



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 8, 2026 – 03:31 PM UTC

PDB ID : 2AJC / pdb_00002ajc
Title : Porcine dipeptidyl peptidase IV (CD26) in complex with 4-(2-Aminoethyl)-b
enzyme sulphonyl fluoride (AEBSF)
Authors : Engel, M.; Hoffmann, T.; Manhart, S.; Heiser, U.; Chambre, S.; Huber, R.;
Demuth, H.U.; Bode, W.
Deposited on : 2005-08-01
Resolution : 1.95 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)
Xtriage (Phenix) : 2.0
EDS : 3.0
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

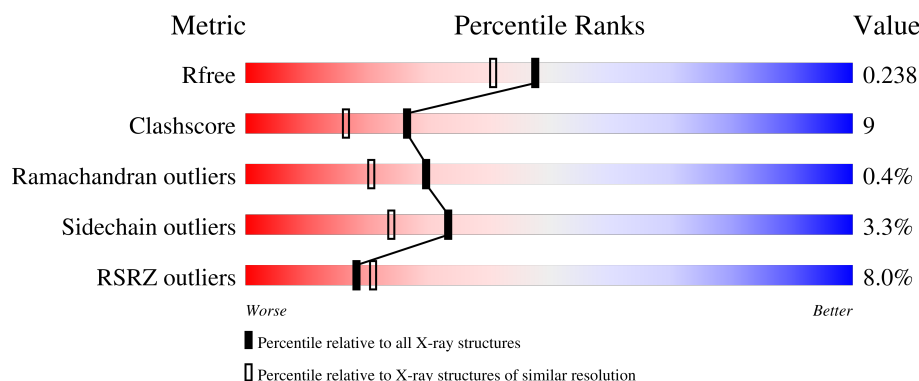
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.95 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.



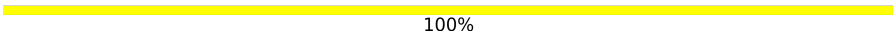
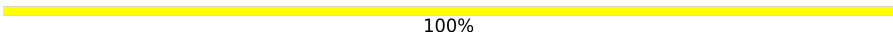
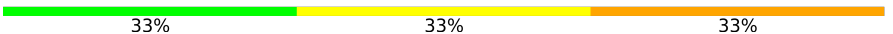
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3494 (1.96-1.96)
Clashscore	190562	3612 (1.96-1.96)
Ramachandran outliers	187476	3587 (1.96-1.96)
Sidechain outliers	187428	3587 (1.96-1.96)
RSRZ outliers	180081	3495 (1.96-1.96)

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	728	8% 80% 19% .
1	B	728	5% 78% 21% .
1	C	728	8% 78% 20% .
1	D	728	11% 75% 22% .
2	E	2	100%

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Mol	Chain	Length	Quality of chain
2	F	2	 50% 50%
2	H	2	 100%
2	I	2	 50% 50%
2	K	2	 100%
2	L	2	 100%
2	M	2	 50% 50%
3	G	3	 67% 33%
3	J	3	 33% 33% 33%

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 25912 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 Dipeptidyl peptidase 4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	728	Total	C	N	O	S	80	0	0
			5966	3825	986	1132	23			
1	B	728	Total	C	N	O	S	42	0	0
			5966	3825	986	1132	23			
1	C	728	Total	C	N	O	S	79	0	0
			5966	3825	986	1132	23			
1	D	728	Total	C	N	O	S	36	0	0
			5966	3825	986	1132	23			

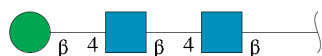
- Molecule 2 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	E	2	Total	C	N	O	0	0	0
			28	16	2	10			
2	F	2	Total	C	N	O	0	0	0
			28	16	2	10			
2	H	2	Total	C	N	O	0	0	0
			28	16	2	10			
2	I	2	Total	C	N	O	0	0	0
			28	16	2	10			
2	K	2	Total	C	N	O	0	0	0
			28	16	2	10			
2	L	2	Total	C	N	O	0	0	0
			28	16	2	10			
2	M	2	Total	C	N	O	0	0	0
			28	16	2	10			

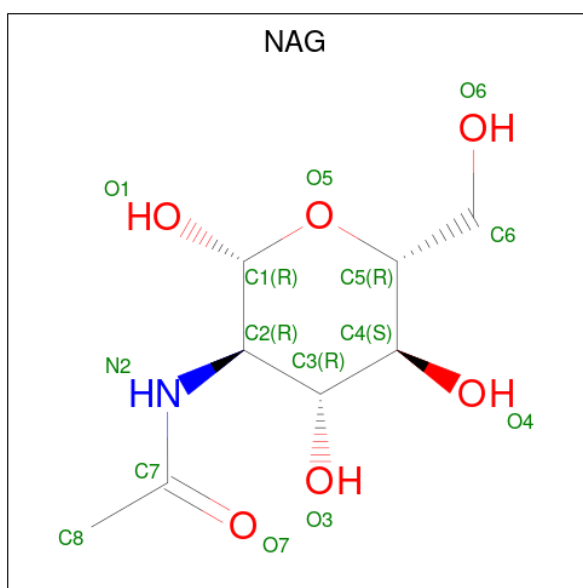
- Molecule 3 is an oligosaccharide called beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-b

eta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	G	3	Total	C	N	O	0	0	0
			39	22	2	15			
3	J	3	Total	C	N	O	0	0	0
			39	22	2	15			

- Molecule 4 is 2-acetamido-2-deoxy-beta-D-glucopyranose (CCD ID: NAG) (formula: $C_8H_{15}NO_6$).



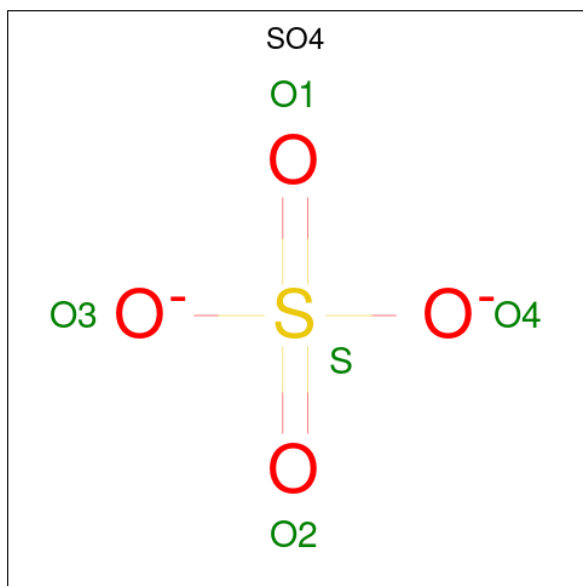
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	0
			14	8	1	5		
4	A	1	Total	C	N	O	0	0
			14	8	1	5		
4	A	1	Total	C	N	O	3	0
			14	8	1	5		
4	A	1	Total	C	N	O	0	0
			14	8	1	5		
4	B	1	Total	C	N	O	0	0
			14	8	1	5		
4	B	1	Total	C	N	O	0	0
			14	8	1	5		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	B	1	Total	C	N	O	0	0
			14	8	1	5		
4	B	1	Total	C	N	O	0	0
			14	8	1	5		
4	C	1	Total	C	N	O	0	0
			14	8	1	5		
4	C	1	Total	C	N	O	0	0
			14	8	1	5		
4	C	1	Total	C	N	O	0	0
			14	8	1	5		
4	C	1	Total	C	N	O	0	0
			14	8	1	5		
4	D	1	Total	C	N	O	0	0
			14	8	1	5		
4	D	1	Total	C	N	O	0	0
			14	8	1	5		

- Molecule 5 is SULFATE ION (CCD ID: SO4) (formula: O₄S).



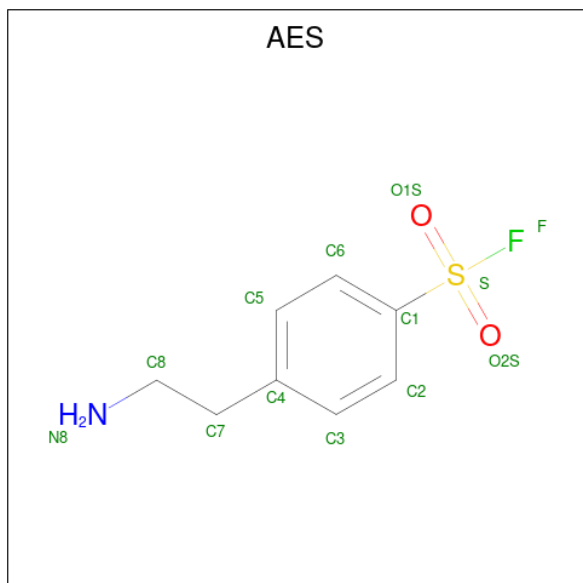
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	O	S	0	0
			5	4	1		
5	B	1	Total	O	S	0	0
			5	4	1		

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

- Molecule 6 is 4-(2-AMINOETHYL)BENZENESULFONYL FLUORIDE (CCD ID: AES) (formula: $C_8H_{10}FNO_2S$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	A	1	Total	C	N	O	S	0	0
			12	8	1	2	1		
6	B	1	Total	C	N	O	S	0	0
			12	8	1	2	1		
6	C	1	Total	C	N	O	S	0	0
			12	8	1	2	1		
6	D	1	Total	C	N	O	S	0	0
			12	8	1	2	1		

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	354	Total	O	0	0
			354	354		
7	B	433	Total	O	0	0
			433	433		
7	C	385	Total	O	0	0
			385	385		

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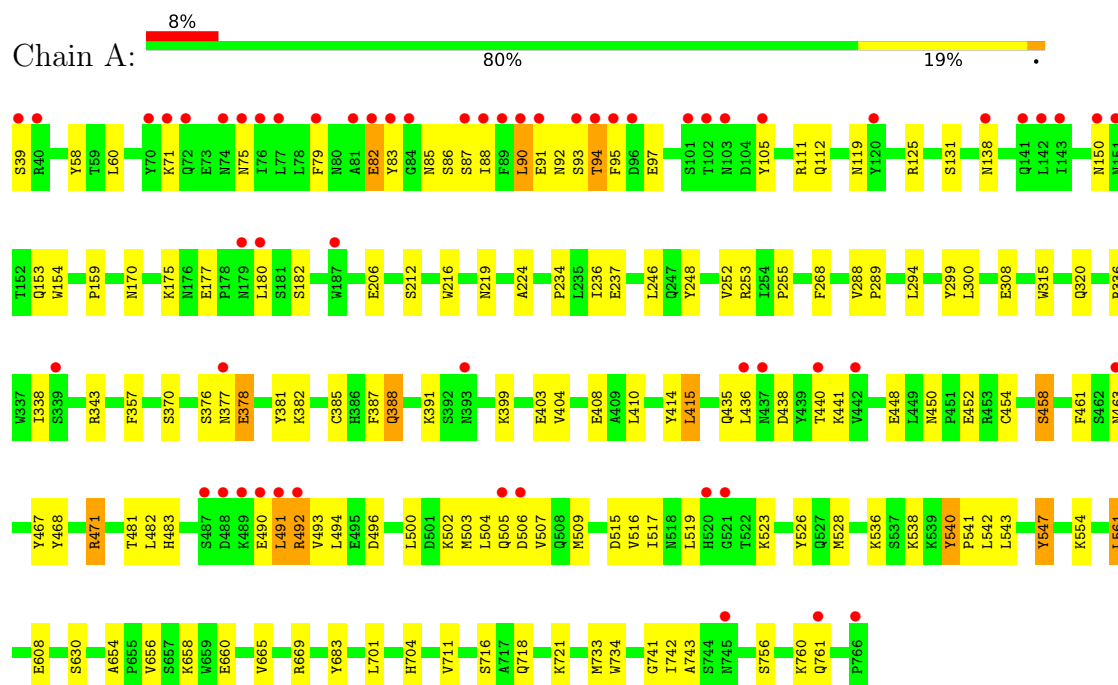
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	D	324	Total 324	O 324	0	0

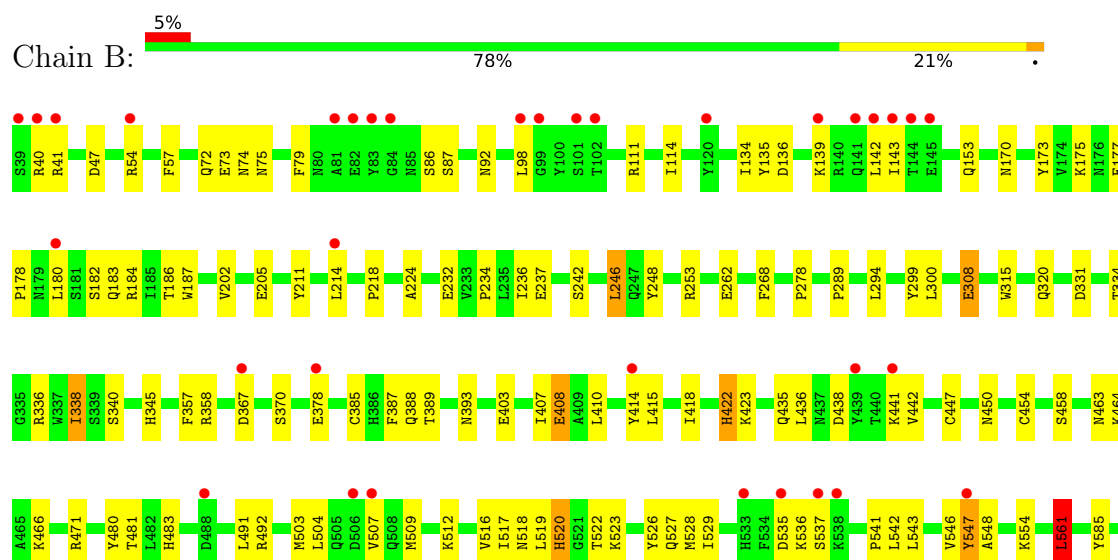
3 Residue-property plots [i](#)

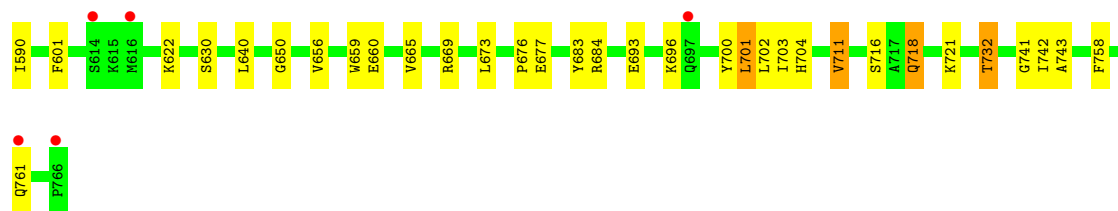
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: Dipeptidyl peptidase 4

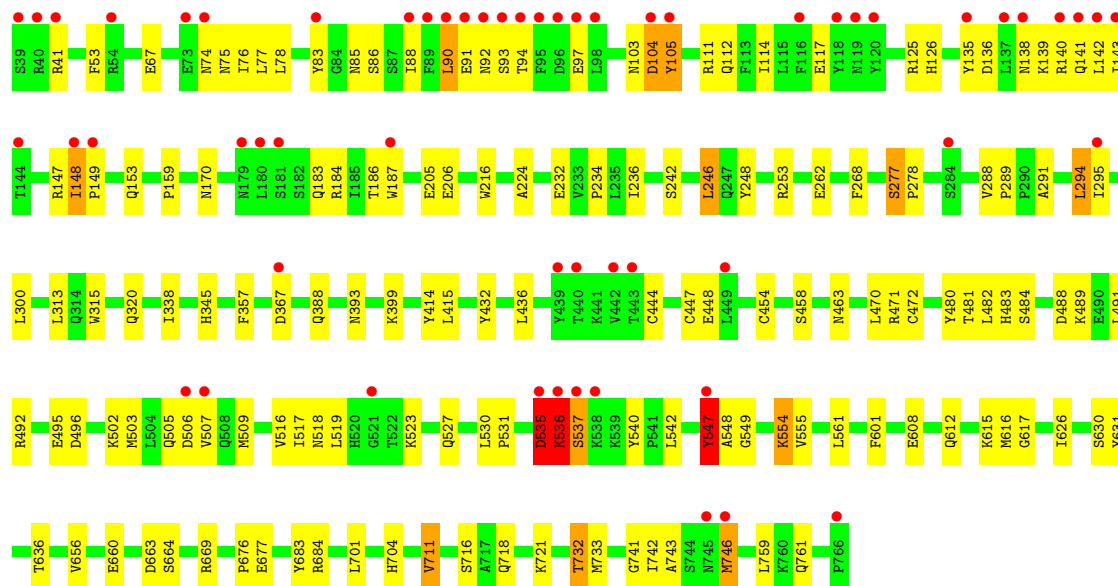
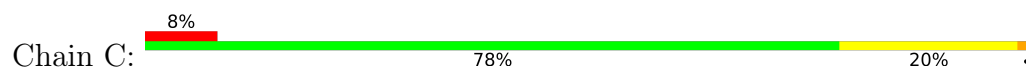


• Molecule 1: Dipeptidyl peptidase 4

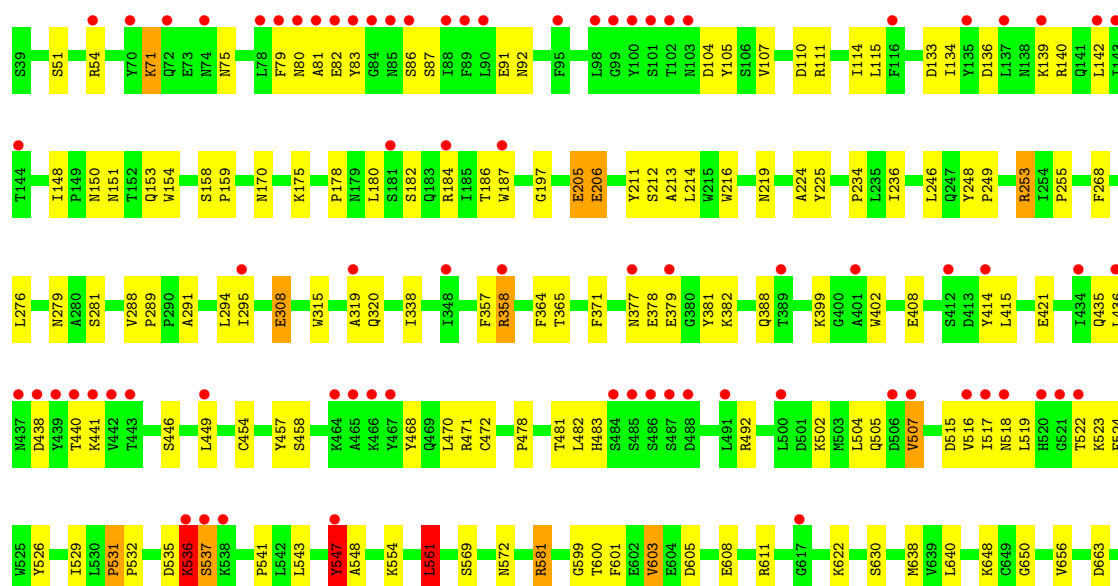
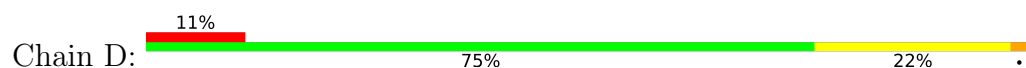


