



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 09:39 AM UTC

PDB ID : 6Q13 / pdb_00006q13
Title : CRYSTAL STRUCTURE OF LDHA IN COMPLEX WITH COMPOUND
NCGC00420737-09 AT 2.00 A RESOLUTION
Authors : Davies, D.R.; Dranow, D.M.
Deposited on : 2019-08-02
Resolution : 2.00 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtrriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

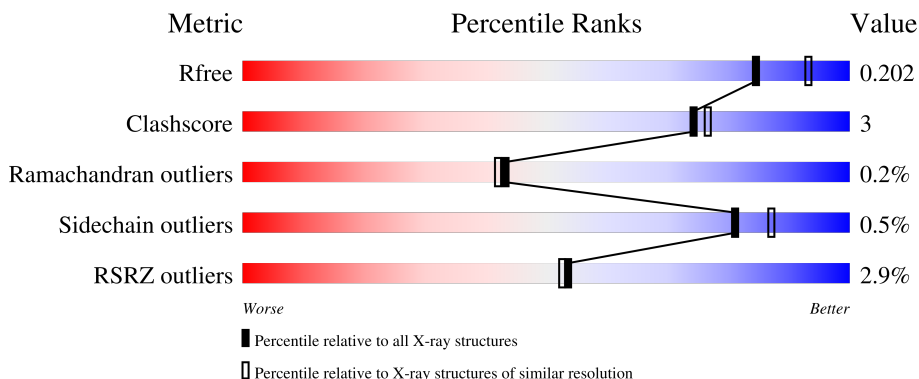
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	10052 (2.00-2.00)
Clashscore	190562	11152 (2.00-2.00)
Ramachandran outliers	187476	11031 (2.00-2.00)
Sidechain outliers	187428	11029 (2.00-2.00)
RSRZ outliers	180081	10067 (2.00-2.00)

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

Mol	Chain	Length	Quality of chain
1	A	332	 2% 92% 8%
1	B	332	 3% 94% 6%
1	C	332	 2% 93% 6%
1	D	332	 4% 91% 9%

2 Entry composition [i](#)

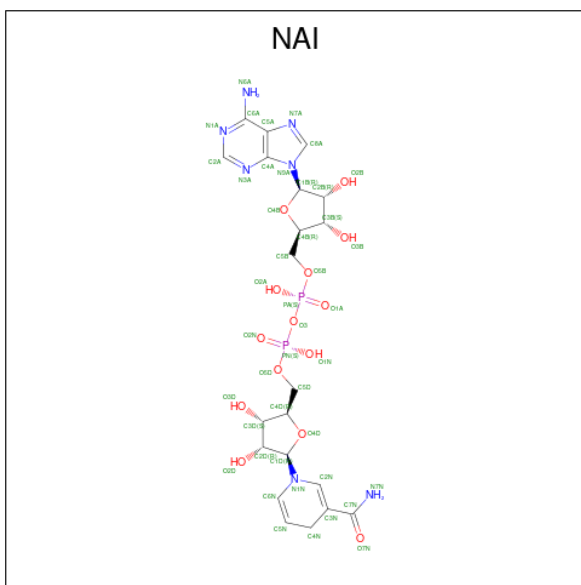
There are 5 unique types of molecules in this entry. The entry contains 11493 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 L-lactate dehydrogenase A chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	331	Total 2533	C 1617	N 433	O 470	S 13	0	2	0
1	B	331	Total 2518	C 1610	N 427	O 468	S 13	0	2	0
1	C	331	Total 2537	C 1619	N 431	O 474	S 13	0	2	0
1	D	331	Total 2522	C 1604	N 427	O 478	S 13	0	3	0

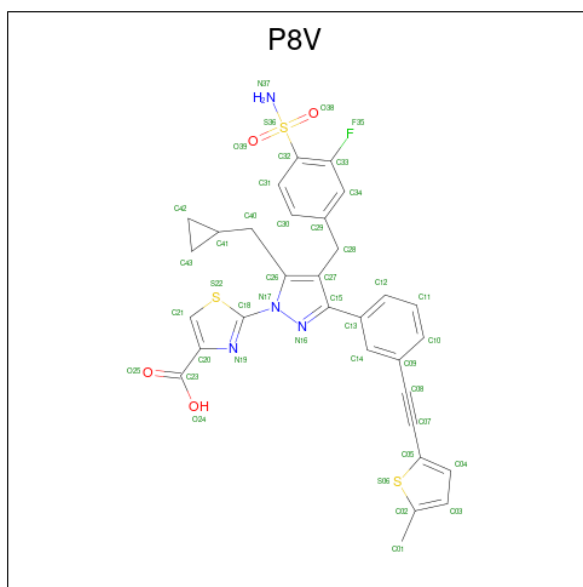
- Molecule 2 is 1,4-DIHYDRONICOTINAMIDE ADENINE DINUCLEOTIDE (CCD ID: NAI) (formula: $C_{21}H_{29}N_7O_{14}P_2$).



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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
2	C	1	Total	C	N	O	P	0	0
			44	21	7	14	2		
2	D	1	Total	C	N	O	P	0	0
			44	21	7	14	2		

- Molecule 3 is 2-[5-(cyclopropylmethyl)-4-[(3-fluoro-4-sulfamoylphenyl)methyl]-3-{3-[(5-methylthiophen-2-yl)ethynyl]phenyl}-1H-pyrazol-1-yl]-1,3-thiazole-4-carboxylic acid (CCD ID: P8V) (formula: C₃₁H₂₅FN₄O₄S₃) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	
			Total	C	F	N	O			S
3	A	1	Total	C	F	N	O	S	0	0
			43	31	1	4	4	3		
3	B	1	Total	C	F	N	O	S	0	0
			43	31	1	4	4	3		
3	C	1	Total	C	F	N	O	S	0	0
			43	31	1	4	4	3		
3	D	1	Total	C	F	N	O	S	0	0
			43	31	1	4	4	3		

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



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C O 4 2 2	0	0
4	A	1	Total C O 4 2 2	0	0
4	A	1	Total C O 4 2 2	0	0
4	A	1	Total C O 4 2 2	0	0
4	B	1	Total C O 4 2 2	0	0
4	C	1	Total C O 4 2 2	0	0
4	C	1	Total C O 4 2 2	0	0
4	C	1	Total C O 4 2 2	0	0
4	C	1	Total C O 4 2 2	0	0
4	D	1	Total C O 4 2 2	0	0
4	D	1	Total C O 4 2 2	0	0
4	D	1	Total C O 4 2 2	0	0
4	D	1	Total C O 4 2 2	0	0
4	D	1	Total C O 4 2 2	0	0

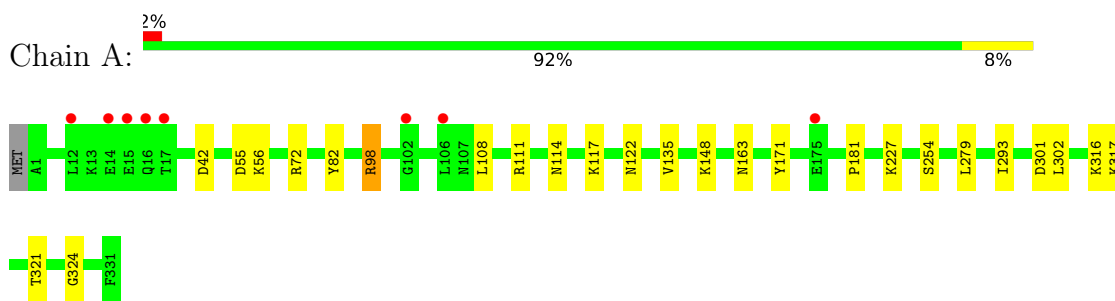
- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	280	Total 288	O 288	0	8
5	B	255	Total 255	O 255	0	0
5	C	226	Total 231	O 231	0	5
5	D	200	Total 205	O 205	0	5

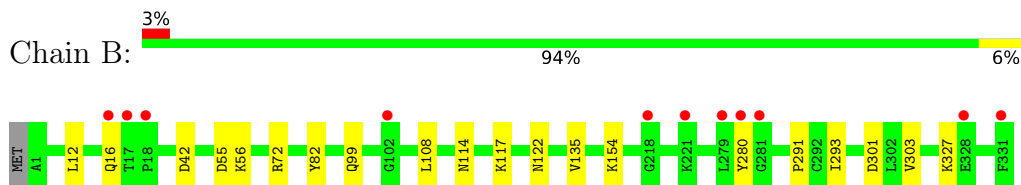
3 Residue-property plots [i](#)

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.

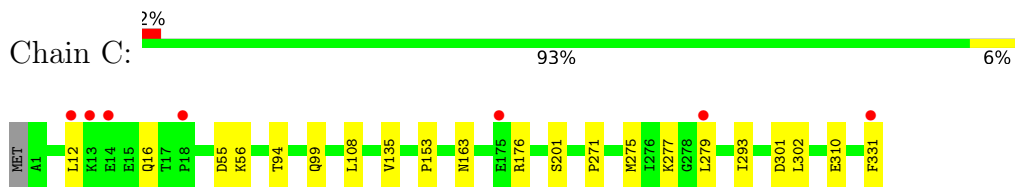
- Molecule 1: L-lactate dehydrogenase A chain



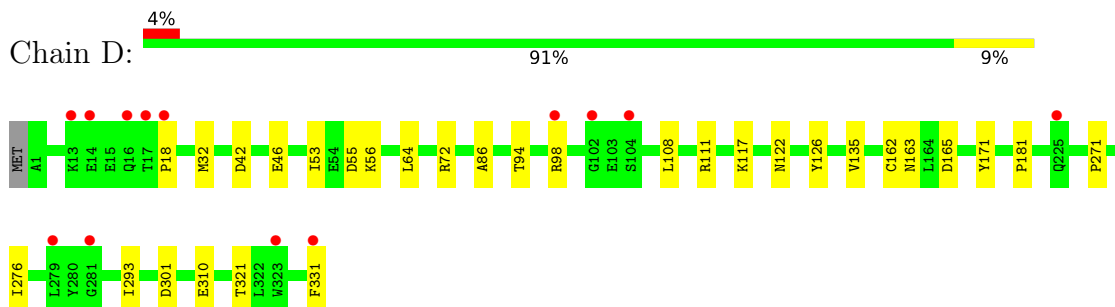
- Molecule 1: L-lactate dehydrogenase A chain



- Molecule 1: L-lactate dehydrogenase A chain



- Molecule 1: L-lactate dehydrogenase A chain



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α , β , γ	134.80Å 94.74Å 121.56Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	45.14 – 2.00 45.14 – 2.00	Depositor EDS
% Data completeness (in resolution range)	99.0 (45.14-2.00) 99.0 (45.14-2.00)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.88 (at 2.00Å)	Xtrriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.169 , 0.209 (Not available) , 0.202	Depositor DCC
R_{free} test set	1916 reflections (1.81%)	wwPDB-VP
Wilson B-factor (Å ²)	24.9	Xtrriage
Anisotropy	0.334	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.36 , 60.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	11493	wwPDB-VP
Average B, all atoms (Å ²)	32.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 15.07% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: P8V, NAI, EDO

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	0.32	0/2583	0.51	0/3501
1	B	0.31	0/2568	0.51	0/3485
1	C	0.28	0/2587	0.48	0/3508
1	D	0.28	0/2575	0.48	0/3497
All	All	0.30	0/10313	0.50	0/13991

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 [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	2533	0	2584	15	0
1	B	2518	0	2553	12	0
1	C	2537	0	2581	13	0
1	D	2522	0	2520	19	0
2	A	44	0	27	3	0
2	B	44	0	27	2	0
2	C	44	0	25	2	0
2	D	44	0	27	3	0
3	A	43	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	43	0	0	1	0
3	C	43	0	0	1	0
3	D	43	0	0	2	0
4	A	16	0	24	1	0
4	B	4	0	6	0	0
4	C	16	0	24	3	0
4	D	20	0	30	1	0
5	A	288	0	0	2	0
5	B	255	0	0	2	0
5	C	231	0	0	2	0
5	D	205	0	0	0	0
All	All	11493	0	10428	65	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 3.

