

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	285	ASP	CB-CG	5.92	1.64	1.51
1	A	208[A]	CYS	CB-SG	-5.89	1.72	1.81
1	A	208[B]	CYS	CB-SG	-5.89	1.72	1.81
1	B	69	GLU	CG-CD	-5.80	1.43	1.51
1	C	198	ARG	CG-CD	5.76	1.66	1.51
1	B	265[A]	ASN	CB-CG	5.67	1.64	1.51
1	B	265[B]	ASN	CB-CG	5.67	1.64	1.51
1	A	482	GLU	CB-CG	5.55	1.62	1.52
1	B	208[A]	CYS	CB-SG	-5.52	1.72	1.81
1	B	208[B]	CYS	CB-SG	-5.52	1.72	1.81
1	A	202	ARG	CZ-NH2	5.33	1.40	1.33
1	A	260	TYR	CD2-CE2	5.32	1.47	1.39
1	A	214	PHE	CE2-CZ	5.29	1.47	1.37
1	A	442[A]	CYS	CB-SG	-5.29	1.73	1.81
1	A	442[B]	CYS	CB-SG	-5.29	1.73	1.81
1	A	186	VAL	CB-CG1	5.19	1.63	1.52
1	A	95	SER	CB-OG	5.17	1.49	1.42
1	B	168	ALA	CA-CB	5.16	1.63	1.52
1	A	185	ALA	CA-CB	5.04	1.63	1.52
1	A	22	VAL	CB-CG2	-5.01	1.42	1.52

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	394	GLY	N-CA-C	-7.11	95.34	113.10
1	C	161	GLY	N-CA-C	-6.11	97.82	113.10
1	C	395	GLY	N-CA-C	-6.09	97.88	113.10
1	B	303	CYS	CA-CB-SG	-5.90	103.38	114.00
1	C	303	CYS	CA-CB-SG	-5.88	103.42	114.00
1	A	285	ASP	CB-CG-OD1	5.81	123.53	118.30
1	A	394	GLY	N-CA-C	5.77	127.52	113.10
1	C	365	THR	N-CA-C	-5.66	95.73	111.00
1	C	365	THR	C-N-CA	5.56	135.59	121.70
1	C	41	VAL	CB-CA-C	-5.54	100.86	111.40
1	A	308	ASP	CB-CG-OD1	-5.54	113.31	118.30
1	B	394	GLY	N-CA-C	-5.52	99.29	113.10
1	B	297	SER	N-CA-CB	-5.42	102.37	110.50
1	C	317	VAL	CB-CA-C	-5.41	101.13	111.40
1	B	8	ASP	CB-CG-OD2	-5.34	113.49	118.30
1	B	3	ILE	N-CA-C	-5.32	96.64	111.00
1	A	380	SER	N-CA-CB	-5.29	102.56	110.50
1	C	366	ALA	N-CA-C	-5.15	97.11	111.00
1	A	79	GLY	N-CA-C	5.07	125.78	113.10

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3734	0	3504	128	0
1	B	3739	0	3520	139	1
1	C	3731	0	3508	139	1
2	D	28	0	25	0	0
2	E	28	0	25	4	0
2	F	28	0	25	3	0
2	G	28	0	25	2	0
2	H	28	0	25	7	0
3	A	4	0	0	0	0
3	B	4	0	0	0	0
3	C	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	20	0	0	0	0
4	B	5	0	0	0	0
4	C	10	0	0	9	0
5	A	6	0	8	4	0
5	B	30	0	40	9	0
5	C	12	0	16	12	0
6	C	14	0	13	0	0
7	A	478	0	0	32	0
7	B	376	0	0	23	0
7	C	340	0	0	24	0
All	All	12647	0	10734	394	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 18.