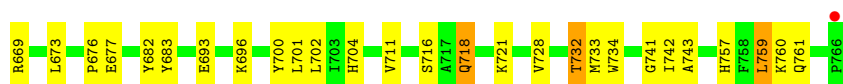


● Molecule 1: Dipeptidyl peptidase 4

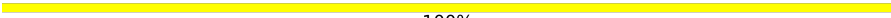


● Molecule 1: Dipeptidyl peptidase 4





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

Chain E:  100%



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

Chain F:  50% 50%



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

Chain H:  100%

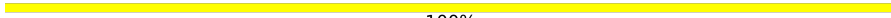


- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain I:  50% 50%



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

Chain K:  100%



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

Chain L:  100%



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

Chain M:  50% 50%

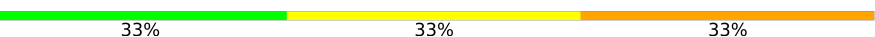


- Molecule 3: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain G:  67% 33%



- Molecule 3: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain J:  33% 33% 33%



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	62.35Å 118.68Å 133.68Å 112.76° 95.16° 90.95°	Depositor
Resolution (Å)	39.90 – 1.95 39.90 – 1.95	Depositor EDS
% Data completeness (in resolution range)	96.6 (39.90-1.95) 96.7 (39.90-1.95)	Depositor EDS
R_{merge}	0.04	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.60 (at 1.95Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.202 , 0.234 0.208 , 0.238	Depositor DCC
R_{free} test set	12343 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å ²)	26.7	Xtriage
Anisotropy	0.362	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 47.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.52$, $\langle L^2 \rangle = 0.35$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	25912	wwPDB-VP
Average B, all atoms (Å ²)	33.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.66% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: SO4, NAG, AES, BMA

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	0.66	0/6141	1.00	26/8353 (0.3%)
1	B	0.68	1/6141 (0.0%)	1.02	25/8353 (0.3%)
1	C	0.66	0/6141	1.03	30/8353 (0.4%)
1	D	0.63	3/6141 (0.0%)	0.99	24/8353 (0.3%)
All	All	0.66	4/24564 (0.0%)	1.01	105/33412 (0.3%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	2
1	D	0	2
All	All	0	4

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	531	PRO	CA-C	6.47	1.55	1.51
1	B	202	VAL	CA-CB	5.56	1.61	1.54
1	D	638	MET	SD-CE	5.26	1.92	1.79
1	D	733	MET	SD-CE	-5.06	1.66	1.79

All (105) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	463	ASN	N-CA-C	9.82	123.21	111.33
1	D	536	LYS	N-CA-C	-8.88	98.88	110.33
1	B	656	VAL	N-CA-C	-8.77	97.28	109.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	656	VAL	N-CA-C	-8.14	98.14	109.21
1	D	656	VAL	N-CA-C	-7.94	98.59	109.55
1	C	617	GLY	N-CA-C	7.90	123.36	114.67
1	D	378	GLU	N-CA-C	-7.66	103.91	113.18
1	A	458	SER	N-CA-C	-7.58	97.88	109.41
1	C	683	TYR	N-CA-C	-7.50	103.05	111.14
1	C	300	LEU	N-CA-C	-7.38	97.21	109.24
1	C	743	ALA	N-CA-C	7.30	122.37	113.17
1	C	105	TYR	N-CA-C	7.23	119.90	110.43
1	D	255	PRO	N-CA-C	-7.22	99.16	110.50
1	D	319	ALA	N-CA-C	-7.01	96.17	108.23
1	A	656	VAL	N-CA-C	-6.93	99.78	109.21
1	A	630	SER	CB-CA-C	-6.92	107.81	117.23
1	B	358	ARG	N-CA-C	-6.79	102.02	108.13
1	D	601	PHE	N-CA-C	6.79	118.68	111.28
1	D	206	GLU	N-CA-C	6.76	122.51	113.72
1	C	537	SER	N-CA-C	-6.75	105.20	113.50
1	B	338	ILE	N-CA-C	6.75	118.01	108.36
1	C	41	ARG	N-CA-C	6.73	118.68	110.41
1	D	236	ILE	N-CA-C	-6.71	98.67	108.87
1	B	205	GLU	N-CA-C	6.71	118.67	111.36
1	C	458	SER	N-CA-C	-6.68	99.17	109.52
1	D	630	SER	CB-CA-C	-6.65	108.19	117.23
1	C	148	ILE	CA-C-N	6.59	126.61	119.89
1	C	148	ILE	C-N-CA	6.59	126.61	119.89
1	B	98	LEU	N-CA-C	6.57	118.52	111.36
1	B	743	ALA	N-CA-C	6.49	121.35	113.17
1	C	205	GLU	N-CA-C	6.48	118.42	111.36
1	D	388	GLN	N-CA-C	-6.46	98.71	109.24
1	C	236	ILE	N-CA-C	-6.40	99.14	108.87
1	C	601	PHE	N-CA-C	6.34	118.19	111.28
1	A	236	ILE	N-CA-C	-6.31	99.28	108.87
1	A	94	THR	N-CA-C	-6.31	105.30	112.87
1	C	664	SER	N-CA-C	6.30	117.81	111.07
1	D	683	TYR	N-CA-C	-6.24	104.01	111.69
1	D	529	ILE	N-CA-C	-6.18	98.31	107.51
1	A	454	CYS	N-CA-C	6.17	118.82	108.02
1	D	458	SER	N-CA-C	-6.17	99.95	109.52
1	C	630	SER	CB-CA-C	-6.14	108.88	117.23
1	B	458	SER	N-CA-C	-6.13	100.02	109.52
1	B	601	PHE	N-CA-C	6.08	117.90	111.28
1	D	743	ALA	N-CA-C	6.07	121.44	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	548	ALA	N-CA-C	6.03	120.58	113.23
1	A	338	ILE	N-CA-C	5.97	117.19	108.53
1	A	450	ASN	CA-C-N	5.95	126.10	119.32
1	A	450	ASN	C-N-CA	5.95	126.10	119.32
1	C	547	TYR	N-CA-C	-5.92	98.19	110.80
1	B	683	TYR	N-CA-C	-5.89	104.94	111.36
1	B	659	TRP	N-CA-C	5.88	118.47	111.71
1	B	684	ARG	N-CA-C	5.81	117.69	111.36
1	C	91	GLU	N-CA-C	5.80	117.82	110.33
1	B	388	GLN	N-CA-C	-5.79	100.23	109.96
1	D	338	ILE	N-CA-C	5.78	117.32	108.71
1	D	541	PRO	N-CA-C	-5.76	102.77	111.41
1	B	236	ILE	N-CA-C	-5.73	100.15	108.87
1	D	561	LEU	N-CA-C	-5.72	97.12	107.75
1	B	529	ILE	N-CA-C	-5.70	99.02	107.51
1	A	206	GLU	N-CA-C	5.69	121.25	113.97
1	D	148	ILE	N-CA-C	-5.67	103.75	109.02
1	C	531	PRO	CA-C-N	5.67	125.62	119.78
1	C	531	PRO	C-N-CA	5.67	125.62	119.78
1	C	447	CYS	N-CA-C	5.66	118.18	111.33
1	B	454	CYS	N-CA-C	5.65	117.91	108.02
1	B	711	VAL	N-CA-C	-5.64	98.30	106.88
1	A	378	GLU	N-CA-C	-5.59	105.96	112.89
1	A	683	TYR	N-CA-C	-5.56	105.30	111.36
1	A	388	GLN	N-CA-C	-5.56	100.24	109.46
1	D	205	GLU	N-CA-C	5.55	117.41	111.36
1	C	616	MET	N-CA-C	-5.53	102.84	110.35
1	D	547	TYR	N-CA-C	-5.49	99.10	110.80
1	A	743	ALA	N-CA-C	5.47	120.11	113.38
1	C	454	CYS	N-CA-C	5.47	117.76	108.02
1	B	541	PRO	N-CA-C	-5.44	103.26	111.41
1	D	158	SER	N-CA-C	-5.38	101.15	109.87
1	B	300	LEU	N-CA-C	-5.37	100.54	109.46
1	B	447	CYS	N-CA-C	5.36	117.81	111.33
1	D	548	ALA	N-CA-C	5.35	121.00	113.56
1	A	541	PRO	N-CA-C	-5.35	103.39	111.41
1	A	540	TYR	N-CA-C	5.30	116.75	110.07
1	C	711	VAL	N-CA-C	-5.30	98.83	106.88
1	C	492	ARG	N-CA-C	5.28	116.56	108.42
1	A	300	LEU	N-CA-C	-5.26	100.59	108.96
1	C	388	GLN	N-CA-C	-5.23	100.71	109.24
1	A	255	PRO	N-CA-C	-5.23	102.29	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	548	ALA	N-CA-C	5.19	120.78	113.56
1	D	365	THR	N-CA-C	-5.18	103.69	110.53
1	A	403	GLU	N-CA-C	5.16	117.66	109.50
1	A	376	SER	CA-C-N	5.15	130.25	121.29
1	A	376	SER	C-N-CA	5.15	130.25	121.29
1	C	338	ILE	N-CA-C	5.14	115.72	108.36
1	B	54	ARG	N-CA-C	5.14	117.11	109.25
1	A	288	VAL	CA-C-N	-5.13	115.10	120.38
1	A	288	VAL	C-N-CA	-5.13	115.10	120.38
1	A	404	VAL	N-CA-C	-5.11	102.15	108.89
1	D	281	SER	N-CA-C	-5.09	103.33	110.35
1	C	530	LEU	N-CA-C	5.09	117.00	109.62
1	B	422	HIS	N-CA-C	5.08	117.93	110.30
1	B	546	VAL	N-CA-C	5.03	115.95	108.46
1	B	561	LEU	N-CA-C	-5.02	98.42	107.75
1	B	408	GLU	N-CA-C	5.00	119.52	113.41
1	C	684	ARG	N-CA-C	5.00	116.73	111.28
1	A	561	LEU	N-CA-C	-5.00	97.77	107.62

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	211	TYR	Sidechain
1	B	700	TYR	Sidechain
1	D	211	TYR	Sidechain
1	D	700	TYR	Sidechain

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	5966	0	5662	94	0
1	B	5966	0	5662	109	0
1	C	5966	0	5661	126	0
1	D	5966	0	5662	120	0
2	E	28	0	25	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	F	28	0	25	0	0
2	H	28	0	25	0	0
2	I	28	0	25	0	0
2	K	28	0	25	0	0
2	L	28	0	25	0	0
2	M	28	0	25	1	0
3	G	39	0	34	0	0
3	J	39	0	34	1	0
4	A	56	0	52	1	0
4	B	56	0	52	1	0
4	C	70	0	65	3	0
4	D	28	0	26	2	0
5	A	5	0	0	0	0
5	B	5	0	0	0	0
5	C	5	0	0	0	0
5	D	5	0	0	0	0
6	A	12	0	10	1	0
6	B	12	0	10	1	0
6	C	12	0	10	2	0
6	D	12	0	10	2	0
7	A	354	0	0	4	0
7	B	433	0	0	7	0
7	C	385	0	0	7	0
7	D	324	0	0	5	0
All	All	25912	0	23125	435	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 9.