All (65) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:401:NAI:H42N	3:D:402:P8V:C23	2.14	0.78
2:A:401:NAI:H42N	3:A:402:P8V:C23	2.14	0.77
1:A:293:ILE:HD12	1:A:301:ASP:HB2	1.66	0.76
1:B:293:ILE:HD12	1:B:301:ASP:HB2	1.70	0.74
1:D:293:ILE:HD12	1:D:301:ASP:HB2	1.74	0.69
2:C:401:NAI:H42N	3:C:402:P8V:C23	2.22	0.69
1:C:176:ARG:HE	4:C:404:EDO:H11	1.58	0.69
2:B:401:NAI:H42N	3:B:402:P8V:C23	2.23	0.69
1:C:293:ILE:HD12	1:C:301:ASP:HB2	1.75	0.68
1:B:280:TYR:OH	5:B:501:HOH:O	2.08	0.67
1:C:275:MET:HE1	1:C:277:LYS:HB3	1.78	0.65
1:A:135:VAL:O	2:A:401:NAI:H2N	2.00	0.61
1:C:331:PHE:N	5:C:504:HOH:O	2.36	0.59
1:C:310:GLU:OE1	5:C:501:HOH:O	2.17	0.58
1:C:135:VAL:O	2:C:401:NAI:H2N	2.03	0.57
1:D:98:ARG:O	1:D:111:ARG:NH1	2.38	0.57
1:B:72:ARG:NH2	5:B:502:HOH:O	2.32	0.56
2:A:401:NAI:H42N	3:A:402:P8V:C20	2.37	0.54
1:B:135:VAL:O	2:B:401:NAI:H2N	2.07	0.54
1:C:163:ASN:HA	1:C:271:PRO:HG2	1.90	0.54
1:D:53:ILE:HD11	1:D:98:ARG:NH2	2.25	0.51
1:A:163:ASN:ND2	1:A:254[A]:SER:OG	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:316:LYS:NZ	5:A:510:HOH:O	2.44	0.50
1:D:122:ASN:OD1	4:D:405:EDO:H11	2.11	0.50
1:A:98:ARG:O	1:A:111:ARG:NH1	2.44	0.50
1:D:310:GLU:OE1	1:D:310:GLU:N	2.38	0.49
1:B:99:GLN:HB2	1:B:108:LEU:HD22	1.95	0.49
4:A:406:EDO:O2	5:A:501:HOH:O	2.18	0.49
1:B:55[A]:ASP:OD1	1:B:56:LYS:N	2.44	0.49
1:A:324:GLY:HA3	1:D:321:THR:HG23	1.94	0.48
1:D:135:VAL:O	2:D:401:NAI:H2N	2.13	0.48
1:D:117:LYS:HD2	1:D:331:PHE:HA	1.96	0.48
1:C:153:PRO:HA	4:C:406:EDO:H22	1.96	0.48
1:C:55:ASP:OD1	1:C:56:LYS:N	2.48	0.47
2:D:401:NAI:H42N	3:D:402:P8V:C20	2.44	0.47
1:B:42:ASP:CG	1:B:72:ARG:HE	2.22	0.46
1:C:94:THR:HG22	1:C:135:VAL:HB	1.97	0.46
1:C:99:GLN:HB2	1:C:108:LEU:HD22	1.98	0.46
1:D:108:LEU:HD23	1:D:108:LEU:HA	1.87	0.44
1:D:163:ASN:HA	1:D:271:PRO:HG2	1.99	0.44
1:C:279:LEU:HD22	1:C:302:LEU:HD11	2.00	0.44
1:B:114:ASN:HA	1:B:117:LYS:HE2	1.99	0.44
1:B:82:TYR:CG	1:B:122:ASN:HB3	2.52	0.43
1:B:327:LYS:HB2	1:B:327:LYS:HE3	1.72	0.43
1:D:32:MET:HE1	1:D:64:LEU:HD11	2.01	0.43
1:A:279:LEU:HD21	1:A:302:LEU:HD11	2.00	0.43
1:D:171:TYR:HA	1:D:181:PRO:HG3	1.99	0.43
1:A:42:ASP:CG	1:A:72:ARG:HE	2.26	0.43
1:D:94:THR:HG22	1:D:135:VAL:HB	2.00	0.43
1:A:82:TYR:CG	1:A:122:ASN:HB3	2.54	0.43
1:D:55[B]:ASP:OD1	1:D:56:LYS:N	2.52	0.43
1:D:162:CYS:HA	1:D:165:ASP:OD1	2.19	0.42
1:A:114:ASN:HA	1:A:117:LYS:HE2	2.02	0.42
1:A:317:LYS:O	1:A:321:THR:HG23	2.19	0.42
1:D:276:ILE:HD12	1:D:276:ILE:HA	1.92	0.41
1:B:154:LYS:HE2	1:B:154:LYS:HB3	1.88	0.41
1:D:86:ALA:HA	1:D:126:TYR:HB3	2.02	0.41
1:D:42:ASP:CG	1:D:72:ARG:HE	2.29	0.41
1:A:98:ARG:HA	1:A:98:ARG:HD3	1.72	0.41
1:A:171:TYR:HA	1:A:181:PRO:HG3	2.02	0.41
1:C:201:SER:HB3	4:C:405:EDO:H21	2.02	0.41
1:D:18:PRO:HB3	1:D:46:GLU:OE1	2.20	0.41
1:A:55[A]:ASP:OD1	1:A:56:LYS:N	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:108:LEU:HD23	1:A:108:LEU:HA	1.91	0.41
1:B:291:PRO:HB2	1:B:303:VAL:HB	2.02	0.41

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	331/332 (100%)	326 (98%)	5 (2%)	0	100	100
1	B	331/332 (100%)	326 (98%)	4 (1%)	1 (0%)	36	35
1	C	331/332 (100%)	325 (98%)	5 (2%)	1 (0%)	36	35
1	D	332/332 (100%)	328 (99%)	4 (1%)	0	100	100
All	All	1325/1328 (100%)	1305 (98%)	18 (1%)	2 (0%)	43	42

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	16	GLN
1	C	16	GLN

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	278/288 (96%)	275 (99%)	3 (1%)	65	73
1	B	274/288 (95%)	273 (100%)	1 (0%)	84	89
1	C	279/288 (97%)	278 (100%)	1 (0%)	84	89
1	D	274/288 (95%)	274 (100%)	0	100	100
All	All	1105/1152 (96%)	1100 (100%)	5 (0%)	81	87

All (5) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	98	ARG
1	A	148	LYS
1	A	227	LYS
1	B	12	LEU
1	C	12	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (11) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	100	GLN
1	A	129	ASN
1	A	185	HIS
1	B	10	ASN
1	B	129	ASN
1	B	185	HIS
1	C	10	ASN
1	C	20	ASN
1	C	232	GLN
1	D	16	GLN
1	D	185	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

22 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	EDO	A	406	-	3,3,3	0.42	0	2,2,2	0.52	0
2	NAI	B	401	-	47,48,48	3.90	27 (57%)	64,73,73	2.58	17 (26%)
4	EDO	D	405	-	3,3,3	0.42	0	2,2,2	0.33	0
4	EDO	D	403	-	3,3,3	0.47	0	2,2,2	0.30	0
4	EDO	A	403	-	3,3,3	0.38	0	2,2,2	0.48	0
3	P8V	C	402	-	48,48,48	2.32	10 (20%)	65,71,71	1.25	7 (10%)
4	EDO	A	405	-	3,3,3	0.47	0	2,2,2	0.31	0
2	NAI	C	401	-	47,48,48	3.95	27 (57%)	64,73,73	2.58	17 (26%)
3	P8V	A	402	-	48,48,48	2.36	10 (20%)	65,71,71	1.15	4 (6%)
3	P8V	D	402	-	48,48,48	2.30	11 (22%)	65,71,71	1.34	8 (12%)
4	EDO	D	404	-	3,3,3	0.35	0	2,2,2	0.58	0
4	EDO	A	404	-	3,3,3	0.43	0	2,2,2	0.37	0
4	EDO	B	403	-	3,3,3	0.44	0	2,2,2	0.43	0
4	EDO	D	407	-	3,3,3	0.50	0	2,2,2	0.35	0
2	NAI	D	401	-	47,48,48	3.95	27 (57%)	64,73,73	2.65	15 (23%)
2	NAI	A	401	-	47,48,48	3.80	29 (61%)	64,73,73	2.58	17 (26%)
3	P8V	B	402	-	48,48,48	2.36	11 (22%)	65,71,71	1.30	6 (9%)
4	EDO	C	404	-	3,3,3	0.68	0	2,2,2	0.27	0
4	EDO	C	405	-	3,3,3	0.48	0	2,2,2	0.15	0
4	EDO	C	406	-	3,3,3	0.43	0	2,2,2	0.44	0
4	EDO	C	403	-	3,3,3	0.39	0	2,2,2	0.45	0
4	EDO	D	406	-	3,3,3	0.47	0	2,2,2	0.49	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the

Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns.
'-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	EDO	A	406	-	-	1/1/1/1	-
2	NAI	B	401	-	-	6/29/72/72	0/5/5/5
4	EDO	D	405	-	-	1/1/1/1	-
4	EDO	D	403	-	-	0/1/1/1	-
4	EDO	A	403	-	-	1/1/1/1	-
3	P8V	C	402	-	-	3/31/33/33	0/6/6/6
4	EDO	A	405	-	-	0/1/1/1	-
2	NAI	C	401	-	-	7/29/72/72	0/5/5/5
3	P8V	A	402	-	-	1/31/33/33	0/6/6/6
3	P8V	D	402	-	-	3/31/33/33	0/6/6/6
4	EDO	D	404	-	-	0/1/1/1	-
4	EDO	A	404	-	-	0/1/1/1	-
4	EDO	B	403	-	-	1/1/1/1	-
4	EDO	D	407	-	-	0/1/1/1	-
2	NAI	D	401	-	-	5/29/72/72	0/5/5/5
2	NAI	A	401	-	-	6/29/72/72	0/5/5/5
3	P8V	B	402	-	-	3/31/33/33	0/6/6/6
4	EDO	C	404	-	-	1/1/1/1	-
4	EDO	C	405	-	-	0/1/1/1	-
4	EDO	C	406	-	-	0/1/1/1	-
4	EDO	C	403	-	-	1/1/1/1	-
4	EDO	D	406	-	-	1/1/1/1	-

