WORLD WIDE PDB

PROTEIN DATA BANK

wwPDB X-ray Structure Validation Summary Report (i)

Apr 17, 2025 – 10:07 AM EDT

PDB ID	:	9NR2 / pdb_00009nr2
Title	:	Crystal structure of H5 hemagglutinin from the influenza virus A/black swan/Akita/1/2016 with LSTa
Authors	:	Lin, T.H.; Zhu, Y.; Wilson, I.A.
Deposited on	:	2025-03-13
Resolution	:	2.71 Å(reported)

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

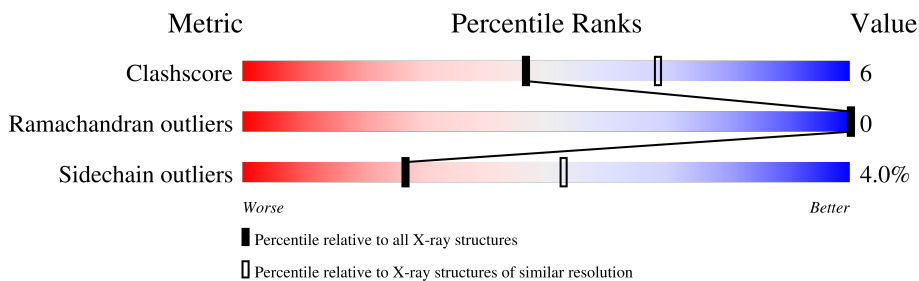|		
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0rc1
EDS	:	FAILED
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.42

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 2.71 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	Percentile Ranks	Value
Clashscore		6
Ramachandran outliers		0
Sidechain outliers		4.0%

Worse   *Better*

■ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	180529	4439 (2.74-2.70)
Ramachandran outliers	177936	4374 (2.74-2.70)
Sidechain outliers	177891	4375 (2.74-2.70)

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

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	A	324	82% 17% ••
1	C	324	84% 14% •
1	E	324	81% 18% •
2	B	177	86% 12% •
2	D	177	83% 14% ••
2	F	177	81% 19% •
3	G	2	100%
4	H	3	100%

WORLDWIDE PDB
PROTEIN DATA BANK

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 12069 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 Hemagglutinin HA1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	321	Total	C	N	O	S	0	0	0
			2538	1604	440	478	16			
1	C	323	Total	C	N	O	S	0	0	0
			2557	1616	445	480	16			
1	E	323	Total	C	N	O	S	0	0	0
			2553	1615	442	480	16			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	9	PRO	-	expression tag	UNP A0A1L7N0F8
A	10	GLY	-	expression tag	UNP A0A1L7N0F8
C	9	PRO	-	expression tag	UNP A0A1L7N0F8
C	10	GLY	-	expression tag	UNP A0A1L7N0F8
E	9	PRO	-	expression tag	UNP A0A1L7N0F8
E	10	GLY	-	expression tag	UNP A0A1L7N0F8

- Molecule 2 is a protein called Hemagglutinin HA2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	174	Total	C	N	O	S	0	0	0
			1414	878	247	281	8			
2	D	174	Total	C	N	O	S	0	0	0
			1414	878	247	281	8			
2	F	177	Total	C	N	O	S	0	0	0
			1435	889	253	285	8			

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	175	SER	-	expression tag	UNP A0A1L7N0F8
B	176	GLY	-	expression tag	UNP A0A1L7N0F8

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Chain	Residue	Modelled	Actual	Comment	Reference
B	177	ARG	-	expression tag	UNP A0A1L7N0F8
D	175	SER	-	expression tag	UNP A0A1L7N0F8
D	176	GLY	-	expression tag	UNP A0A1L7N0F8
D	177	ARG	-	expression tag	UNP A0A1L7N0F8
F	175	SER	-	expression tag	UNP A0A1L7N0F8
F	176	GLY	-	expression tag	UNP A0A1L7N0F8
F	177	ARG	-	expression tag	UNP A0A1L7N0F8

- Molecule 3 is an oligosaccharide called N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galacto pyranose.
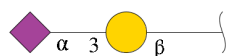
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
3	G	2	32	17	1	14	0	0	0

- Molecule 4 is an oligosaccharide called beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.
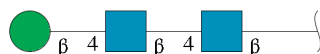
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
4	H	3	39	22	2	15	0	0	0

- Molecule 5 is 2-acetamido-2-deoxy-beta-D-glucopyranose (CCD ID: NAG) (formula: $C_8H_{15}NO_6$) (labeled as "Ligand of Interest" by depositor).

NAG

O6
OH

O1
HO

O5
O

C6

C1(R)   C5(R)

C2(R)   C4(S)
C3(R)

N2
HN

OH
O4

C7

OH

C8

O
O7

O3

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

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	4	Total	O	0	0
			4	4		
6	B	3	Total	O	0	0
			3	3		
6	C	2	Total	O	0	0
			2	2		
6	E	4	Total	O	0	0
			4	4		
6	F	4	Total	O	0	0
			4	4		

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. 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. 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.

Note EDS failed to run properly.

• Molecule 1: Hemagglutinin HA1
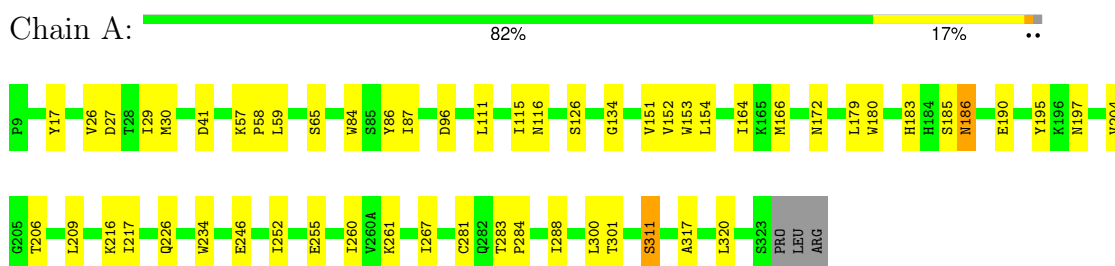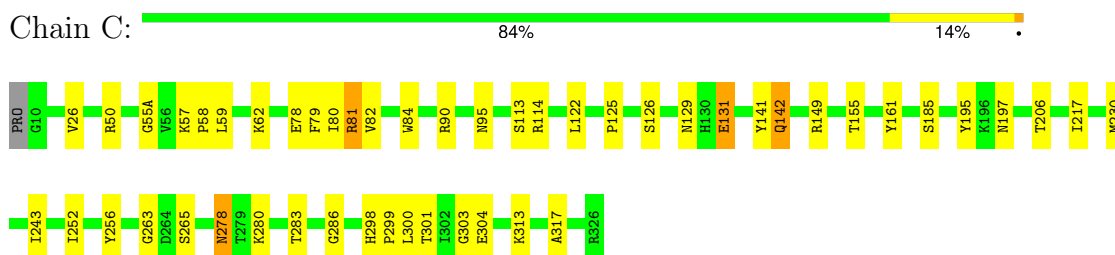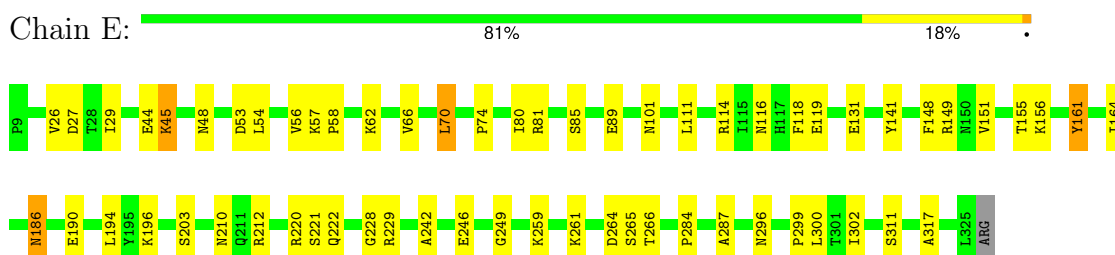
Chain A:

• Molecule 1: Hemagglutinin HA1

Chain C:

• Molecule 1: Hemagglutinin HA1

Chain E:

• Molecule 2: Hemagglutinin HA2

Chain B:

• Molecule 2: Hemagglutinin HA2

Chain D:

83%   14%

G1 F9 I10 Q30 R38 E39 K51 S54 I55 F63 E69 L73 L80 N81 E85 L89 L98 E103 R106 H111 V115 L133 E139 D145 N146 P160 S163 K169 S174 SER GLY ARG

• Molecule 2: Hemagglutinin HA2

Chain F:

81%   19%

G1 L2 F3 M17 V18 D19 G20 W21 Q30 R38 T41 K58 F63 V66 N79 L80 N81 K82 K83 M84 E85 D86 L89 L98 L99 V100 L101 M102 E105 S113 K116 D120 R123 L124 Q125 E147 C148 M149 E150 S151 V152 R153 Y157

R177
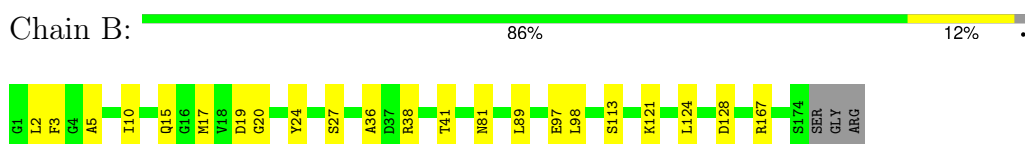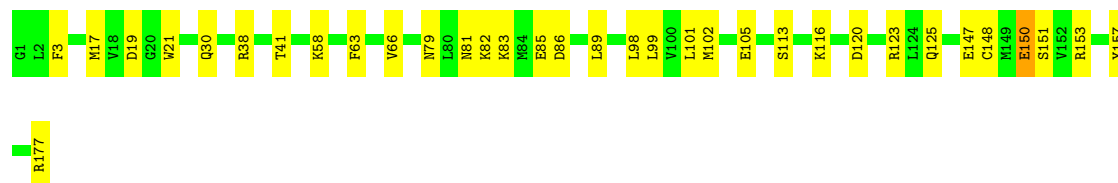
• Molecule 3: N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galactopyranose

Chain G:

100%

GAL1 SIA2

• Molecule 4: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-ac etamido-2-deoxy-beta-D-glucopyranose

Chain H:

100%

NAG1 NAG2 BMA3

4 Data and refinement statistics ⓘ

EDS failed to run properly - this section is therefore incomplete.

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	187.24Å 100.40Å 132.07Å 90.00° 125.93° 90.00°	Depositor
Resolution (Å)	35.65 – 2.71	Depositor
% Data completeness (in resolution range)	97.4 (35.65-2.71)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.75 (at 2.73Å)	Xtriage
Refinement program	PHENIX (1.21.2_5419: ???)	Depositor
R, R_{free}	0.223 , 0.272	Depositor
Wilson B-factor (Å^2)	63.1	Xtriage
Anisotropy	0.479	Xtriage
L-test for twinning[2]	$< |L| > = 0.49, < L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	12069	wwPDB-VP
Average B, all atoms (Å^2)	69.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.38% of the height of the origin peak. No significant pseudotranslation is detected.*

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.24	0/2602	0.47	0/3539
1	C	0.24	0/2621	0.48	0/3565
1	E	0.25	0/2618	0.49	0/3562
2	B	0.25	0/1441	0.46	0/1937
2	D	0.26	0/1441	0.46	0/1937
2	F	0.25	0/1462	0.47	0/1964
All	All	0.25	0/12185	0.47	0/16504

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2538	0	2479	28	0
1	C	2557	0	2502	27	0
1	E	2553	0	2497	35	0
2	B	1414	0	1319	15	0
2	D	1414	0	1319	19	0
2	F	1435	0	1340	22	0
3	G	32	0	28	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	H	39	0	34	0	0
5	A	28	0	26	0	0
5	C	14	0	13	0	0
5	E	28	0	26	1	0
6	A	4	0	0	0	0
6	B	3	0	0	0	0
6	C	2	0	0	0	0
6	E	4	0	0	0	0
6	F	4	0	0	0	0
All	All	12069	0	11583	133	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 6.

The worst 5 of 133 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:280:LYS:HE3	1:C:304:GLU:HB2	1.75	0.69
2:B:2:LEU:O	2:F:113:SER:OG	2.11	0.69
1:E:80:ILE:HG22	1:E:81:ARG:H	1.57	0.68
1:C:283:THR:OG1	1:C:286:GLY:O	2.10	0.66
2:B:19:ASP:OD1	2:B:38:ARG:NH1	2.31	0.64

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	319/324 (98%)	307 (96%)	12 (4%)	0	100	100
1	C	321/324 (99%)	308 (96%)	13 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	321/324 (99%)	310 (97%)	11 (3%)	0	100	100
2	B	172/177 (97%)	168 (98%)	4 (2%)	0	100	100
2	D	172/177 (97%)	168 (98%)	4 (2%)	0	100	100
2	F	175/177 (99%)	171 (98%)	4 (2%)	0	100	100
All	All	1480/1503 (98%)	1432 (97%)	48 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	286/289 (99%)	275 (96%)	11 (4%)	28	55
1	C	288/289 (100%)	277 (96%)	11 (4%)	28	55
1	E	288/289 (100%)	276 (96%)	12 (4%)	25	51
2	B	149/151 (99%)	144 (97%)	5 (3%)	32	59
2	D	149/151 (99%)	143 (96%)	6 (4%)	27	53
2	F	151/151 (100%)	144 (95%)	7 (5%)	23	47
All	All	1311/1320 (99%)	1259 (96%)	52 (4%)	27	53

5 of 52 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	D	39	GLU
1	E	62	LYS
2	F	147	GLU
2	D	54	SER
2	D	169	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 6 such sidechains are listed below:

Mol	Chain	Res	Type
2	D	161	GLN
1	E	116	ASN
2	F	125	GLN
2	B	154	ASN
2	B	15	GLN

5.3.3   RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5   Carbohydrates ⓘ

5 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
3	GAL	G	1	3	12,12,12	0.57	0	17,17,17	0.85	1 (5%)
3	SIA	G	2	3	20,20,21	1.60	1 (5%)	21,28,31	1.78	4 (19%)
4	NAG	H	1	4,1	14,14,15	0.79	0	17,19,21	1.28	3 (17%)
4	NAG	H	2	4	14,14,15	0.74	0	17,19,21	1.17	1 (5%)
4	BMA	H	3	4	11,11,12	0.85	0	15,15,17	3.10	5 (33%)

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
3	GAL	G	1	3	-	2/2/22/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	SIA	G	2	3	-	3/18/34/38	0/1/1/1
4	NAG	H	1	4,1	-	2/6/23/26	0/1/1/1
4	NAG	H	2	4	-	0/6/23/26	0/1/1/1
4	BMA	H	3	4	-	0/2/19/22	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	G	2	SIA	C2-C1	5.66	1.59	1.52

The worst 5 of 14 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	H	3	BMA	C1-O5-C5	9.73	125.22	112.19
3	G	2	SIA	O1A-C1-C2	-4.90	112.26	122.85
4	H	3	BMA	C1-C2-C3	4.37	116.00	109.64
3	G	2	SIA	O6-C2-C3	-4.14	104.98	110.56
4	H	2	NAG	C1-O5-C5	3.63	117.05	112.19

There are no chirality outliers.