All (435) 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:536:LYS:HG2	1:C:537:SER:H	1.19	1.00
1:C:516:VAL:HG11	1:C:523:LYS:HB2	1.42	0.98
1:D:320:GLN:OE1	1:D:669:ARG:HD3	1.71	0.89
1:C:320:GLN:OE1	1:C:669:ARG:HD3	1.72	0.88
1:A:492:ARG:HH21	1:A:492:ARG:HB3	1.37	0.88
1:B:320:GLN:OE1	1:B:669:ARG:HD3	1.75	0.87
1:A:253:ARG:NH2	1:B:253:ARG:HH21	1.72	0.86
1:D:536:LYS:O	1:D:537:SER:HB2	1.74	0.86
1:C:76:ILE:HB	1:C:90:LEU:CD1	2.08	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:291:ALA:O	1:D:295:ILE:HG13	1.77	0.83
1:C:612:GLN:O	1:C:615:LYS:HG2	1.79	0.83
1:C:76:ILE:HD12	1:C:90:LEU:HD11	1.60	0.82
1:B:378:GLU:CD	1:B:378:GLU:H	1.88	0.81
1:D:153:GLN:HE22	1:D:170:ASN:ND2	1.78	0.80
1:C:676:PRO:HG2	1:C:677:GLU:OE2	1.82	0.80
1:C:253:ARG:HH21	1:D:253:ARG:HH22	1.25	0.80
1:B:407:ILE:HG23	1:B:415:LEU:HD21	1.66	0.78
1:B:184:ARG:HD3	1:B:186:THR:O	1.84	0.77
1:D:75:ASN:ND2	1:D:92:ASN:H	1.82	0.77
1:C:704:HIS:HD2	1:C:716:SER:OG	1.69	0.76
1:A:153:GLN:HE22	1:A:170:ASN:ND2	1.82	0.76
1:A:547:TYR:HB3	1:A:554:LYS:HG2	1.66	0.76
1:A:492:ARG:HB3	1:A:492:ARG:NH2	2.01	0.74
1:A:408:GLU:HG2	7:A:1767:HOH:O	1.86	0.74
1:A:75:ASN:HB3	1:A:92:ASN:N	2.03	0.74
1:B:526:TYR:HE1	1:B:528:MET:HE2	1.53	0.74
1:D:504:LEU:HA	1:D:507:VAL:HG12	1.70	0.74
1:B:177:GLU:HB2	1:B:180:LEU:HD23	1.68	0.73
1:C:481:THR:OG1	1:C:483:HIS:HE1	1.71	0.73
1:A:438:ASP:HB3	1:A:441:LYS:HD2	1.71	0.73
1:C:184:ARG:HD3	1:C:186:THR:O	1.89	0.72
1:D:516:VAL:HG11	1:D:523:LYS:HB2	1.71	0.72
1:A:410:LEU:HD13	1:A:415:LEU:HD23	1.71	0.72
1:C:291:ALA:O	1:C:295:ILE:HG13	1.89	0.72
1:C:536:LYS:HG2	1:C:537:SER:N	1.98	0.72
1:C:111:ARG:HD2	7:C:1843:HOH:O	1.91	0.71
1:C:535:ASP:C	1:C:536:LYS:HD3	2.17	0.70
1:D:693:GLU:HG3	7:D:1662:HOH:O	1.92	0.69
1:C:153:GLN:HE22	1:C:170:ASN:ND2	1.90	0.69
1:C:313:LEU:N	1:C:313:LEU:HD12	2.07	0.69
1:D:696:LYS:HG3	1:D:728:VAL:HG22	1.74	0.69
1:B:693:GLU:OE1	1:B:696:LYS:HE3	1.92	0.68
1:B:111:ARG:HD2	7:B:1783:HOH:O	1.94	0.68
1:A:435:GLN:NE2	1:A:441:LYS:HD3	2.09	0.68
1:A:75:ASN:HD22	1:A:92:ASN:ND2	1.92	0.67
1:A:82:GLU:HG2	1:A:467:TYR:OH	1.95	0.67
1:B:422:HIS:CD2	1:B:423:LYS:HD3	2.29	0.67
1:A:320:GLN:OE1	1:A:669:ARG:HD3	1.95	0.67
1:C:519:LEU:HD22	1:C:608:GLU:OE1	1.95	0.66
1:A:481:THR:OG1	1:A:483:HIS:HE1	1.79	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:136:ASP:CG	1:B:139:LYS:HG2	2.21	0.66
1:D:704:HIS:HD2	1:D:716:SER:OG	1.79	0.66
1:B:334:THR:OG1	1:B:336:ARG:HG2	1.96	0.66
1:B:153:GLN:HE22	1:B:170:ASN:ND2	1.94	0.65
1:C:746:MET:H	1:C:746:MET:CE	2.10	0.65
1:D:414:TYR:HA	1:D:436:LEU:HD13	1.79	0.65
1:C:502:LYS:O	1:C:505:GLN:HG2	1.96	0.65
1:C:516:VAL:CG1	1:C:523:LYS:HB2	2.24	0.65
1:D:547:TYR:HB3	1:D:554:LYS:HG2	1.77	0.65
1:A:111:ARG:HD2	7:A:1819:HOH:O	1.97	0.64
1:A:388:GLN:HB2	1:A:391:LYS:HB2	1.79	0.64
1:D:136:ASP:CG	1:D:139:LYS:HG2	2.22	0.64
1:D:153:GLN:HE22	1:D:170:ASN:HD22	1.42	0.64
1:C:746:MET:H	1:C:746:MET:HE2	1.62	0.64
1:C:253:ARG:HH21	1:D:253:ARG:NH2	1.96	0.63
1:C:139:LYS:HD3	1:C:141:GLN:NE2	2.14	0.63
1:D:184:ARG:HD3	1:D:186:THR:O	1.98	0.63
1:C:76:ILE:HB	1:C:90:LEU:HD13	1.80	0.63
1:B:704:HIS:HD2	1:B:716:SER:OG	1.81	0.63
1:C:519:LEU:HD22	1:C:608:GLU:CD	2.24	0.63
1:B:75:ASN:ND2	1:B:92:ASN:H	1.97	0.63
1:C:536:LYS:CG	1:C:537:SER:H	1.99	0.62
1:D:175:LYS:CG	1:D:182:SER:HB3	2.30	0.62
1:D:640:LEU:HD11	1:D:650:GLY:HA3	1.80	0.62
1:C:232:GLU:HB3	1:C:262:GLU:HG2	1.82	0.62
1:C:288:VAL:HG13	1:C:289:PRO:HD2	1.81	0.62
1:D:75:ASN:HD22	1:D:91:GLU:HA	1.65	0.62
1:B:177:GLU:CB	1:B:180:LEU:HD23	2.29	0.62
1:C:535:ASP:C	1:C:536:LYS:CD	2.73	0.61
1:C:536:LYS:HD3	1:C:536:LYS:N	2.15	0.61
1:A:414:TYR:HA	1:A:436:LEU:HD13	1.82	0.61
1:C:535:ASP:O	1:C:536:LYS:HB3	1.99	0.61
1:D:504:LEU:HA	1:D:507:VAL:CG1	2.29	0.61
1:C:733:MET:HA	1:D:732:THR:HG22	1.81	0.61
1:C:733:MET:HA	1:D:732:THR:CG2	2.31	0.60
1:D:718:GLN:HA	1:D:718:GLN:HE21	1.65	0.60
1:B:407:ILE:CG2	1:B:415:LEU:HD21	2.32	0.60
1:B:481:THR:OG1	1:B:483:HIS:HE1	1.84	0.60
1:B:438:ASP:OD2	1:B:441:LYS:HE3	2.01	0.60
1:C:153:GLN:HE22	1:C:170:ASN:HD22	1.49	0.59
1:D:377:ASN:HB3	1:D:379:GLU:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:92:ASN:C	1:A:94:THR:H	2.10	0.59
1:B:218:PRO:HD2	1:B:308:GLU:OE2	2.02	0.59
1:A:88:ILE:HG21	1:A:91:GLU:HG2	1.85	0.59
1:D:543:LEU:HD22	1:D:759:LEU:HD11	1.84	0.59
1:B:410:LEU:HD13	1:B:415:LEU:HD23	1.85	0.59
1:C:53:PHE:CD1	1:C:503:MET:HG2	2.37	0.59
1:C:104:ASP:HB3	1:C:117:GLU:HB3	1.85	0.59
1:C:253:ARG:NH2	1:D:253:ARG:HH22	2.00	0.59
1:D:357:PHE:CE1	6:D:801:AES:H2	2.38	0.58
1:A:87:SER:OG	4:A:767(A):NAG:H81	2.04	0.58
1:C:547:TYR:HB3	1:C:554:LYS:HG2	1.85	0.58
1:C:718:GLN:HE22	1:C:721:LYS:NZ	2.02	0.58
1:D:676:PRO:HG2	1:D:677:GLU:OE1	2.03	0.58
1:D:481:THR:OG1	1:D:483:HIS:HE1	1.85	0.58
1:D:536:LYS:NZ	1:D:536:LYS:HB3	2.19	0.58
1:B:408:GLU:HG2	7:B:1639:HOH:O	2.02	0.58
1:B:503:MET:HE1	7:B:1743:HOH:O	2.03	0.58
1:B:718:GLN:HA	1:B:718:GLN:HE21	1.67	0.58
1:C:242:SER:HB3	1:C:246:LEU:HD12	1.85	0.58
1:A:248:TYR:CZ	1:B:234:PRO:HB2	2.39	0.58
1:A:377:ASN:HB2	1:A:381:TYR:O	2.04	0.58
1:A:175:LYS:HG3	1:A:182:SER:HB3	1.86	0.57
1:A:704:HIS:HD2	1:A:716:SER:OG	1.87	0.57
1:A:175:LYS:CG	1:A:182:SER:HB3	2.35	0.57
1:B:357:PHE:CE1	6:B:801:AES:H2	2.40	0.57
1:C:139:LYS:HD3	1:C:141:GLN:CD	2.30	0.57
1:D:408:GLU:HG2	7:D:1571:HOH:O	2.04	0.57
1:B:718:GLN:HE22	1:B:721:LYS:NZ	2.03	0.57
1:B:57:PHE:HA	1:B:480:TYR:CE1	2.40	0.57
1:B:526:TYR:CE1	1:B:528:MET:HE2	2.37	0.57
1:A:504:LEU:HA	1:A:507:VAL:HG12	1.87	0.56
1:B:422:HIS:NE2	1:B:423:LYS:HD3	2.20	0.56
1:D:536:LYS:O	1:D:537:SER:CB	2.48	0.56
1:D:718:GLN:HE22	1:D:721:LYS:NZ	2.03	0.56
1:B:741:GLY:O	1:B:742:ILE:C	2.48	0.56
1:B:640:LEU:HD11	1:B:650:GLY:HA3	1.87	0.56
1:D:288:VAL:CG1	1:D:289:PRO:HD2	2.35	0.56
3:J:1:NAG:H62	3:J:2:NAG:HN2	1.70	0.56
1:A:502:LYS:O	1:A:505:GLN:HG2	2.06	0.56
1:B:73:GLU:OE2	1:B:73:GLU:HA	2.05	0.56
1:D:184:ARG:HD2	1:D:187:TRP:CE2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:458:SER:OG	1:A:471:ARG:HD3	2.05	0.56
1:D:133:ASP:HB3	1:D:142:LEU:HD21	1.87	0.56
1:D:600:THR:O	1:D:603:VAL:HG13	2.06	0.55
1:B:175:LYS:CG	1:B:182:SER:HB3	2.36	0.55
1:B:224:ALA:HB1	1:B:268:PHE:CZ	2.41	0.55
1:C:53:PHE:CE1	1:C:503:MET:HG2	2.42	0.55
1:B:41:ARG:NH1	1:B:47:ASP:OD1	2.40	0.55
1:A:39:SER:HA	1:A:506:ASP:OD2	2.06	0.55
1:D:599:GLY:O	1:D:603:VAL:HG11	2.07	0.55
1:B:232:GLU:HB3	1:B:262:GLU:HG2	1.89	0.55
1:D:134:ILE:HG21	1:D:178:PRO:HB3	1.89	0.55
1:A:112:GLN:HG2	1:A:138:ASN:HD21	1.71	0.54
1:A:131:SER:OG	1:A:150:ASN:ND2	2.40	0.54
1:D:518:ASN:O	1:D:519:LEU:HD23	2.07	0.54
1:B:418:ILE:HD11	7:B:1506:HOH:O	2.06	0.54
1:C:139:LYS:O	1:C:141:GLN:HG3	2.07	0.54
1:D:175:LYS:HG3	1:D:182:SER:HB3	1.89	0.54
1:B:516:VAL:HG11	1:B:523:LYS:HB2	1.90	0.54
1:B:677:GLU:CD	1:B:677:GLU:H	2.16	0.54
1:B:414:TYR:HA	1:B:436:LEU:HD13	1.89	0.54
1:D:288:VAL:HG13	1:D:289:PRO:HD2	1.90	0.54
1:A:153:GLN:HE22	1:A:170:ASN:HD22	1.53	0.54
1:C:519:LEU:HD13	1:C:608:GLU:OE1	2.07	0.54
1:B:175:LYS:HG2	1:B:182:SER:HB3	1.90	0.53
1:A:519:LEU:HD22	1:A:608:GLU:OE2	2.09	0.53
1:D:289:PRO:HB3	1:D:315:TRP:CD2	2.43	0.53
1:A:526:TYR:HE1	1:A:528:MET:HE2	1.74	0.53
1:C:114:ILE:HG22	1:C:135:TYR:HB3	1.91	0.53
1:C:136:ASP:CG	1:C:139:LYS:HG2	2.34	0.53
1:D:516:VAL:HG12	1:D:517:ILE:N	2.24	0.53
1:A:93:SER:C	1:A:95:PHE:N	2.65	0.52
1:D:79:PHE:CD1	1:D:86:SER:HB3	2.44	0.52
1:C:75:ASN:ND2	1:C:92:ASN:H	2.07	0.52
1:A:482:LEU:O	1:A:490:GLU:O	2.27	0.52
1:D:472:CYS:O	1:D:478:PRO:HA	2.10	0.52
1:B:676:PRO:HG2	1:B:677:GLU:OE2	2.09	0.52
1:C:357:PHE:CE1	6:C:801:AES:H2	2.44	0.52
1:B:464:LYS:HE2	1:B:466:LYS:HE2	1.92	0.52
1:D:71:LYS:HA	1:D:75:ASN:O	2.10	0.52
1:D:677:GLU:OE1	1:D:677:GLU:N	2.41	0.52
1:B:660:GLU:OE2	7:B:1543:HOH:O	2.19	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:114:ILE:CG2	1:C:135:TYR:HB3	2.40	0.52
1:C:718:GLN:HE22	1:C:721:LYS:HZ1	1.57	0.51
1:D:741:GLY:O	1:D:742:ILE:C	2.53	0.51
1:B:214:LEU:HD12	1:B:214:LEU:O	2.11	0.51
1:C:253:ARG:NH2	1:D:253:ARG:NH2	2.57	0.51
1:D:105:TYR:HB2	1:D:114:ILE:HD11	1.92	0.51
1:D:535:ASP:C	1:D:536:LYS:O	2.48	0.51
1:B:175:LYS:NZ	1:B:178:PRO:HA	2.26	0.51
1:B:378:GLU:CD	1:B:378:GLU:N	2.65	0.51
1:A:741:GLY:O	1:A:742:ILE:C	2.54	0.51
1:B:758:PHE:O	1:B:761:GLN:HG2	2.10	0.51
1:C:248:TYR:CZ	1:D:234:PRO:HB2	2.45	0.51
1:D:536:LYS:HB3	1:D:536:LYS:HZ3	1.74	0.51
1:D:718:GLN:HE22	1:D:721:LYS:HZ1	1.59	0.51
1:D:757:HIS:O	1:D:761:GLN:HG2	2.11	0.51
1:C:90:LEU:HD13	1:C:90:LEU:O	2.11	0.51
1:A:435:GLN:HE22	1:A:441:LYS:HD3	1.76	0.50
1:C:527:GLN:HB3	1:C:555:VAL:HG13	1.94	0.50
1:A:93:SER:C	1:A:95:PHE:H	2.20	0.50
1:D:516:VAL:HG13	1:D:524:PHE:O	2.12	0.50
1:A:125:ARG:HB3	7:A:1596:HOH:O	2.11	0.50
1:B:522:THR:HG21	1:B:590:ILE:HD11	1.92	0.50
1:D:154:TRP:CE2	1:D:212:SER:HB3	2.46	0.50
1:A:507:VAL:HG13	1:A:509:MET:HG2	1.93	0.50
1:B:704:HIS:HE1	1:B:711:VAL:O	1.95	0.50
1:C:67:GLU:HB3	1:C:78:LEU:HD11	1.94	0.50
1:B:516:VAL:HG11	1:B:523:LYS:HD2	1.94	0.50
1:C:491:LEU:N	1:C:491:LEU:HD22	2.27	0.50
1:C:612:GLN:HA	1:C:615:LYS:HD3	1.94	0.49
1:A:299:TYR:CZ	1:A:665:VAL:HG22	2.47	0.49
1:B:504:LEU:HA	1:B:507:VAL:HG12	1.94	0.49
1:B:79:PHE:CD1	1:B:86:SER:HB3	2.48	0.49
1:C:289:PRO:HB3	1:C:315:TRP:CD2	2.47	0.49
1:C:547:TYR:CB	1:C:554:LYS:HG2	2.43	0.49
1:D:504:LEU:HD23	1:D:507:VAL:HG11	1.94	0.49
1:C:704:HIS:CD2	1:C:716:SER:OG	2.57	0.49
1:C:741:GLY:O	1:C:742:ILE:C	2.55	0.49
1:A:75:ASN:HB3	1:A:92:ASN:H	1.75	0.49
1:B:415:LEU:HD13	1:B:415:LEU:C	2.38	0.49
1:A:71:LYS:HE3	1:A:105:TYR:CD2	2.48	0.49
1:B:153:GLN:HE22	1:B:170:ASN:HD22	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:345:HIS:HD2	7:B:1522:HOH:O	1.96	0.49
1:A:159:PRO:HD3	1:A:216:TRP:CB	2.43	0.49
1:A:492:ARG:HH21	1:A:492:ARG:CB	2.19	0.49
1:D:547:TYR:CB	1:D:554:LYS:HG2	2.43	0.49
1:B:693:GLU:OE1	1:B:696:LYS:CE	2.61	0.48
1:D:159:PRO:HD3	1:D:216:TRP:HB3	1.95	0.48
1:D:224:ALA:HB1	1:D:268:PHE:CZ	2.48	0.48
1:D:581:ARG:HB2	1:D:605:ASP:OD2	2.12	0.48
1:C:518:ASN:O	1:C:519:LEU:HD23	2.13	0.48
1:B:370:SER:HB2	1:B:387:PHE:O	2.14	0.48
1:C:86:SER:HA	4:C:767(A):NAG:H81	1.95	0.48
1:C:357:PHE:CZ	6:C:801:AES:H2	2.48	0.48
1:D:502:LYS:O	1:D:505:GLN:HG2	2.13	0.48
1:A:83:TYR:HB2	1:A:85:ASN:OD1	2.13	0.48
1:A:415:LEU:C	1:A:415:LEU:HD13	2.39	0.48
1:A:538:LYS:HD3	1:A:540:TYR:CZ	2.49	0.48
1:C:535:ASP:O	1:C:536:LYS:CB	2.62	0.48
1:D:206:GLU:OE2	1:D:663:ASP:OD2	2.32	0.48
1:A:92:ASN:O	1:A:94:THR:N	2.43	0.48
1:A:219:ASN:HB2	1:A:308:GLU:CD	2.38	0.47
1:A:253:ARG:CZ	1:B:253:ARG:HH21	2.27	0.47
1:A:734:TRP:H	1:B:732:THR:HG21	1.79	0.47
1:B:184:ARG:HD2	1:B:187:TRP:CE2	2.48	0.47
1:B:173:TYR:CE2	1:B:184:ARG:HG3	2.49	0.47
1:D:107:VAL:HG23	7:D:1806:HOH:O	2.15	0.47
1:D:279:ASN:OD1	4:D:773(A):NAG:N2	2.47	0.47
1:D:219:ASN:HB2	1:D:308:GLU:CD	2.40	0.47
1:D:414:TYR:CA	1:D:436:LEU:HD13	2.44	0.47
1:C:471:ARG:HG2	1:C:480:TYR:CD2	2.49	0.47
1:C:484:SER:O	1:C:488:ASP:HA	2.15	0.47
1:C:718:GLN:HA	1:C:718:GLN:HE21	1.79	0.47
1:A:154:TRP:CE2	1:A:212:SER:HB2	2.49	0.47
1:A:733:MET:HA	1:B:732:THR:CG2	2.45	0.47
1:B:289:PRO:HB3	1:B:315:TRP:CD2	2.50	0.47
4:C:770(A):NAG:O3	4:C:770(A):NAG:H83	2.14	0.47
1:D:184:ARG:HD2	1:D:187:TRP:CD2	2.50	0.47
1:D:611:ARG:HH11	1:D:611:ARG:HG3	1.79	0.47
1:C:97:GLU:O	1:C:97:GLU:HG2	2.15	0.47
1:C:660:GLU:CG	7:C:1787:HOH:O	2.62	0.47
1:A:516:VAL:HG11	1:A:523:LYS:HB2	1.96	0.47
1:B:393:ASN:HD22	1:B:393:ASN:H	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:516:VAL:HG12	1:C:517:ILE:N	2.30	0.47
1:A:175:LYS:HG3	1:A:182:SER:CB	2.44	0.47
1:A:289:PRO:HB3	1:A:315:TRP:CD2	2.50	0.46
1:A:493:VAL:HG11	1:A:496:ASP:HB3	1.96	0.46
1:A:718:GLN:HE21	1:A:718:GLN:HA	1.80	0.46
1:C:184:ARG:HD2	1:C:187:TRP:CE2	2.49	0.46
1:A:500:LEU:HA	1:A:503:MET:HE3	1.96	0.46
1:C:142:LEU:HD23	1:C:143:ILE:N	2.31	0.46
1:C:234:PRO:HB2	1:D:248:TYR:CZ	2.50	0.46
1:D:415:LEU:C	1:D:415:LEU:HD23	2.40	0.46
1:C:90:LEU:O	1:C:90:LEU:HD22	2.15	0.46
1:C:507:VAL:HG23	1:C:509:MET:HG2	1.98	0.46
1:D:175:LYS:HE3	1:D:180:LEU:O	2.15	0.46
1:A:414:TYR:CA	1:A:436:LEU:HD13	2.45	0.46
1:D:682:TYR:OH	2:M:2:NAG:H83	2.16	0.46
1:B:673:LEU:HD12	1:B:673:LEU:N	2.31	0.46
1:C:549:GLY:HA2	1:C:631:TYR:CE1	2.51	0.46
1:D:87:SER:HB3	4:D:767(A):NAG:O6	2.16	0.46
1:D:516:VAL:CG1	1:D:517:ILE:N	2.79	0.46
1:D:600:THR:O	1:D:603:VAL:CG1	2.63	0.46
1:A:58:TYR:CD2	1:A:494:LEU:HB3	2.50	0.46
1:A:60:LEU:HD12	1:A:60:LEU:C	2.41	0.46
1:C:313:LEU:N	1:C:313:LEU:CD1	2.78	0.46
1:B:491:LEU:O	1:B:492:ARG:HB3	2.15	0.45
1:B:519:LEU:HB3	1:B:520:HIS:CE1	2.51	0.45
1:C:489:LYS:O	1:C:491:LEU:HD22	2.16	0.45
1:D:502:LYS:HD2	1:D:505:GLN:OE1	2.15	0.45
1:C:112:GLN:HB3	1:C:138:ASN:HD21	1.81	0.45
1:C:415:LEU:HB2	1:C:436:LEU:HD11	1.98	0.45
1:B:718:GLN:HA	1:B:718:GLN:NE2	2.31	0.45
1:C:183:GLN:NE2	1:C:277:SER:C	2.74	0.45
1:D:81:ALA:O	1:D:82:GLU:HB3	2.17	0.45
1:A:438:ASP:OD1	1:A:440:THR:HB	2.17	0.45
1:C:76:ILE:CD1	1:C:90:LEU:HD11	2.37	0.45
1:A:75:ASN:ND2	1:A:92:ASN:ND2	2.63	0.45
1:A:224:ALA:HB1	1:A:268:PHE:CZ	2.52	0.45
1:C:140:ARG:HG2	1:C:140:ARG:HH11	1.82	0.45
1:C:496:ASP:HB2	7:C:1694:HOH:O	2.17	0.45
1:D:532:PRO:HD3	1:D:569:SER:HA	1.98	0.45
1:A:547:TYR:HB2	1:A:554:LYS:HD3	1.98	0.45
1:C:142:LEU:HD23	1:C:142:LEU:C	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:234:PRO:HB2	1:B:248:TYR:CZ	2.52	0.45
1:C:183:GLN:HE22	1:C:278:PRO:N	2.15	0.45
1:D:446:SER:HA	1:D:449:LEU:HG	1.99	0.45
1:C:484:SER:CB	1:C:491:LEU:HD21	2.46	0.45
1:A:79:PHE:CD1	1:A:86:SER:HB3	2.52	0.44
1:A:336:ARG:HD3	1:C:277:SER:OG	2.17	0.44
1:B:547:TYR:HB3	1:B:554:LYS:HG2	1.98	0.44
1:D:438:ASP:C	1:D:440:THR:H	2.25	0.44
1:A:92:ASN:C	1:A:94:THR:N	2.74	0.44
1:B:471:ARG:NH2	7:B:1882:HOH:O	2.50	0.44
1:C:432:TYR:CE2	1:C:444:CYS:HB2	2.53	0.44
1:C:535:ASP:N	1:C:540:TYR:OH	2.40	0.44
1:D:379:GLU:HG2	1:D:381:TYR:CD1	2.53	0.44
1:C:345:HIS:HD2	7:C:1601:HOH:O	2.01	0.44
1:D:51:SER:O	1:D:54:ARG:HD2	2.17	0.44
1:D:648:LYS:HE3	7:D:1701:HOH:O	2.17	0.44
1:A:490:GLU:O	1:A:490:GLU:HG3	2.17	0.44
1:B:75:ASN:HD22	1:B:92:ASN:H	1.66	0.44
1:B:73:GLU:O	1:B:74:ASN:HB2	2.18	0.44
1:D:104:ASP:OD1	1:D:105:TYR:N	2.49	0.44
1:C:105:TYR:HB2	1:C:114:ILE:HD11	1.99	0.44
1:C:704:HIS:HE1	1:C:711:VAL:O	2.00	0.44
1:A:718:GLN:HE22	1:A:721:LYS:NZ	2.15	0.44
1:B:183:GLN:HE22	1:B:278:PRO:HA	1.83	0.44
1:C:97:GLU:N	1:C:97:GLU:OE1	2.50	0.44
1:C:732:THR:HG21	1:D:734:TRP:H	1.82	0.44
1:D:184:ARG:HH11	1:D:187:TRP:HA	1.83	0.44
1:D:105:TYR:HA	1:D:115:LEU:O	2.18	0.44
1:A:90:LEU:HD21	1:A:94:THR:HG21	2.00	0.44
1:B:718:GLN:HE22	1:B:721:LYS:HZ1	1.64	0.44
1:C:393:ASN:ND2	1:C:393:ASN:H	2.16	0.43
1:D:219:ASN:H	1:D:308:GLU:CD	2.26	0.43
1:A:88:ILE:HG21	1:A:91:GLU:CG	2.47	0.43
1:A:357:PHE:CE1	6:A:801:AES:H2	2.53	0.43
1:A:704:HIS:HE1	1:A:711:VAL:O	2.00	0.43
1:C:83:TYR:HB2	1:C:85:ASN:OD1	2.18	0.43
1:D:468:TYR:CE2	1:D:483:HIS:HB2	2.53	0.43
1:A:382:LYS:HE2	7:A:1774:HOH:O	2.18	0.43
1:A:515:ASP:HB3	1:A:526:TYR:CE2	2.53	0.43
1:C:660:GLU:HG3	7:C:1787:HOH:O	2.18	0.43
1:D:205:GLU:OE2	6:D:801:AES:N8	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:512:LYS:HE3	1:B:527:GLN:CD	2.43	0.43
1:D:80:ASN:OD1	1:D:83:TYR:HD2	2.01	0.43
1:D:535:ASP:OD1	1:D:536:LYS:O	2.36	0.43
1:D:561:LEU:HD12	1:D:561:LEU:HA	1.89	0.43
1:A:490:GLU:O	1:A:492:ARG:N	2.51	0.43
1:B:184:ARG:HD2	1:B:187:TRP:CD2	2.54	0.43
1:B:214:LEU:HD12	1:B:214:LEU:C	2.44	0.43
1:C:159:PRO:HD3	1:C:216:TRP:CB	2.49	0.43
1:D:150:ASN:O	1:D:151:ASN:HB2	2.19	0.43
1:A:219:ASN:HD22	1:A:308:GLU:CG	2.32	0.43
1:B:72:GLN:HG2	1:B:73:GLU:HG2	2.00	0.43
1:B:507:VAL:HG13	1:B:509:MET:HG2	2.01	0.43
1:A:177:GLU:HB2	1:A:180:LEU:HB2	2.00	0.43
1:B:704:HIS:CD2	1:B:716:SER:OG	2.67	0.43
7:C:1840:HOH:O	1:D:249:PRO:HB2	2.19	0.43
1:B:414:TYR:CA	1:B:436:LEU:HD13	2.49	0.43
1:B:463:ASN:N	1:B:463:ASN:HD22	2.16	0.43
1:C:495:GLU:HA	7:C:1719:HOH:O	2.19	0.43
1:C:288:VAL:HG11	1:C:294:LEU:HD11	2.01	0.42
1:D:382:LYS:HE2	7:D:1788:HOH:O	2.19	0.42
1:D:704:HIS:HE1	1:D:711:VAL:O	2.01	0.42
1:A:461:PHE:CD2	1:A:468:TYR:HB3	2.53	0.42
1:B:87:SER:OG	4:B:767(A):NAG:H81	2.19	0.42
1:B:134:ILE:HG21	1:B:178:PRO:HB3	2.00	0.42
1:B:331:ASP:HB2	1:B:338:ILE:HD12	2.01	0.42
1:C:125:ARG:HG2	1:C:126:HIS:NE2	2.33	0.42
1:D:105:TYR:CD1	1:D:105:TYR:C	2.97	0.42
1:A:654:ALA:HA	1:A:704:HIS:CD2	2.54	0.42
1:C:77:LEU:CD2	1:C:88:ILE:HG12	2.50	0.42
1:C:626:ILE:HG23	1:C:636:THR:HG23	2.01	0.42
1:A:378:GLU:CD	1:A:378:GLU:H	2.27	0.42
1:B:142:LEU:HD23	1:B:143:ILE:N	2.34	0.42
1:D:140:ARG:HG2	1:D:140:ARG:HH11	1.84	0.42
1:D:364:PHE:CD2	1:D:371:PHE:HB3	2.55	0.42
1:D:531:PRO:HB3	1:D:572:ASN:HD22	1.85	0.42
1:C:148:ILE:HA	1:C:149:PRO:HD3	1.86	0.42
1:D:110:ASP:C	1:D:110:ASP:OD1	2.62	0.42
1:B:516:VAL:CG1	1:B:523:LYS:HB2	2.48	0.42
1:C:484:SER:N	1:C:491:LEU:HD21	2.34	0.42
4:C:771(A):NAG:H83	4:C:771(A):NAG:H2	1.94	0.42
1:A:370:SER:HB2	1:A:387:PHE:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:184:ARG:CD	1:B:186:THR:O	2.61	0.42
1:C:206:GLU:OE2	1:C:663:ASP:OD2	2.38	0.42
1:D:457:TYR:HA	1:D:471:ARG:O	2.20	0.42
1:B:403:GLU:OE1	1:B:585:TYR:HA	2.19	0.42
1:C:484:SER:N	1:C:491:LEU:CD2	2.83	0.42
1:A:253:ARG:HH22	1:B:253:ARG:HH21	1.62	0.41
1:B:134:ILE:O	1:B:143:ILE:HD13	2.19	0.41
1:A:517:ILE:HG23	1:A:526:TYR:CE2	2.55	0.41
1:B:114:ILE:HG23	1:B:135:TYR:HB3	2.03	0.41
1:B:143:ILE:N	1:B:143:ILE:HD12	2.35	0.41
1:B:516:VAL:CG1	1:B:517:ILE:N	2.83	0.41
1:B:535:ASP:C	1:B:537:SER:N	2.78	0.41
1:C:75:ASN:HD21	1:C:92:ASN:HB2	1.84	0.41
1:B:175:LYS:HZ1	1:B:178:PRO:HA	1.85	0.41
1:C:503:MET:HE2	1:C:503:MET:HB2	1.75	0.41
1:D:197:GLY:C	1:D:213:ALA:HB3	2.46	0.41
1:D:358:ARG:HE	1:D:358:ARG:HB3	1.61	0.41
1:D:435:GLN:HE22	1:D:441:LYS:HD2	1.85	0.41
1:B:237:GLU:HG2	1:B:253:ARG:HG2	2.01	0.41
1:C:77:LEU:HD23	1:C:88:ILE:HA	2.03	0.41
1:A:658:LYS:HE2	1:A:660:GLU:HB2	2.02	0.41
1:B:180:LEU:HD22	1:B:180:LEU:N	2.36	0.41
1:C:718:GLN:HA	1:C:718:GLN:NE2	2.35	0.41
1:A:547:TYR:C	1:A:547:TYR:CD2	2.99	0.41
1:B:516:VAL:HG12	1:B:517:ILE:N	2.36	0.41
1:C:463:ASN:N	1:C:463:ASN:HD22	2.18	0.41
1:B:393:ASN:H	1:B:393:ASN:ND2	2.19	0.41
1:C:75:ASN:ND2	1:C:92:ASN:HB2	2.35	0.41
1:C:94:THR:O	1:C:94:THR:HG22	2.20	0.41
1:D:515:ASP:HB3	1:D:526:TYR:CZ	2.56	0.41
1:D:547:TYR:C	1:D:547:TYR:CD2	2.98	0.41
1:D:718:GLN:HA	1:D:718:GLN:NE2	2.34	0.41
1:B:136:ASP:HB2	1:B:143:ILE:HD11	2.03	0.41
1:C:516:VAL:CG1	1:C:517:ILE:N	2.84	0.41
1:A:237:GLU:HA	1:A:252:VAL:O	2.21	0.41
1:B:561:LEU:HD12	1:B:561:LEU:HA	1.99	0.41
1:B:701:LEU:HD13	1:B:703:ILE:HD11	2.03	0.41
1:C:142:LEU:HD23	1:C:143:ILE:O	2.21	0.41
1:C:506:ASP:OD1	1:C:506:ASP:O	2.38	0.41
1:D:522:THR:HB	1:D:524:PHE:CE1	2.56	0.41
1:A:452:GLU:HA	1:A:452:GLU:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:214:LEU:HD23	1:D:225:TYR:HB3	2.03	0.41
1:D:481:THR:OG1	1:D:483:HIS:CE1	2.71	0.41
1:D:492:ARG:HH11	1:D:492:ARG:HG2	1.85	0.41
1:C:224:ALA:HB1	1:C:268:PHE:CZ	2.56	0.40
1:C:414:TYR:HA	1:C:436:LEU:HD13	2.01	0.40
1:D:402:TRP:CD2	1:D:421:GLU:HB2	2.57	0.40
1:B:242:SER:HB3	1:B:246:LEU:HD12	2.04	0.40
1:B:299:TYR:CZ	1:B:665:VAL:HG22	2.56	0.40
1:C:125:ARG:HG2	1:C:126:HIS:CD2	2.57	0.40
1:C:148:ILE:HG23	1:C:149:PRO:HD2	2.03	0.40
1:C:288:VAL:CG1	1:C:289:PRO:HD2	2.48	0.40
1:D:454:CYS:HB3	1:D:457:TYR:CZ	2.56	0.40
1:A:756:SER:O	1:A:760:LYS:HG3	2.21	0.40
1:C:470:LEU:HD23	1:C:470:LEU:HA	1.96	0.40
1:D:470:LEU:HD23	1:D:470:LEU:HA	1.87	0.40
1:B:345:HIS:HE1	1:B:389:THR:O	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	726/728 (100%)	690 (95%)	33 (4%)	3 (0%)	30	21
1	B	726/728 (100%)	703 (97%)	22 (3%)	1 (0%)	48	41
1	C	726/728 (100%)	692 (95%)	28 (4%)	6 (1%)	16	8
1	D	726/728 (100%)	693 (96%)	32 (4%)	1 (0%)	48	41
All	All	2904/2912 (100%)	2778 (96%)	115 (4%)	11 (0%)	30	21