All (152) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	401	NAI	C3B-C4B	-10.06	1.27	1.53
2	C	401	NAI	C3B-C4B	-10.06	1.27	1.53
2	D	401	NAI	C3B-C4B	-9.91	1.27	1.53
2	A	401	NAI	C3B-C4B	-9.80	1.28	1.53
3	D	402	P8V	O39-S36	8.35	1.58	1.43
2	D	401	NAI	C2B-C1B	-8.31	1.27	1.53
2	C	401	NAI	C2B-C1B	-8.11	1.28	1.53
3	B	402	P8V	O38-S36	8.09	1.58	1.43
2	B	401	NAI	C2B-C1B	-8.01	1.28	1.53
2	B	401	NAI	O4D-C1D	7.83	1.60	1.42
3	A	402	P8V	O39-S36	7.75	1.57	1.43
2	A	401	NAI	C2B-C1B	-7.75	1.29	1.53
3	C	402	P8V	O39-S36	7.63	1.57	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	402	P8V	O38-S36	7.55	1.57	1.43
3	B	402	P8V	O39-S36	7.41	1.56	1.43
3	D	402	P8V	O38-S36	7.40	1.56	1.43
2	D	401	NAI	O4D-C1D	7.37	1.59	1.42
2	A	401	NAI	O4D-C1D	7.37	1.59	1.42
2	C	401	NAI	O4D-C1D	7.34	1.59	1.42
2	B	401	NAI	C2N-C3N	7.34	1.55	1.35
2	C	401	NAI	C2D-C1D	-7.33	1.30	1.53
2	D	401	NAI	C2N-C3N	7.32	1.55	1.35
2	D	401	NAI	C2D-C1D	-7.29	1.30	1.53
2	A	401	NAI	C2D-C1D	-7.28	1.30	1.53
2	B	401	NAI	C2D-C1D	-7.19	1.30	1.53
2	C	401	NAI	C6N-C5N	7.15	1.55	1.33
3	A	402	P8V	O38-S36	7.15	1.56	1.43
2	A	401	NAI	C2N-C3N	7.10	1.54	1.35
2	B	401	NAI	C6N-C5N	7.06	1.54	1.33
2	C	401	NAI	C2N-C3N	7.04	1.54	1.35
2	D	401	NAI	C6N-C5N	6.97	1.54	1.33
3	A	402	P8V	C20-C23	6.88	1.54	1.48
2	A	401	NAI	C6N-C5N	6.84	1.54	1.33
2	C	401	NAI	C6A-N6A	6.73	1.51	1.34
2	D	401	NAI	C6A-N6A	6.71	1.51	1.34
2	A	401	NAI	C6A-N6A	6.26	1.50	1.34
2	B	401	NAI	C6A-N6A	6.17	1.50	1.34
3	C	402	P8V	C20-C23	5.97	1.54	1.48
2	D	401	NAI	O4B-C1B	5.81	1.55	1.42
2	D	401	NAI	O4D-C4D	-5.79	1.32	1.45
2	C	401	NAI	O4D-C4D	-5.77	1.32	1.45
2	B	401	NAI	O4D-C4D	-5.64	1.32	1.45
2	C	401	NAI	O4B-C1B	5.57	1.54	1.42
3	B	402	P8V	C20-C23	5.56	1.53	1.48
2	C	401	NAI	C2B-C3B	5.56	1.68	1.53
2	C	401	NAI	O4B-C4B	5.55	1.57	1.45
2	D	401	NAI	O4B-C4B	5.52	1.57	1.45
2	A	401	NAI	C7N-N7N	5.51	1.49	1.33
2	A	401	NAI	O4D-C4D	-5.47	1.32	1.45
2	A	401	NAI	O4B-C4B	5.43	1.57	1.45
2	D	401	NAI	C2B-C3B	5.37	1.67	1.53
2	C	401	NAI	C7N-N7N	5.37	1.48	1.33
2	B	401	NAI	C2B-C3B	5.34	1.67	1.53
2	B	401	NAI	C7N-N7N	5.34	1.48	1.33
2	C	401	NAI	PA-O3	5.29	1.65	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	401	NAI	O4B-C1B	5.26	1.54	1.42
2	D	401	NAI	C7N-N7N	5.25	1.48	1.33
2	B	401	NAI	PA-O3	5.20	1.65	1.59
2	B	401	NAI	O4B-C4B	5.20	1.56	1.45
3	D	402	P8V	C20-C23	5.16	1.53	1.48
2	A	401	NAI	C2B-C3B	5.11	1.67	1.53
2	A	401	NAI	O4B-C1B	4.93	1.53	1.42
2	D	401	NAI	PA-O3	4.91	1.64	1.59
3	A	402	P8V	S36-N37	4.51	1.69	1.60
2	A	401	NAI	PA-O3	4.39	1.64	1.59
3	C	402	P8V	S36-N37	4.37	1.68	1.60
3	A	402	P8V	C18-S22	4.33	1.83	1.74
2	D	401	NAI	PN-O3	4.26	1.64	1.59
3	B	402	P8V	S36-N37	4.19	1.68	1.60
3	C	402	P8V	C21-S22	4.19	1.82	1.71
2	D	401	NAI	C6N-N1N	4.03	1.47	1.37
3	A	402	P8V	C21-S22	4.02	1.81	1.71
3	C	402	P8V	C05-S06	3.96	1.81	1.73
3	B	402	P8V	C05-S06	3.96	1.81	1.73
3	D	402	P8V	C05-S06	3.93	1.81	1.73
3	B	402	P8V	C40-C26	3.89	1.51	1.49
3	B	402	P8V	C21-S22	3.89	1.81	1.71
2	A	401	NAI	C6N-N1N	3.87	1.46	1.37
2	C	401	NAI	C6N-N1N	3.86	1.46	1.37
2	B	401	NAI	C6N-N1N	3.85	1.46	1.37
2	C	401	NAI	PN-O3	3.83	1.63	1.59
3	D	402	P8V	S36-N37	3.82	1.67	1.60
3	D	402	P8V	C21-S22	3.67	1.81	1.71
3	A	402	P8V	C05-S06	3.65	1.80	1.73
3	D	402	P8V	C18-S22	3.48	1.81	1.74
3	C	402	P8V	C18-S22	3.23	1.80	1.74
3	B	402	P8V	C18-S22	3.17	1.80	1.74
2	D	401	NAI	C7N-C3N	3.16	1.55	1.48
2	B	401	NAI	C7N-C3N	3.10	1.55	1.48
2	C	401	NAI	C4N-C5N	3.10	1.57	1.49
2	D	401	NAI	C4N-C5N	3.05	1.56	1.49
2	B	401	NAI	C4N-C5N	3.04	1.56	1.49
3	A	402	P8V	C02-S06	3.02	1.80	1.72
3	C	402	P8V	C02-S06	3.00	1.80	1.72
2	A	401	NAI	C5A-N7A	-2.99	1.33	1.39
2	C	401	NAI	O2D-C2D	2.95	1.50	1.43
2	A	401	NAI	C4N-C5N	2.88	1.56	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	402	P8V	C33-C32	-2.85	1.37	1.39
2	B	401	NAI	C5A-N7A	-2.84	1.33	1.39
2	C	401	NAI	C5A-N7A	-2.80	1.34	1.39
2	B	401	NAI	PN-O3	2.79	1.62	1.59
2	A	401	NAI	O2D-C2D	2.78	1.49	1.43
3	B	402	P8V	C02-S06	2.74	1.80	1.72
2	C	401	NAI	C7N-C3N	2.73	1.54	1.48
2	A	401	NAI	C7N-C3N	2.71	1.54	1.48
3	D	402	P8V	C02-S06	2.69	1.79	1.72
2	D	401	NAI	O2D-C2D	2.67	1.49	1.43
2	B	401	NAI	C8A-N9A	-2.67	1.33	1.37
2	B	401	NAI	O2D-C2D	2.67	1.49	1.43
2	B	401	NAI	C5A-C4A	-2.64	1.34	1.39
2	D	401	NAI	C5B-C4B	2.58	1.59	1.51
2	A	401	NAI	C5A-C4A	-2.57	1.34	1.39
2	C	401	NAI	C8A-N9A	-2.57	1.33	1.37
2	B	401	NAI	O7N-C7N	-2.56	1.18	1.24
2	A	401	NAI	PN-O3	2.56	1.62	1.59
2	C	401	NAI	C5A-C4A	-2.51	1.34	1.39
2	C	401	NAI	C5B-C4B	2.48	1.59	1.51
3	D	402	P8V	C18-N19	-2.47	1.26	1.31
2	B	401	NAI	C2A-N3A	2.46	1.38	1.33
2	D	401	NAI	C5A-N7A	-2.46	1.34	1.39
2	D	401	NAI	C5A-C4A	-2.44	1.34	1.39
2	B	401	NAI	PN-O5D	2.44	1.68	1.59
2	C	401	NAI	C2A-N3A	2.41	1.38	1.33
2	D	401	NAI	C8A-N9A	-2.39	1.33	1.37
2	A	401	NAI	C2A-N3A	2.35	1.38	1.33
2	D	401	NAI	PN-O5D	2.34	1.68	1.59
2	B	401	NAI	C4N-C3N	2.32	1.54	1.50
2	C	401	NAI	O7N-C7N	-2.29	1.19	1.24
3	B	402	P8V	C18-N19	-2.29	1.26	1.31
3	A	402	P8V	O24-C23	-2.29	1.24	1.30
2	D	401	NAI	C4N-C3N	2.28	1.54	1.50
2	A	401	NAI	C8A-N9A	-2.27	1.33	1.37
3	C	402	P8V	C18-N19	-2.24	1.26	1.31
3	D	402	P8V	C40-C26	2.23	1.50	1.49
2	B	401	NAI	C5B-C4B	2.22	1.58	1.51
2	D	401	NAI	C2A-N3A	2.18	1.37	1.33
3	D	402	P8V	C33-C32	-2.18	1.37	1.39
2	D	401	NAI	O7N-C7N	-2.17	1.19	1.24
2	A	401	NAI	C4N-C3N	2.16	1.54	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	401	NAI	C2A-N1A	2.15	1.37	1.33
2	A	401	NAI	C5B-C4B	2.14	1.58	1.51
2	C	401	NAI	PN-O5D	2.13	1.67	1.59
3	A	402	P8V	C18-N19	-2.11	1.27	1.31
2	C	401	NAI	C4N-C3N	2.10	1.54	1.50
3	C	402	P8V	C40-C26	2.10	1.50	1.49
2	A	401	NAI	PN-O5D	2.08	1.67	1.59
2	A	401	NAI	O3B-C3B	2.07	1.48	1.43
2	C	401	NAI	PA-O5B	2.02	1.67	1.59
2	A	401	NAI	O7N-C7N	-2.01	1.19	1.24
2	A	401	NAI	O3D-C3D	-2.01	1.38	1.43
2	D	401	NAI	O3B-C3B	2.01	1.47	1.43
2	B	401	NAI	PA-O5B	2.00	1.67	1.59