5 of 7 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	G	2	SIA	O6-C6-C7-O7
3	G	1	GAL	O5-C5-C6-O6
4	H	1	NAG	C4-C5-C6-O6
3	G	1	GAL	C4-C5-C6-O6
4	H	1	NAG	O5-C5-C6-O6

There are no ring outliers.

No monomer is involved in short contacts.

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

Oligosaccharide Chain G

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain H

Bond lengths

Bond angles

Torsions

Rings
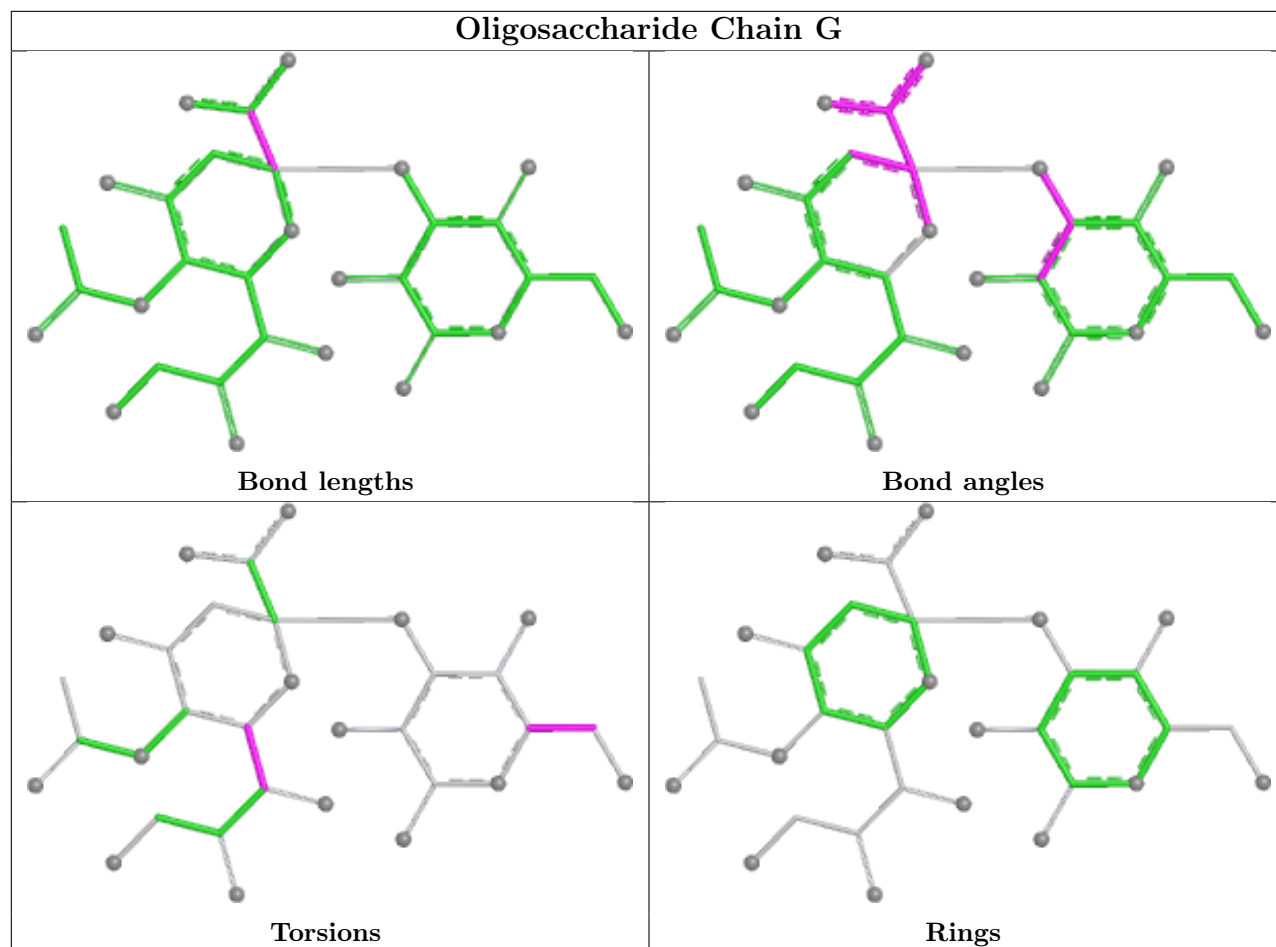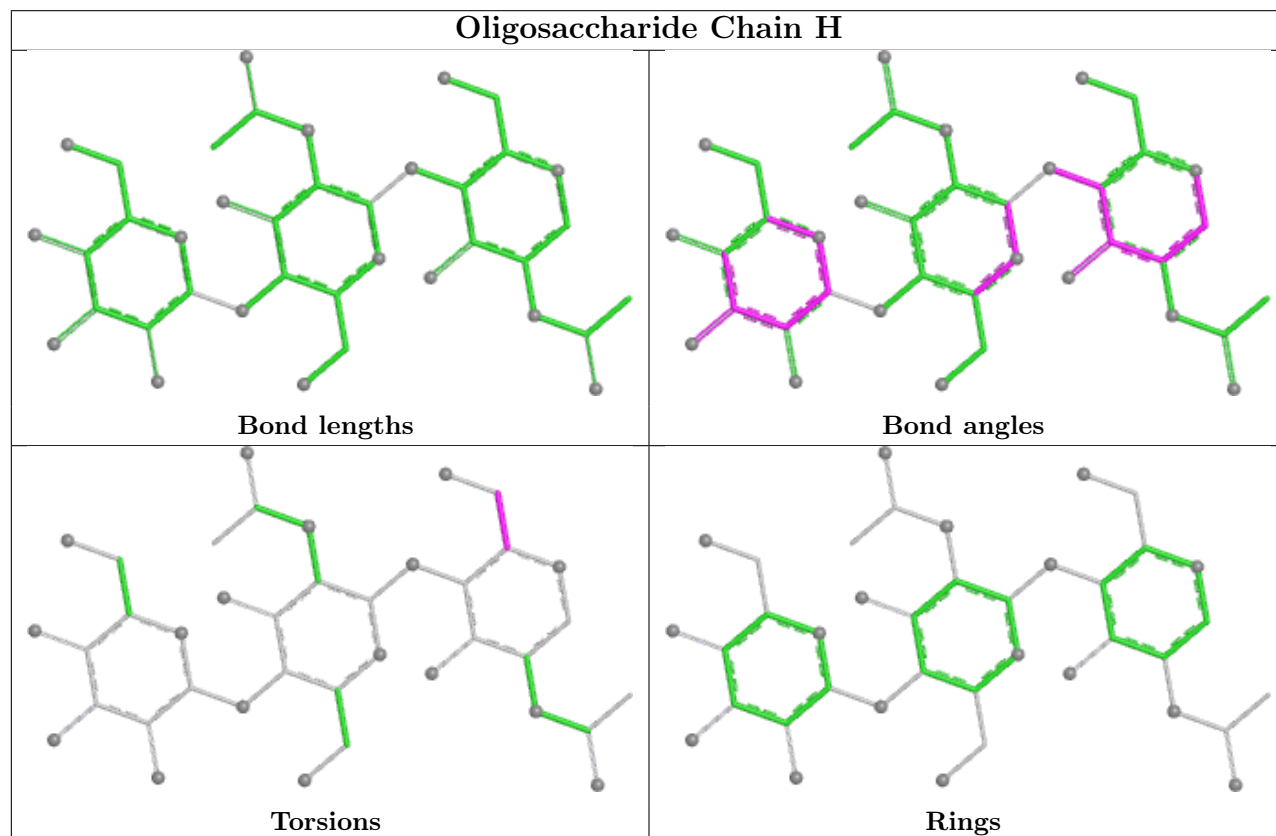
5.6 Ligand geometry (i)