All (11) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	40	ARG
1	C	74	ASN
1	C	103	ASN
1	C	104	ASP
1	C	535	ASP
1	C	536	LYS
1	C	93	SER
1	A	97	GLU
1	A	491	LEU
1	A	82	GLU
1	D	537	SER

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	652/652 (100%)	633 (97%)	19 (3%)	37	29
1	B	652/652 (100%)	630 (97%)	22 (3%)	32	23
1	C	652/652 (100%)	631 (97%)	21 (3%)	34	25
1	D	652/652 (100%)	627 (96%)	25 (4%)	29	19
All	All	2608/2608 (100%)	2521 (97%)	87 (3%)	33	24

All (87) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	90	LEU
1	A	119	ASN
1	A	246	LEU
1	A	294	LEU
1	A	343	ARG
1	A	385	CYS
1	A	399	LYS
1	A	415	LEU
1	A	448	GLU
1	A	471	ARG
1	A	491	LEU

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Mol	Chain	Res	Type
1	A	492	ARG
1	A	536	LYS
1	A	542	LEU
1	A	543	LEU
1	A	547	TYR
1	A	561	LEU
1	A	701	LEU
1	A	761	GLN
1	B	246	LEU
1	B	294	LEU
1	B	308	GLU
1	B	340	SER
1	B	367	ASP
1	B	385	CYS
1	B	435	GLN
1	B	442	VAL
1	B	450	ASN
1	B	518	ASN
1	B	520	HIS
1	B	536	LYS
1	B	542	LEU
1	B	543	LEU
1	B	547	TYR
1	B	561	LEU
1	B	622	LYS
1	B	630	SER
1	B	701	LEU
1	B	702	LEU
1	B	718	GLN
1	B	732	THR
1	C	90	LEU
1	C	147	ARG
1	C	246	LEU
1	C	277	SER
1	C	294	LEU
1	C	367	ASP
1	C	399	LYS
1	C	448	GLU
1	C	472	CYS
1	C	482	LEU
1	C	535	ASP
1	C	536	LYS

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Mol	Chain	Res	Type
1	C	542	LEU
1	C	547	TYR
1	C	554	LYS
1	C	561	LEU
1	C	701	LEU
1	C	732	THR
1	C	746	MET
1	C	759	LEU
1	C	761	GLN
1	D	71	LYS
1	D	111	ARG
1	D	246	LEU
1	D	253	ARG
1	D	276	LEU
1	D	294	LEU
1	D	308	GLU
1	D	358	ARG
1	D	399	LYS
1	D	482	LEU
1	D	507	VAL
1	D	536	LYS
1	D	547	TYR
1	D	561	LEU
1	D	581	ARG
1	D	603	VAL
1	D	608	GLU
1	D	622	LYS
1	D	673	LEU
1	D	701	LEU
1	D	702	LEU
1	D	718	GLN
1	D	732	THR
1	D	759	LEU
1	D	760	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (104) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	61	GLN
1	A	74	ASN
1	A	75	ASN
1	A	112	GLN

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Mol	Chain	Res	Type
1	A	138	ASN
1	A	141	GLN
1	A	150	ASN
1	A	169	ASN
1	A	170	ASN
1	A	176	ASN
1	A	183	GLN
1	A	192	ASN
1	A	219	ASN
1	A	247	GLN
1	A	345	HIS
1	A	369	ASN
1	A	435	GLN
1	A	463	ASN
1	A	483	HIS
1	A	518	ASN
1	A	572	ASN
1	A	612	GLN
1	A	679	ASN
1	A	694	ASN
1	A	704	HIS
1	A	718	GLN
1	A	745	ASN
1	B	61	GLN
1	B	75	ASN
1	B	123	GLN
1	B	169	ASN
1	B	170	ASN
1	B	176	ASN
1	B	183	GLN
1	B	192	ASN
1	B	227	GLN
1	B	247	GLN
1	B	345	HIS
1	B	369	ASN
1	B	393	ASN
1	B	463	ASN
1	B	483	HIS
1	B	505	GLN
1	B	533	HIS
1	B	572	ASN
1	B	612	GLN

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Mol	Chain	Res	Type
1	B	679	ASN
1	B	694	ASN
1	B	704	HIS
1	B	718	GLN
1	B	761	GLN
1	C	72	GLN
1	C	74	ASN
1	C	75	ASN
1	C	123	GLN
1	C	138	ASN
1	C	141	GLN
1	C	150	ASN
1	C	169	ASN
1	C	170	ASN
1	C	176	ASN
1	C	183	GLN
1	C	192	ASN
1	C	227	GLN
1	C	247	GLN
1	C	345	HIS
1	C	369	ASN
1	C	393	ASN
1	C	463	ASN
1	C	483	HIS
1	C	505	GLN
1	C	612	GLN
1	C	679	ASN
1	C	694	ASN
1	C	704	HIS
1	C	718	GLN
1	C	745	ASN
1	C	757	HIS
1	C	761	GLN
1	D	61	GLN
1	D	72	GLN
1	D	75	ASN
1	D	103	ASN
1	D	123	GLN
1	D	141	GLN
1	D	169	ASN
1	D	170	ASN
1	D	176	ASN

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Mol	Chain	Res	Type
1	D	183	GLN
1	D	192	ASN
1	D	227	GLN
1	D	247	GLN
1	D	393	ASN
1	D	435	GLN
1	D	463	ASN
1	D	483	HIS
1	D	572	ASN
1	D	595	ASN
1	D	612	GLN
1	D	679	ASN
1	D	694	ASN
1	D	704	HIS
1	D	718	GLN
1	D	745	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

20 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	E	1	1,2	14,14,15	0.75	0	17,19,21	0.84	1 (5%)
2	NAG	E	2	2	14,14,15	0.50	0	17,19,21	0.79	1 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	NAG	F	1	1,2	14,14,15	0.78	0	17,19,21	0.74	0
2	NAG	F	2	2	14,14,15	0.59	0	17,19,21	0.77	1 (5%)
3	NAG	G	1	1,3	14,14,15	0.56	0	17,19,21	0.83	0
3	NAG	G	2	3	14,14,15	0.48	0	17,19,21	0.76	0
3	BMA	G	3	3	11,11,12	0.65	0	15,15,17	1.20	2 (13%)
2	NAG	H	1	1,2	14,14,15	0.68	0	17,19,21	0.74	0
2	NAG	H	2	2	14,14,15	0.65	0	17,19,21	0.76	0
2	NAG	I	1	1,2	14,14,15	0.80	0	17,19,21	0.65	0
2	NAG	I	2	2	14,14,15	0.70	0	17,19,21	0.80	1 (5%)
3	NAG	J	1	1,3	14,14,15	0.62	0	17,19,21	0.79	1 (5%)
3	NAG	J	2	3	14,14,15	0.47	0	17,19,21	0.61	0
3	BMA	J	3	3	11,11,12	0.62	0	15,15,17	0.37	0
2	NAG	K	1	1,2	14,14,15	0.65	0	17,19,21	0.70	1 (5%)
2	NAG	K	2	2	14,14,15	0.52	0	17,19,21	0.72	1 (5%)
2	NAG	L	1	1,2	14,14,15	0.62	0	17,19,21	0.92	1 (5%)
2	NAG	L	2	2	14,14,15	0.67	0	17,19,21	0.83	1 (5%)
2	NAG	M	1	1,2	14,14,15	0.79	0	17,19,21	0.62	0
2	NAG	M	2	2	14,14,15	0.59	0	17,19,21	0.90	1 (5%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAG	E	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	E	2	2	-	4/6/23/26	0/1/1/1
2	NAG	F	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	F	2	2	-	2/6/23/26	0/1/1/1
3	NAG	G	1	1,3	-	2/6/23/26	0/1/1/1
3	NAG	G	2	3	-	2/6/23/26	0/1/1/1
3	BMA	G	3	3	-	2/2/19/22	0/1/1/1
2	NAG	H	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	H	2	2	-	0/6/23/26	0/1/1/1
2	NAG	I	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	I	2	2	-	0/6/23/26	0/1/1/1
3	NAG	J	1	1,3	-	2/6/23/26	0/1/1/1
3	NAG	J	2	3	-	3/6/23/26	0/1/1/1
3	BMA	J	3	3	-	2/2/19/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAG	K	1	1,2	-	1/6/23/26	0/1/1/1
2	NAG	K	2	2	-	4/6/23/26	0/1/1/1
2	NAG	L	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	L	2	2	-	2/6/23/26	0/1/1/1
2	NAG	M	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	M	2	2	-	3/6/23/26	0/1/1/1

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	G	3	BMA	C1-O5-C5	3.06	116.29	112.19
2	E	1	NAG	C2-N2-C7	-2.67	119.33	122.90
2	E	2	NAG	C2-N2-C7	-2.56	119.47	122.90
2	L	1	NAG	C2-N2-C7	-2.35	119.75	122.90
2	K	2	NAG	C2-N2-C7	-2.30	119.82	122.90
2	L	2	NAG	C2-N2-C7	-2.26	119.86	122.90
2	F	2	NAG	C2-N2-C7	-2.26	119.87	122.90
3	G	3	BMA	C3-C4-C5	2.15	114.14	110.23
3	J	1	NAG	C2-N2-C7	-2.13	120.04	122.90
2	K	1	NAG	C2-N2-C7	-2.11	120.07	122.90
2	I	2	NAG	C2-N2-C7	-2.08	120.11	122.90
2	M	2	NAG	C2-N2-C7	-2.02	120.19	122.90

There are no chirality outliers.