All (91) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	401	NAI	N6A-C6A-N1A	-10.29	95.46	118.38
2	B	401	NAI	N6A-C6A-N1A	-9.81	96.53	118.38
2	C	401	NAI	N6A-C6A-N1A	-9.66	96.86	118.38
2	A	401	NAI	N6A-C6A-N1A	-9.08	98.15	118.38
2	D	401	NAI	C5A-C6A-N6A	8.61	144.60	123.29
2	C	401	NAI	C5A-C6A-N6A	8.13	143.42	123.29
2	B	401	NAI	C5A-C6A-N6A	7.91	142.88	123.29
2	A	401	NAI	C5A-C6A-N6A	7.46	141.75	123.29
2	D	401	NAI	C4A-N9A-C1B	-6.82	110.68	126.63
2	C	401	NAI	C4A-N9A-C1B	-6.76	110.82	126.63
2	A	401	NAI	C4A-N9A-C1B	-6.41	111.65	126.63
2	D	401	NAI	C1B-N9A-C8A	5.76	139.89	127.09
2	B	401	NAI	C4A-N9A-C1B	-5.72	113.24	126.63
2	C	401	NAI	C1B-N9A-C8A	5.68	139.71	127.09
2	D	401	NAI	N3A-C2A-N1A	-5.59	120.12	128.58
2	B	401	NAI	C5A-C4A-N3A	-5.45	119.21	126.72
2	A	401	NAI	N3A-C2A-N1A	-5.31	120.55	128.58
2	B	401	NAI	N3A-C2A-N1A	-5.31	120.55	128.58
3	C	402	P8V	O25-C23-C20	-5.23	113.76	122.02
3	B	402	P8V	O25-C23-C20	-5.17	113.85	122.02
2	A	401	NAI	C1B-N9A-C8A	5.04	138.29	127.09
2	C	401	NAI	N3A-C2A-N1A	-4.97	121.05	128.58
2	A	401	NAI	C5A-C4A-N3A	-4.96	119.89	126.72
2	A	401	NAI	N9A-C8A-N7A	-4.81	107.11	113.94
2	A	401	NAI	N3A-C4A-N9A	4.81	135.35	127.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	401	NAI	C5A-C4A-N3A	-4.81	120.09	126.72
2	B	401	NAI	N3A-C4A-N9A	4.79	135.31	127.17
2	D	401	NAI	C5A-C4A-N3A	-4.78	120.13	126.72
3	D	402	P8V	O25-C23-C20	-4.77	114.48	122.02
2	D	401	NAI	N9A-C8A-N7A	-4.67	107.31	113.94
2	C	401	NAI	N9A-C8A-N7A	-4.62	107.39	113.94
3	A	402	P8V	O25-C23-C20	-4.59	114.77	122.02
2	B	401	NAI	C1B-N9A-C8A	4.55	137.19	127.09
2	B	401	NAI	N9A-C8A-N7A	-4.48	107.58	113.94
2	A	401	NAI	C4B-O4B-C1B	-4.12	100.38	109.47
2	A	401	NAI	C4A-N9A-C8A	4.03	109.97	105.74
2	C	401	NAI	N3A-C4A-N9A	3.92	133.84	127.17
2	D	401	NAI	N3A-C4A-N9A	3.78	133.59	127.17
3	D	402	P8V	O38-S36-N37	3.70	112.69	107.35
2	B	401	NAI	C4A-N9A-C8A	3.62	109.54	105.74
2	C	401	NAI	C4A-N9A-C8A	3.56	109.48	105.74
2	C	401	NAI	C4B-O4B-C1B	-3.53	101.67	109.47
2	D	401	NAI	C4A-N9A-C8A	3.52	109.43	105.74
3	B	402	P8V	O24-C23-O25	3.39	131.98	123.90
2	B	401	NAI	C4B-O4B-C1B	-3.35	102.06	109.47
3	C	402	P8V	O24-C23-O25	3.34	131.86	123.90
2	D	401	NAI	C4B-O4B-C1B	-3.30	102.18	109.47
3	D	402	P8V	O24-C23-O25	3.30	131.75	123.90
3	B	402	P8V	C31-C32-C33	3.21	120.62	118.53
2	B	401	NAI	C2A-N3A-C4A	3.16	119.54	111.83
2	B	401	NAI	O4B-C1B-C2B	-3.14	99.90	106.62
3	B	402	P8V	C18-N19-C20	3.10	114.20	106.79
2	D	401	NAI	C5A-N7A-C8A	3.05	108.25	103.45
3	A	402	P8V	C18-N19-C20	3.05	114.07	106.79
2	D	401	NAI	C2A-N3A-C4A	3.04	119.27	111.83
3	A	402	P8V	O24-C23-O25	3.00	131.03	123.90
2	C	401	NAI	C5A-N7A-C8A	2.92	108.04	103.45
2	A	401	NAI	C6A-C5A-C4A	2.86	121.08	117.18
2	A	401	NAI	C2A-N3A-C4A	2.84	118.77	111.83
3	C	402	P8V	C18-N19-C20	2.82	113.52	106.79
2	C	401	NAI	C2A-N3A-C4A	2.80	118.68	111.83
2	A	401	NAI	C5A-N7A-C8A	2.79	107.84	103.45
2	B	401	NAI	C6A-C5A-C4A	2.79	120.99	117.18
2	C	401	NAI	C6A-C5A-C4A	2.75	120.93	117.18
3	B	402	P8V	C34-C33-C32	-2.74	121.38	122.66
2	B	401	NAI	C5A-N7A-C8A	2.68	107.66	103.45
3	D	402	P8V	C40-C26-N17	2.65	128.25	123.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	D	402	P8V	C18-N19-C20	2.64	113.09	106.79
2	A	401	NAI	O4B-C1B-C2B	-2.46	101.34	106.62
3	C	402	P8V	C15-N16-N17	2.44	106.57	103.97
3	D	402	P8V	C31-C32-C33	2.42	120.11	118.53
2	A	401	NAI	C2B-C1B-N9A	-2.42	107.30	113.30
2	A	401	NAI	O4B-C4B-C5B	-2.33	101.88	109.33
2	A	401	NAI	C4D-O4D-C1D	-2.30	104.38	109.47
3	B	402	P8V	S22-C18-N19	-2.30	113.44	116.28
2	C	401	NAI	O2A-PA-O3	2.26	113.38	107.27
3	C	402	P8V	C40-C26-N17	2.24	127.55	123.74
2	D	401	NAI	C6A-C5A-C4A	2.21	120.20	117.18
2	B	401	NAI	O4D-C1D-C2D	-2.20	101.91	106.62
2	D	401	NAI	C4D-O4D-C1D	-2.15	104.71	109.47
2	B	401	NAI	C2B-C1B-N9A	-2.15	107.97	113.30
2	C	401	NAI	C4D-O4D-C1D	-2.14	104.74	109.47
2	B	401	NAI	C4D-O4D-C1D	-2.13	104.76	109.47
3	A	402	P8V	C15-N16-N17	2.12	106.24	103.97
3	D	402	P8V	C15-N16-N17	2.10	106.21	103.97
3	D	402	P8V	C21-S22-C18	-2.08	85.87	89.41
3	C	402	P8V	C21-S22-C18	-2.06	85.92	89.41
2	D	401	NAI	O4D-C1D-C2D	-2.03	102.28	106.62
2	C	401	NAI	O4D-C1D-C2D	-2.02	102.29	106.62
2	C	401	NAI	C2B-C3B-C4B	2.02	106.51	102.61
3	C	402	P8V	C27-C15-N16	-2.00	109.63	111.96

There are no chirality outliers.

All (41) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	C	404	EDO	O1-C1-C2-O2
2	D	401	NAI	C2D-C1D-N1N-C2N
2	D	401	NAI	C2D-C1D-N1N-C6N
4	C	403	EDO	O1-C1-C2-O2
2	C	401	NAI	C2D-C1D-N1N-C2N
2	B	401	NAI	C2D-C1D-N1N-C2N
2	C	401	NAI	C2D-C1D-N1N-C6N
2	A	401	NAI	C2B-C1B-N9A-C8A
2	B	401	NAI	C2B-C1B-N9A-C8A
2	C	401	NAI	C2B-C1B-N9A-C8A
2	D	401	NAI	C2B-C1B-N9A-C8A
2	A	401	NAI	C2D-C1D-N1N-C2N
2	A	401	NAI	C2D-C1D-N1N-C6N

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Mol	Chain	Res	Type	Atoms
2	C	401	NAI	C5B-O5B-PA-O2A
3	B	402	P8V	S06-C05-C07-C08
3	C	402	P8V	S06-C05-C07-C08
3	D	402	P8V	S06-C05-C07-C08
2	B	401	NAI	C2D-C1D-N1N-C6N
4	A	406	EDO	O1-C1-C2-O2
4	B	403	EDO	O1-C1-C2-O2
2	B	401	NAI	O4D-C1D-N1N-C2N
2	A	401	NAI	O4D-C1D-N1N-C2N
2	D	401	NAI	O4D-C1D-N1N-C2N
4	D	406	EDO	O1-C1-C2-O2
2	C	401	NAI	O4D-C1D-N1N-C2N
2	D	401	NAI	O4D-C1D-N1N-C6N
3	B	402	P8V	C04-C05-C07-C08
3	C	402	P8V	C04-C05-C07-C08
3	D	402	P8V	C04-C05-C07-C08
4	D	405	EDO	O1-C1-C2-O2
2	A	401	NAI	O4D-C1D-N1N-C6N
2	B	401	NAI	O4D-C1D-N1N-C6N
2	A	401	NAI	O4B-C4B-C5B-O5B
2	B	401	NAI	O4B-C4B-C5B-O5B
2	C	401	NAI	O4B-C4B-C5B-O5B
2	C	401	NAI	O4D-C1D-N1N-C6N
3	A	402	P8V	N19-C18-N17-N16
3	B	402	P8V	N19-C18-N17-N16
3	C	402	P8V	N19-C18-N17-N16
3	D	402	P8V	N19-C18-N17-N16
4	A	403	EDO	O1-C1-C2-O2

There are no ring outliers.

