



# Full wwPDB X-ray Structure Validation Report ⓘ

Nov 22, 2023 – 06:06 PM JST

PDB ID : 7X5P  
Title : Truncated VhChiP (1-19aa) in complex with doxycycline  
Authors : Sanram, S.; Robinson, C.R.; Aunkham, A.; Suginta, W.  
Deposited on : 2022-03-05  
Resolution : 3.40 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](mailto: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>.

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

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

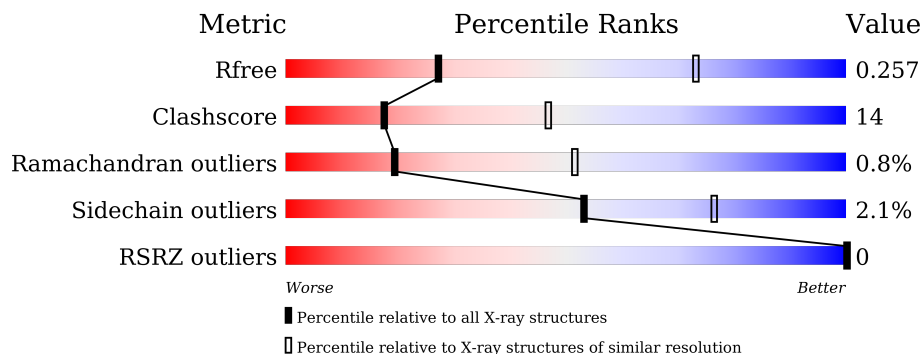
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.40 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1026 (3.48-3.32)
Clashscore	141614	1055 (3.48-3.32)
Ramachandran outliers	138981	1038 (3.48-3.32)
Sidechain outliers	138945	1038 (3.48-3.32)
RSRZ outliers	127900	2173 (3.50-3.30)

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  $\geq 3$ , 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	331	
1	B	331	
1	C	331	
1	D	331	
1	E	331	
1	F	331	

## 2 Entry composition [i](#)

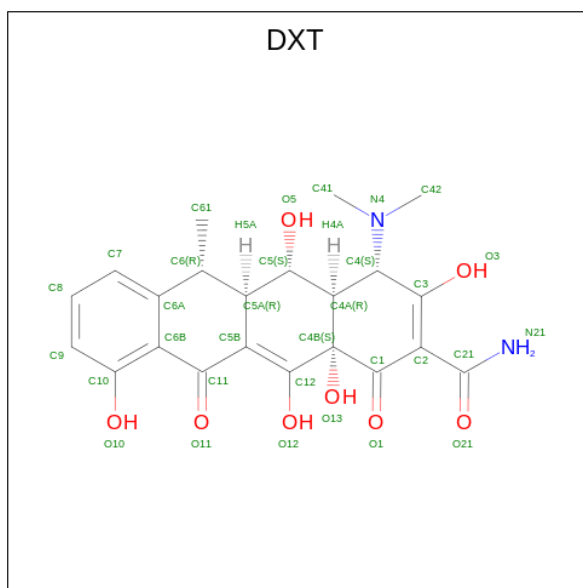
There are 5 unique types of molecules in this entry. The entry contains 15743 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Chitoporin.

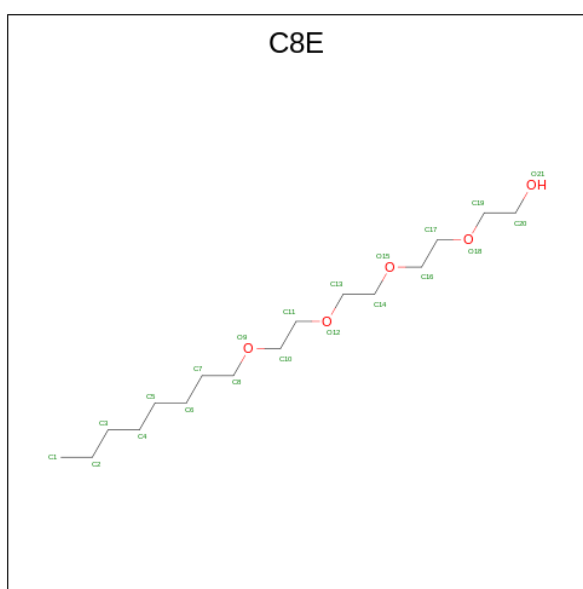
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	331	Total 2566	C 1615	N 424	O 518	S 9	0	0	0
1	B	331	Total 2570	C 1616	N 426	O 519	S 9	0	0	0
1	C	331	Total 2553	C 1606	N 423	O 515	S 9	0	0	0
1	D	331	Total 2571	C 1618	N 426	O 518	S 9	0	0	0
1	E	331	Total 2564	C 1616	N 425	O 514	S 9	0	0	0
1	F	331	Total 2568	C 1618	N 424	O 517	S 9	0	0	0