All (33) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	E	2	NAG	C8-C7-N2-C2
2	E	2	NAG	O7-C7-N2-C2
2	K	2	NAG	C8-C7-N2-C2
2	K	2	NAG	O7-C7-N2-C2
2	L	1	NAG	C8-C7-N2-C2
2	L	1	NAG	O7-C7-N2-C2
2	L	2	NAG	C8-C7-N2-C2
2	L	2	NAG	O7-C7-N2-C2
2	M	2	NAG	C1-C2-N2-C7
3	J	1	NAG	C8-C7-N2-C2
3	J	1	NAG	O7-C7-N2-C2
3	J	2	NAG	C3-C2-N2-C7

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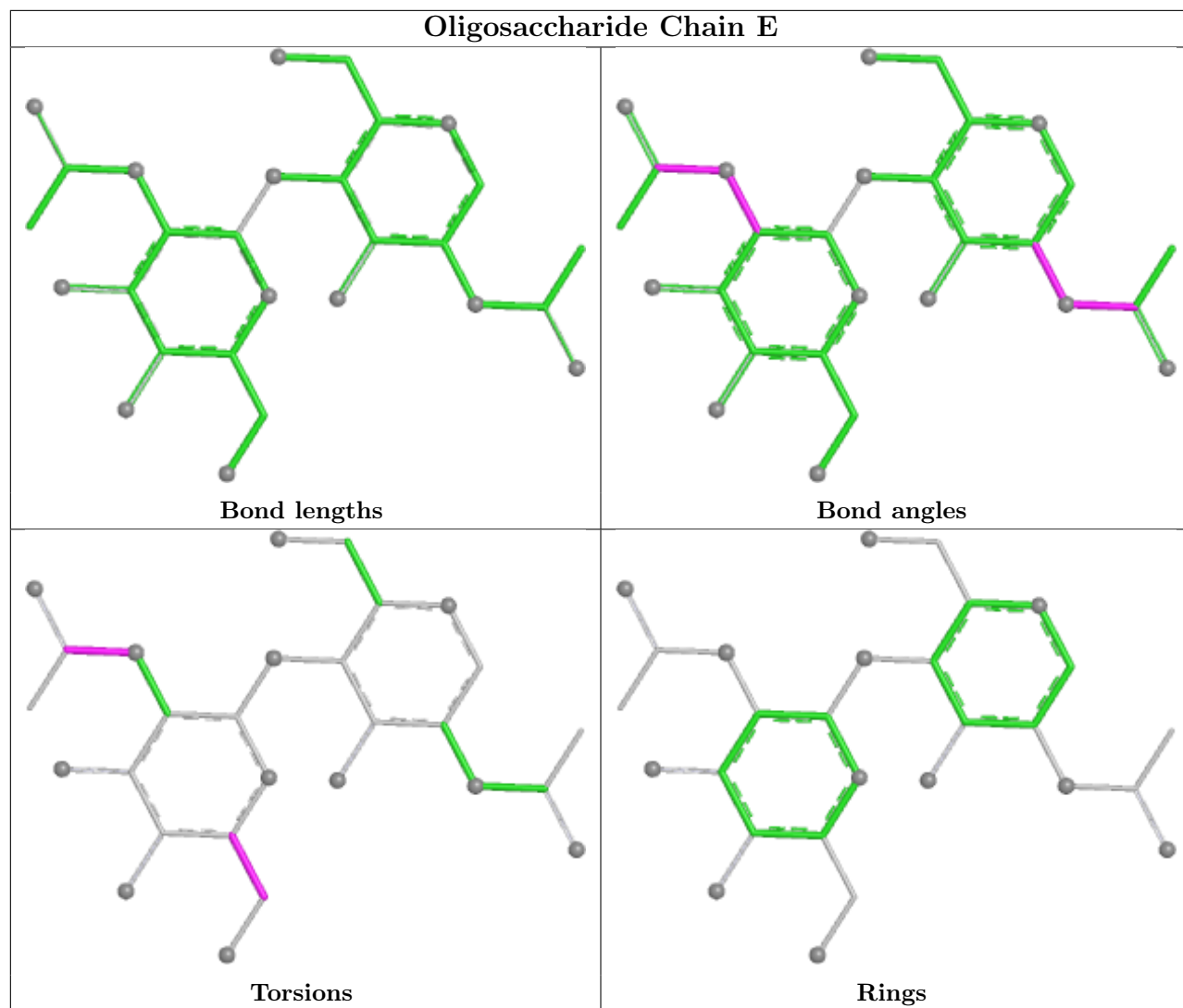
Mol	Chain	Res	Type	Atoms
3	J	2	NAG	C8-C7-N2-C2
3	J	2	NAG	O7-C7-N2-C2
2	K	2	NAG	O5-C5-C6-O6
2	K	2	NAG	C4-C5-C6-O6
2	F	2	NAG	C4-C5-C6-O6
3	G	3	BMA	O5-C5-C6-O6
2	F	2	NAG	O5-C5-C6-O6
2	M	2	NAG	C8-C7-N2-C2
2	M	2	NAG	O7-C7-N2-C2
3	G	2	NAG	C8-C7-N2-C2
3	G	2	NAG	O7-C7-N2-C2
3	G	3	BMA	C4-C5-C6-O6
3	J	3	BMA	C4-C5-C6-O6
3	J	3	BMA	O5-C5-C6-O6
2	I	1	NAG	C4-C5-C6-O6
3	G	1	NAG	C4-C5-C6-O6
2	K	1	NAG	O5-C5-C6-O6
3	G	1	NAG	O5-C5-C6-O6
2	I	1	NAG	O5-C5-C6-O6
2	E	2	NAG	C4-C5-C6-O6
2	E	2	NAG	O5-C5-C6-O6

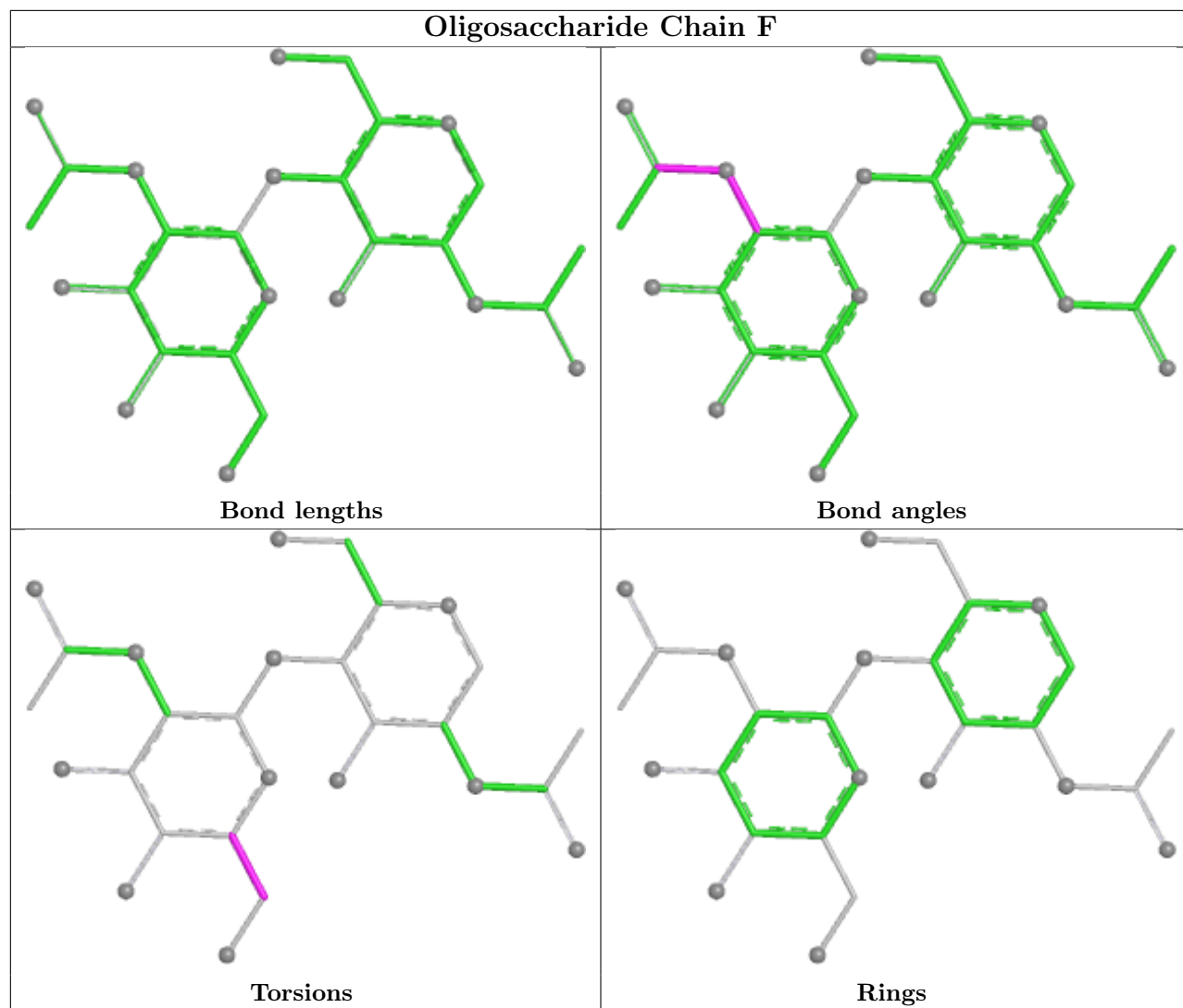
There are no ring outliers.

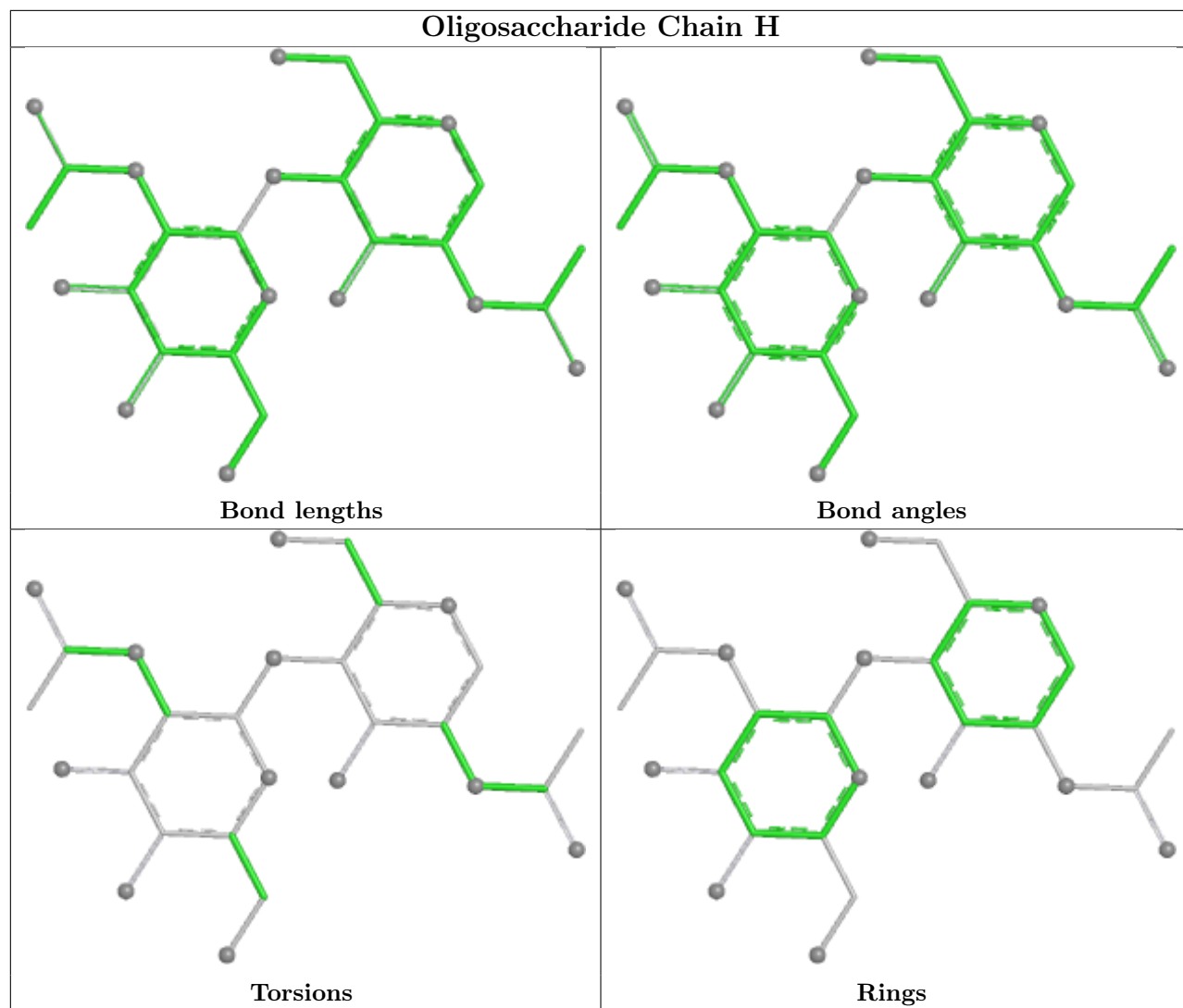
3 monomers are involved in 2 short contacts:

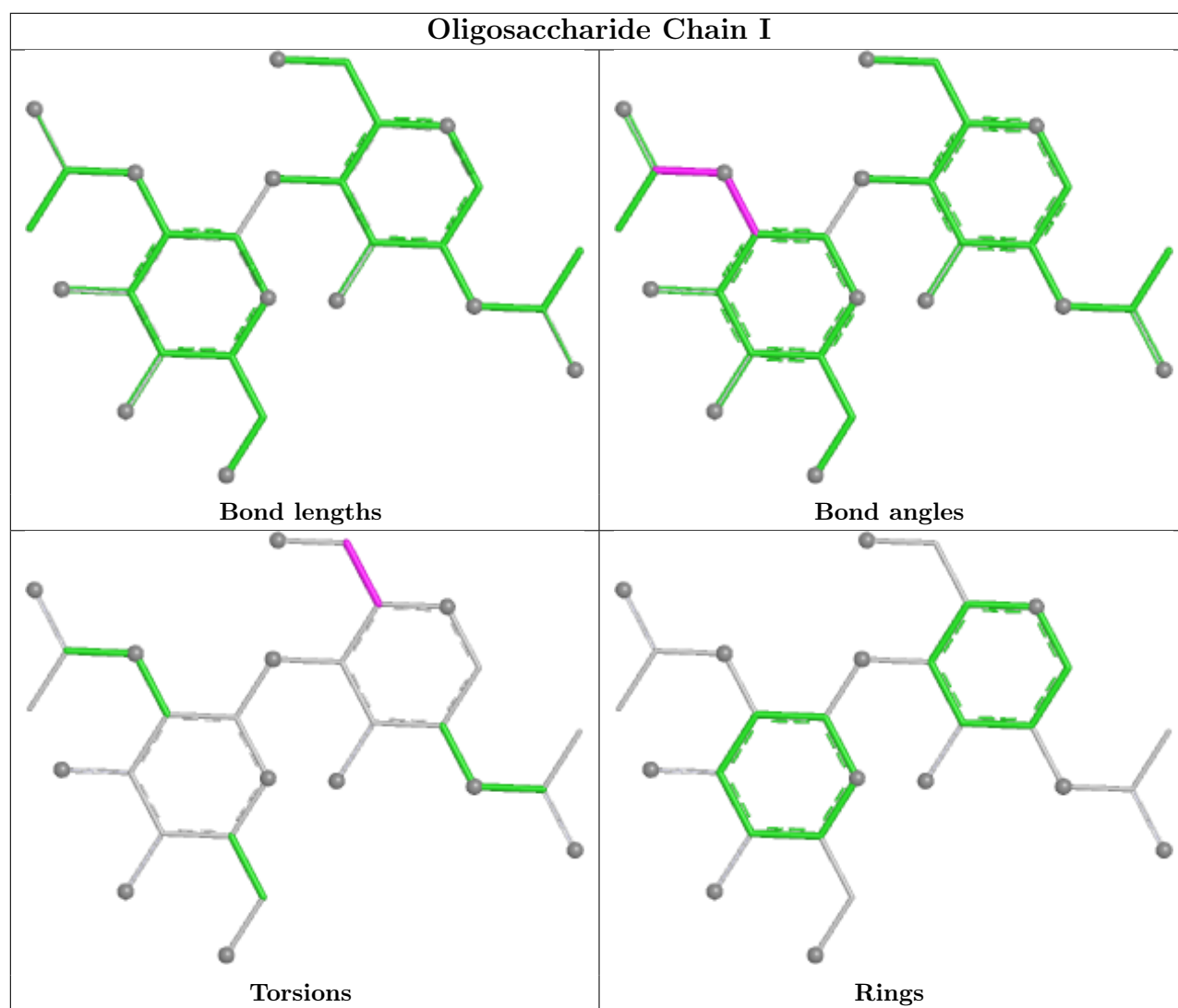
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	J	1	NAG	1	0
2	M	2	NAG	1	0
3	J	2	NAG	1	0

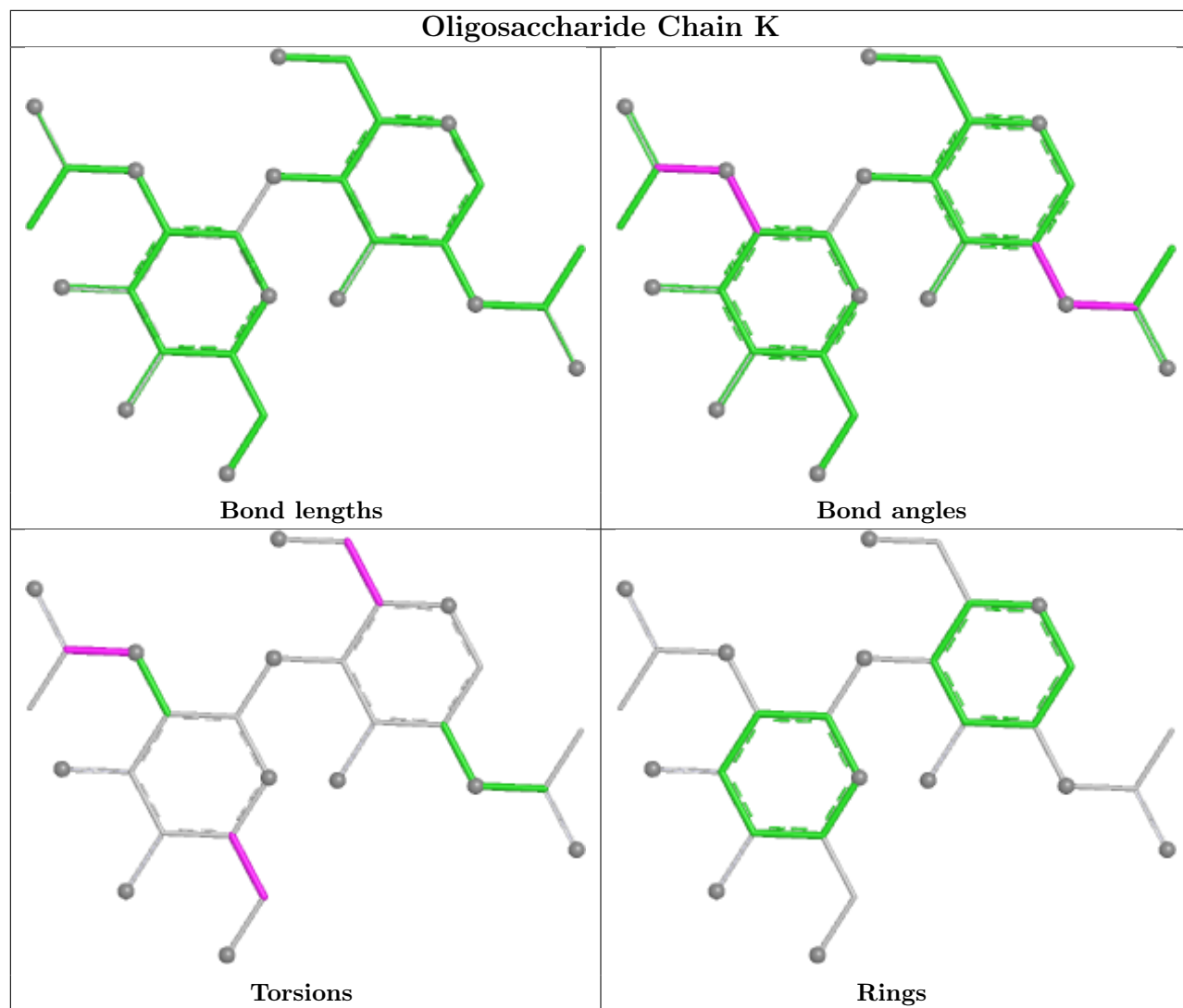
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