13 monomers are involved in 15 short contacts:

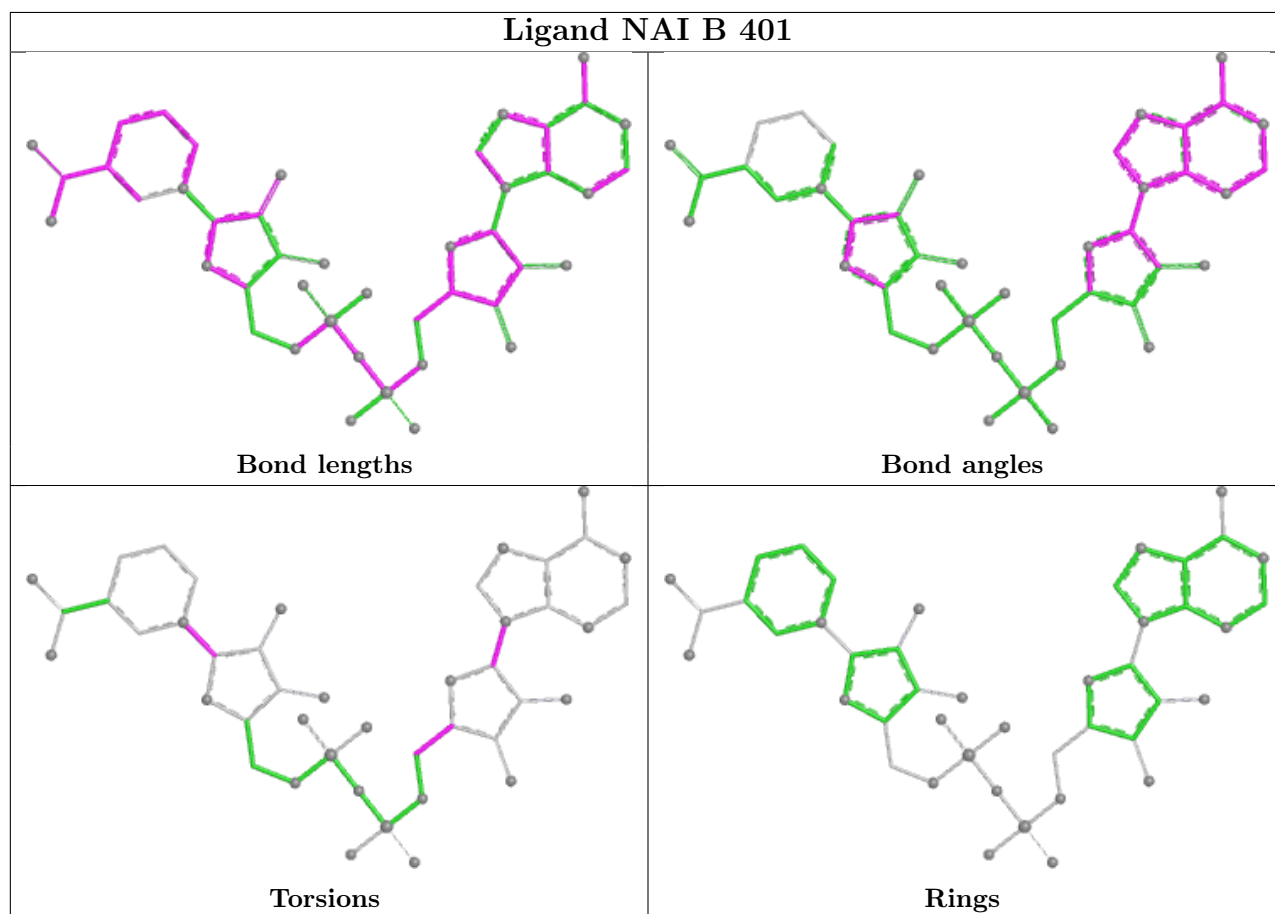
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	406	EDO	1	0
2	B	401	NAI	2	0
4	D	405	EDO	1	0
3	C	402	P8V	1	0
2	C	401	NAI	2	0
3	A	402	P8V	2	0
3	D	402	P8V	2	0
2	D	401	NAI	3	0
2	A	401	NAI	3	0