All (394) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:414:ASN:ND2	2:H:1:NAG:C1	1.68	1.53
1:B:414:ASN:HD21	2:F:1:NAG:C1	1.18	1.52
1:A:436:ASN:ND2	2:E:1:NAG:C1	1.68	1.51
1:B:414:ASN:ND2	2:F:1:NAG:C1	1.75	1.43
2:H:1:NAG:H3	2:H:1:NAG:C8	1.41	1.42
2:H:1:NAG:H83	2:H:1:NAG:C3	1.73	1.19
1:B:72:LYS:N	5:B:506:GOL:H12	1.59	1.18
1:B:17:VAL:HG12	1:B:22:VAL:CA	1.76	1.15
1:A:161:GLY:HA2	1:A:162:ALA:CB	1.78	1.14
1:B:17:VAL:HG12	1:B:22:VAL:HA	1.26	1.11
1:C:70:PHE:H	1:C:103:MET:HE1	1.07	1.10
2:H:1:NAG:C8	2:H:1:NAG:C3	2.30	1.04
1:A:17:VAL:HG12	1:A:22:VAL:HA	1.34	1.03
1:A:59:LEU:CD1	1:A:114:THR:HG21	1.89	1.03
1:C:53:LEU:O	1:C:90:VAL:HG21	1.60	1.01
1:C:329:ASN:ND2	1:C:329:ASN:H	1.59	1.01
1:A:299:VAL:HB	7:A:1042:HOH:O	1.62	1.00
1:B:17:VAL:HG12	1:B:22:VAL:N	1.75	1.00
1:B:17:VAL:CG1	1:B:22:VAL:HA	1.91	1.00
1:A:17:VAL:HG12	1:A:22:VAL:CA	1.92	0.98
1:B:265[A]:ASN:HD21	1:B:272:GLY:H	1.08	0.97
1:C:17:VAL:HG12	1:C:22:VAL:HA	1.46	0.97
1:B:358:GLN:HE22	1:B:370:LEU:H	1.12	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:59:LEU:HD11	1:A:114:THR:HG21	1.46	0.97
1:A:161:GLY:HA2	1:A:162:ALA:HB2	1.46	0.97
1:B:12:VAL:HG22	7:B:901:HOH:O	1.62	0.97
1:C:17:VAL:HG12	1:C:22:VAL:CA	1.94	0.96
1:A:162:ALA:H	1:A:163:GLY:HA2	1.26	0.95
1:C:265[B]:ASN:HD21	1:C:272:GLY:H	1.06	0.95
1:C:12:VAL:HG22	7:C:632:HOH:O	1.65	0.95
1:C:162:ALA:HB2	7:C:891:HOH:O	1.65	0.94
1:A:160:MET:O	1:A:162:ALA:HB2	1.68	0.94
1:B:161:GLY:N	1:B:162:ALA:CB	2.30	0.94
1:A:56[A]:CYS:SG	1:B:52:GLN:NE2	2.39	0.94
1:B:36:VAL:HG22	1:B:124:PRO:HG2	1.47	0.94
1:C:36:VAL:HG22	1:C:124:PRO:HG2	1.47	0.94
1:C:365:THR:HB	1:C:366:ALA:CB	1.97	0.94
1:C:329:ASN:N	1:C:329:ASN:HD22	1.58	0.94
1:B:59:LEU:HD11	1:B:114:THR:HG21	1.48	0.94
1:C:358:GLN:HE22	1:C:370:LEU:H	1.14	0.94
1:A:17:VAL:HG23	5:C:507:GOL:O1	1.68	0.93
1:C:48:VAL:HG23	7:C:714:HOH:O	1.67	0.92
1:B:59:LEU:HD21	1:B:158[B]:LYS:HE3	1.51	0.92
1:B:59:LEU:CD1	1:B:114:THR:HG21	1.99	0.92
1:B:161:GLY:CA	1:B:162:ALA:HB2	1.99	0.92
5:C:507:GOL:C1	7:C:929:HOH:O	2.17	0.92
1:B:72:LYS:H	5:B:506:GOL:H12	1.15	0.92
1:B:214:PHE:CE2	1:B:216[B]:ILE:HD11	2.04	0.92
1:A:161:GLY:HA2	1:A:162:ALA:HB3	1.50	0.91
1:C:20:GLY:O	5:C:507:GOL:H31	1.71	0.91
1:A:48:VAL:HG23	7:A:692:HOH:O	1.71	0.90
1:C:179:THR:O	1:C:183:VAL:HG22	1.71	0.90
1:B:414:ASN:ND2	2:F:1:NAG:O5	1.83	0.90
1:B:56[A]:CYS:SG	1:C:52:GLN:NE2	2.44	0.90
1:A:451:LEU:HD23	1:A:465:ILE:HD11	1.54	0.89
1:B:17:VAL:CG1	1:B:22:VAL:CA	2.47	0.89
1:B:215:SER:C	1:B:216[B]:ILE:HD12	1.92	0.89
1:A:12:VAL:HG21	7:C:637:HOH:O	1.72	0.89
1:B:179:THR:O	1:B:183:VAL:HG22	1.72	0.89
1:A:195:VAL:HG23	7:A:648:HOH:O	1.74	0.88
1:C:60:VAL:HG21	7:C:801:HOH:O	1.74	0.88
1:A:12:VAL:HG22	7:A:800:HOH:O	1.73	0.88
1:B:161:GLY:N	1:B:162:ALA:HB2	1.89	0.87
1:A:17:VAL:HG23	5:C:507:GOL:HO1	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:329:ASN:OD1	1:A:329:ASN:N	2.06	0.86
1:A:10:HIS:CD2	1:C:56[A]:CYS:SG	2.69	0.86
1:C:365:THR:HB	1:C:366:ALA:HB2	1.58	0.86
1:A:52:GLN:NE2	1:C:56[A]:CYS:SG	2.48	0.85
1:C:117:TYR:CE1	1:C:208:CYS:SG	2.70	0.84
1:A:183:VAL:HG21	7:A:767:HOH:O	1.76	0.84
1:C:70:PHE:N	1:C:103:MET:HE1	1.91	0.84
1:A:161:GLY:CA	1:A:162:ALA:CB	2.56	0.84
7:B:670:HOH:O	1:C:12:VAL:HG21	1.77	0.84
1:C:164:GLY:HA2	1:C:165:ALA:HB3	1.60	0.84
1:B:53:LEU:O	1:B:90:VAL:HG21	1.77	0.83
1:A:113:LEU:HG	1:A:114:THR:HG22	1.60	0.83
1:C:44:ASN:ND2	1:C:46:GLN:HE21	1.76	0.83
1:C:329:ASN:H	1:C:329:ASN:HD22	0.86	0.82
1:C:366:ALA:HB1	4:C:506:SO4:S	2.20	0.81
2:H:1:NAG:H3	2:H:1:NAG:H83	0.82	0.81
1:B:265[A]:ASN:ND2	1:B:272:GLY:H	1.78	0.81
1:B:161:GLY:HA3	1:B:162:ALA:HB2	1.62	0.81
1:B:161:GLY:N	1:B:162:ALA:HB3	1.96	0.79
1:C:366:ALA:HB1	4:C:506:SO4:O2	1.82	0.79
5:C:507:GOL:H11	7:C:929:HOH:O	1.78	0.79
1:A:265:ASN:HD21	1:A:272:GLY:H	1.29	0.79
1:B:72:LYS:H	5:B:506:GOL:C1	1.93	0.79
1:B:391:GLY:HA2	1:B:433:VAL:HG22	1.65	0.79
1:C:17:VAL:HG21	5:C:507:GOL:H2	1.64	0.78
1:A:436:ASN:CG	2:E:1:NAG:C1	2.51	0.78
1:A:90:VAL:HG22	7:A:702:HOH:O	1.82	0.78
1:B:3:ILE:O	1:B:37:ILE:HA	1.84	0.78
1:B:113:LEU:HG	1:B:114:THR:HG22	1.64	0.78
2:H:1:NAG:H3	2:H:1:NAG:H82	1.58	0.77
1:A:179:THR:O	1:A:183:VAL:HG22	1.83	0.77
1:A:161:GLY:CA	1:A:162:ALA:HB2	2.14	0.77
7:A:847:HOH:O	1:B:12:VAL:HG21	1.84	0.77
1:C:365:THR:HB	1:C:366:ALA:HB3	1.65	0.77
1:A:17:VAL:CG1	1:A:22:VAL:HA	2.13	0.77
1:C:365:THR:CB	1:C:366:ALA:CB	2.63	0.77
1:B:56[A]:CYS:SG	1:C:10:HIS:CD2	2.79	0.76
1:C:366:ALA:CB	4:C:506:SO4:O2	2.33	0.76
1:B:161:GLY:H	1:B:162:ALA:HB3	1.52	0.75
1:C:332:LEU:HD12	1:C:388:LEU:HD23	1.68	0.75
1:A:391:GLY:HA2	1:A:433:VAL:HG22	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:95:SER:HB3	7:A:737:HOH:O	1.85	0.74
1:C:310:HIS:HD2	1:C:421:ASP:O	1.70	0.74
1:A:136:ASN:OD1	7:A:1050:HOH:O	2.03	0.74
1:A:59:LEU:HD12	1:A:114:THR:HG21	1.69	0.74
1:C:183:VAL:HG21	7:C:776:HOH:O	1.88	0.74
1:A:60:VAL:HG21	7:A:688:HOH:O	1.88	0.72
1:B:183:VAL:HG21	7:B:668:HOH:O	1.89	0.72
1:A:436:ASN:ND2	2:E:1:NAG:O5	2.22	0.72
1:C:59:LEU:HD11	1:C:114:THR:HG21	1.72	0.72
1:A:165:ALA:HB1	7:A:1076:HOH:O	1.88	0.72
1:C:53:LEU:O	1:C:90:VAL:CG2	2.38	0.71
1:A:342:VAL:HG23	7:A:647:HOH:O	1.91	0.71
1:B:103:MET:HE2	7:B:841:HOH:O	1.89	0.71
1:A:60:VAL:HG23	7:A:660:HOH:O	1.91	0.70
1:C:265[B]:ASN:ND2	1:C:272:GLY:H	1.86	0.70
1:C:365:THR:CB	1:C:366:ALA:HB3	2.21	0.70
1:B:59:LEU:CD1	1:B:114:THR:CG2	2.69	0.70
1:A:10:HIS:NE2	1:C:56[A]:CYS:SG	2.64	0.70
1:B:48:VAL:HG23	7:B:799:HOH:O	1.91	0.69
1:B:60:VAL:HG23	7:B:681:HOH:O	1.92	0.69
1:A:162:ALA:N	1:A:163:GLY:HA2	2.02	0.69
1:C:60:VAL:HG23	7:C:644:HOH:O	1.92	0.69
1:B:70:PHE:CD2	1:B:103:MET:SD	2.85	0.68
1:B:161:GLY:CA	1:B:162:ALA:CB	2.63	0.68
1:A:117:TYR:CE1	1:A:208[B]:CYS:SG	2.87	0.68
1:B:17:VAL:HG23	5:B:510:GOL:O2	1.95	0.67
1:A:17:VAL:HG22	4:C:505:SO4:O4	1.95	0.67
1:A:426:ASP:OD1	1:A:427:VAL:HG23	1.95	0.67
1:C:17:VAL:HG22	4:C:505:SO4:O2	1.94	0.67
1:A:36:VAL:HG22	1:A:124:PRO:HG2	1.77	0.67
1:C:285:ASP:OD1	7:C:868:HOH:O	2.12	0.66
1:C:471:ILE:HG13	7:C:927:HOH:O	1.95	0.66
1:A:41:VAL:CG2	1:A:104:ALA:HB2	2.25	0.66
7:A:649:HOH:O	1:C:155:VAL:HG21	1.95	0.66
1:B:90:VAL:HG22	7:B:679:HOH:O	1.95	0.66
1:A:394:GLY:HA2	7:A:924:HOH:O	1.96	0.66
1:B:340:ASN:ND2	7:B:959:HOH:O	2.29	0.66
1:A:10:HIS:CD2	1:C:56[A]:CYS:HG	2.14	0.65
1:B:70:PHE:HB2	5:B:506:GOL:H2	1.79	0.64
1:C:17:VAL:CG1	1:C:22:VAL:HB	2.26	0.64
1:A:56[A]:CYS:SG	1:B:10:HIS:CD2	2.90	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:374:SER:O	1:C:465:ILE:HG22	1.97	0.64
1:B:214:PHE:HE2	1:B:216[B]:ILE:HD11	1.58	0.64
1:C:444:ASP:HB2	7:C:681:HOH:O	1.97	0.64
1:A:70:PHE:H	1:A:103:MET:CE	2.10	0.63
1:C:365:THR:CB	1:C:366:ALA:HB2	2.27	0.63
1:A:53:LEU:O	1:A:90:VAL:HG21	1.98	0.63
1:A:54:ILE:HG13	7:B:618:HOH:O	1.98	0.63
1:C:366:ALA:HB1	4:C:506:SO4:O3	1.97	0.63
1:A:100:VAL:HG23	1:A:100:VAL:O	1.98	0.62
1:B:17:VAL:HG12	1:B:21:PHE:C	2.20	0.62
1:B:36:VAL:HG23	7:B:921:HOH:O	1.99	0.62
1:C:3:ILE:O	1:C:38:ALA:N	2.33	0.62
1:A:95:SER:CB	7:A:737:HOH:O	2.43	0.62
1:A:400:HIS:HB2	1:A:427:VAL:HG22	1.81	0.62
1:B:56[A]:CYS:HG	1:C:10:HIS:CD2	2.17	0.62
1:A:331:ASN:HD22	1:A:331:ASN:C	2.03	0.62
7:A:626:HOH:O	1:C:54:ILE:HD12	2.00	0.62
1:B:117:TYR:CE1	1:B:208[B]:CYS:SG	2.88	0.61
1:B:162:ALA:HB1	7:B:870:HOH:O	2.00	0.61
1:A:103:MET:HE3	7:A:726:HOH:O	2.00	0.61
1:C:17:VAL:HG23	7:C:688:HOH:O	2.00	0.61
1:A:162:ALA:H	1:A:164:GLY:HA3	1.64	0.61
1:B:195:VAL:HG11	7:B:866:HOH:O	2.00	0.60
1:A:69:GLU:HA	1:A:103:MET:HE1	1.82	0.60
1:B:17:VAL:HG23	1:B:17:VAL:O	2.01	0.60
1:B:72:LYS:N	5:B:506:GOL:C1	2.51	0.60
1:B:22:VAL:HG23	7:C:607:HOH:O	2.01	0.60
1:A:160:MET:HE3	1:A:160:MET:HA	1.83	0.60
1:A:310:HIS:HE1	7:A:787:HOH:O	1.83	0.60
1:B:155:VAL:HG23	7:B:633:HOH:O	2.01	0.60
1:A:163:GLY:HA3	7:A:965:HOH:O	2.01	0.59
1:C:17:VAL:HG12	1:C:22:VAL:N	2.17	0.59
1:B:17:VAL:CG1	1:B:22:VAL:N	2.59	0.59
1:C:118:CYS:SG	1:C:208:CYS:HB3	2.42	0.59
1:C:118:CYS:HA	1:C:208:CYS:SG	2.43	0.59
1:B:155:VAL:HG21	7:C:856:HOH:O	2.02	0.59
1:C:243:ALA:O	1:C:244:ALA:HB3	2.03	0.59
1:C:365:THR:O	1:C:368:ASP:HB2	2.02	0.59
1:B:329:ASN:OD1	1:B:329:ASN:N	2.36	0.59
1:C:17:VAL:HG12	1:C:22:VAL:CB	2.32	0.59
1:A:112:HIS:CE1	5:A:509:GOL:H32	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:22:VAL:CG2	7:C:607:HOH:O	2.50	0.59
1:A:59:LEU:HD12	1:A:114:THR:CG2	2.33	0.58
1:C:400:HIS:HB2	1:C:427:VAL:HG22	1.85	0.58
1:A:155:VAL:HG21	7:B:858:HOH:O	2.03	0.58
1:B:320:ASN:O	1:B:322:HIS:N	2.35	0.58
1:C:90:VAL:HG22	7:C:628:HOH:O	2.03	0.58
1:C:186:VAL:HG23	7:C:756:HOH:O	2.03	0.58
1:A:30:GLY:N	7:A:800:HOH:O	2.33	0.58
1:C:310:HIS:CD2	1:C:421:ASP:O	2.54	0.58
1:A:17:VAL:CG2	4:C:505:SO4:O4	2.52	0.58