5 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	NAG	C	401	1	14,14,15	0.70	0	17,19,21	0.81	0
5	NAG	A	401	1	14,14,15	0.73	0	17,19,21	0.95	1 (5%)
5	NAG	A	402	1	14,14,15	0.72	0	17,19,21	1.18	1 (5%)
5	NAG	E	402	1	14,14,15	0.67	0	17,19,21	0.87	0
5	NAG	E	401	1	14,14,15	0.70	0	17,19,21	1.48	3 (17%)

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
5	NAG	C	401	1	-	2/6/23/26	0/1/1/1
5	NAG	A	401	1	-	1/6/23/26	0/1/1/1
5	NAG	A	402	1	-	4/6/23/26	0/1/1/1
5	NAG	E	402	1	-	0/6/23/26	0/1/1/1
5	NAG	E	401	1	-	4/6/23/26	0/1/1/1

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	E	401	NAG	C2-N2-C7	3.31	127.33	122.90
5	A	402	NAG	C2-N2-C7	3.20	127.19	122.90
5	E	401	NAG	C1-C2-N2	2.74	114.75	110.43
5	E	401	NAG	C1-O5-C5	2.50	115.53	112.19
5	A	401	NAG	C1-O5-C5	2.42	115.43	112.19

There are no chirality outliers.

5 of 11 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	402	NAG	O5-C5-C6-O6
5	C	401	NAG	O5-C5-C6-O6
5	A	402	NAG	C4-C5-C6-O6
5	C	401	NAG	C4-C5-C6-O6
5	E	401	NAG	C4-C5-C6-O6

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	E	401	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 all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand NAG C 401