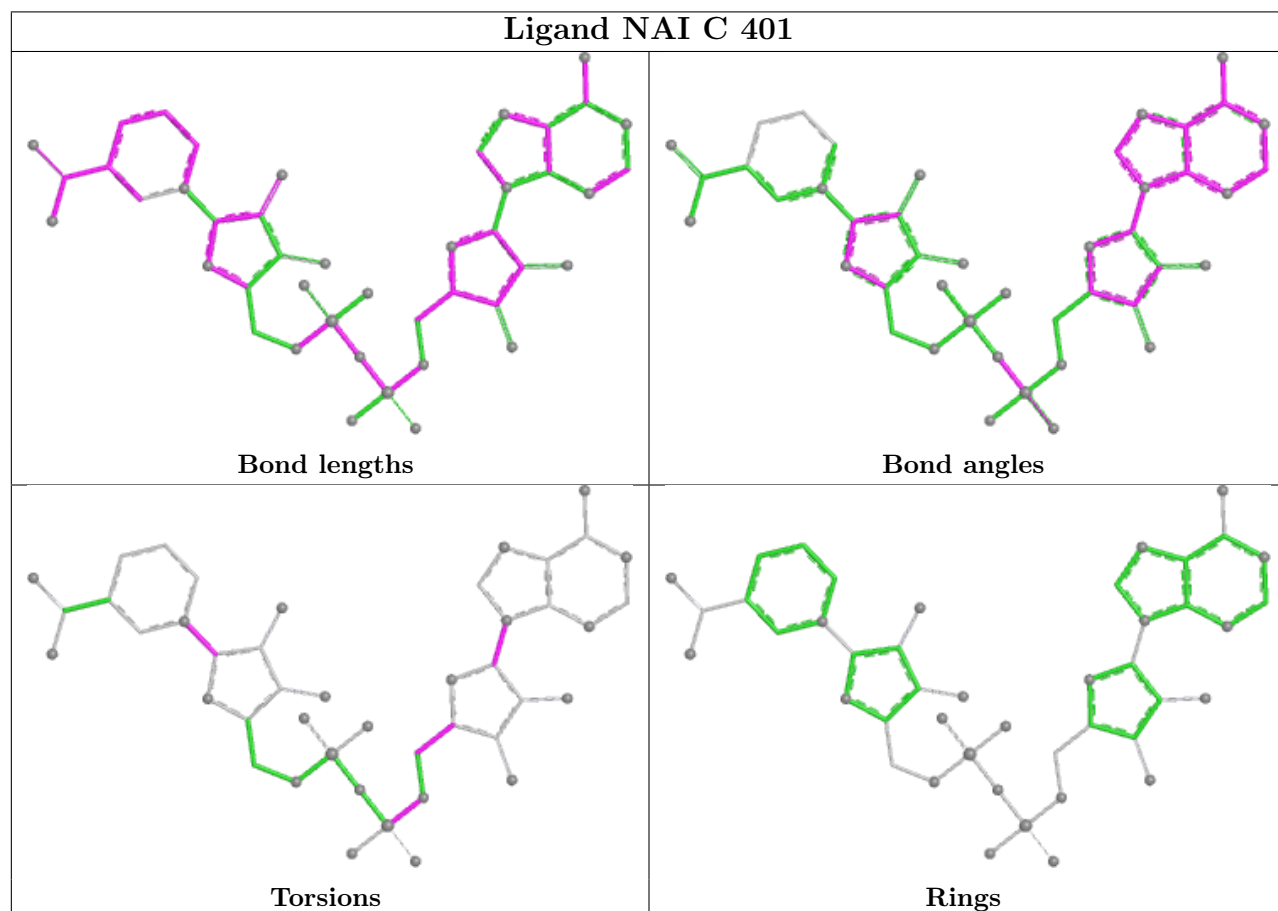
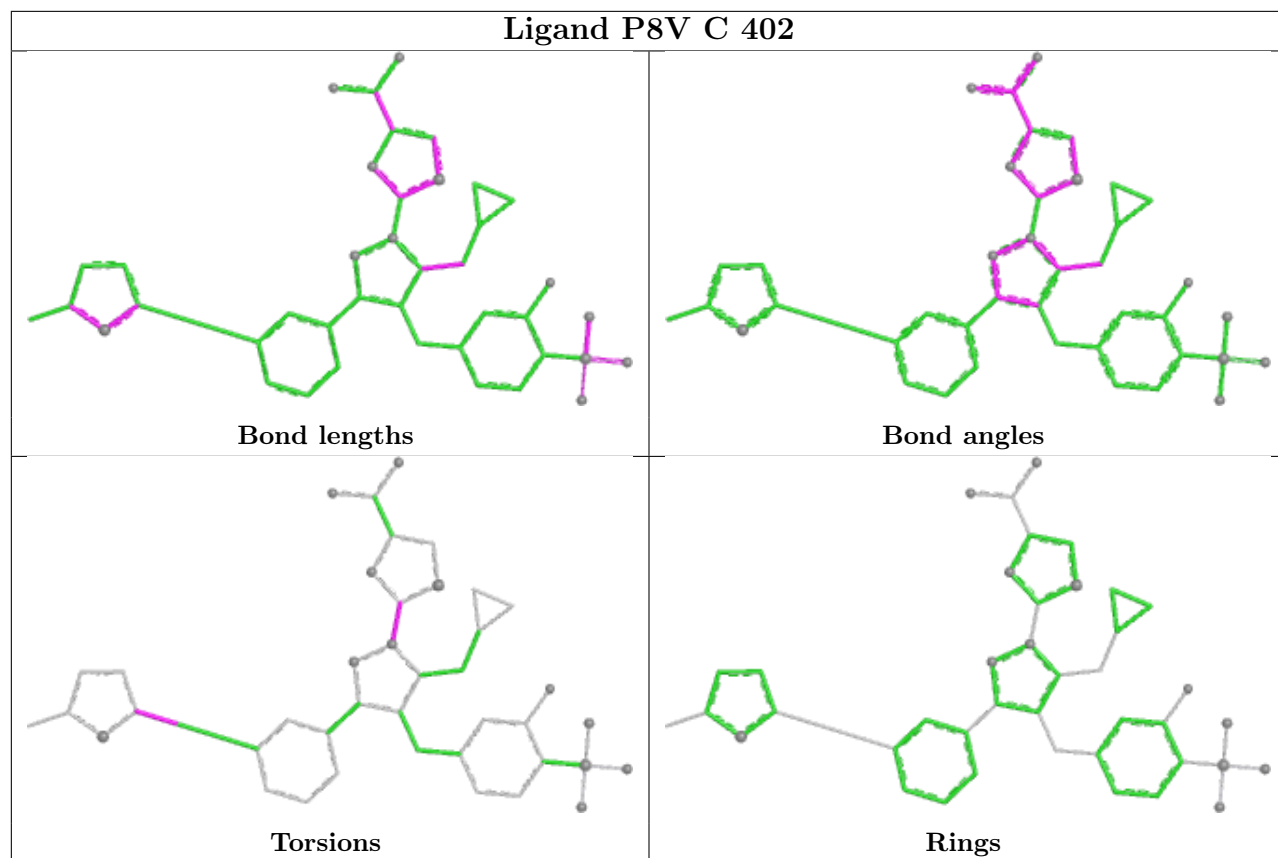
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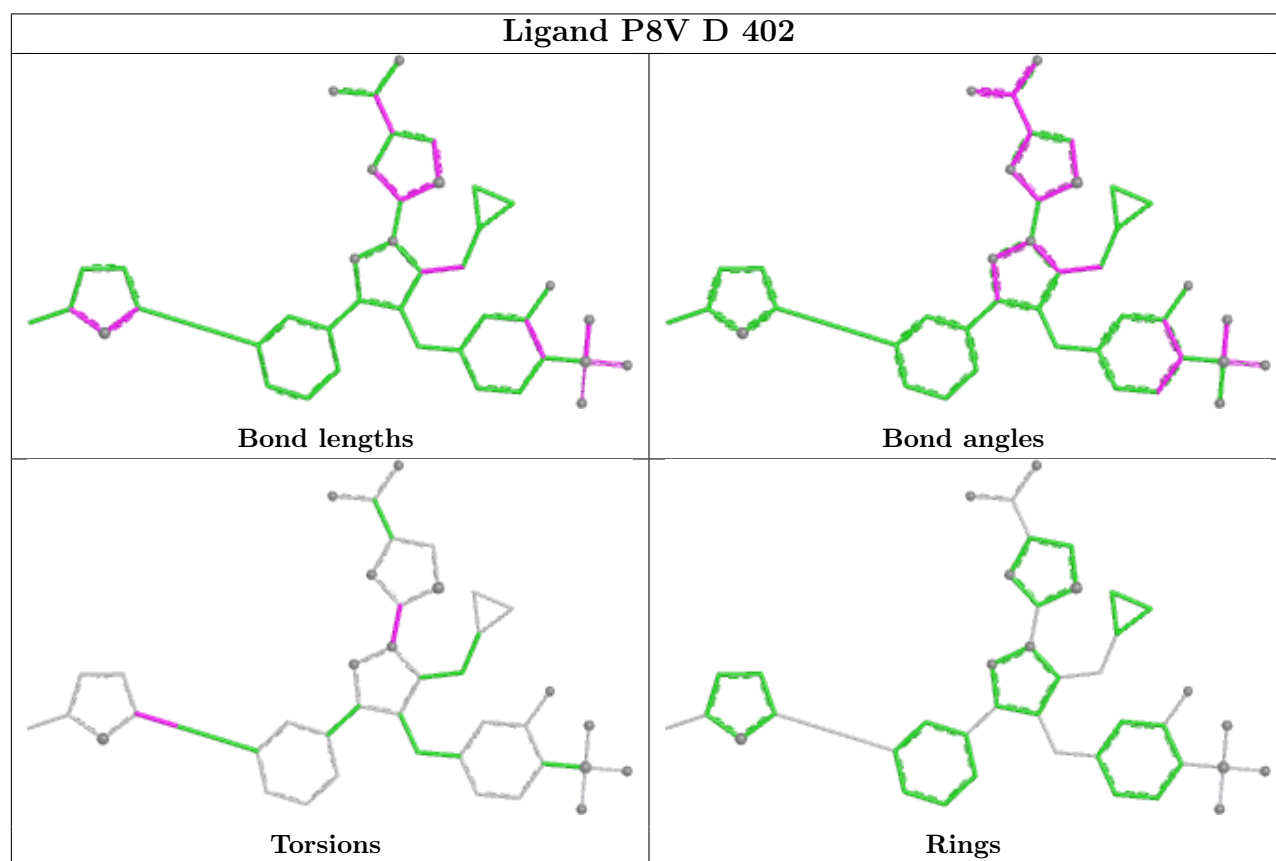
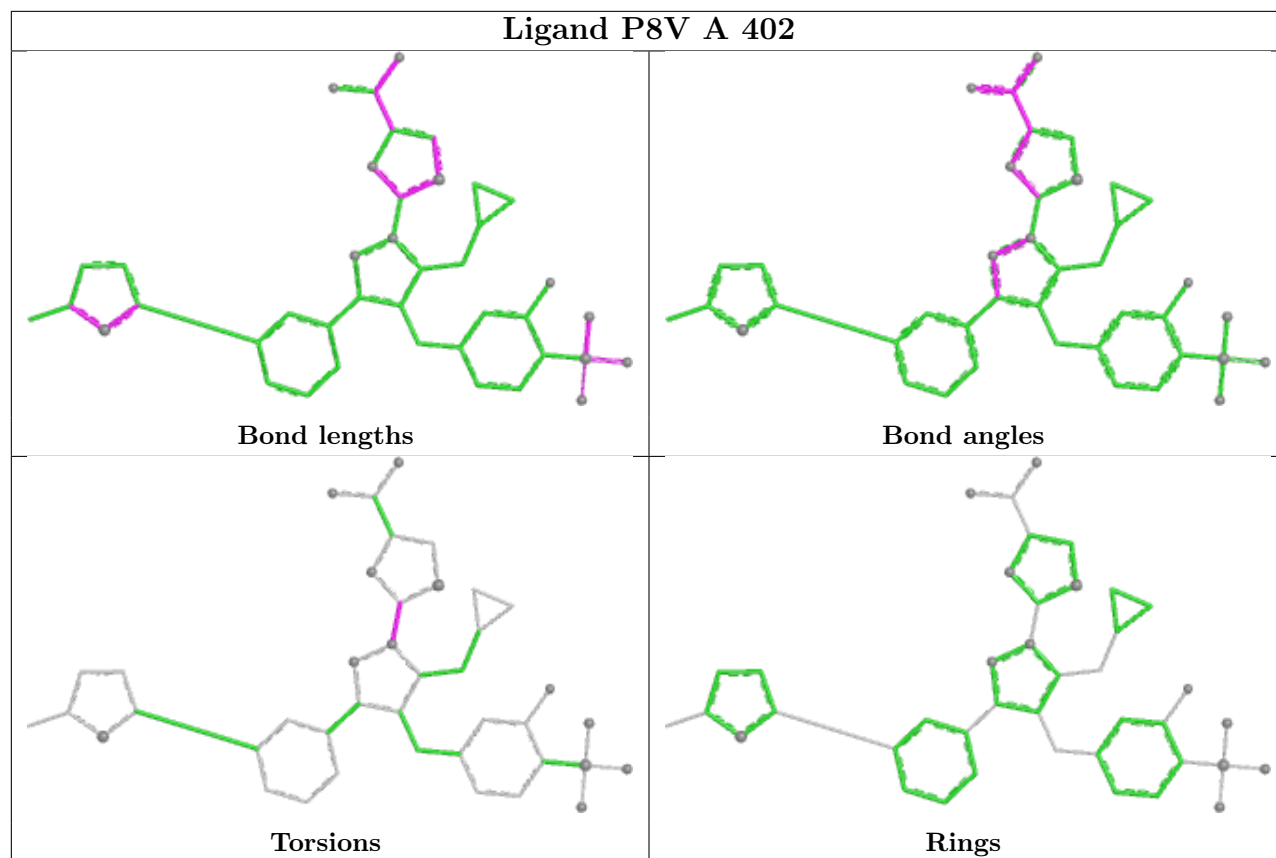
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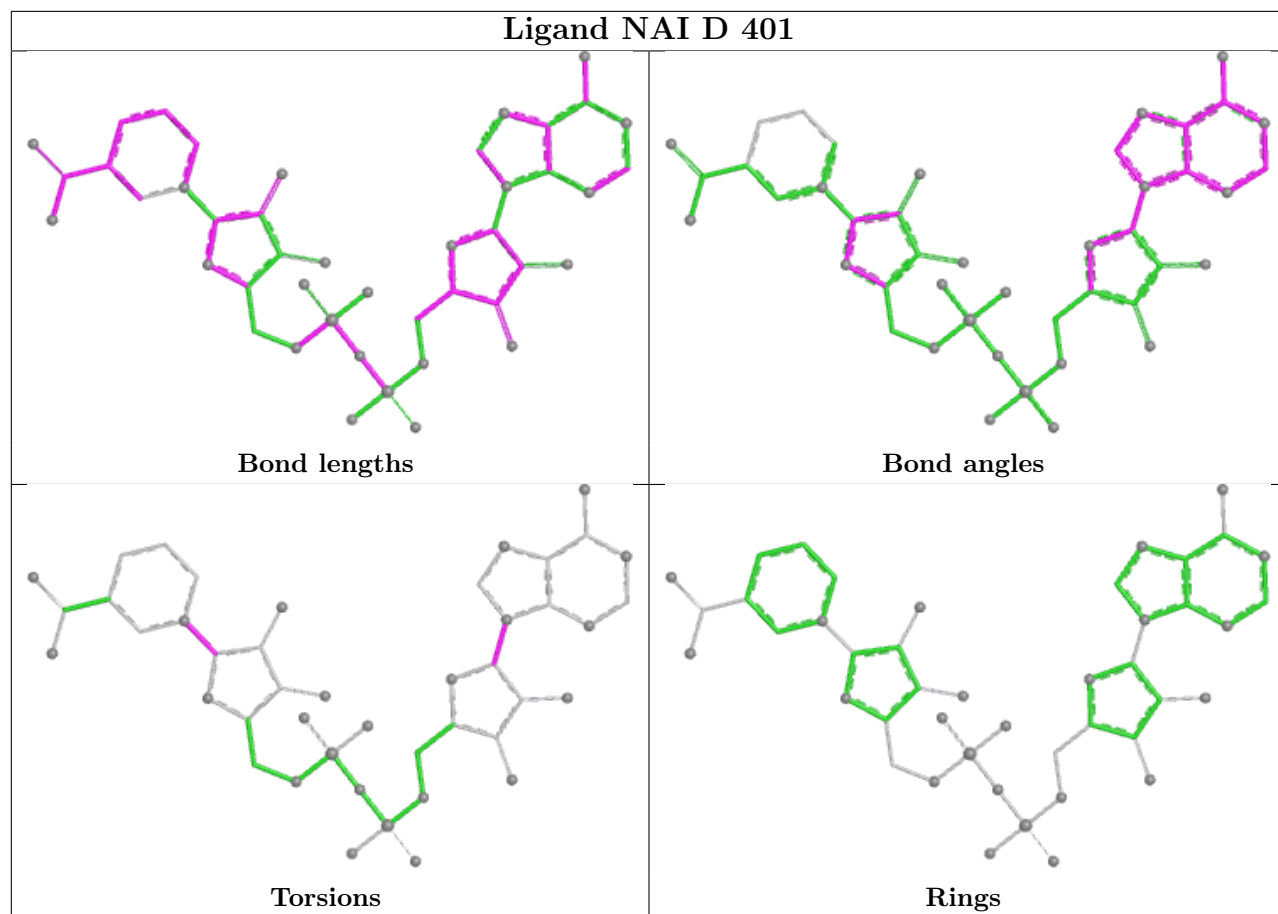
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	402	P8V	1	0
4	C	404	EDO	1	0
4	C	405	EDO	1	0
4	C	406	EDO	1	0