1:A:386:ILE:HD12	1:A:441:PHE:HE1	1.68	0.57
1:A:56[A]:CYS:HG	1:B:10:HIS:CD2	2.21	0.57
1:B:97:ASN:ND2	7:B:908:HOH:O	2.19	0.57
1:A:17:VAL:HG12	1:A:22:VAL:N	2.19	0.57
1:B:426:ASP:OD1	1:B:427:VAL:HG23	2.03	0.57
1:A:176:LEU:HD21	5:C:507:GOL:H32	1.86	0.57
1:B:95:SER:HB3	7:B:908:HOH:O	2.04	0.57
1:C:59:LEU:CD1	1:C:114:THR:HG21	2.34	0.57
1:C:17:VAL:CG1	1:C:22:VAL:HA	2.30	0.56
1:C:41:VAL:HG13	1:C:103:MET:O	2.06	0.56
1:B:59:LEU:HD21	1:B:158[A]:LYS:HD2	1.86	0.56
1:C:20:GLY:C	5:C:507:GOL:H31	2.25	0.56
1:B:54:ILE:HD11	7:B:652:HOH:O	2.05	0.56
1:C:181:VAL:HG13	7:C:626:HOH:O	2.06	0.56
1:A:310:HIS:HD2	1:A:421:ASP:O	1.88	0.56
1:B:162:ALA:HB2	1:B:166:ILE:HD11	1.88	0.56
1:C:451:LEU:HB3	1:C:465:ILE:HD12	1.87	0.56
1:A:113:LEU:C	1:A:114:THR:HG22	2.27	0.56
1:C:170:SER:HB3	1:C:179:THR:HA	1.88	0.56
1:C:118:CYS:SG	1:C:208:CYS:CB	2.95	0.55
1:A:83:ILE:HD11	1:A:348:PHE:CZ	2.41	0.55
1:C:59:LEU:CD1	1:C:114:THR:CG2	2.85	0.55
1:C:114:THR:OG1	1:C:115:THR:N	2.40	0.55
1:C:59:LEU:HD21	1:C:158[A]:LYS:HD2	1.89	0.55
1:C:117:TYR:CD1	1:C:208:CYS:SG	2.98	0.55
1:A:17:VAL:CG1	1:A:22:VAL:HB	2.36	0.55
1:B:356:LEU:HD23	1:B:484:TRP:CZ2	2.42	0.54
7:A:801:HOH:O	2:E:1:NAG:H81	2.06	0.54
1:B:430:ILE:HA	1:B:437:VAL:HG21	1.87	0.54
1:C:67:HIS:CE1	1:C:244:ALA:HB1	2.42	0.54
1:B:181:VAL:HG13	7:B:783:HOH:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:178:ARG:HG2	1:B:186:VAL:HG22	1.88	0.54
1:A:17:VAL:CG1	1:A:22:VAL:CA	2.75	0.54
1:A:70:PHE:H	1:A:103:MET:HE1	1.73	0.54
1:C:17:VAL:CG1	1:C:22:VAL:CB	2.86	0.54
1:B:358:GLN:HE22	1:B:370:LEU:N	1.95	0.53
5:C:507:GOL:H12	7:C:929:HOH:O	1.98	0.53
1:C:103:MET:HE2	7:C:737:HOH:O	2.08	0.53
1:B:56[A]:CYS:SG	1:C:10:HIS:HD2	2.31	0.53
1:B:72:LYS:CA	5:B:506:GOL:H12	2.37	0.53
1:C:366:ALA:HB3	4:C:506:SO4:O2	2.08	0.53
1:C:3:ILE:O	1:C:37:ILE:HA	2.09	0.53
1:C:414:ASN:ND2	2:H:1:NAG:O5	2.38	0.52
1:C:329:ASN:ND2	1:C:329:ASN:N	2.28	0.52
1:A:103:MET:CE	7:A:726:HOH:O	2.55	0.52
1:C:365:THR:CA	1:C:366:ALA:HB2	2.39	0.52
1:A:10:HIS:HD2	1:C:56[A]:CYS:SG	2.32	0.52
1:A:41:VAL:HG22	1:A:104:ALA:HB2	1.92	0.52
1:A:59:LEU:CD1	1:A:114:THR:CG2	2.76	0.52
1:A:302:LYS:HD3	7:A:1016:HOH:O	2.08	0.52
1:B:160:MET:HE3	1:B:160:MET:HA	1.91	0.52
1:C:17:VAL:HG21	5:C:507:GOL:C2	2.36	0.52
1:A:180:HIS:CD2	1:A:270:GLY:H	2.27	0.52
1:C:321:PRO:HA	1:C:419:TYR:CG	2.46	0.51
1:A:70:PHE:H	1:A:103:MET:HE2	1.74	0.51
1:B:54:ILE:HD13	7:C:750:HOH:O	2.09	0.51
1:A:265:ASN:ND2	1:A:272:GLY:H	2.04	0.51
1:A:386:ILE:CD1	1:A:441:PHE:HE1	2.23	0.51
1:B:151:ASP:OD2	1:B:208[A]:CYS:HB2	2.11	0.51
1:C:132:ASP:HB3	1:C:135:ALA:HB2	1.93	0.50
1:B:17:VAL:CG1	1:B:22:VAL:CB	2.90	0.50
1:B:17:VAL:HG13	1:B:22:VAL:HA	1.88	0.50
1:B:44:ASN:ND2	1:B:46:GLN:HE21	2.08	0.50
1:C:36:VAL:HG21	1:C:143:ASP:OD2	2.11	0.50
1:B:180:HIS:CD2	1:B:270:GLY:H	2.28	0.50
1:C:209:ASP:HA	1:C:455:ILE:HG23	1.93	0.50
1:B:265[A]:ASN:HD21	1:B:272:GLY:N	1.92	0.49
1:C:160:MET:HE2	1:C:166:ILE:HG12	1.95	0.49
1:B:60:VAL:HG22	7:B:689:HOH:O	2.13	0.49
1:B:83:ILE:HD11	1:B:348:PHE:HZ	1.76	0.49
1:B:178:ARG:HG2	1:B:186:VAL:CG2	2.42	0.49
1:B:320:ASN:HD22	1:B:322:HIS:CE1	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:46:GLN:HA	1:B:97:ASN:HD22	1.78	0.48
1:C:71:GLN:HE22	1:C:98:PHE:CB	2.26	0.48
1:A:191:ILE:HD12	1:A:262:ILE:HD13	1.95	0.48
1:C:426:ASP:OD1	1:C:427:VAL:HG23	2.13	0.48
1:A:17:VAL:CG1	1:A:22:VAL:CB	2.90	0.48
1:B:162:ALA:CB	1:B:166:ILE:HD11	2.43	0.48
1:B:305:ILE:HD11	7:B:948:HOH:O	2.13	0.48
1:A:15:ASP:OD2	1:A:22:VAL:HG22	2.13	0.48
1:A:10:HIS:HE2	1:C:56[A]:CYS:HG	1.51	0.48
1:B:54:ILE:C	1:B:54:ILE:HD12	2.34	0.48
1:C:136:ASN:ND2	1:C:136:ASN:H	2.12	0.48
1:A:113:LEU:C	1:A:114:THR:CG2	2.82	0.47
1:C:20:GLY:O	5:C:507:GOL:C3	2.53	0.47
1:B:256:PRO:HB3	7:B:969:HOH:O	2.14	0.47
1:C:59:LEU:HD11	1:C:114:THR:CG2	2.42	0.47
1:A:225:GLU:HB3	1:A:248:SER:HB2	1.96	0.47
1:A:22:VAL:HG21	1:B:16:ILE:HG22	1.97	0.47
1:B:301:THR:HG22	1:B:302:LYS:HG2	1.96	0.47
1:C:376:ILE:HG22	1:C:377:SER:O	2.15	0.47
1:B:83:ILE:HD11	1:B:348:PHE:CZ	2.50	0.47
1:A:36:VAL:HG23	7:A:969:HOH:O	2.14	0.47
1:A:41:VAL:HG21	1:A:104:ALA:HB2	1.97	0.47
1:A:56[A]:CYS:SG	1:B:10:HIS:HD2	2.38	0.47
1:B:320:ASN:ND2	1:B:322:HIS:CE1	2.83	0.47
1:A:83:ILE:HD11	1:A:348:PHE:HZ	1.79	0.47
1:B:17:VAL:HG22	4:C:505:SO4:O3	2.14	0.47
1:B:36:VAL:HG21	1:B:143:ASP:OD2	2.15	0.47
1:B:176:LEU:HD22	5:B:510:GOL:H12	1.96	0.47
1:C:209:ASP:HB3	1:C:210:PRO:CD	2.45	0.47
1:C:332:LEU:HD12	1:C:388:LEU:CD2	2.41	0.46
1:A:112:HIS:ND1	5:A:509:GOL:H32	2.30	0.46
1:A:181:VAL:HG13	7:A:826:HOH:O	2.14	0.46
1:C:113:LEU:HG	1:C:114:THR:HG22	1.98	0.46
1:A:90:VAL:HG22	1:A:91:GLY:N	2.30	0.46
1:C:83:ILE:HD11	1:C:348:PHE:HZ	1.81	0.46
1:A:16:ILE:HD11	1:A:152:TRP:CH2	2.50	0.46
1:C:82:PHE:C	1:C:83:ILE:HD13	2.36	0.46
1:A:160:MET:C	1:A:162:ALA:HB2	2.33	0.46
1:A:198:ARG:HD3	7:A:977:HOH:O	2.15	0.46
1:B:76:TRP:CE2	1:B:481:PRO:HD3	2.51	0.46
1:C:386:ILE:CD1	1:C:441:PHE:HE1	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:656:HOH:O	1:C:54:ILE:HG13	2.14	0.45
1:B:216[B]:ILE:HD13	1:B:221:MET:SD	2.57	0.45
1:A:331:ASN:C	1:A:331:ASN:ND2	2.70	0.45
1:B:49:THR:O	1:B:93:SER:HA	2.16	0.45
1:B:404:HIS:NE2	1:B:469:GLU:OE1	2.42	0.45
1:A:182:ASN:HD21	1:B:192:THR:H	1.65	0.45
1:C:83:ILE:HD13	1:C:83:ILE:N	2.31	0.45
1:B:155:VAL:HG22	1:C:1:VAL:HG13	1.98	0.45
1:B:318:PRO:HB2	1:B:383:THR:HG23	1.99	0.45
1:A:67:HIS:CD2	1:A:67:HIS:C	2.90	0.45
1:A:41:VAL:HG13	1:A:103:MET:O	2.16	0.45
1:C:41:VAL:CG1	1:C:103:MET:O	2.65	0.45
1:A:459:LEU:HD21	5:A:509:GOL:C3	2.47	0.44
1:B:358:GLN:NE2	1:B:370:LEU:H	1.96	0.44
1:C:331:ASN:C	1:C:331:ASN:HD22	2.21	0.44
1:C:365:THR:CA	1:C:366:ALA:CB	2.94	0.44
1:C:451:LEU:HD12	1:C:465:ILE:HD11	1.99	0.44
1:A:36:VAL:HG21	1:A:143:ASP:OD2	2.16	0.44
1:B:22:VAL:HG21	1:C:16:ILE:HG22	2.00	0.44
1:C:178:ARG:HG2	1:C:186:VAL:HG22	2.00	0.44
1:A:459:LEU:HD21	5:A:509:GOL:H31	1.99	0.44
1:A:61:ASP:O	1:A:113:LEU:HD23	2.17	0.44
1:C:17:VAL:HG23	1:C:17:VAL:O	2.17	0.44
1:B:181:VAL:HA	5:B:507:GOL:H2	2.00	0.44
1:B:241:ILE:HG23	1:B:241:ILE:O	2.18	0.44
1:B:378:LEU:HD22	1:B:384:ILE:HD12	1.99	0.44
1:B:70:PHE:CE2	1:B:103:MET:SD	3.11	0.43
1:B:161:GLY:H	1:B:162:ALA:CB	2.13	0.43
1:C:191:ILE:HD12	1:C:262:ILE:HD13	1.99	0.43
1:C:243:ALA:O	1:C:244:ALA:CB	2.66	0.43
1:A:160:MET:HA	1:A:160:MET:CE	2.46	0.43
1:A:413:SER:HB2	7:A:979:HOH:O	2.17	0.43
1:B:323:GLN:NE2	2:G:1:NAG:H61	2.33	0.43
1:C:191:ILE:HD12	1:C:262:ILE:CD1	2.48	0.43
1:A:394:GLY:HA2	1:A:395:GLY:HA3	1.65	0.43
1:A:111:SER:HB2	1:A:121:LEU:HD13	2.01	0.43
1:C:26:VAL:HG13	1:C:53:LEU:HD21	2.00	0.43
1:B:53:LEU:O	1:B:90:VAL:CG2	2.58	0.43
1:B:68:GLY:O	1:B:103:MET:CE	2.67	0.43
1:C:15:ASP:OD2	1:C:22:VAL:HG22	2.19	0.42
1:A:430:ILE:HA	1:A:437:VAL:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:386:ILE:CD1	1:B:441:PHE:HE1	2.32	0.42
1:B:70:PHE:CG	1:B:103:MET:SD	3.12	0.42
1:B:400:HIS:HB2	1:B:427:VAL:HG22	2.01	0.42
1:C:209:ASP:HB3	1:C:210:PRO:HD3	2.01	0.42
1:B:59:LEU:HD12	1:B:114:THR:CG2	2.49	0.42
1:C:186:VAL:HB	1:C:187:PRO:CD	2.49	0.42
1:A:54:ILE:HD13	7:A:790:HOH:O	2.19	0.42
1:B:3:ILE:O	1:B:38:ALA:N	2.52	0.42
1:B:155:VAL:HG22	1:C:1:VAL:CG1	2.50	0.42
1:B:340:ASN:ND2	7:B:965:HOH:O	2.38	0.42
1:B:182:ASN:ND2	1:C:192:THR:OG1	2.53	0.42
1:B:389:PRO:HG3	2:G:1:NAG:H82	2.02	0.41
1:C:83:ILE:HD11	1:C:348:PHE:CZ	2.54	0.41
1:C:394:GLY:O	1:C:458:HIS:HE1	2.03	0.41
1:B:162:ALA:H	1:B:164:GLY:HA3	1.85	0.41
1:A:82:PHE:HB3	1:A:351:PRO:HD2	2.03	0.41
1:A:243:ALA:O	1:A:244:ALA:HB3	2.20	0.41
1:A:305:ILE:HD13	7:A:1046:HOH:O	2.20	0.41
1:B:15:ASP:OD2	1:B:22:VAL:HG22	2.20	0.41
1:B:195:VAL:HG12	7:B:693:HOH:O	2.20	0.41
1:B:354:PRO:O	1:B:355:VAL:C	2.57	0.41
1:C:192:THR:HA	1:C:283:ARG:O	2.21	0.41
1:B:151:ASP:OD1	1:B:151:ASP:N	2.49	0.41
1:B:191:ILE:HD12	1:B:262:ILE:CD1	2.51	0.41
1:C:37:ILE:O	1:C:125:PHE:HA	2.21	0.41
1:C:404:HIS:NE2	1:C:469:GLU:OE1	2.53	0.41
1:C:330:LEU:HD23	1:C:330:LEU:HA	1.76	0.41
1:A:19:ASP:HA	1:A:177:GLY:O	2.21	0.40
1:C:179:THR:CG2	1:C:183:VAL:HA	2.51	0.40
1:C:180:HIS:CD2	1:C:270:GLY:H	2.39	0.40
1:C:181:VAL:CG1	7:C:626:HOH:O	2.67	0.40
1:A:30:GLY:HA3	1:C:24:PRO:HG3	2.02	0.40
1:A:115:THR:HA	1:A:456:ASP:OD2	2.20	0.40
1:A:311:PRO:HD3	1:A:423:ILE:HA	2.03	0.40
1:A:413:SER:CB	7:A:979:HOH:O	2.69	0.40
1:B:227:ASP:OD2	1:B:425:ARG:HB2	2.22	0.40
1:B:386:ILE:HD11	1:B:441:PHE:CE1	2.56	0.40
1:C:41:VAL:HG23	7:C:835:HOH:O	2.22	0.40
1:A:17:VAL:HG11	1:A:22:VAL:HB	2.02	0.40
1:C:41:VAL:HG13	1:C:104:ALA:HB2	2.03	0.40
1:A:176:LEU:CD2	5:C:507:GOL:H32	2.52	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:136:ASN:ND2	1:C:136:ASN:ND2[3_554]	1.85	0.35