Bond lengths

Bond angles

Torsions

Rings

Ligand NAG A 401

Bond lengths

Bond angles

Torsions

Rings

Ligand NAG A 402

Bond lengths

Bond angles

Torsions

Rings

Ligand NAG E 402

Bond lengths

Bond angles

Torsions

Rings

Ligand NAG E 401

Bond lengths

Bond angles

Torsions

Rings
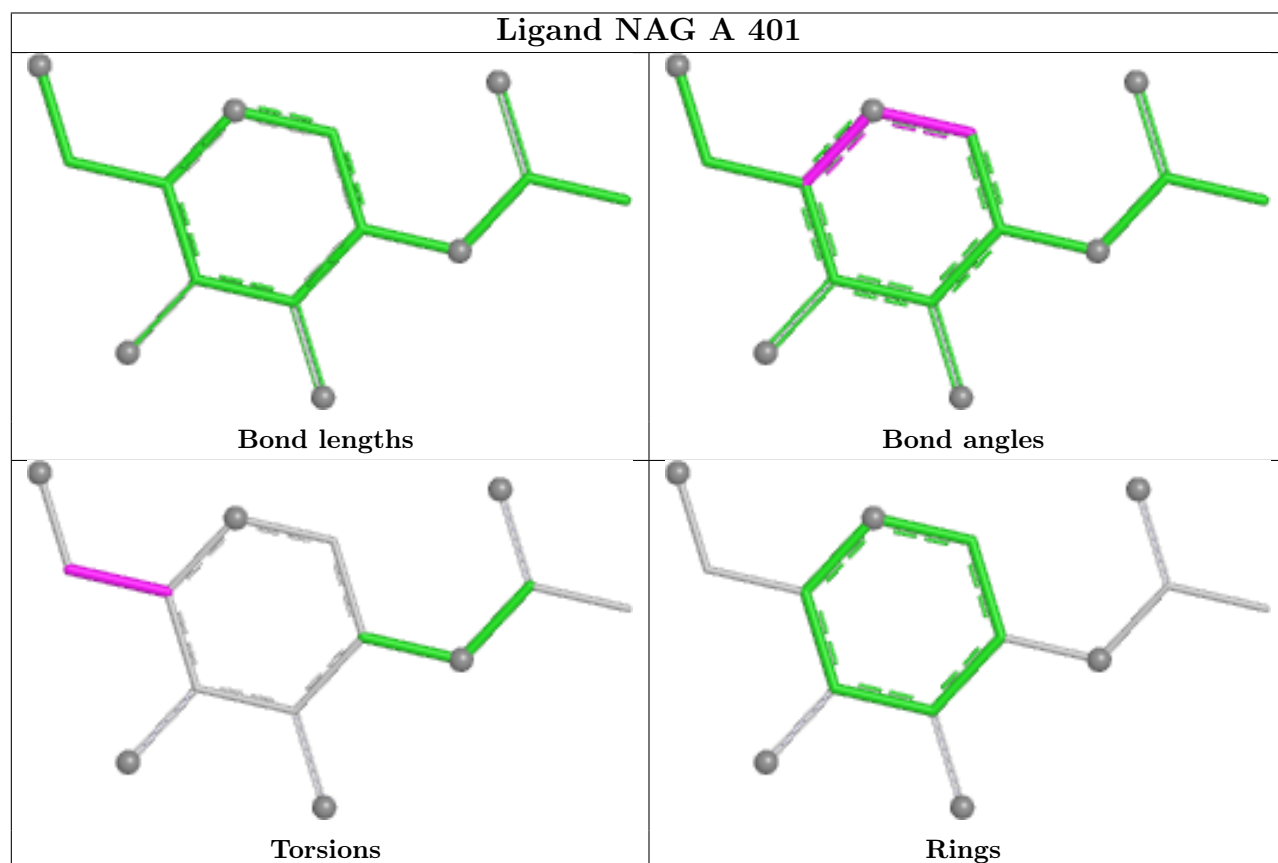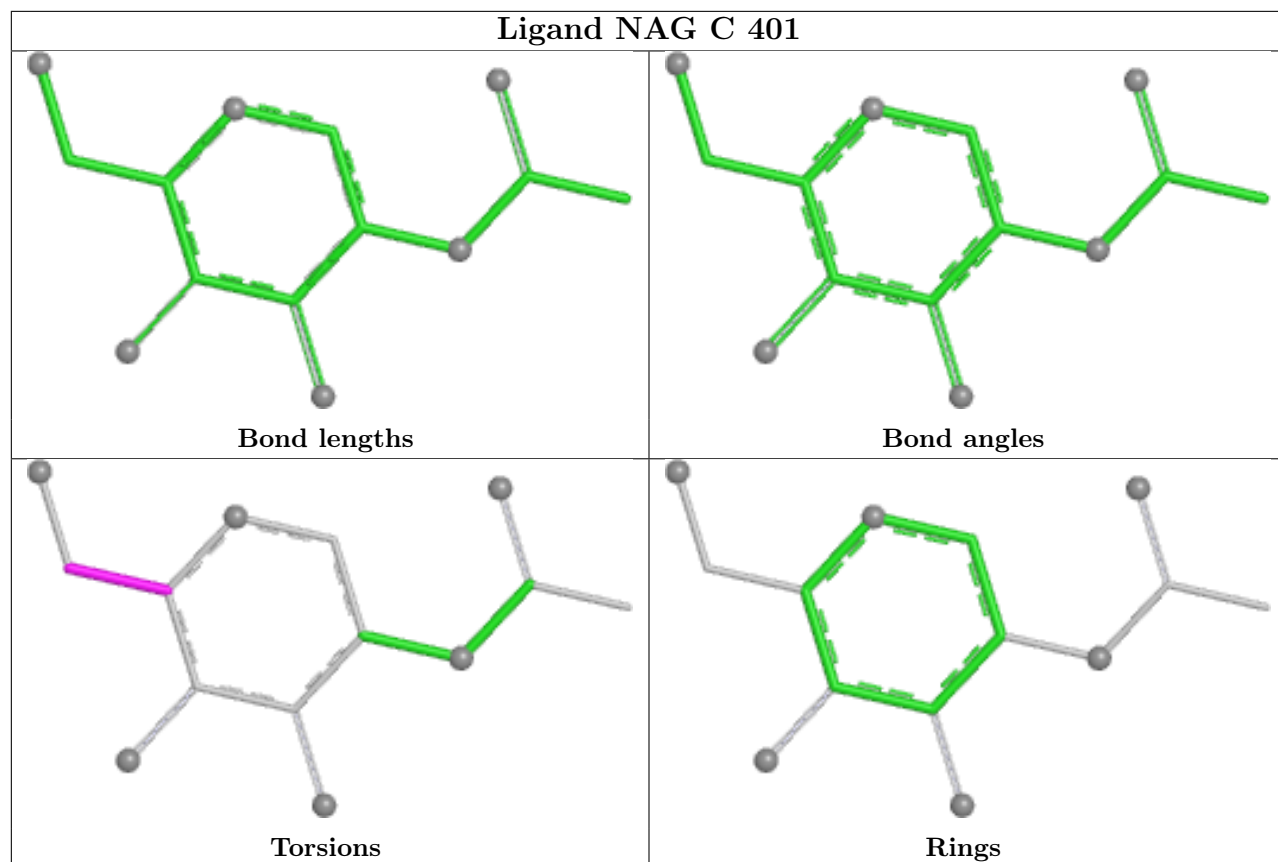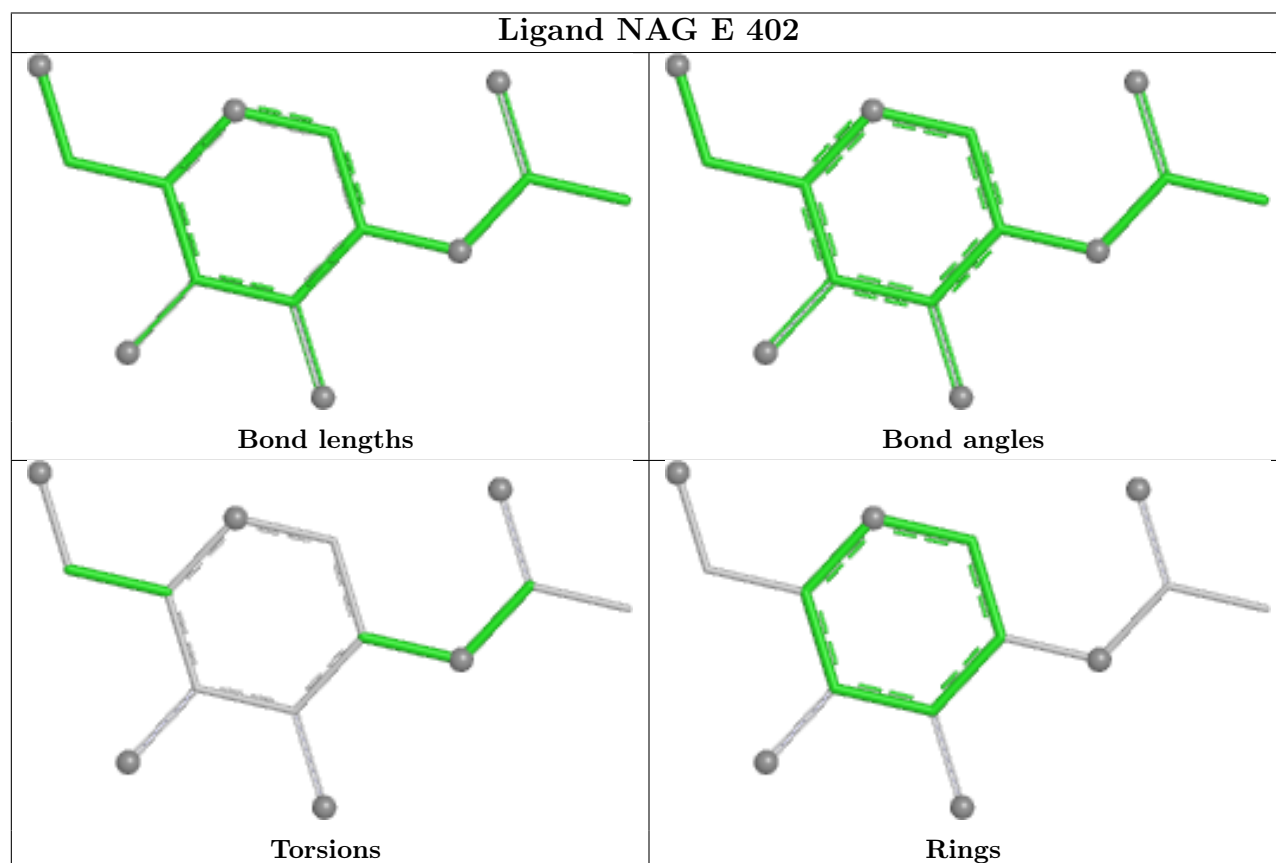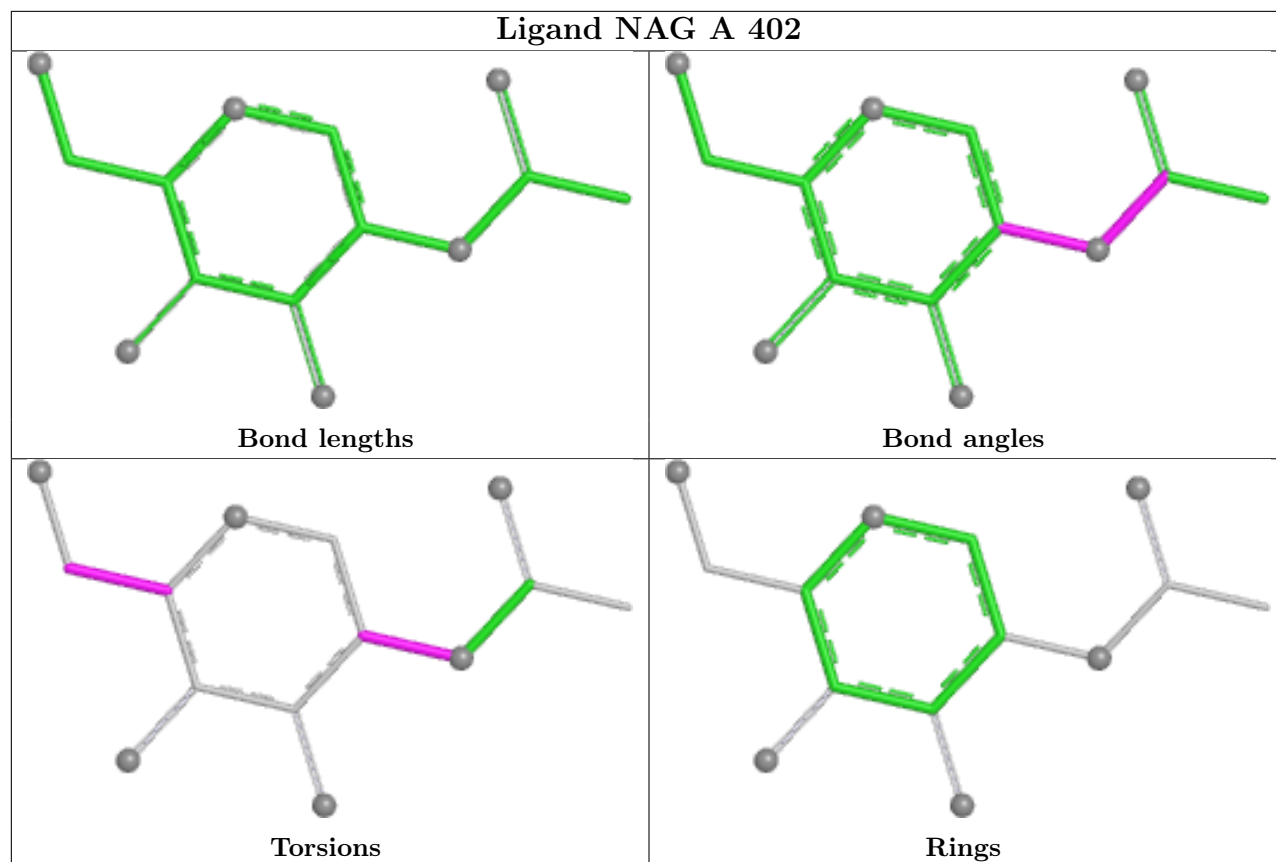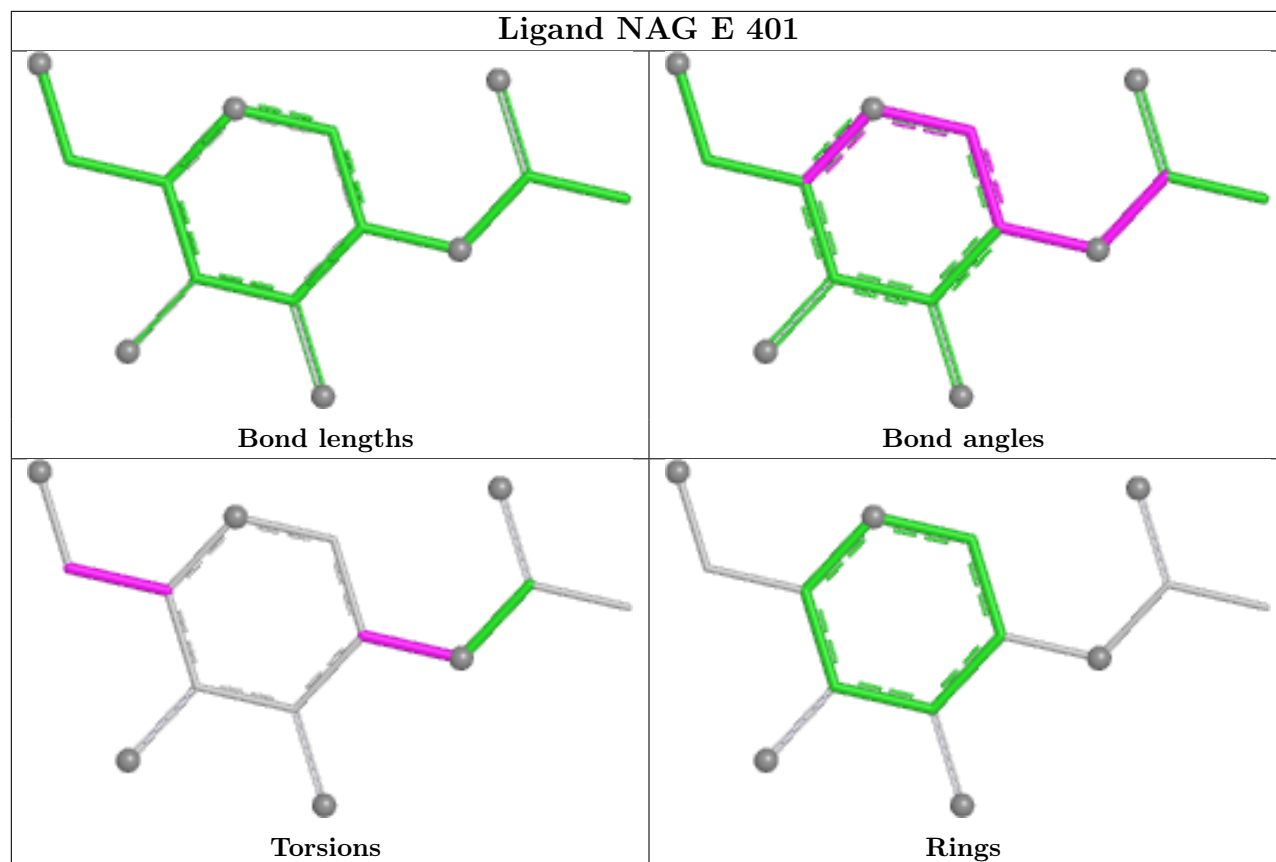
5.7 Other polymers ⓘ