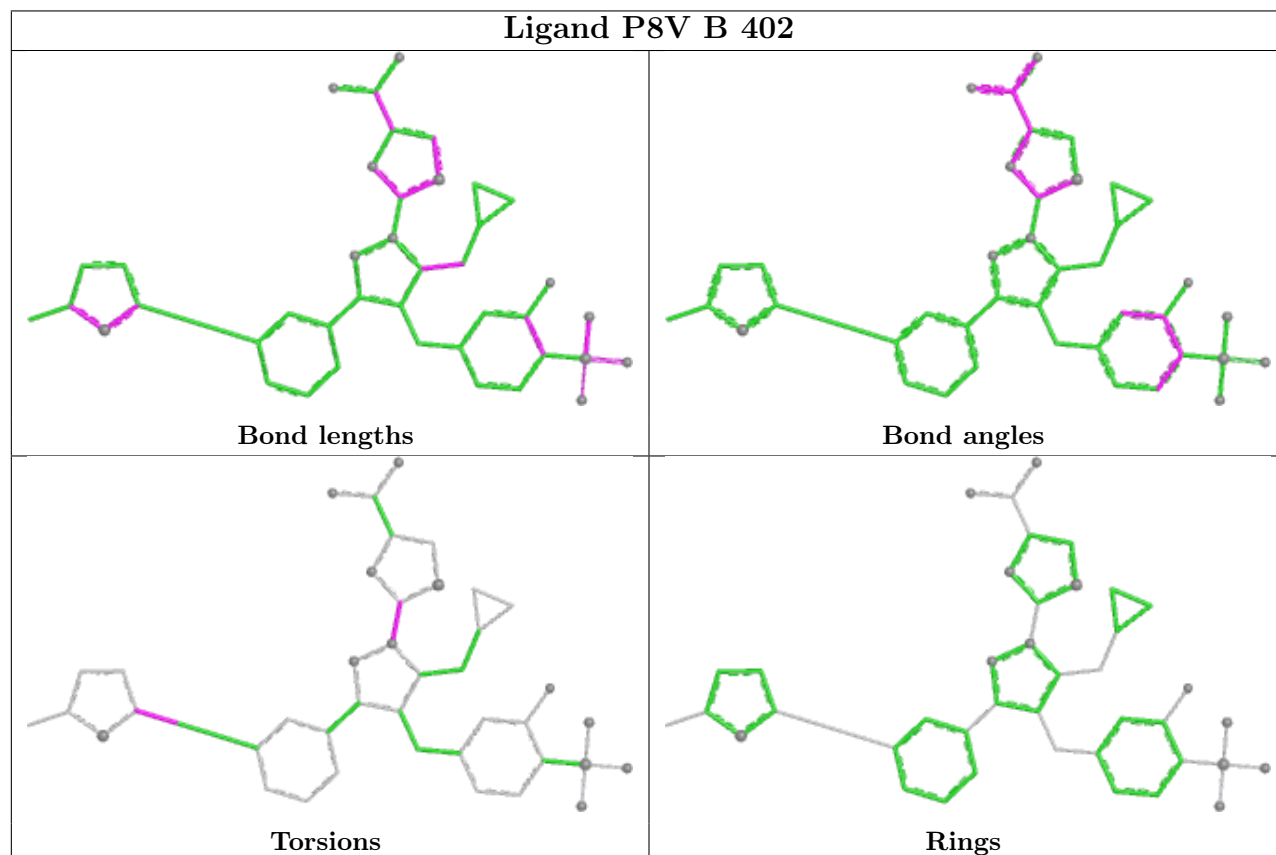
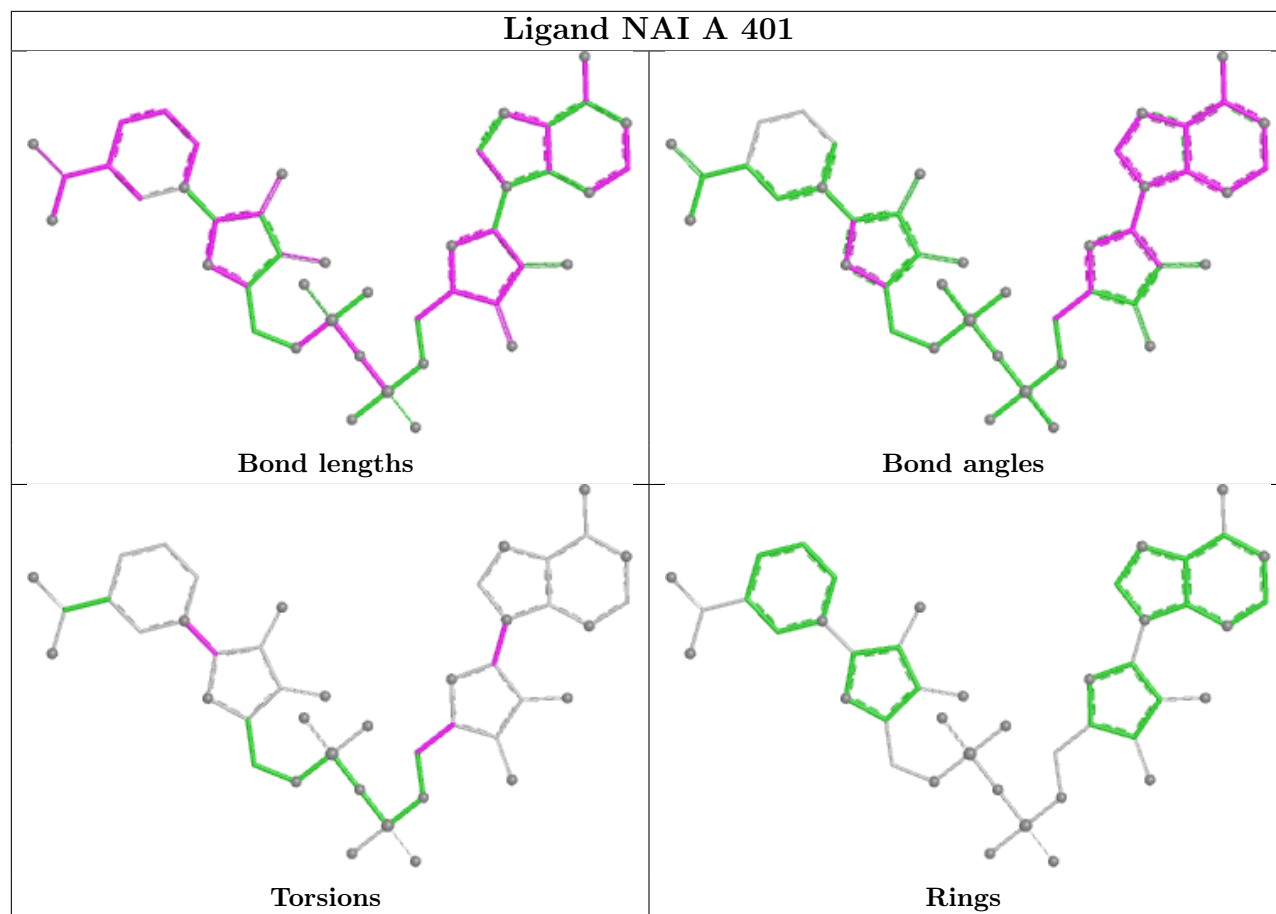
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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











5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

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	331/332 (99%)	-0.13	8 (2%) 59 59	12, 24, 48, 88	2 (0%)
1	B	331/332 (99%)	-0.05	11 (3%) 49 48	13, 26, 48, 78	2 (0%)
1	C	331/332 (99%)	0.02	7 (2%) 63 63	17, 31, 53, 76	2 (0%)
1	D	331/332 (99%)	0.17	13 (3%) 43 42	19, 32, 56, 76	3 (0%)
All	All	1324/1328 (99%)	0.00	39 (2%) 53 52	12, 29, 53, 88	9 (0%)

All (39) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	331	PHE	3.8
1	A	106	LEU	3.6
1	B	16	GLN	3.5
1	D	102	GLY	3.3
1	A	15	GLU	3.1
1	A	16	GLN	3.0
1	A	12	LEU	3.0
1	D	17	THR	2.9
1	B	221	LYS	2.9
1	A	17	THR	2.9
1	B	279	LEU	2.8
1	C	18	PRO	2.8
1	D	18	PRO	2.8
1	C	13	LYS	2.8
1	D	98	ARG	2.8
1	C	175	GLU	2.8
1	D	331	PHE	2.8
1	C	14	GLU	2.7
1	B	18	PRO	2.7
1	B	17	THR	2.7
1	B	102	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
1	D	16	GLN	2.5
1	B	281	GLY	2.5
1	D	225	GLN	2.5
1	D	14	GLU	2.5
1	D	279	LEU	2.5
1	C	331	PHE	2.4
1	D	281	GLY	2.4
1	B	328	GLU	2.3
1	A	14	GLU	2.3
1	B	280	TYR	2.3
1	B	218	GLY	2.3
1	C	12	LEU	2.3
1	C	279	LEU	2.2
1	D	323	TRP	2.2
1	D	13	LYS	2.1
1	A	102	GLY	2.1
1	D	104	SER	2.1
1	A	175	GLU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
4	EDO	D	407	4/4	0.73	0.21	44,44,47,50	0
4	EDO	C	404	4/4	0.78	0.20	32,46,51,57	0
4	EDO	A	406	4/4	0.82	0.15	32,46,51,52	0
4	EDO	B	403	4/4	0.83	0.16	54,54,59,64	0
4	EDO	D	405	4/4	0.87	0.11	47,48,51,55	0

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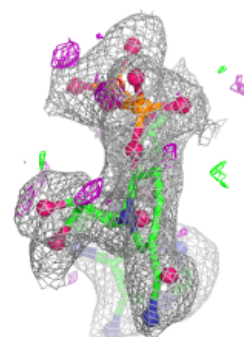
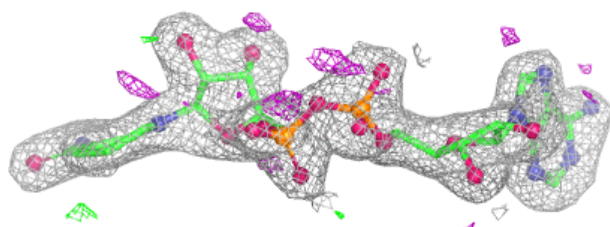
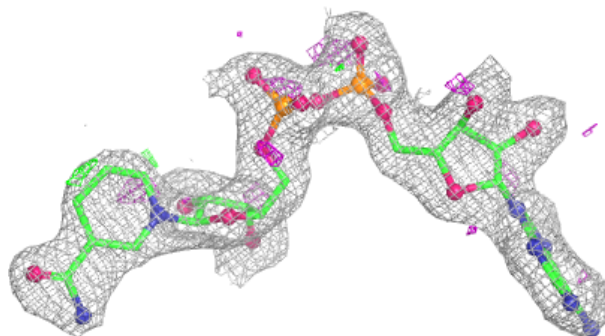
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
4	EDO	A	404	4/4	0.87	0.12	50,53,54,57	0
4	EDO	C	406	4/4	0.88	0.17	38,40,41,49	0
4	EDO	D	406	4/4	0.89	0.12	43,46,49,51	0
4	EDO	C	403	4/4	0.89	0.15	46,47,51,53	0
4	EDO	A	403	4/4	0.90	0.12	38,38,46,50	0
4	EDO	C	405	4/4	0.90	0.19	33,42,47,49	0
4	EDO	D	404	4/4	0.92	0.11	46,46,48,51	0
4	EDO	D	403	4/4	0.92	0.10	49,51,52,54	0
4	EDO	A	405	4/4	0.93	0.10	44,47,47,48	0
2	NAI	D	401	44/44	0.94	0.10	25,36,47,49	0
2	NAI	A	401	44/44	0.95	0.08	16,26,35,36	0
2	NAI	B	401	44/44	0.95	0.08	22,31,40,43	0
2	NAI	C	401	44/44	0.95	0.09	18,32,47,50	0
3	P8V	C	402	43/43	0.96	0.07	20,28,42,54	0
3	P8V	D	402	43/43	0.97	0.07	21,30,35,37	0
3	P8V	B	402	43/43	0.97	0.07	16,27,37,50	0
3	P8V	A	402	43/43	0.97	0.07	18,25,36,42	0