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	498/495 (101%)	476 (96%)	18 (4%)	4 (1%)	19	13
1	B	498/495 (101%)	473 (95%)	20 (4%)	5 (1%)	15	9
1	C	496/495 (100%)	470 (95%)	23 (5%)	3 (1%)	25	19
All	All	1492/1485 (100%)	1419 (95%)	61 (4%)	12 (1%)	19	13

All (12) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	162	ALA
1	B	162	ALA
1	C	209	ASP
1	C	366	ALA
1	A	209	ASP
1	A	394	GLY
1	B	209	ASP
1	B	297	SER
1	C	355	VAL
1	A	59	LEU
1	B	161	GLY
1	B	325	GLY

5.3.2 Protein sidechains

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	410/406 (101%)	383 (93%)	27 (7%)	16	12
1	B	410/406 (101%)	385 (94%)	25 (6%)	18	14
1	C	408/406 (100%)	379 (93%)	29 (7%)	14	10
All	All	1228/1218 (101%)	1147 (93%)	81 (7%)	17	12

All (81) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	15	ASP
1	A	54	ILE
1	A	69	GLU
1	A	97	ASN
1	A	114	THR
1	A	117	TYR
1	A	122	ARG
1	A	158	LYS
1	A	160	MET
1	A	220	ASP
1	A	226	THR
1	A	246	ARG
1	A	285	ASP
1	A	297	SER
1	A	303	CYS
1	A	329	ASN
1	A	331	ASN
1	A	347	SER
1	A	349	THR
1	A	364	ASN
1	A	380	SER
1	A	413	SER
1	A	417	SER
1	A	450	PHE
1	A	460	ASP
1	A	463	PHE

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Mol	Chain	Res	Type
1	A	465	ILE
1	B	15	ASP
1	B	41	VAL
1	B	69	GLU
1	B	117	TYR
1	B	122	ARG
1	B	158[A]	LYS
1	B	158[B]	LYS
1	B	160	MET
1	B	195	VAL
1	B	226	THR
1	B	246	ARG
1	B	285	ASP
1	B	297	SER
1	B	299	VAL
1	B	301	THR
1	B	303	CYS
1	B	320	ASN
1	B	329	ASN
1	B	349	THR
1	B	372	SER
1	B	380	SER
1	B	382	SER
1	B	417	SER
1	B	450	PHE
1	B	463	PHE
1	C	15	ASP
1	C	41	VAL
1	C	54	ILE
1	C	69	GLU
1	C	97	ASN
1	C	114	THR
1	C	117	TYR
1	C	122	ARG
1	C	156	LEU
1	C	158[A]	LYS
1	C	158[B]	LYS
1	C	160	MET
1	C	195	VAL
1	C	226	THR
1	C	246	ARG
1	C	285	ASP

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Mol	Chain	Res	Type
1	C	297	SER
1	C	303	CYS
1	C	327	ASP
1	C	329	ASN
1	C	331	ASN
1	C	349	THR
1	C	388	LEU
1	C	417	SER
1	C	444	ASP
1	C	450	PHE
1	C	451	LEU
1	C	463	PHE
1	C	465	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (47) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	40	ASN
1	A	44	ASN
1	A	52	GLN
1	A	71	GLN
1	A	92	ASN
1	A	97	ASN
1	A	136	ASN
1	A	180	HIS
1	A	182	ASN
1	A	265	ASN
1	A	310	HIS
1	A	320	ASN
1	A	364	ASN
1	A	486	ASN
1	B	40	ASN
1	B	44	ASN
1	B	52	GLN
1	B	92	ASN
1	B	97	ASN
1	B	116	GLN
1	B	136	ASN
1	B	180	HIS
1	B	182	ASN
1	B	252	ASN
1	B	255	GLN

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Mol	Chain	Res	Type
1	B	320	ASN
1	B	322	HIS
1	B	358	GLN
1	B	364	ASN
1	B	486	ASN
1	C	44	ASN
1	C	52	GLN
1	C	71	GLN
1	C	85	GLN
1	C	92	ASN
1	C	131	ASN
1	C	136	ASN
1	C	180	HIS
1	C	232	GLN
1	C	300	HIS
1	C	310	HIS
1	C	320	ASN
1	C	329	ASN
1	C	331	ASN
1	C	358	GLN
1	C	486	ASN
1	C	495	HIS

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](#)

10 monosaccharides 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	NAG	D	1	1,2	14,14,15	0.66	0	17,19,21	1.30	2 (11%)
2	NAG	D	2	2	14,14,15	0.64	0	17,19,21	1.25	3 (17%)
2	NAG	E	1	2	14,14,15	0.58	0	17,19,21	0.99	0
2	NAG	E	2	2	14,14,15	0.69	0	17,19,21	3.40	6 (35%)
2	NAG	F	1	2	14,14,15	0.62	0	17,19,21	0.99	0
2	NAG	F	2	2	14,14,15	0.43	0	17,19,21	1.78	3 (17%)
2	NAG	G	1	1,2	14,14,15	0.71	0	17,19,21	2.51	5 (29%)
2	NAG	G	2	2	14,14,15	0.64	0	17,19,21	2.02	3 (17%)
2	NAG	H	1	2	14,14,15	0.56	0	17,19,21	1.49	4 (23%)
2	NAG	H	2	2	14,14,15	0.62	0	17,19,21	1.09	2 (11%)

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
2	NAG	D	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	D	2	2	-	0/6/23/26	0/1/1/1
2	NAG	E	1	2	-	2/6/23/26	0/1/1/1
2	NAG	E	2	2	-	5/6/23/26	0/1/1/1
2	NAG	F	1	2	-	2/6/23/26	0/1/1/1
2	NAG	F	2	2	-	2/6/23/26	0/1/1/1
2	NAG	G	1	1,2	-	3/6/23/26	0/1/1/1
2	NAG	G	2	2	-	4/6/23/26	0/1/1/1
2	NAG	H	1	2	-	5/6/23/26	0/1/1/1
2	NAG	H	2	2	-	2/6/23/26	0/1/1/1

There are no bond length outliers.

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	2	NAG	C4-C3-C2	-9.38	97.27	111.02
2	E	2	NAG	O5-C1-C2	-6.49	101.05	111.29
2	G	1	NAG	C4-C3-C2	-6.39	101.66	111.02
2	G	1	NAG	C2-N2-C7	5.58	130.84	122.90
2	G	2	NAG	O5-C1-C2	-5.49	102.62	111.29
2	E	2	NAG	C1-O5-C5	4.43	118.19	112.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	2	NAG	C3-C4-C5	4.37	118.03	110.24
2	E	2	NAG	C1-C2-N2	4.17	117.61	110.49
2	F	2	NAG	C1-O5-C5	3.97	117.56	112.19
2	G	1	NAG	O5-C1-C2	-3.76	105.34	111.29
2	F	2	NAG	C6-C5-C4	-3.54	104.72	113.00
2	F	2	NAG	C2-N2-C7	-3.34	118.15	122.90
2	H	1	NAG	C4-C3-C2	3.24	115.77	111.02
2	D	1	NAG	C1-O5-C5	3.20	116.53	112.19
2	E	2	NAG	O5-C5-C4	3.19	118.60	110.83
2	G	2	NAG	C4-C3-C2	3.04	115.47	111.02
2	D	2	NAG	C1-O5-C5	2.79	115.97	112.19
2	G	1	NAG	O7-C7-N2	-2.53	117.30	121.95
2	H	2	NAG	O5-C5-C6	2.51	111.14	107.20
2	D	2	NAG	C2-N2-C7	-2.43	119.44	122.90
2	G	1	NAG	C8-C7-N2	2.42	120.19	116.10
2	D	1	NAG	O3-C3-C2	-2.30	104.71	109.47
2	E	2	NAG	C2-N2-C7	2.28	126.15	122.90
2	H	1	NAG	O5-C1-C2	-2.21	107.81	111.29
2	H	2	NAG	C3-C4-C5	-2.17	106.37	110.24
2	H	1	NAG	O3-C3-C4	-2.16	105.35	110.35
2	H	1	NAG	C6-C5-C4	-2.15	107.98	113.00
2	D	2	NAG	C6-C5-C4	-2.04	108.23	113.00

There are no chirality outliers.