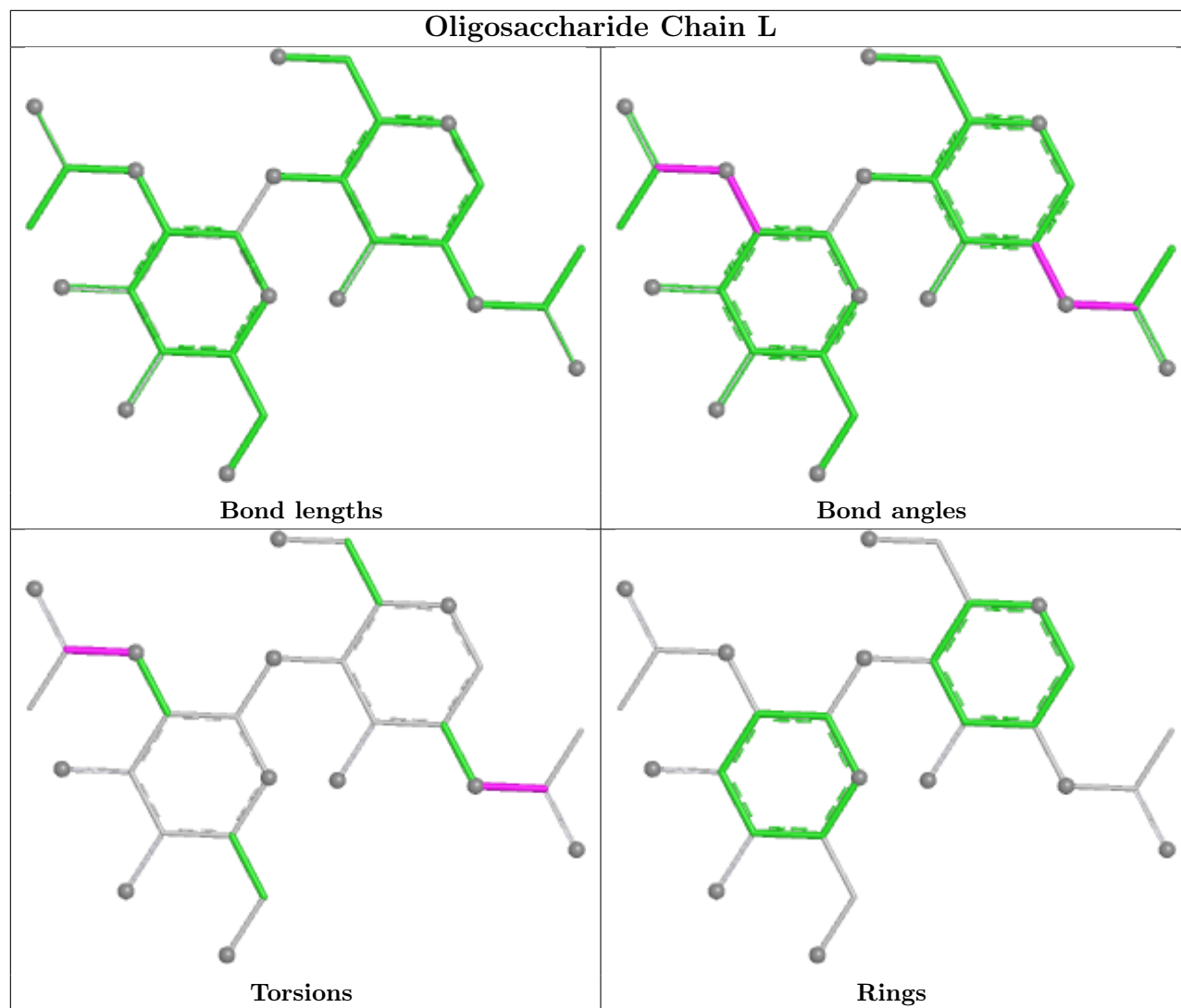


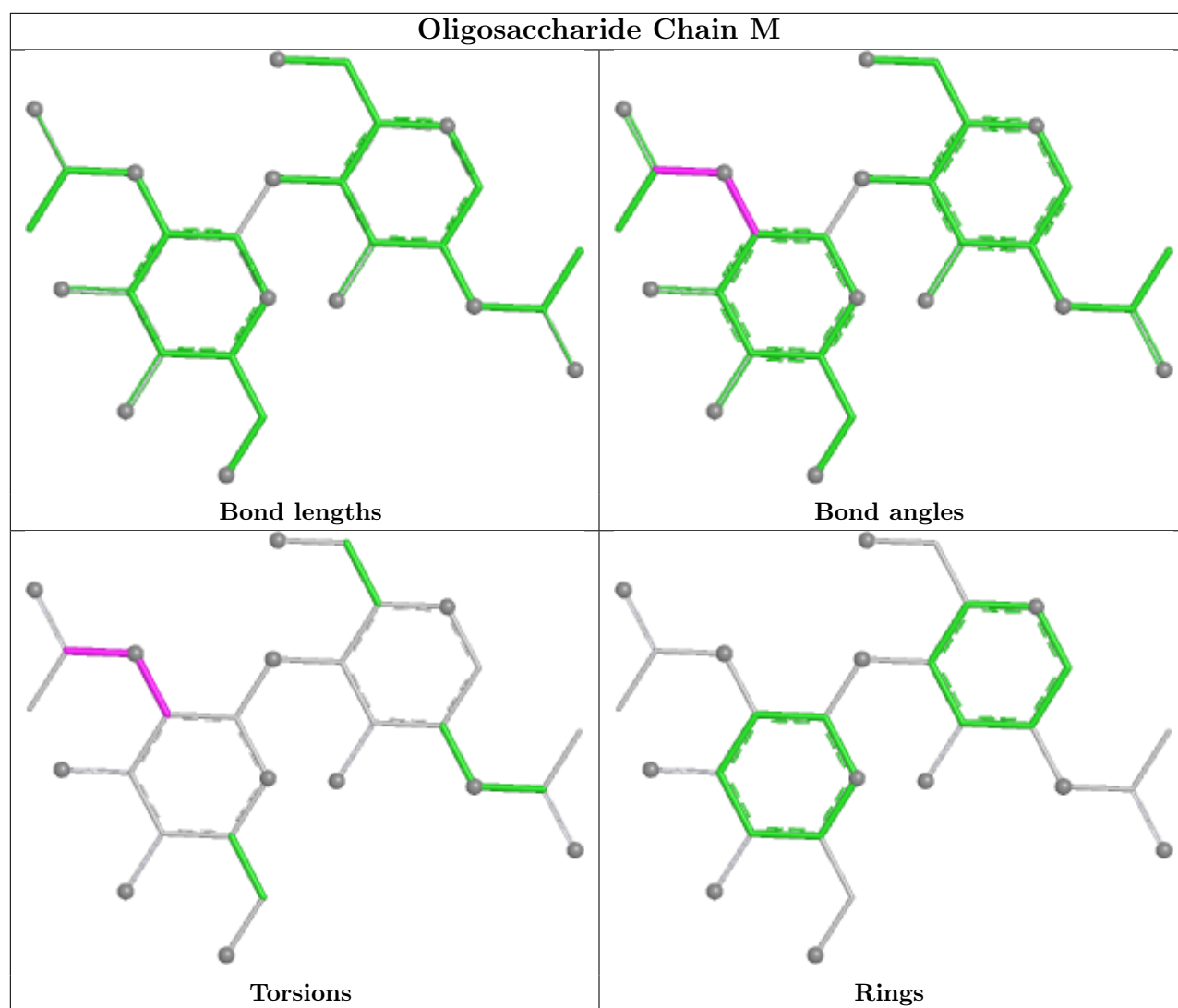


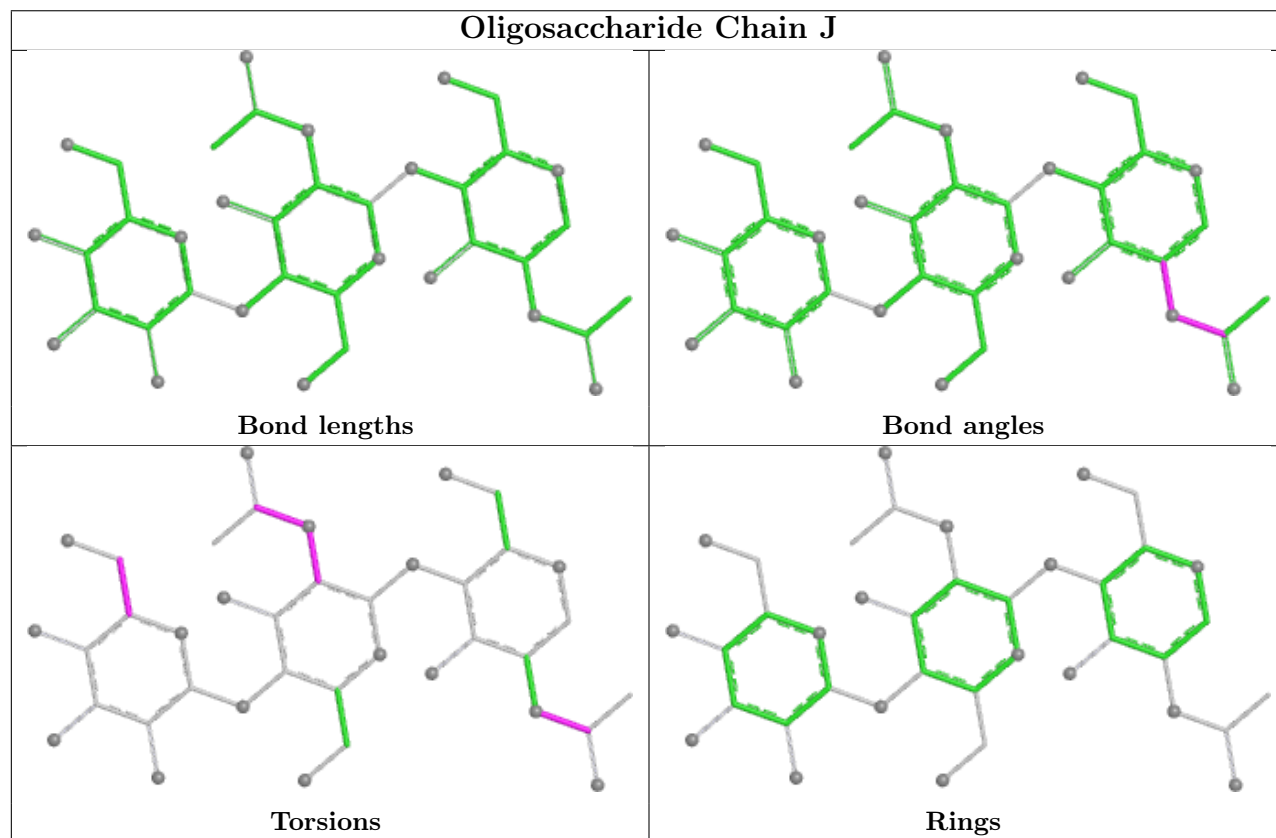
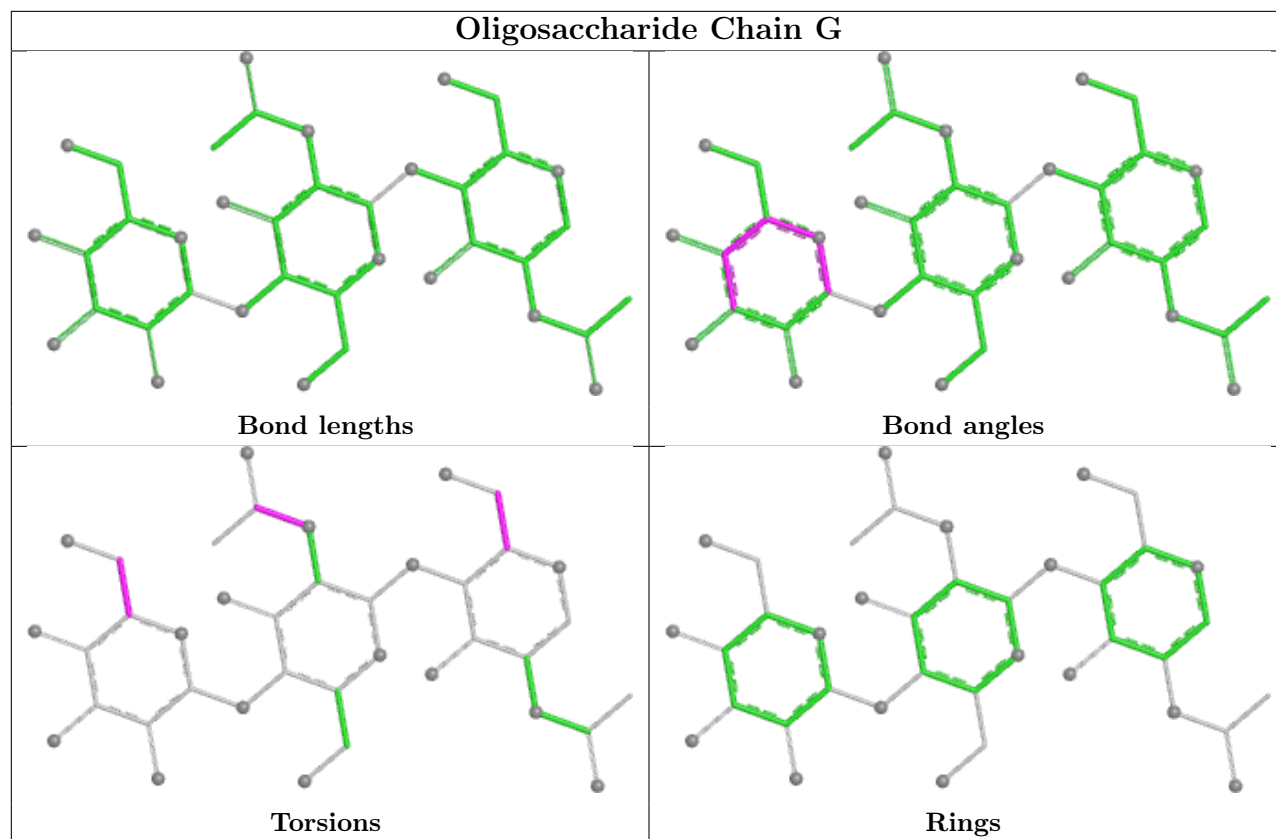












5.6 Ligand geometry

23 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$
5	SO4	C	1502	-	4,4,4	0.49	0	6,6,6	0.62	0
5	SO4	D	1503	-	4,4,4	0.51	0	6,6,6	0.60	0
6	AES	A	801	1	10,12,13	2.13	4 (40%)	14,15,18	1.38	3 (21%)
4	NAG	D	773(A)	1	14,14,15	0.59	0	17,19,21	0.85	1 (5%)
5	SO4	B	1501	-	4,4,4	0.48	0	6,6,6	0.59	0
4	NAG	B	771(A)	1	14,14,15	0.58	0	17,19,21	0.65	0
4	NAG	A	767(A)	1	14,14,15	0.60	0	17,19,21	0.59	0
4	NAG	C	770(A)	1	14,14,15	0.75	0	17,19,21	0.94	1 (5%)
4	NAG	B	772(A)	1	14,14,15	0.61	0	17,19,21	1.02	1 (5%)
4	NAG	C	769(A)	1	14,14,15	0.49	0	17,19,21	0.79	1 (5%)
4	NAG	B	767(A)	1	14,14,15	0.61	0	17,19,21	0.70	0
6	AES	B	801	1	10,12,13	2.04	4 (40%)	14,15,18	1.33	2 (14%)
4	NAG	D	767(A)	1	14,14,15	0.64	0	17,19,21	0.69	1 (5%)
4	NAG	A	768(A)	1	14,14,15	0.62	0	17,19,21	0.74	0
4	NAG	C	771(A)	1	14,14,15	0.49	0	17,19,21	0.91	0
4	NAG	C	767(A)	1	14,14,15	0.62	0	17,19,21	0.70	0
4	NAG	C	768(A)	1	14,14,15	0.53	0	17,19,21	0.74	1 (5%)
6	AES	D	801	1	10,12,13	2.09	4 (40%)	14,15,18	1.49	3 (21%)
4	NAG	A	771(A)	1	14,14,15	0.54	0	17,19,21	0.73	1 (5%)
6	AES	C	801	1	10,12,13	1.96	4 (40%)	14,15,18	1.37	2 (14%)
4	NAG	A	772(A)	1	14,14,15	0.53	0	17,19,21	0.94	0
5	SO4	A	1500	-	4,4,4	0.55	0	6,6,6	0.62	0
4	NAG	B	773(A)	1	14,14,15	0.58	0	17,19,21	0.66	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	AES	A	801	1	-	2/7/7/9	0/1/1/1
4	NAG	D	773(A)	1	-	4/6/23/26	0/1/1/1
4	NAG	B	771(A)	1	-	0/6/23/26	0/1/1/1
4	NAG	A	767(A)	1	-	2/6/23/26	0/1/1/1
4	NAG	C	770(A)	1	-	2/6/23/26	0/1/1/1
4	NAG	B	772(A)	1	-	2/6/23/26	0/1/1/1
4	NAG	C	769(A)	1	-	0/6/23/26	0/1/1/1
4	NAG	B	767(A)	1	-	3/6/23/26	0/1/1/1
6	AES	B	801	1	-	3/7/7/9	0/1/1/1
4	NAG	D	767(A)	1	-	4/6/23/26	0/1/1/1
4	NAG	A	768(A)	1	-	2/6/23/26	0/1/1/1
4	NAG	C	771(A)	1	-	2/6/23/26	0/1/1/1
4	NAG	C	767(A)	1	-	4/6/23/26	0/1/1/1
4	NAG	C	768(A)	1	-	4/6/23/26	0/1/1/1
6	AES	D	801	1	-	2/7/7/9	0/1/1/1
4	NAG	A	771(A)	1	-	4/6/23/26	0/1/1/1
6	AES	C	801	1	-	0/7/7/9	0/1/1/1
4	NAG	A	772(A)	1	-	0/6/23/26	0/1/1/1
4	NAG	B	773(A)	1	-	0/6/23/26	0/1/1/1

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	D	801	AES	C6-C1	4.05	1.44	1.38
6	B	801	AES	C6-C1	3.85	1.44	1.38
6	A	801	AES	C6-C1	3.71	1.44	1.38
6	A	801	AES	C5-C6	3.49	1.44	1.38
6	C	801	AES	C6-C1	3.37	1.43	1.38
6	D	801	AES	C5-C6	3.01	1.43	1.38
6	B	801	AES	C5-C6	2.85	1.43	1.38
6	C	801	AES	C5-C6	2.76	1.43	1.38
6	A	801	AES	C5-C4	2.74	1.44	1.38
6	C	801	AES	C5-C4	2.59	1.44	1.38
6	B	801	AES	C5-C4	2.44	1.43	1.38
6	A	801	AES	C2-C1	2.44	1.42	1.38
6	D	801	AES	C5-C4	2.32	1.43	1.38
6	C	801	AES	C2-C1	2.31	1.41	1.38
6	D	801	AES	C2-C1	2.30	1.41	1.38
6	B	801	AES	C2-C1	2.18	1.41	1.38

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	D	801	AES	O2S-S-C1	3.31	112.00	104.55
6	B	801	AES	O2S-S-C1	2.77	110.78	104.55
6	C	801	AES	C8-C7-C4	-2.65	106.90	112.82
6	A	801	AES	O2S-S-C1	2.63	110.46	104.55
6	C	801	AES	O2S-S-C1	2.62	110.44	104.55
4	C	770(A)	NAG	C2-N2-C7	-2.59	119.43	122.90
4	D	773(A)	NAG	C2-N2-C7	-2.48	119.58	122.90
6	B	801	AES	C8-C7-C4	-2.39	107.46	112.82
4	B	772(A)	NAG	C3-C4-C5	2.28	114.36	110.23
6	D	801	AES	C8-C7-C4	-2.20	107.89	112.82
4	A	771(A)	NAG	C2-N2-C7	-2.12	120.06	122.90
6	A	801	AES	C8-C7-C4	-2.06	108.22	112.82
6	D	801	AES	C2-C1-C6	-2.05	119.30	121.59
6	A	801	AES	C3-C2-C1	2.03	121.16	119.39
4	C	769(A)	NAG	C2-N2-C7	-2.03	120.19	122.90
4	D	767(A)	NAG	C2-N2-C7	-2.02	120.20	122.90
4	C	768(A)	NAG	C2-N2-C7	-2.01	120.21	122.90

There are no chirality outliers.