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 (i)

6.1   Protein, DNA and RNA chains (i)

EDS failed to run properly - this section is therefore empty.

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

EDS failed to run properly - this section is therefore empty.

6.3   Carbohydrates (i)

EDS failed to run properly - this section is therefore empty.

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.
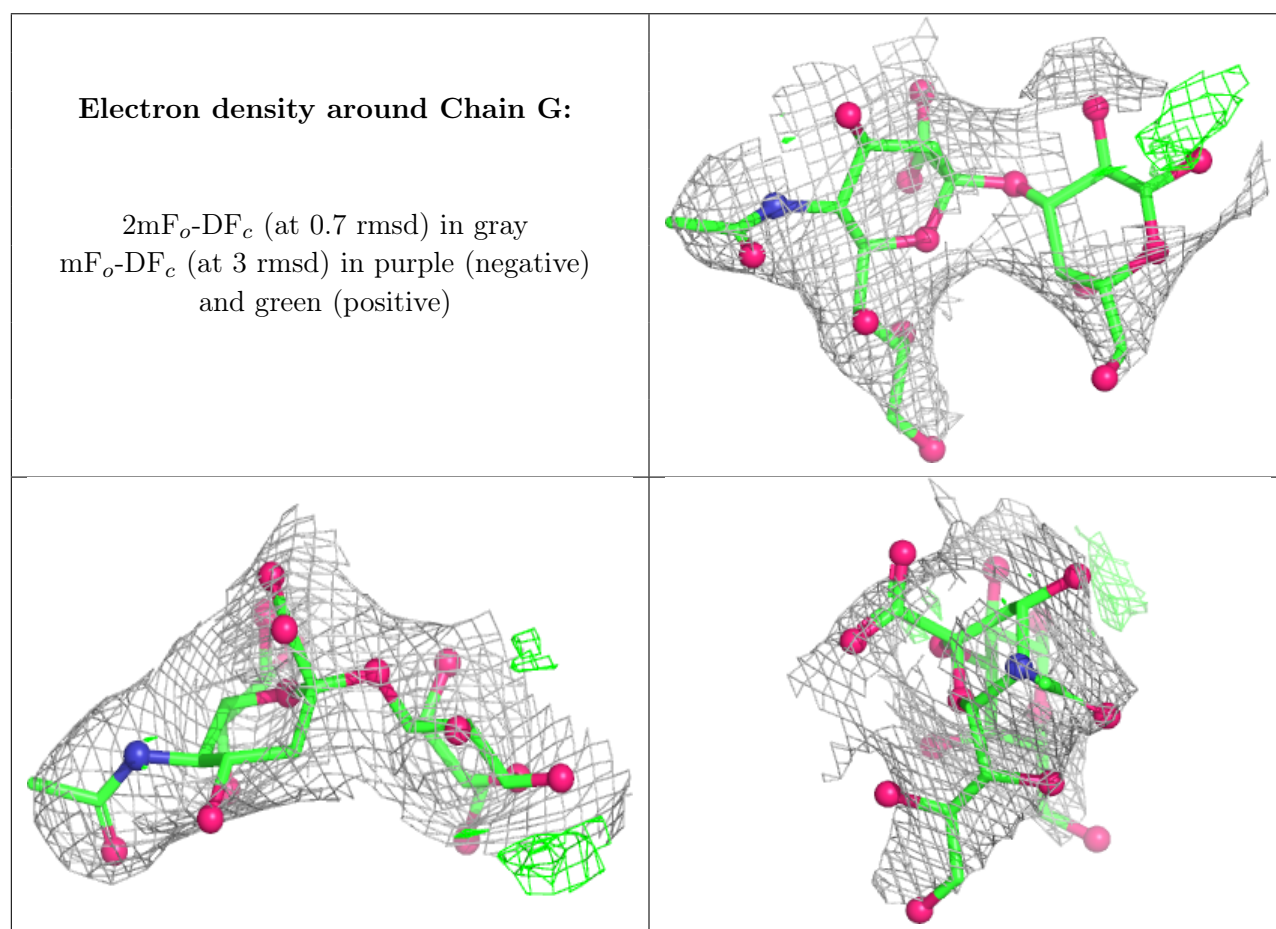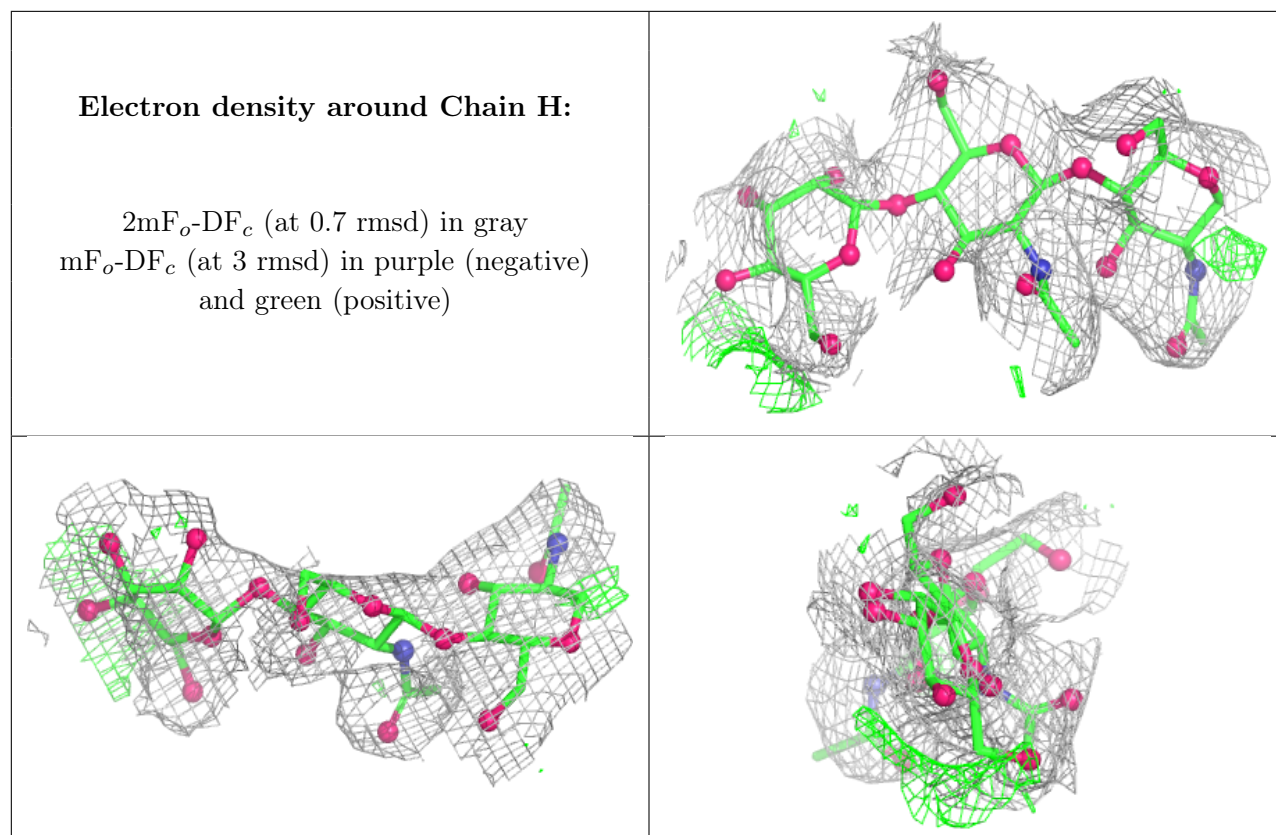
Electron density around Chain G:

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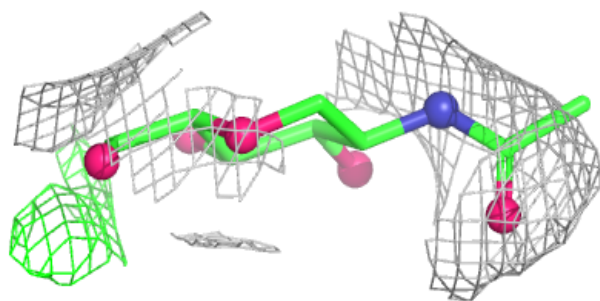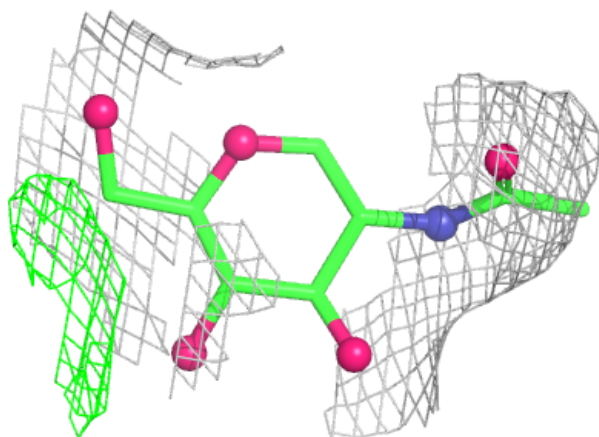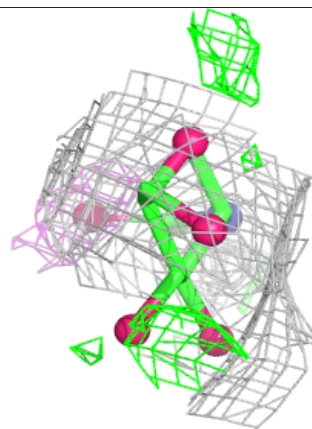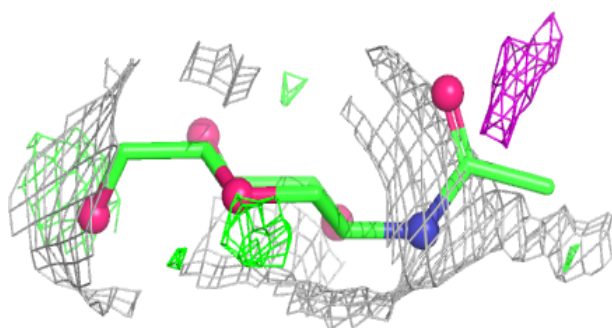and green (positive)

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)

6.4 Ligands ⓘ

EDS failed to run properly - this section is therefore empty.