All (25) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	G	1	NAG	C3-C2-N2-C7
2	H	1	NAG	C3-C2-N2-C7
2	F	1	NAG	O5-C5-C6-O6
2	F	1	NAG	C4-C5-C6-O6
2	F	2	NAG	C4-C5-C6-O6
2	G	2	NAG	C4-C5-C6-O6
2	G	2	NAG	O5-C5-C6-O6
2	H	2	NAG	O5-C5-C6-O6
2	E	2	NAG	O5-C5-C6-O6
2	F	2	NAG	O5-C5-C6-O6
2	H	2	NAG	C4-C5-C6-O6
2	E	1	NAG	C8-C7-N2-C2
2	E	1	NAG	O7-C7-N2-C2
2	E	2	NAG	C8-C7-N2-C2
2	E	2	NAG	O7-C7-N2-C2

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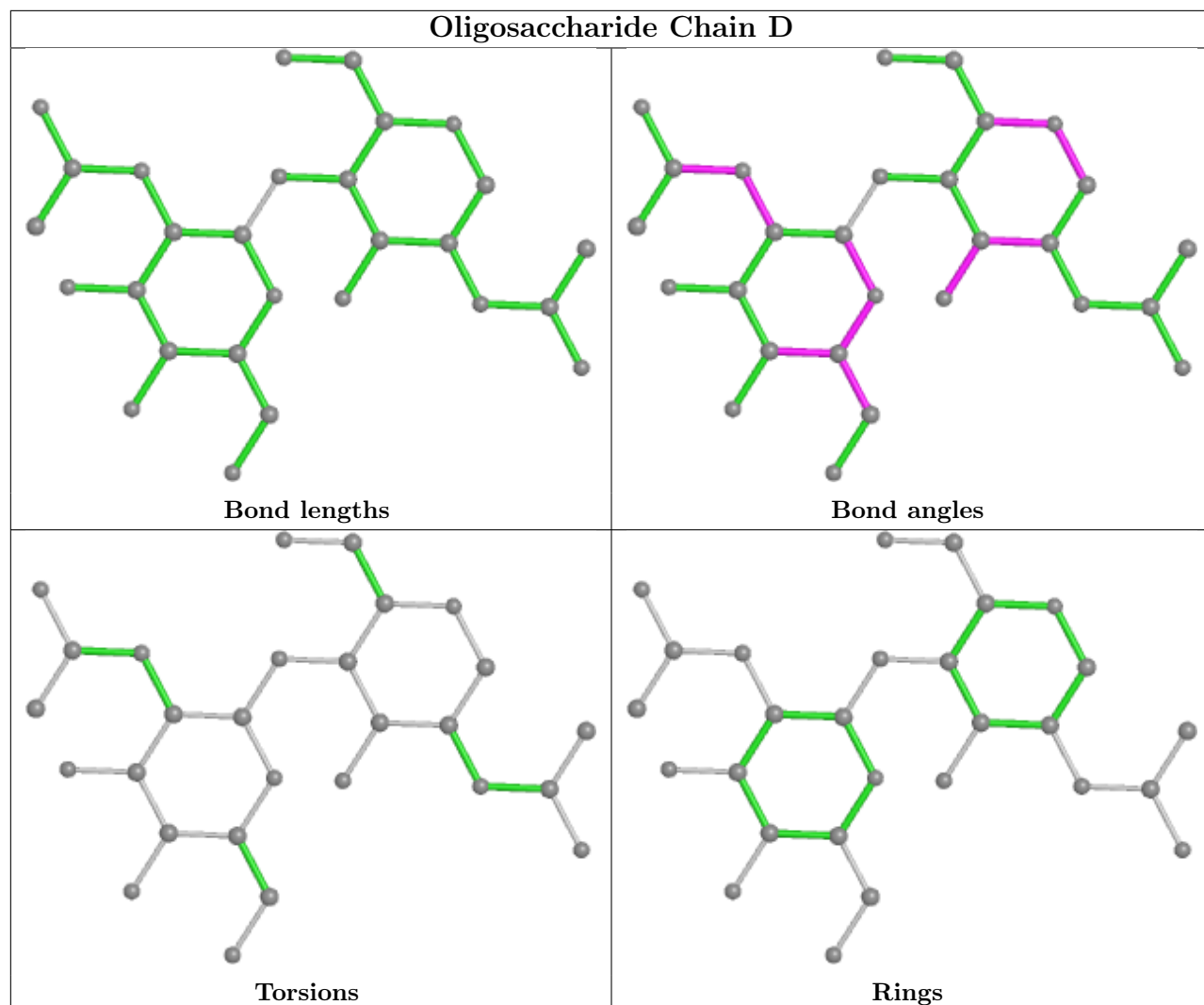
Mol	Chain	Res	Type	Atoms
2	G	1	NAG	C8-C7-N2-C2
2	G	1	NAG	O7-C7-N2-C2
2	G	2	NAG	C8-C7-N2-C2
2	G	2	NAG	O7-C7-N2-C2
2	H	1	NAG	C8-C7-N2-C2
2	H	1	NAG	O7-C7-N2-C2
2	H	1	NAG	C4-C5-C6-O6
2	E	2	NAG	C4-C5-C6-O6
2	E	2	NAG	C3-C2-N2-C7
2	H	1	NAG	O5-C5-C6-O6

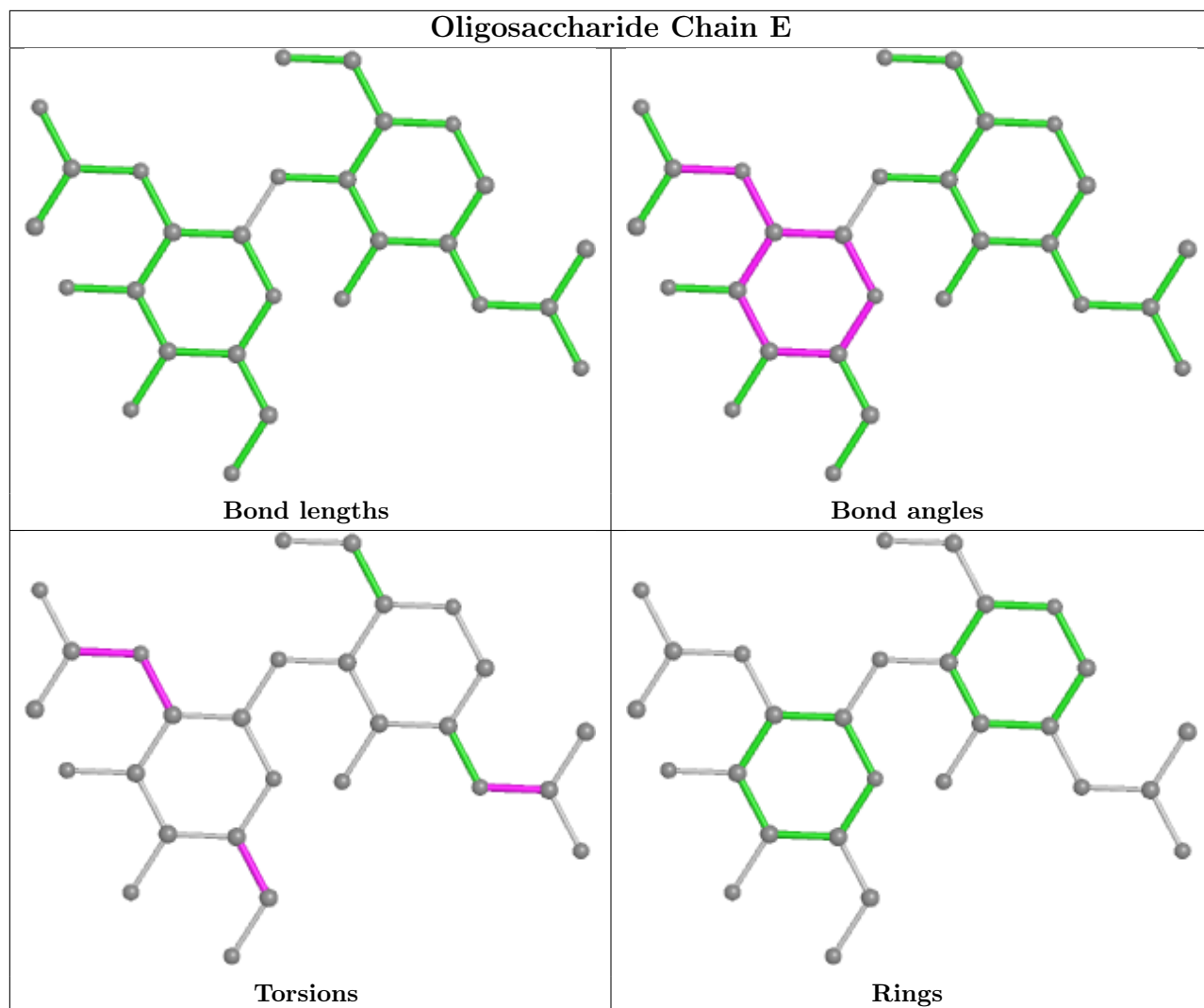
There are no ring outliers.