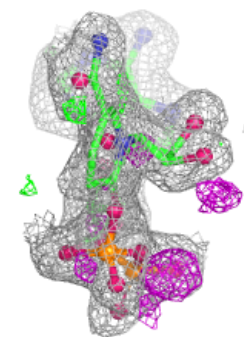
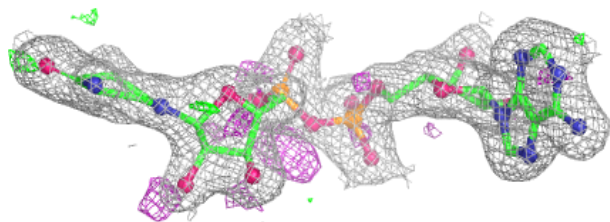
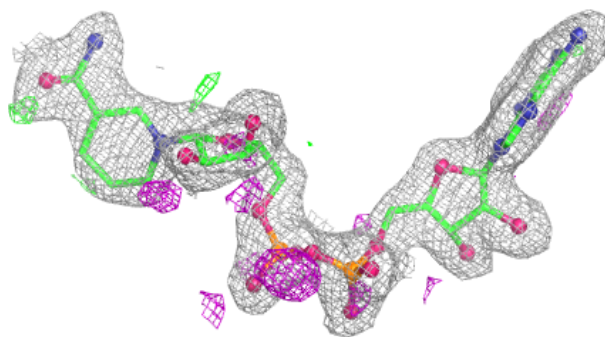
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around NAI D 401:

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

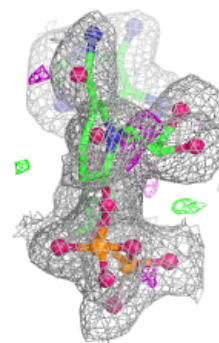
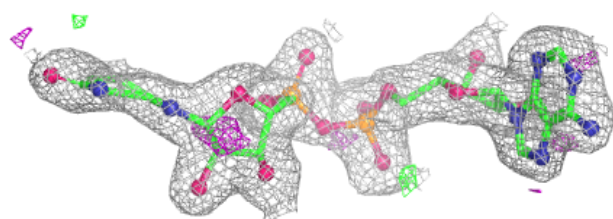
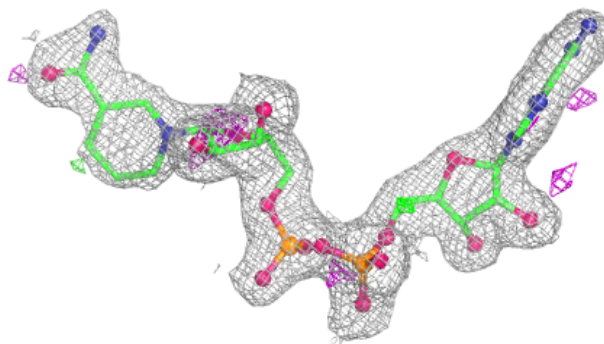
**Electron density around NAI A 401:**

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

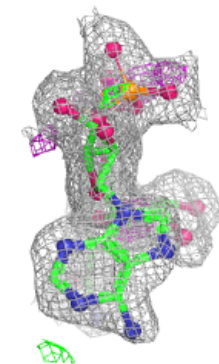
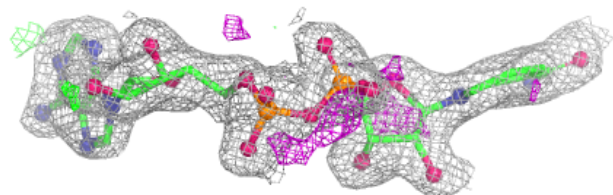
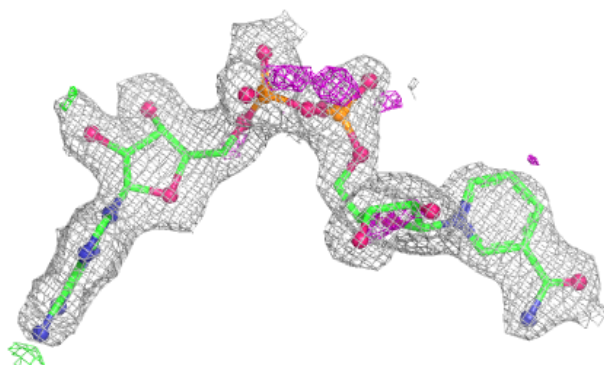


Electron density around NAI B 401:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

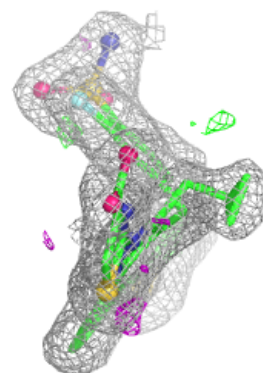
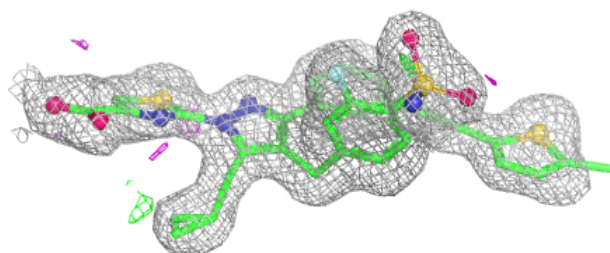
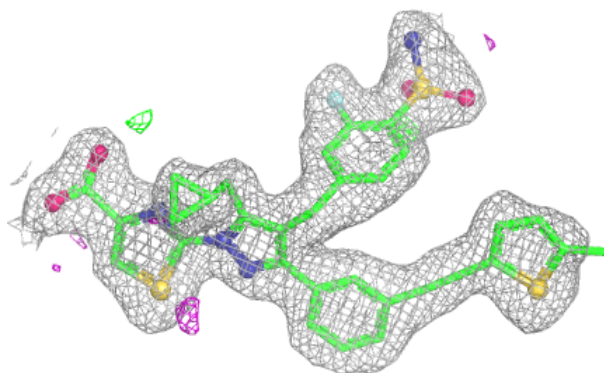
**Electron density around NAI C 401:**

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

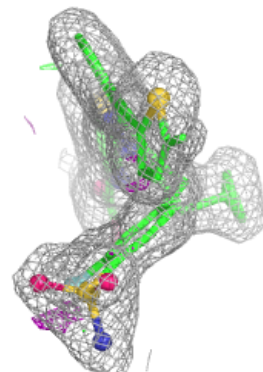
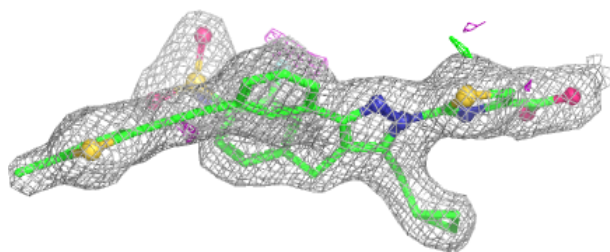
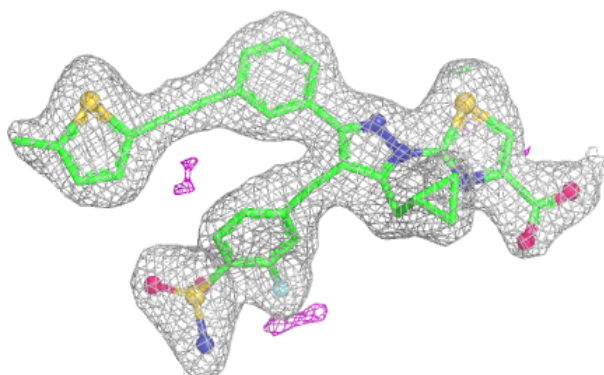


Electron density around P8V C 402:

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

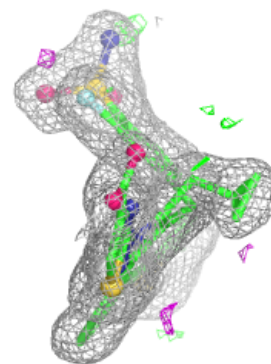
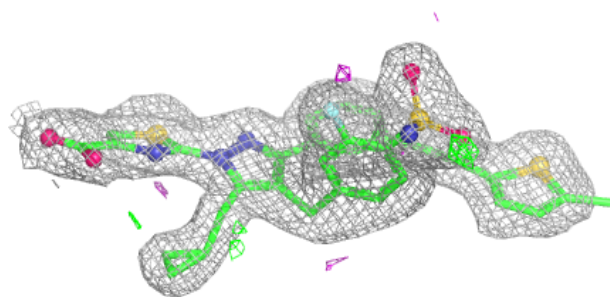
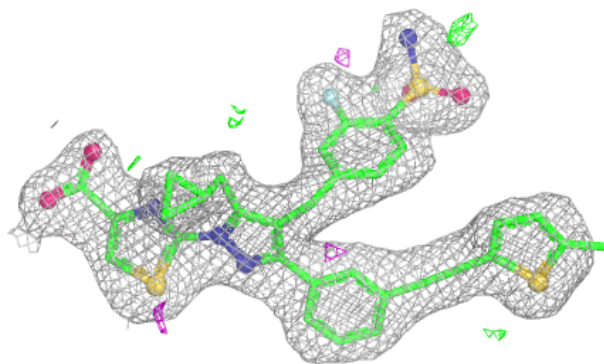
**Electron density around P8V D 402:**

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and green (positive)

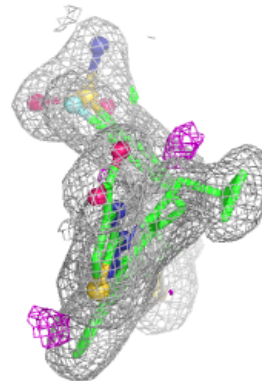
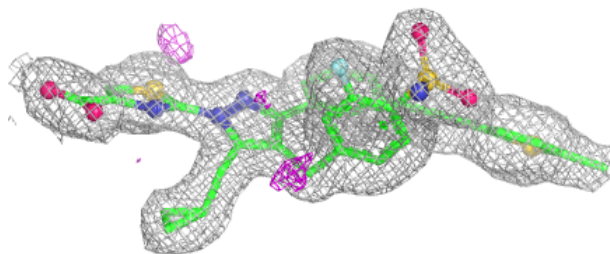
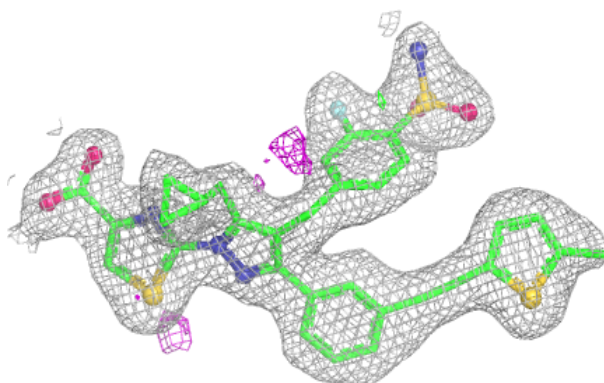


Electron density around P8V B 402:

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

**Electron density around P8V 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)



6.5 Other polymers [i](#)

There are no such residues in this entry.