- Molecule 2 is (4S,4AR,5S,5AR,6R,12AS)-4-(DIMETHYLAMINO)-3,5,10,12,12A-PENTAHYDROXY-6-METHYL-1,11-DIOXO-1,4,4A,5,5A,6,11,12A-OCTAHYDROTETRACENE-2-CARBOXAMIDE (three-letter code: DXT) (formula: C<sub>22</sub>H<sub>24</sub>N<sub>2</sub>O<sub>8</sub>).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			32	22	2	8		
2	B	1	Total	C	N	O	0	0
			32	22	2	8		
2	D	1	Total	C	N	O	0	0
			32	22	2	8		
2	F	1	Total	C	N	O	0	0
			32	22	2	8		

- Molecule 3 is (HYDROXYETHYLOXY)TRI(ETHYLOXY)OCTANE (three-letter code: C8E) (formula: C<sub>16</sub>H<sub>34</sub>O<sub>5</sub>) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			10	6	4		
3	A	1	Total	C	O	0	0
			16	13	3		
3	A	1	Total	C	O	0	0
			15	10	5		
3	A	1	Total	C	O	0	0
			21	16	5		
3	B	1	Total	C	O	0	0
			10	6	4		
3	B	1	Total	C	O	0	0
			10	6	4		
3	B	1	Total	C	O	0	0
			10	6	4		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	C	1	Total C O 13 8 5	0	0
3	D	1	Total C O 10 6 4	0	0
3	D	1	Total C O 10 6 4	0	0
3	E	1	Total C O 10 6 4	0	0
3	F	1	Total C O 10 6 4	0	0
3	F	1	Total C O 21 16 5	0	0
3	F	1	Total C O 10 6 4	0	0
3	F	1	Total C O 10 6 4	0	0

- Molecule 4 is SODIUM ION (three-letter code: NA) (formula: Na).

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

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	9	Total O 9 9	0	0
5	B	2	Total O 2 2	0	0
5	C	3	Total O 3 3	0	0

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<b>Mol</b>	<b>Chain</b>	<b>Residues</b>	<b>Atoms</b>	<b>ZeroOcc</b>	<b>AltConf</b>
5	D	3	Total O 3 3	0	0
5	E	2	Total O 2 2	0	0
5	F	2	Total O 2 2	0	0

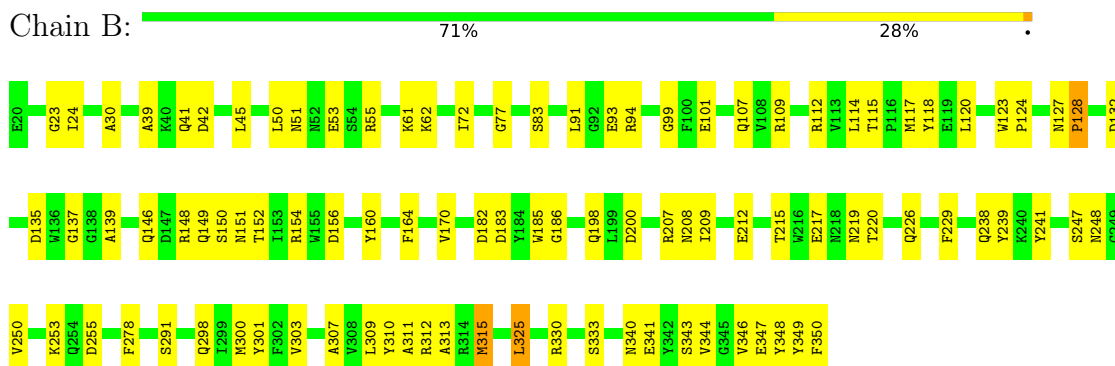
### 3 Residue-property plots [i](#)

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.