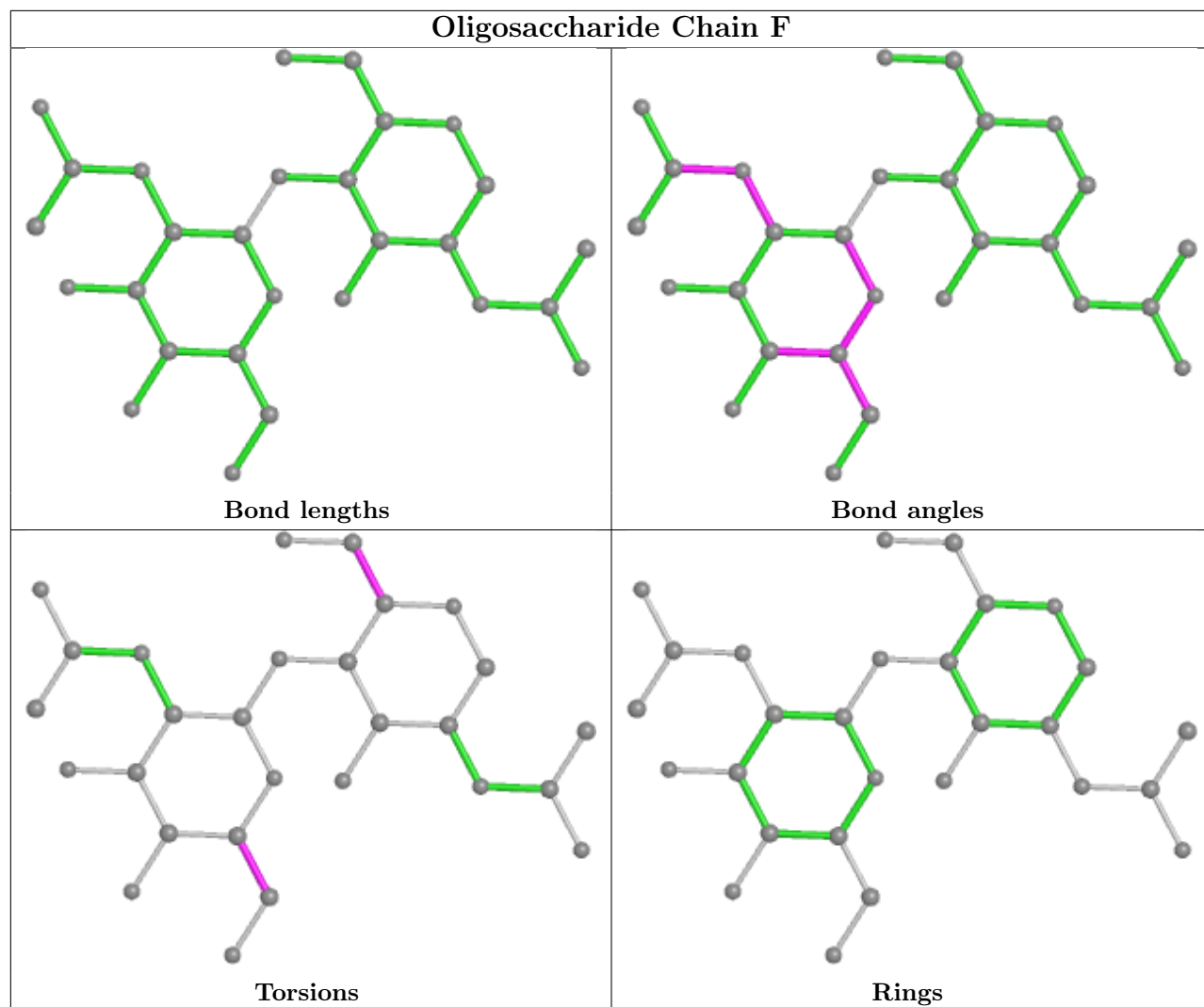
4 monomers are involved in 16 short contacts:

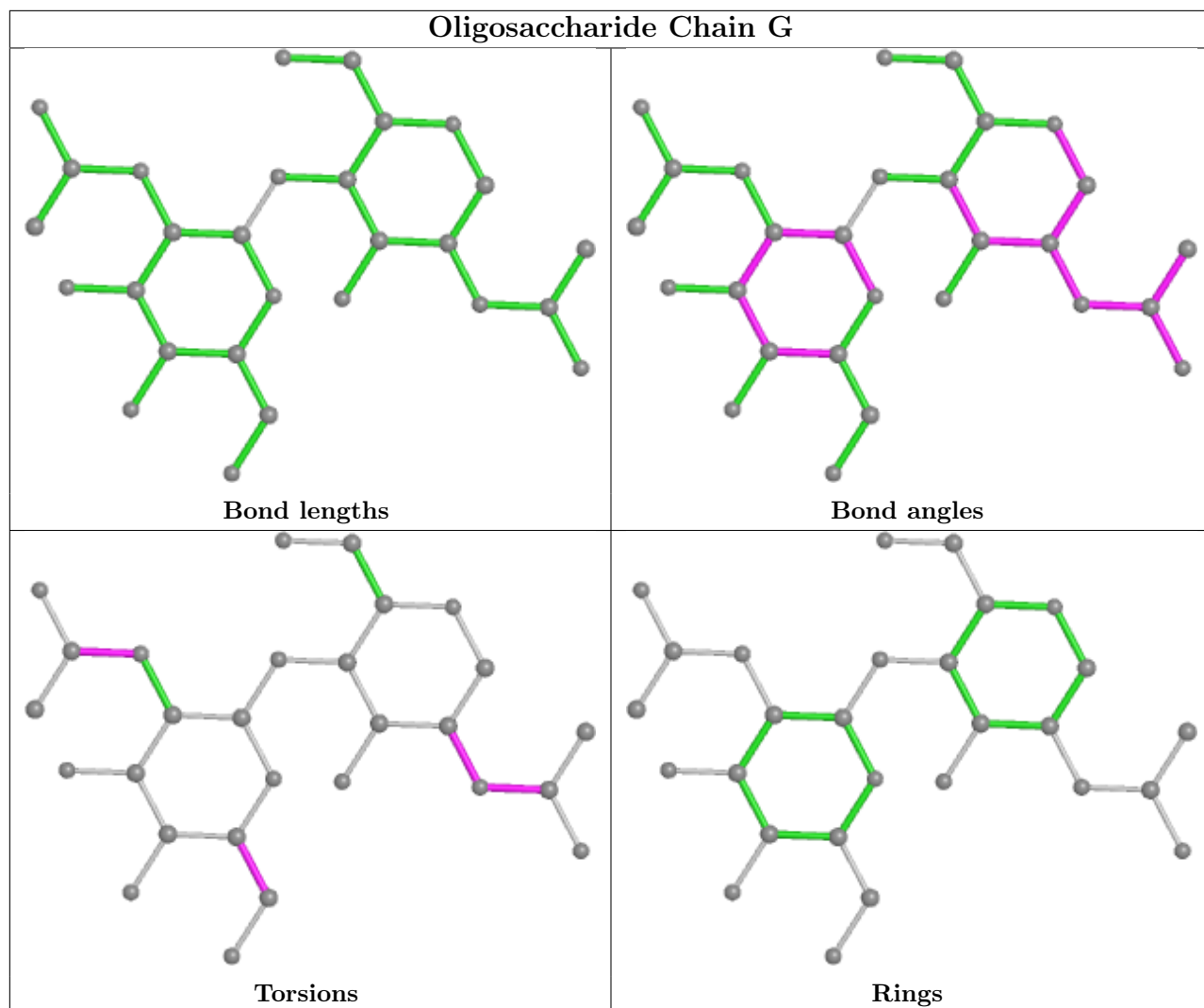
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	1	NAG	3	0
2	G	1	NAG	2	0
2	H	1	NAG	7	0
2	E	1	NAG	4	0

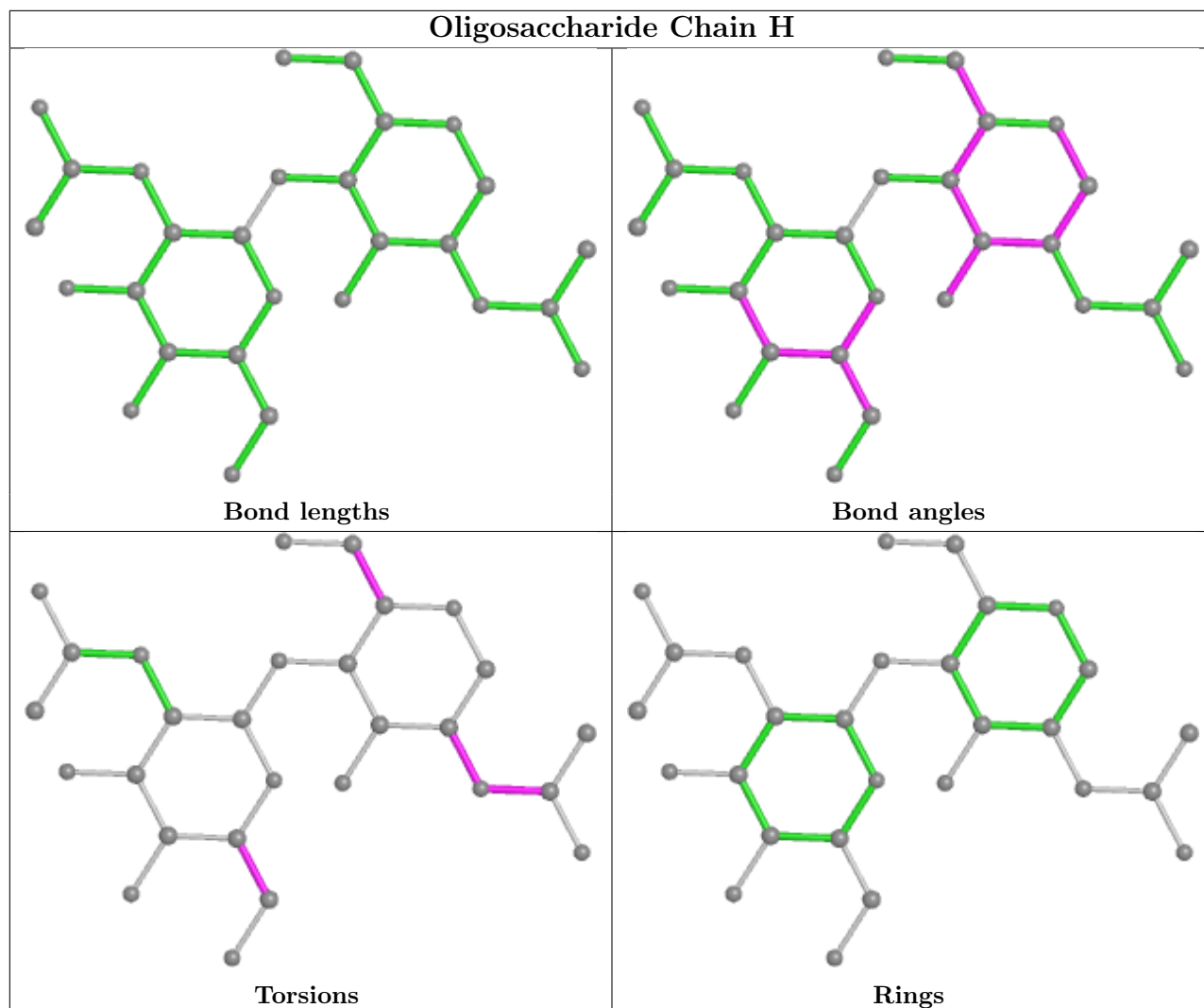
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.