All (40) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	767(A)	NAG	C8-C7-N2-C2
4	A	767(A)	NAG	O7-C7-N2-C2
4	A	768(A)	NAG	C8-C7-N2-C2
4	A	768(A)	NAG	O7-C7-N2-C2
4	A	771(A)	NAG	C8-C7-N2-C2
4	A	771(A)	NAG	O7-C7-N2-C2
4	B	767(A)	NAG	C8-C7-N2-C2
4	B	767(A)	NAG	O7-C7-N2-C2
4	C	768(A)	NAG	C8-C7-N2-C2
4	C	768(A)	NAG	O7-C7-N2-C2
4	C	770(A)	NAG	C8-C7-N2-C2
4	C	770(A)	NAG	O7-C7-N2-C2
4	C	771(A)	NAG	C8-C7-N2-C2
4	C	771(A)	NAG	O7-C7-N2-C2
4	D	767(A)	NAG	C8-C7-N2-C2
4	D	767(A)	NAG	O7-C7-N2-C2
4	D	773(A)	NAG	C8-C7-N2-C2
4	D	773(A)	NAG	O7-C7-N2-C2
6	B	801	AES	C4-C7-C8-N8

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Mol	Chain	Res	Type	Atoms
4	B	772(A)	NAG	O7-C7-N2-C2
4	B	772(A)	NAG	C8-C7-N2-C2
4	C	767(A)	NAG	C8-C7-N2-C2
4	C	767(A)	NAG	O7-C7-N2-C2
4	D	773(A)	NAG	O5-C5-C6-O6
4	D	773(A)	NAG	C4-C5-C6-O6
4	A	771(A)	NAG	O5-C5-C6-O6
4	C	768(A)	NAG	C4-C5-C6-O6
4	C	767(A)	NAG	O5-C5-C6-O6
4	D	767(A)	NAG	O5-C5-C6-O6
4	C	768(A)	NAG	O5-C5-C6-O6
4	A	771(A)	NAG	C4-C5-C6-O6
4	C	767(A)	NAG	C4-C5-C6-O6
4	B	767(A)	NAG	O5-C5-C6-O6
4	D	767(A)	NAG	C4-C5-C6-O6
6	A	801	AES	C2-C1-S-O2S
6	A	801	AES	C6-C1-S-O2S
6	B	801	AES	C2-C1-S-O2S
6	B	801	AES	C6-C1-S-O2S
6	D	801	AES	C2-C1-S-O2S
6	D	801	AES	C6-C1-S-O2S

There are no ring outliers.

11 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	A	801	AES	1	0
4	D	773(A)	NAG	1	0
4	A	767(A)	NAG	1	0
4	C	770(A)	NAG	1	0
4	B	767(A)	NAG	1	0
6	B	801	AES	1	0
4	D	767(A)	NAG	1	0
4	C	771(A)	NAG	1	0
4	C	767(A)	NAG	1	0
6	D	801	AES	2	0
6	C	801	AES	2	0

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

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	724/728 (99%)	0.37	58 (8%)	18	21	16, 29, 55, 99	13 (1%)
1	B	728/728 (100%)	0.18	39 (5%)	31	37	14, 27, 49, 72	12 (1%)
1	C	723/728 (99%)	0.34	57 (7%)	18	21	12, 29, 55, 104	11 (1%)
1	D	728/728 (100%)	0.58	78 (10%)	11	12	18, 33, 61, 87	10 (1%)
All	All	2903/2912 (99%)	0.37	232 (7%)	18	21	12, 29, 56, 104	46 (1%)

All (232) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	98	LEU	6.3
1	C	90	LEU	6.1
1	A	95	PHE	5.8
1	B	83	TYR	5.6
1	C	95	PHE	5.6
1	C	104	ASP	5.5
1	D	83	TYR	5.1
1	C	535	ASP	5.1
1	A	89	PHE	5.0
1	A	81	ALA	4.9
1	C	537	SER	4.9
1	C	536	LYS	4.9
1	B	142	LEU	4.8
1	A	90	LEU	4.6
1	D	377	ASN	4.5
1	A	94	THR	4.5
1	D	98	LEU	4.5
1	A	83	TYR	4.4
1	A	138	ASN	4.3
1	D	81	ALA	4.3
1	D	143	ILE	4.3

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Mol	Chain	Res	Type	RSRZ
1	D	82	GLU	4.2
1	D	142	LEU	4.2
1	A	101	SER	4.1
1	A	96	ASP	4.0
1	D	79	PHE	4.0
1	A	491	LEU	4.0
1	C	295	ILE	4.0
1	C	120	TYR	3.9
1	D	295	ILE	3.9
1	A	506	ASP	3.9
1	A	377	ASN	3.8
1	D	518	ASN	3.8
1	B	143	ILE	3.8
1	A	79	PHE	3.7
1	C	180	LEU	3.7
1	C	143	ILE	3.7
1	D	100	TYR	3.6
1	B	99	GLY	3.6
1	C	142	LEU	3.6
1	A	93	SER	3.6
1	A	766	PRO	3.5
1	C	96	ASP	3.5
1	D	537	SER	3.5
1	C	40	ARG	3.5
1	D	521	GLY	3.5
1	B	40	ARG	3.5
1	D	99	GLY	3.5
1	A	103	ASN	3.4
1	C	94	THR	3.4
1	A	70	TYR	3.4
1	A	39	SER	3.4
1	D	90	LEU	3.4
1	D	101	SER	3.4
1	D	54	ARG	3.4
1	D	95	PHE	3.4
1	D	547	TYR	3.3
1	B	439	TYR	3.2
1	A	142	LEU	3.2
1	B	41	ARG	3.2
1	C	137	LEU	3.2
1	C	538	LYS	3.2
1	C	93	SER	3.2

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Mol	Chain	Res	Type	RSRZ
1	A	71	LYS	3.1
1	B	507	VAL	3.1
1	C	506	ASP	3.1
1	A	88	ILE	3.1
1	C	148	ILE	3.1
1	D	436	LEU	3.1
1	D	86	SER	3.1
1	B	533	HIS	3.1
1	D	491	LEU	3.0
1	D	484	SER	3.0
1	B	547	TYR	3.0
1	D	439	TYR	3.0
1	D	538	LYS	3.0
1	C	766	PRO	3.0
1	C	440	THR	2.9
1	C	97	GLU	2.9
1	A	74	ASN	2.9
1	B	506	ASP	2.9
1	A	75	ASN	2.9
1	C	39	SER	2.9
1	D	84	GLY	2.9
1	A	120	TYR	2.9
1	B	39	SER	2.9
1	C	746	MET	2.9
1	A	84	GLY	2.9
1	B	54	ARG	2.8
1	C	367	ASP	2.8
1	B	81	ALA	2.8
1	B	101	SER	2.8
1	D	319	ALA	2.8
1	B	180	LEU	2.8
1	D	144	THR	2.8
1	C	507	VAL	2.8
1	D	442	VAL	2.8
1	B	141	GLN	2.7
1	C	745	ASN	2.7
1	A	102	THR	2.7
1	B	766	PRO	2.7
1	D	414	TYR	2.7
1	A	76	ILE	2.7
1	D	88	ILE	2.7
1	A	72	GLN	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	151	ASN	2.7
1	D	85	ASN	2.7
1	B	84	GLY	2.7
1	B	537	SER	2.7
1	D	434	ILE	2.7
1	D	465	ALA	2.6
1	D	187	TRP	2.6
1	C	140	ARG	2.6
1	C	141	GLN	2.6
1	A	82	GLU	2.6
1	A	180	LEU	2.6
1	C	74	ASN	2.6
1	B	535	ASP	2.6
1	C	135	TYR	2.6
1	D	70	TYR	2.6
1	D	449	LEU	2.6
1	C	181	SER	2.6
1	D	89	PHE	2.5
1	D	379	GLU	2.5
1	C	187	TRP	2.5
1	D	617	GLY	2.5
1	D	507	VAL	2.5
1	D	516	VAL	2.5
1	A	490	GLU	2.5
1	C	105	TYR	2.5
1	B	538	LYS	2.5
1	D	520	HIS	2.5
1	A	440	THR	2.5
1	A	488	ASP	2.5
1	A	77	LEU	2.5
1	D	78	LEU	2.5
1	A	179	ASN	2.5
1	C	41	ARG	2.5
1	A	87	SER	2.5
1	A	143	ILE	2.5
1	A	141	GLN	2.5
1	B	378	GLU	2.5
1	B	697	GLN	2.5
1	B	616	MET	2.5
1	D	103	ASN	2.4
1	D	72	GLN	2.4
1	D	488	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
1	D	467	TYR	2.4
1	D	485	SER	2.4
1	D	536	LYS	2.4
1	C	91	GLU	2.4
1	A	150	ASN	2.4
1	D	102	THR	2.4
1	A	437	ASN	2.4
1	A	745	ASN	2.4
1	C	442	VAL	2.4
1	A	187	TRP	2.4
1	D	412	SER	2.4
1	D	464	LYS	2.4
1	A	40	ARG	2.3
1	A	492	ARG	2.3
1	D	137	LEU	2.3
1	C	443	THR	2.3
1	D	401	ALA	2.3
1	A	91	GLU	2.3
1	C	83	TYR	2.3
1	D	389	THR	2.3
1	C	92	ASN	2.3
1	C	88	ILE	2.3
1	C	73	GLU	2.3
1	A	436	LEU	2.3
1	A	393	ASN	2.3
1	A	463	ASN	2.3
1	C	144	THR	2.3
1	D	80	ASN	2.3
1	B	139	LYS	2.3
1	D	139	LYS	2.3
1	D	181	SER	2.3
1	D	487	SER	2.3
1	A	761	GLN	2.3
1	D	74	ASN	2.3
1	D	443	THR	2.3
1	D	466	LYS	2.3
1	C	521	GLY	2.2
1	A	339	SER	2.2
1	C	179	ASN	2.2
1	B	102	THR	2.2
1	B	144	THR	2.2
1	B	367	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	614	SER	2.2
1	C	284	SER	2.2
1	A	105	TYR	2.2
1	D	135	TYR	2.2
1	C	119	ASN	2.2
1	D	522	THR	2.2
1	B	120	TYR	2.2
1	D	437	ASN	2.2
1	B	761	GLN	2.2
1	B	488	ASP	2.2
1	D	766	PRO	2.2
1	C	54	ARG	2.2
1	D	184	ARG	2.2
1	C	89	PHE	2.1
1	C	439	TYR	2.1
1	A	505	GLN	2.1
1	D	440	THR	2.1
1	B	98	LEU	2.1
1	C	149	PRO	2.1
1	D	116	PHE	2.1
1	B	414	TYR	2.1
1	D	517	ILE	2.1
1	A	487	SER	2.1
1	D	358	ARG	2.1
1	B	214	LEU	2.1
1	D	500	LEU	2.1
1	C	547	TYR	2.1
1	D	486	SER	2.1
1	A	489	LYS	2.1
1	B	145	GLU	2.1
1	D	441	LYS	2.1
1	A	520	HIS	2.1
1	C	138	ASN	2.1
1	D	438	ASP	2.1
1	D	506	ASP	2.1
1	C	116	PHE	2.0
1	D	348	ILE	2.0
1	A	442	VAL	2.0
1	C	449	LEU	2.0
1	B	82	GLU	2.0
1	B	441	LYS	2.0
1	A	521	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
1	C	118	TYR	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](#)

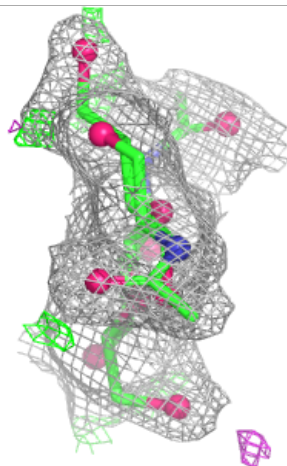
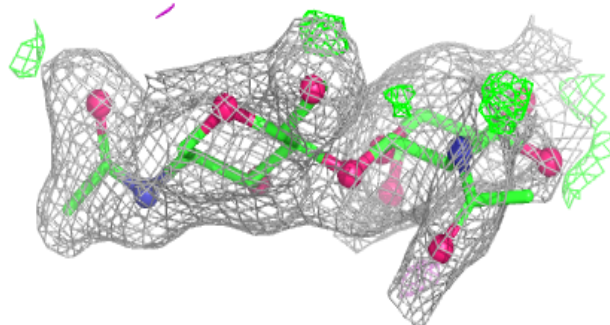
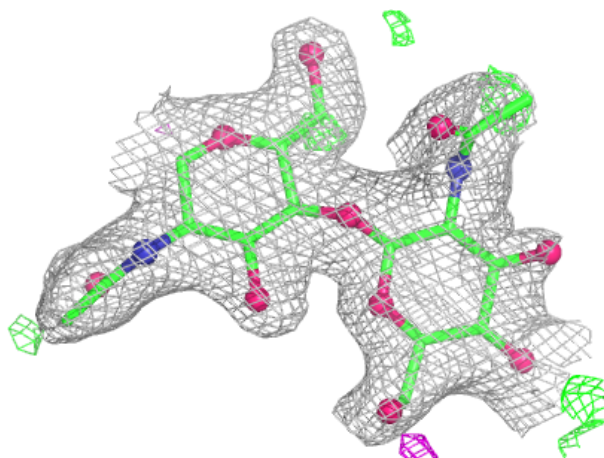
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	BMA	J	3	11/12	0.59	0.20	83,84,84,84	0
2	NAG	E	2	14/15	0.69	0.14	54,60,61,62	0
2	NAG	K	2	14/15	0.73	0.15	53,57,61,61	0
2	NAG	H	2	14/15	0.73	0.15	44,51,55,58	0
3	BMA	G	3	11/12	0.74	0.14	48,50,51,56	0
2	NAG	L	2	14/15	0.76	0.17	69,70,72,72	0
3	NAG	J	1	14/15	0.77	0.16	74,76,79,79	0
2	NAG	M	2	14/15	0.77	0.14	51,55,58,59	0
2	NAG	L	1	14/15	0.78	0.16	55,62,65,66	0
3	NAG	J	2	14/15	0.79	0.15	80,81,82,83	0
2	NAG	F	2	14/15	0.79	0.12	47,50,54,56	0
2	NAG	I	2	14/15	0.82	0.12	40,44,50,50	0
2	NAG	M	1	14/15	0.88	0.10	28,34,40,45	0
2	NAG	F	1	14/15	0.88	0.10	29,36,43,43	0
3	NAG	G	2	14/15	0.90	0.10	43,45,48,48	0
2	NAG	E	1	14/15	0.91	0.08	32,37,42,46	0
3	NAG	G	1	14/15	0.92	0.09	37,40,42,47	0
2	NAG	K	1	14/15	0.92	0.09	35,37,44,46	0
2	NAG	H	1	14/15	0.92	0.08	26,33,42,42	0
2	NAG	I	1	14/15	0.93	0.07	25,32,38,38	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.