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.
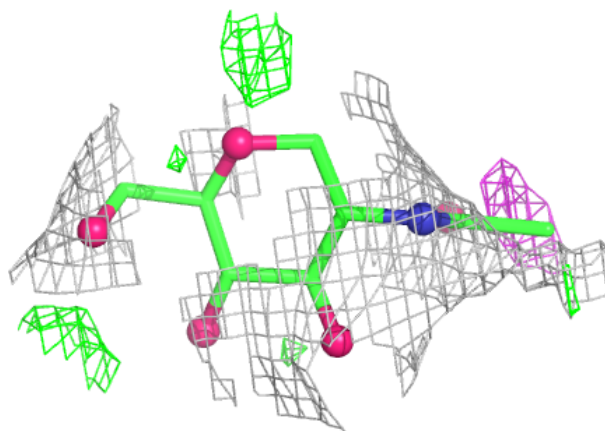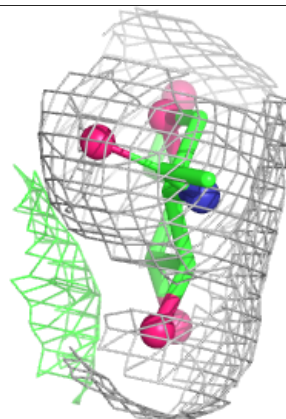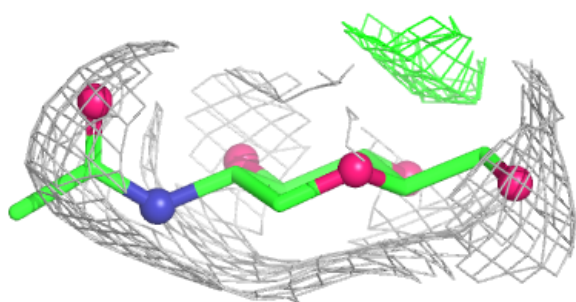
Electron density around NAG A 401:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
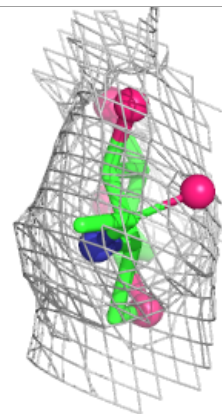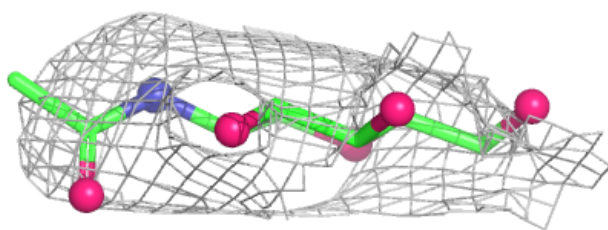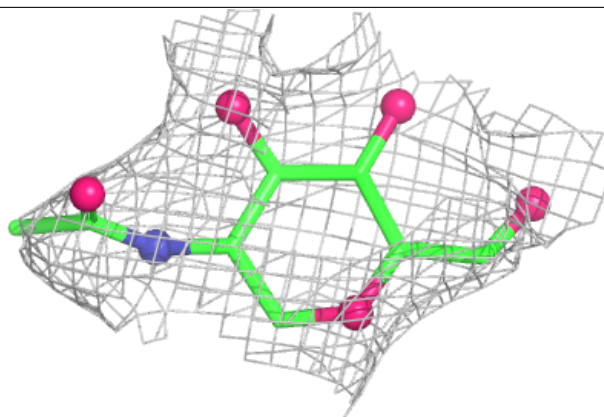
Electron density around NAG A 402:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
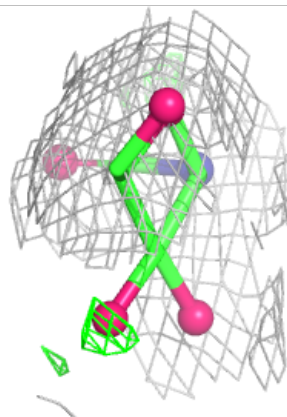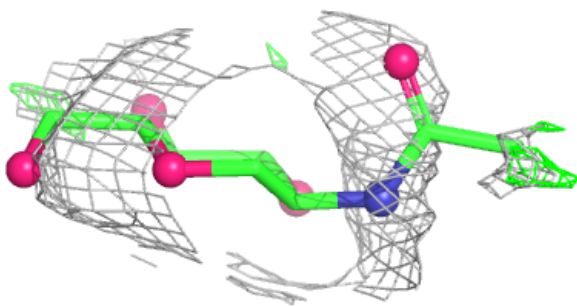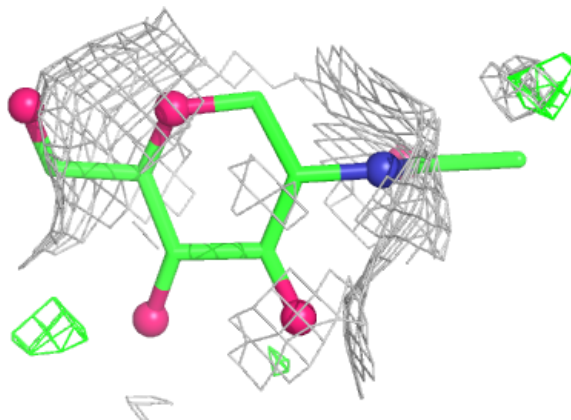
Electron density around NAG C 401:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
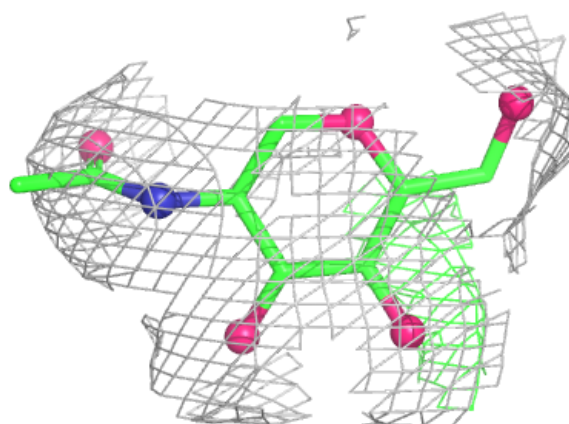and green (positive)
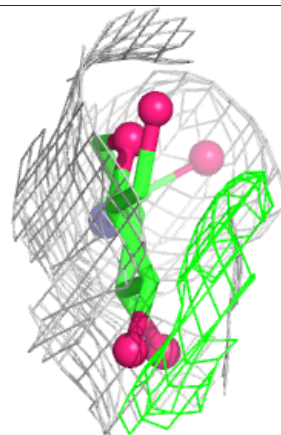
Electron density around NAG E 401:

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

Electron density around NAG E 402:

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

6.5 Other polymers ⓘ

EDS failed to run properly - this section is therefore empty.