5.6 Ligand geometry [i](#)

Of 28 ligands modelled in this entry, 12 are monoatomic - leaving 16 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
4	SO4	A	506	-	4,4,4	0.25	0	6,6,6	0.52	0
4	SO4	C	506	-	4,4,4	0.20	0	6,6,6	0.44	0
6	NAG	C	510	1	14,14,15	2.27	2 (14%)	17,19,21	2.21	4 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	SO4	C	505	-	4,4,4	0.39	0	6,6,6	0.71	0
5	GOL	B	506	-	5,5,5	0.74	0	5,5,5	1.85	2 (40%)
5	GOL	B	508	-	5,5,5	0.18	0	5,5,5	0.60	0
4	SO4	A	505	-	4,4,4	0.39	0	6,6,6	0.75	0
4	SO4	B	505	-	4,4,4	0.34	0	6,6,6	0.84	0
5	GOL	B	507	-	5,5,5	0.70	0	5,5,5	0.92	0
5	GOL	B	509	-	5,5,5	0.85	0	5,5,5	1.33	1 (20%)
5	GOL	C	508	-	5,5,5	0.47	0	5,5,5	1.59	1 (20%)
5	GOL	C	507	-	5,5,5	0.32	0	5,5,5	1.47	1 (20%)
4	SO4	A	508	-	4,4,4	0.26	0	6,6,6	0.61	0
4	SO4	A	507	-	4,4,4	0.73	0	6,6,6	0.84	0
5	GOL	B	510	-	5,5,5	0.48	0	5,5,5	0.56	0
5	GOL	A	509	-	5,5,5	0.48	0	5,5,5	0.65	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
6	NAG	C	510	1	-	2/6/23/26	0/1/1/1
5	GOL	B	509	-	-	0/4/4/4	-
5	GOL	B	508	-	-	2/4/4/4	-
5	GOL	B	506	-	-	3/4/4/4	-
5	GOL	B	507	-	-	3/4/4/4	-
5	GOL	C	507	-	-	4/4/4/4	-
5	GOL	B	510	-	-	0/4/4/4	-
5	GOL	C	508	-	-	1/4/4/4	-
5	GOL	A	509	-	-	4/4/4/4	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	C	510	NAG	O7-C7	7.82	1.40	1.23
6	C	510	NAG	C7-N2	2.37	1.42	1.34

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	C	510	NAG	C1-O5-C5	6.47	120.96	112.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	C	510	NAG	C3-C4-C5	-3.65	103.73	110.24
6	C	510	NAG	C2-N2-C7	3.12	127.34	122.90
5	C	508	GOL	C3-C2-C1	-2.87	100.54	111.70
5	C	507	GOL	O1-C1-C2	-2.81	96.73	110.20
5	B	509	GOL	O2-C2-C1	2.57	120.44	109.12
5	B	506	GOL	O1-C1-C2	2.34	121.41	110.20
5	B	506	GOL	O2-C2-C3	2.24	119.01	109.12
6	C	510	NAG	C6-C5-C4	-2.15	107.97	113.00

There are no chirality outliers.

All (19) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	509	GOL	O1-C1-C2-C3
5	A	509	GOL	C1-C2-C3-O3
5	B	507	GOL	O1-C1-C2-C3
5	C	507	GOL	O1-C1-C2-C3
5	A	509	GOL	O1-C1-C2-O2
5	C	507	GOL	O1-C1-C2-O2
6	C	510	NAG	O5-C5-C6-O6
5	B	506	GOL	O1-C1-C2-C3
5	B	508	GOL	C1-C2-C3-O3
5	C	507	GOL	C1-C2-C3-O3
5	A	509	GOL	O2-C2-C3-O3
5	B	506	GOL	O2-C2-C3-O3
5	B	507	GOL	O1-C1-C2-O2
5	C	507	GOL	O2-C2-C3-O3
5	B	507	GOL	O2-C2-C3-O3
5	B	508	GOL	O2-C2-C3-O3
5	B	506	GOL	C1-C2-C3-O3
6	C	510	NAG	C4-C5-C6-O6
5	C	508	GOL	O2-C2-C3-O3

There are no ring outliers.

7 monomers are involved in 34 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	C	506	SO4	5	0
4	C	505	SO4	4	0
5	B	506	GOL	6	0
5	B	507	GOL	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	C	507	GOL	12	0
5	B	510	GOL	2	0
5	A	509	GOL	4	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	A	495/495 (100%)	-0.17	2 (0%) 92 92	9, 19, 33, 46	0
1	B	495/495 (100%)	0.14	26 (5%) 26 25	10, 24, 45, 56	0
1	C	495/495 (100%)	0.10	15 (3%) 50 49	11, 26, 47, 62	0
All	All	1485/1485 (100%)	0.02	43 (2%) 51 50	9, 23, 43, 62	0

All (43) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	415	SER	6.7
1	B	328	CYS	5.9
1	C	324	GLY	4.9
1	B	320	ASN	4.3
1	B	415	SER	4.0
1	B	363	ALA	3.9
1	C	372	SER	3.8
1	B	362	GLY	3.6
1	B	364	ASN	3.3
1	B	323	GLN	3.3
1	B	367	ALA	3.2
1	C	328	CYS	3.1
1	B	368	ASP	3.0
1	B	329	ASN	3.0
1	B	369	LEU	3.0
1	B	372	SER	2.9
1	B	162	ALA	2.7
1	B	331	ASN	2.7
1	C	327	ASP	2.7
1	C	362	GLY	2.7
1	B	490	SER	2.6
1	B	473	ASN	2.5
1	C	320	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	364	ASN	2.5
1	B	326	ALA	2.5
1	B	366	ALA	2.4
1	A	415	SER	2.4
1	A	331	ASN	2.4
1	B	381	ASN	2.3
1	B	365	THR	2.3
1	C	208	CYS	2.3
1	C	56[A]	CYS	2.3
1	C	369	LEU	2.2
1	B	442	CYS	2.2
1	B	373	GLY	2.2
1	C	433	VAL	2.2
1	B	319	GLY	2.1
1	B	346	VAL	2.1
1	B	383	THR	2.1
1	C	319	GLY	2.1
1	C	432	GLY	2.1
1	B	17	VAL	2.0
1	C	323	GLN	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](#)

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.

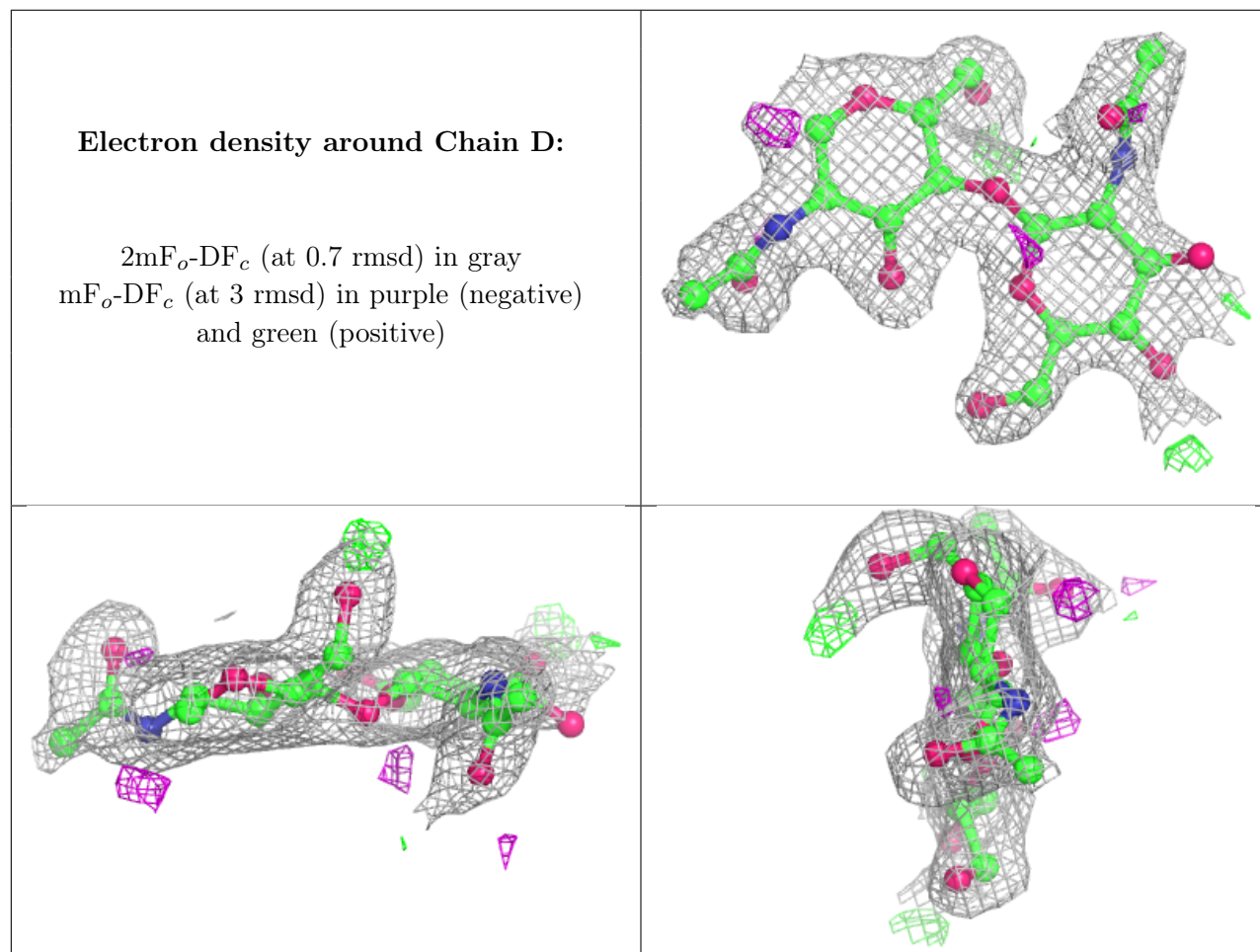
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	NAG	H	1	14/15	0.68	0.34	66,68,72,85	0
2	NAG	E	2	14/15	0.72	0.30	47,54,58,61	0
2	NAG	F	2	14/15	0.73	0.41	61,66,72,73	0
2	NAG	G	2	14/15	0.79	0.35	63,77,91,95	0
2	NAG	F	1	14/15	0.81	0.28	48,59,63,64	0
2	NAG	G	1	14/15	0.84	0.26	45,56,61,68	0
2	NAG	H	2	14/15	0.84	0.21	60,68,72,75	0
2	NAG	D	2	14/15	0.87	0.21	47,52,58,60	0

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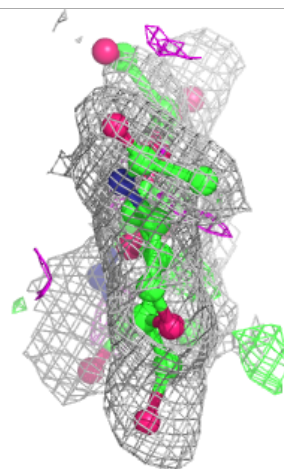
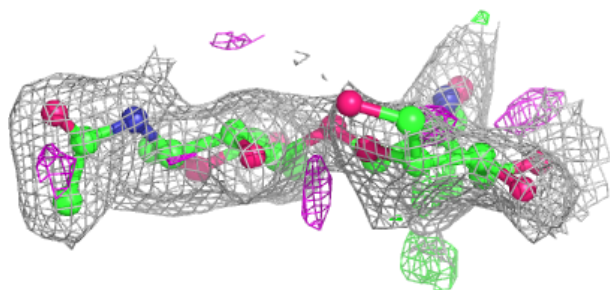
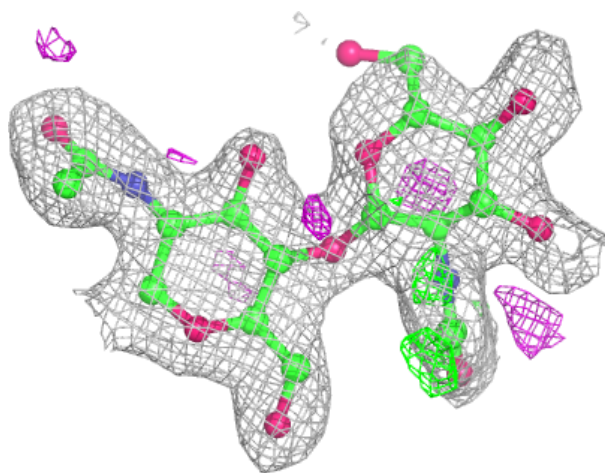
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	NAG	E	1	14/15	0.91	0.18	28,36,42,45	0
2	NAG	D	1	14/15	0.93	0.17	29,33,37,42	0

The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.