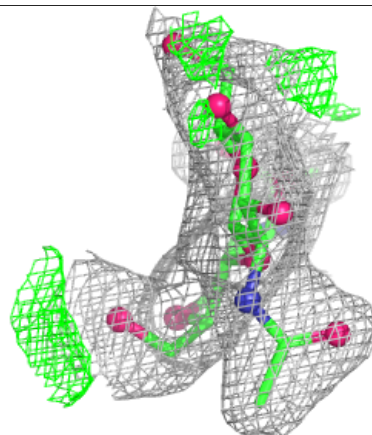
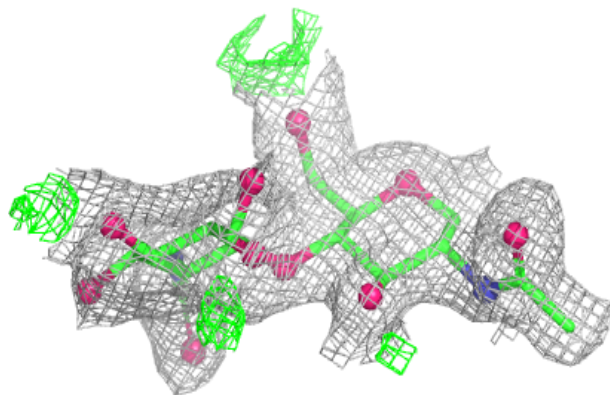
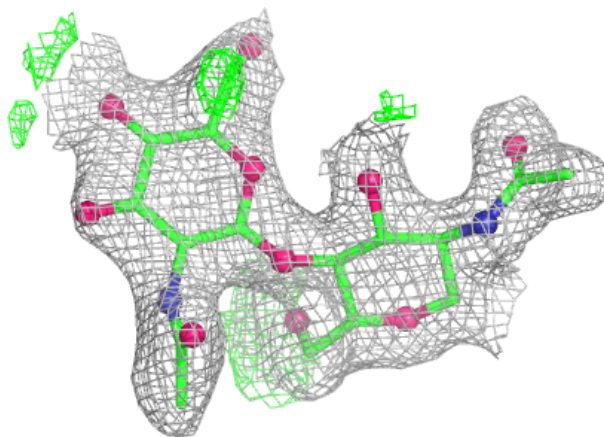
Electron density around Chain E:

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



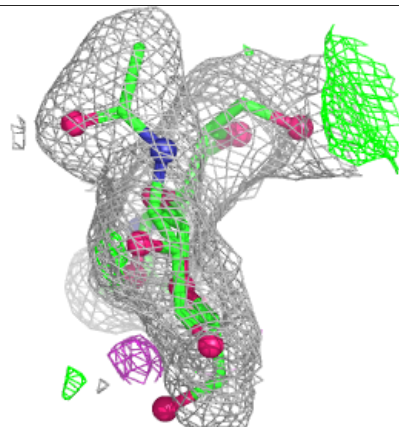
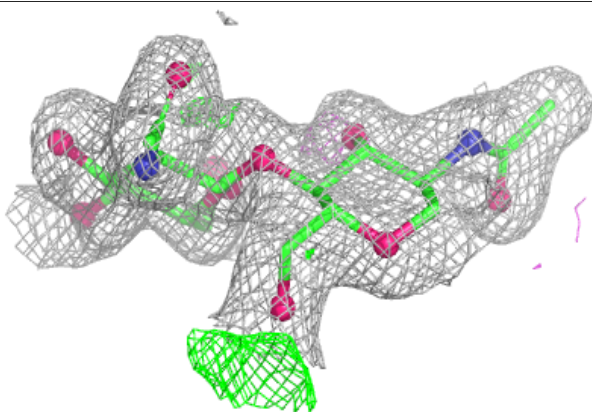
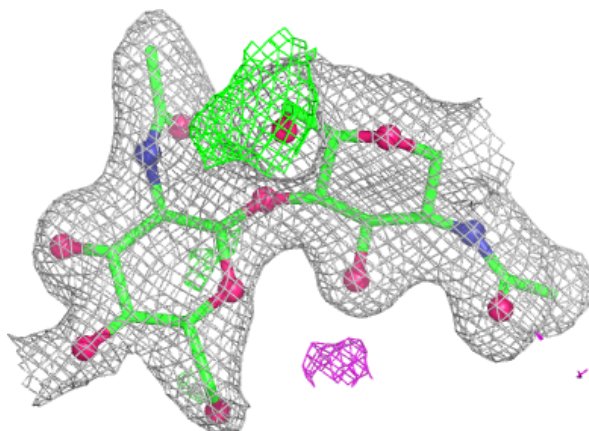
Electron density around Chain F:

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



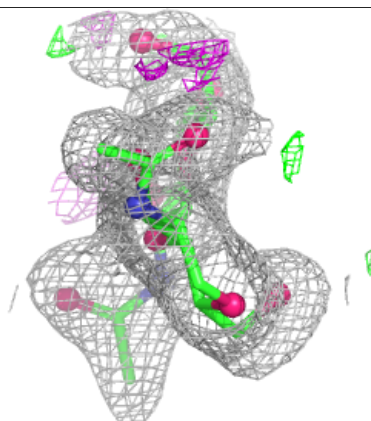
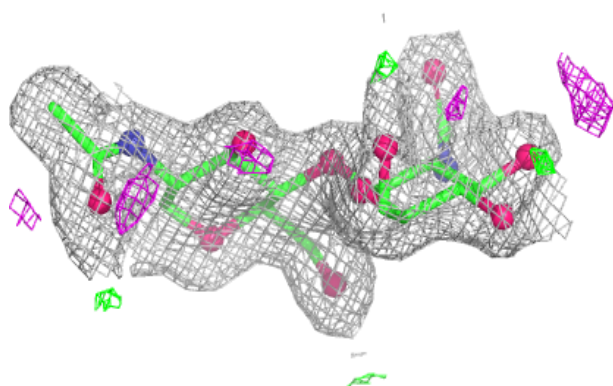
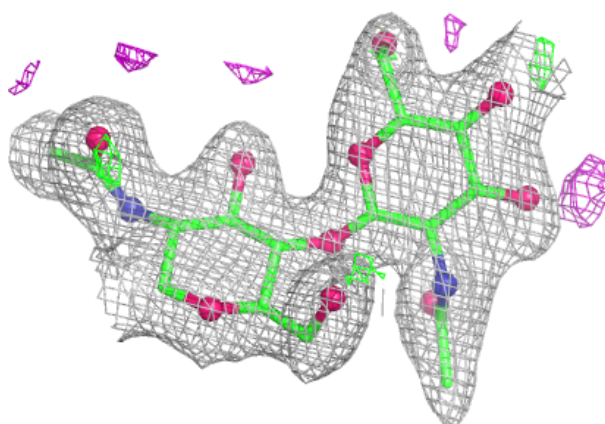
Electron density around Chain H:

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



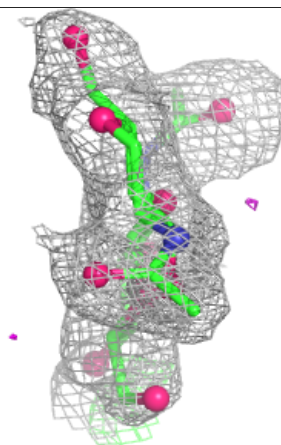
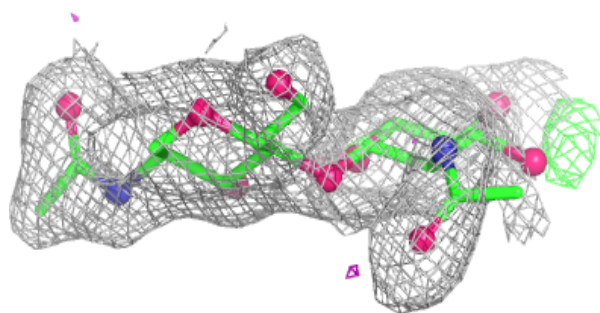
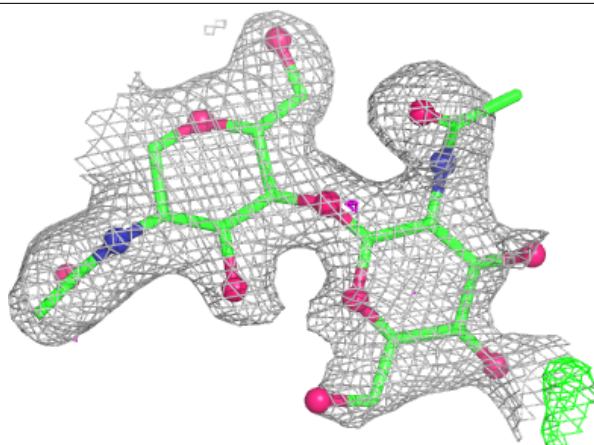
Electron density around Chain I:

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



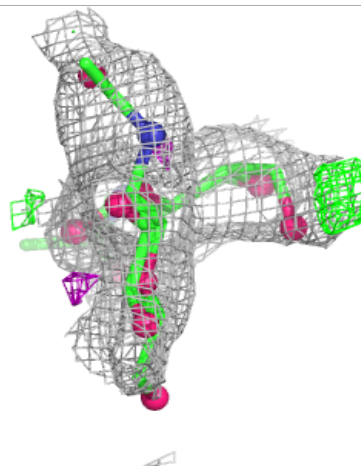
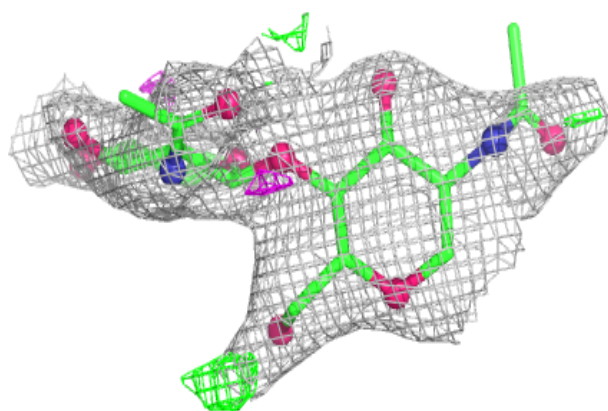
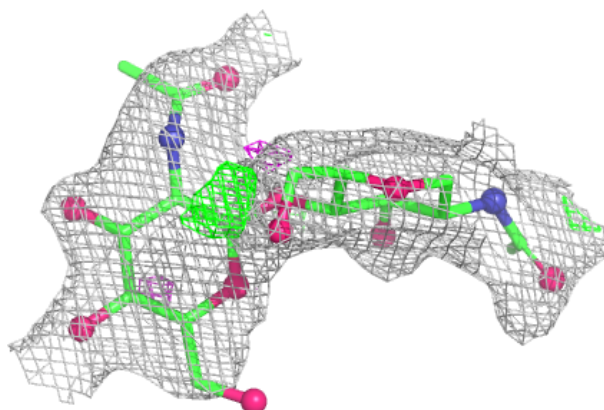
Electron density around Chain K:

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



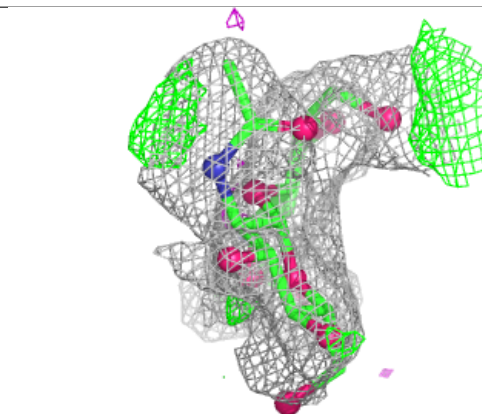
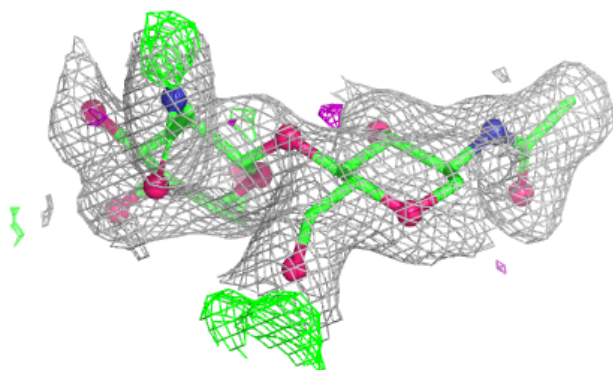
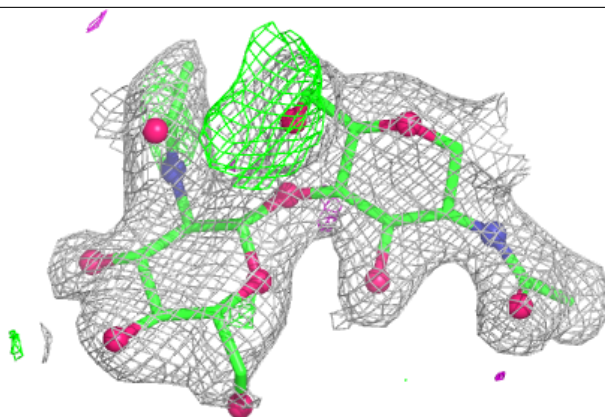
Electron density around Chain L:

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

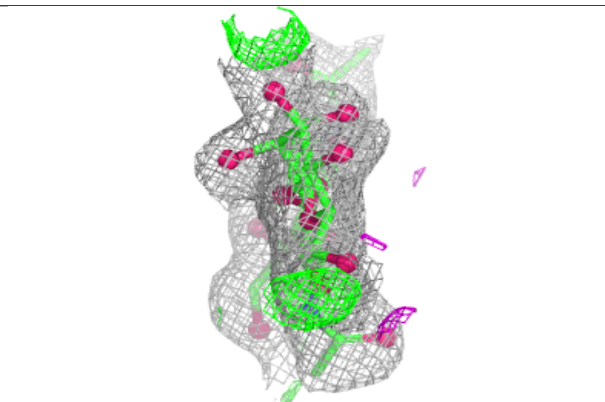
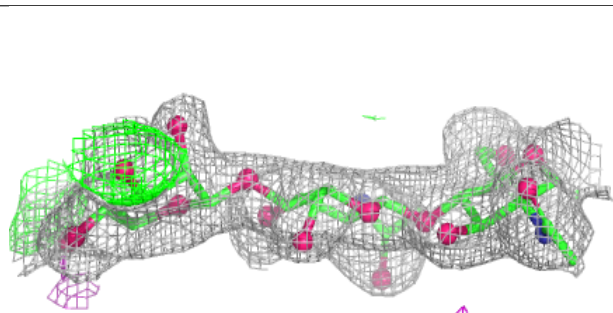
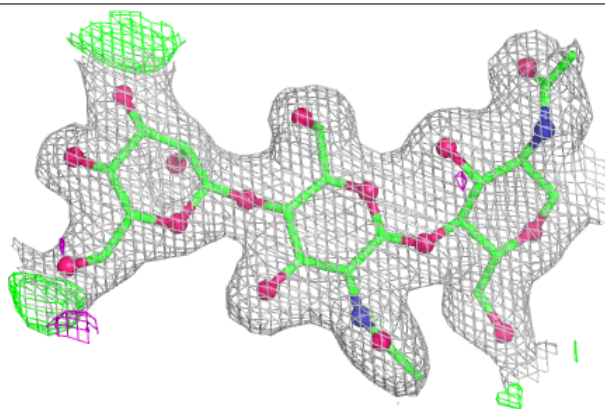


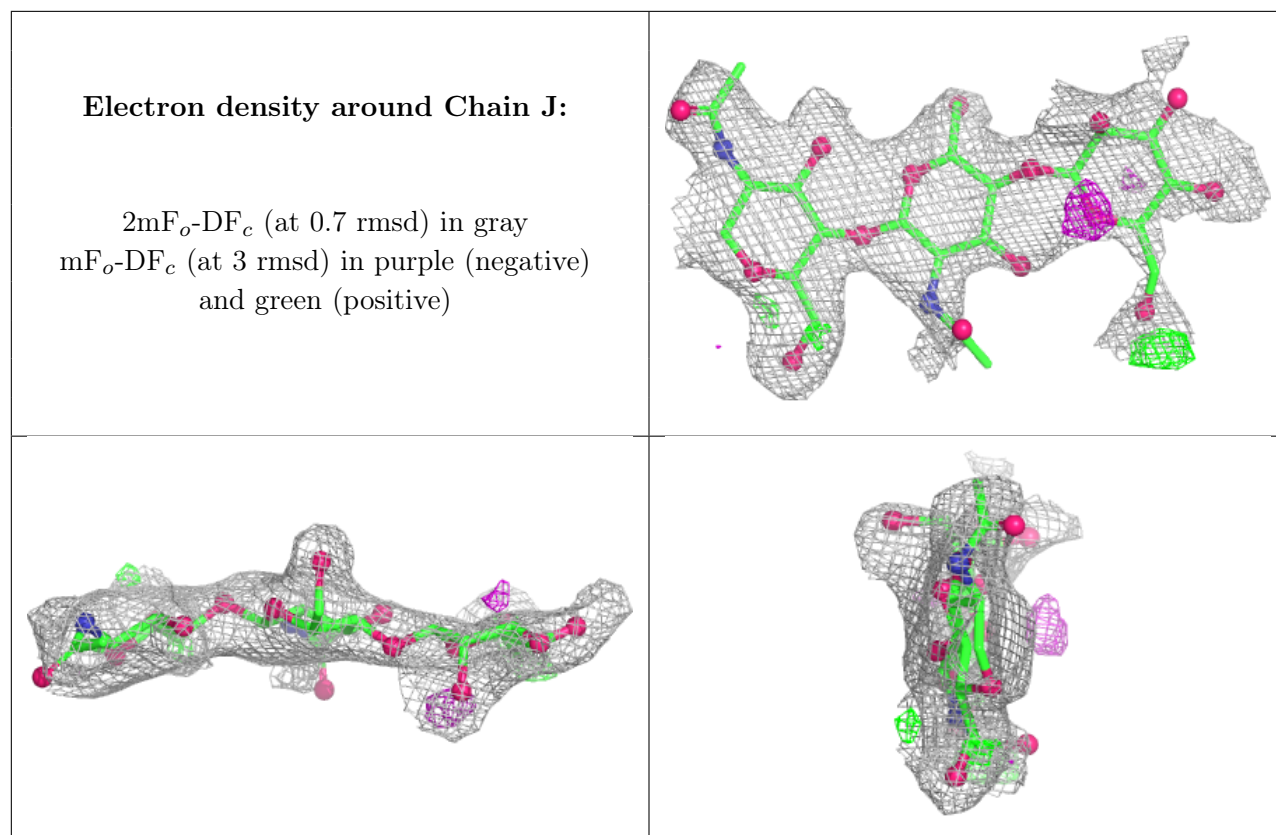
Electron density around Chain M:

$2mF_o-DF_c$ (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 ⓘ

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($\text{\AA}^2$)	Q<0.9
4	NAG	D	767(A)	14/15	0.21	0.20	89,90,91,92	0
4	NAG	C	768(A)	14/15	0.54	0.19	88,89,90,91	0
4	NAG	A	771(A)	14/15	0.66	0.20	49,52,54,54	3
4	NAG	B	767(A)	14/15	0.67	0.18	68,70,73,73	0
4	NAG	A	767(A)	14/15	0.68	0.18	81,83,84,84	0
4	NAG	D	773(A)	14/15	0.68	0.17	56,60,62,64	0
6	AES	D	801	12/13	0.68	0.24	63,67,69,69	0
6	AES	A	801	12/13	0.76	0.18	30,53,59,62	0
4	NAG	C	767(A)	14/15	0.76	0.15	60,63,65,65	0
4	NAG	A	768(A)	14/15	0.77	0.20	77,79,80,80	0
4	NAG	C	771(A)	14/15	0.77	0.14	43,48,52,52	0
6	AES	B	801	12/13	0.78	0.19	48,55,59,61	0
6	AES	C	801	12/13	0.81	0.18	33,53,60,61	0
4	NAG	B	772(A)	14/15	0.81	0.12	46,48,53,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
4	NAG	C	770(A)	14/15	0.82	0.13	44,47,53,55	0
4	NAG	A	772(A)	14/15	0.84	0.12	41,44,51,53	0
4	NAG	B	773(A)	14/15	0.88	0.10	36,40,45,48	0
4	NAG	B	771(A)	14/15	0.89	0.10	28,33,37,40	0
4	NAG	C	769(A)	14/15	0.89	0.10	31,35,37,42	0
5	SO4	B	1501	5/5	0.96	0.11	29,30,32,32	0
5	SO4	D	1503	5/5	0.96	0.11	41,43,45,45	0
5	SO4	A	1500	5/5	0.96	0.13	33,35,35,36	0
5	SO4	C	1502	5/5	0.98	0.07	32,32,34,35	0

6.5 Other polymers [i](#)

There are no such residues in this entry.