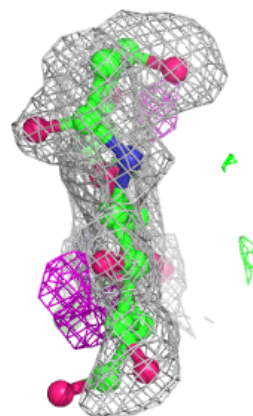
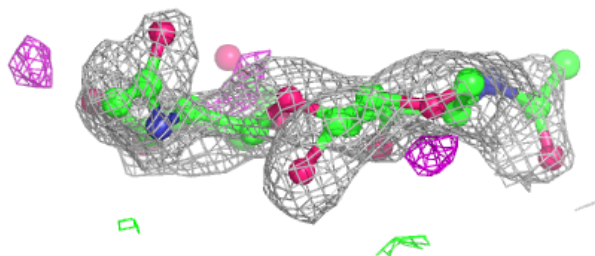
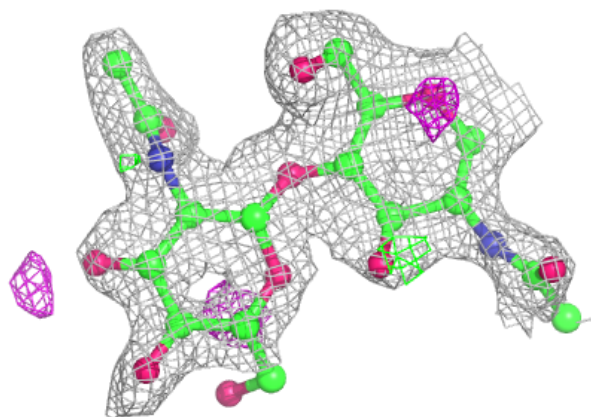
Electron density around Chain E:

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



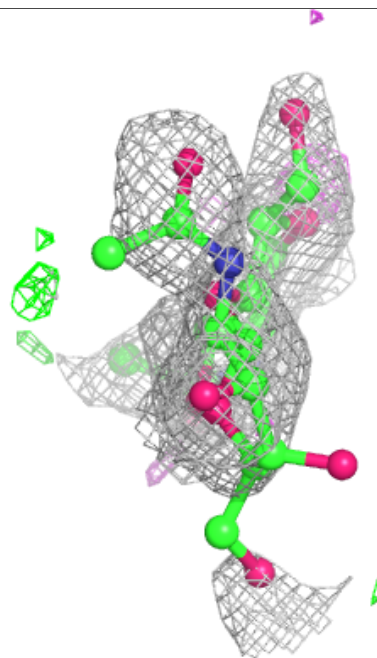
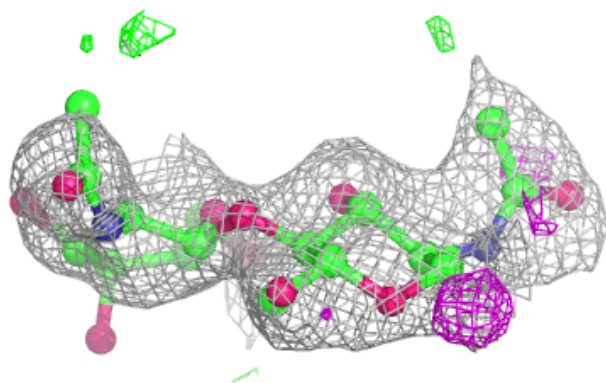
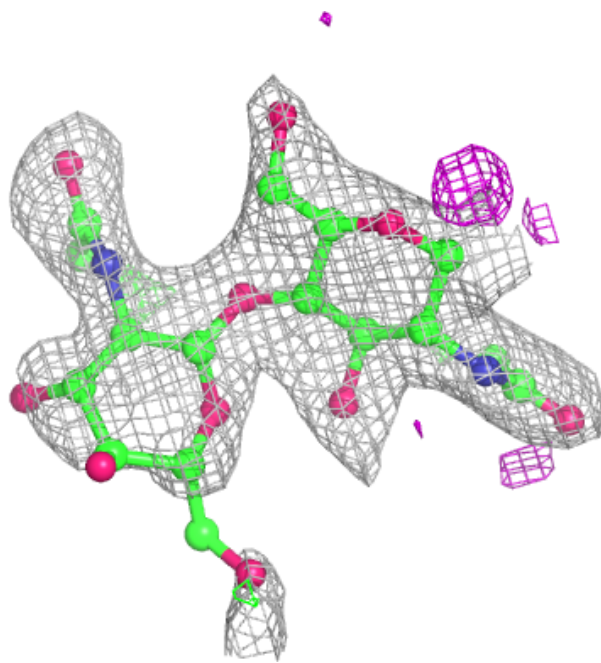
Electron density around Chain F:

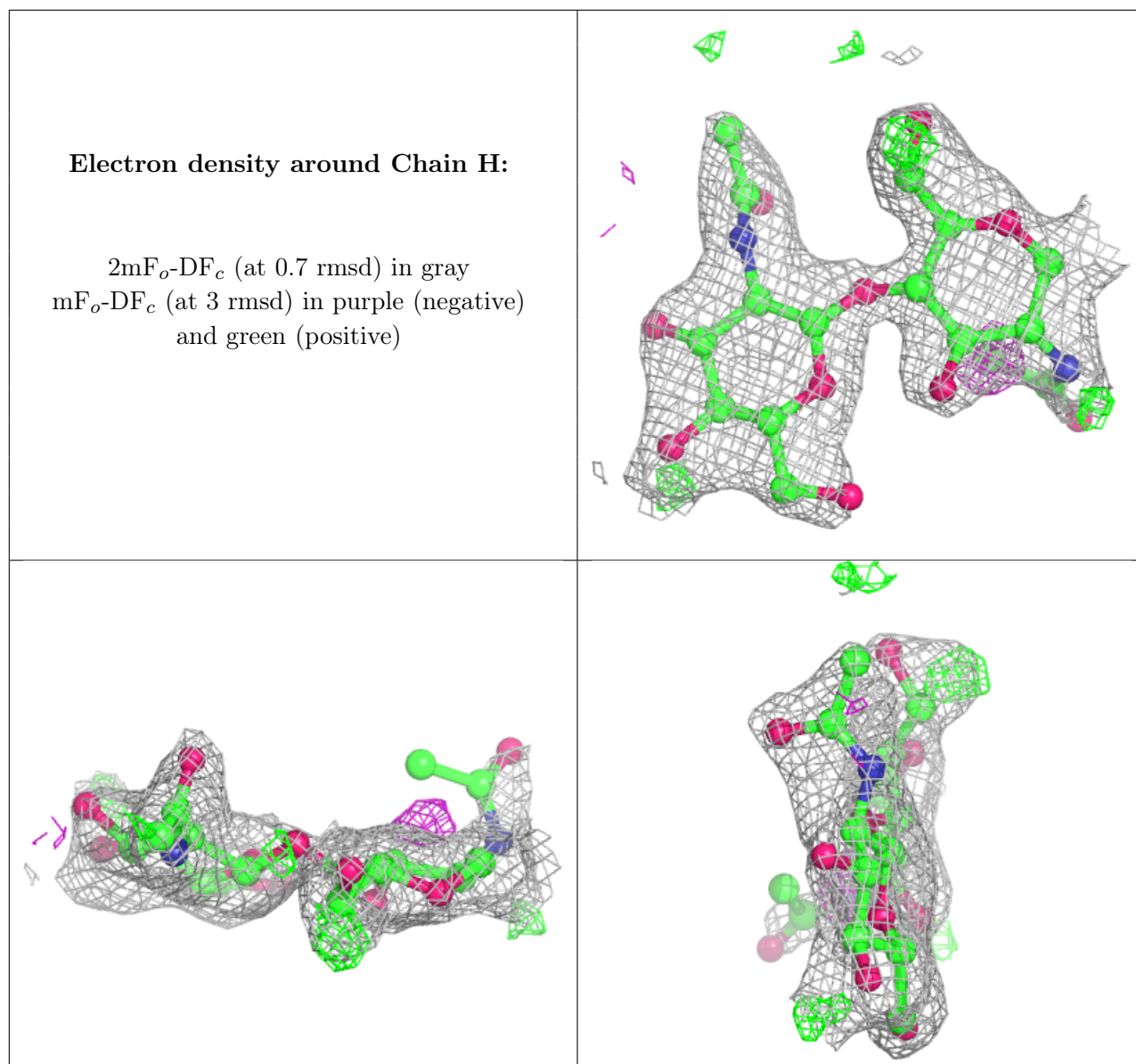
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around Chain G:

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





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
4	SO4	C	506	5/5	0.61	0.32	46,47,49,49	5
6	NAG	C	510	14/15	0.78	0.20	54,60,62,62	0
5	GOL	A	509	6/6	0.82	0.20	32,48,50,53	0
4	SO4	B	505	5/5	0.88	0.16	29,31,32,33	5
5	GOL	B	509	6/6	0.90	0.16	20,26,32,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
5	GOL	B	506	6/6	0.90	0.23	22,32,35,35	0
5	GOL	C	508	6/6	0.92	0.16	34,38,41,46	0
5	GOL	B	510	6/6	0.92	0.14	23,28,30,30	0
5	GOL	B	508	6/6	0.93	0.20	46,52,53,55	0
5	GOL	C	507	6/6	0.94	0.25	26,34,41,47	0
5	GOL	B	507	6/6	0.95	0.13	23,30,34,35	0
4	SO4	A	508	5/5	0.96	0.16	19,22,23,26	5
4	SO4	A	506	5/5	0.96	0.15	60,60,61,61	0
4	SO4	A	505	5/5	0.98	0.14	31,36,40,41	0
3	CU	C	503	1/1	0.99	0.07	26,26,26,26	0
4	SO4	C	505	5/5	0.99	0.12	21,26,28,29	0
4	SO4	A	507	5/5	0.99	0.14	19,22,26,28	0
3	CU	C	501	1/1	0.99	0.07	31,31,31,31	0
3	CU	A	501	1/1	1.00	0.08	19,19,19,19	0
3	CU	C	502	1/1	1.00	0.07	22,22,22,22	0
3	CU	A	502	1/1	1.00	0.07	15,15,15,15	0
3	CU	C	504	1/1	1.00	0.05	28,28,28,28	0
3	CU	A	503	1/1	1.00	0.08	19,19,19,19	0
3	CU	A	504	1/1	1.00	0.08	18,18,18,18	0
3	CU	B	501	1/1	1.00	0.07	20,20,20,20	0
3	CU	B	502	1/1	1.00	0.07	19,19,19,19	0
3	CU	B	503	1/1	1.00	0.07	23,23,23,23	0
3	CU	B	504	1/1	1.00	0.05	26,26,26,26	0

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

There are no such residues in this entry.