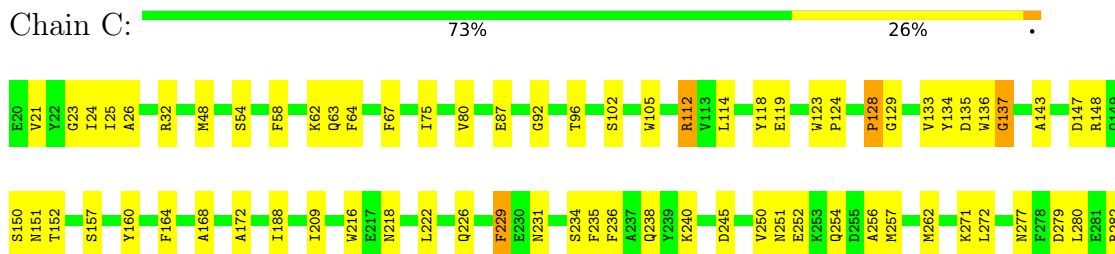
- Molecule 1: Chitoporin

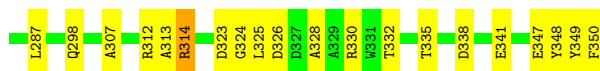


- Molecule 1: Chitoporin

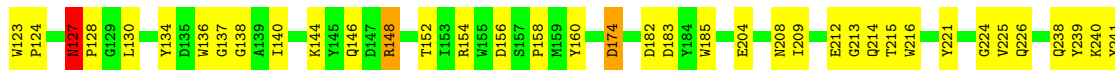


- Molecule 1: Chitoporin

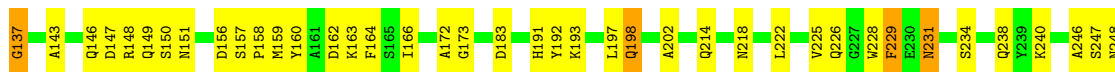




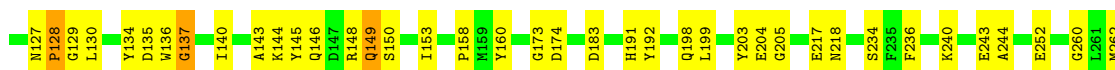
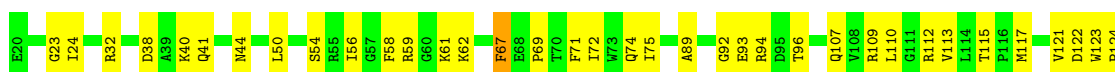
- Molecule 1: Chitoporin



- Molecule 1: Chitoporin



- Molecule 1: Chitoporin





## 4 Data and refinement statistics i

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	92.39Å 92.50Å 96.52Å 101.11° 101.14° 109.72°	Depositor
Resolution (Å)	20.02 – 3.40 20.02 – 3.40	Depositor EDS
% Data completeness (in resolution range)	94.5 (20.02-3.40) 90.5 (20.02-3.40)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.78 (at 3.44Å)	Xtrriage
Refinement program	PHENIX 1.19.2_4158	Depositor
R, $R_{free}$	0.182 , 0.258 0.182 , 0.257	Depositor DCC
$R_{free}$ test set	1993 reflections (5.46%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	49.6	Xtrriage
Anisotropy	0.399	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 16.1	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.48$ , $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	0.448 for -k,-h,-l	Xtrriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	15743	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	50.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.68% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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: C8E, NA, DXT

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	0.54	0/2632	0.71	0/3569
1	B	0.55	0/2636	0.73	0/3573
1	C	0.55	0/2619	0.70	0/3552
1	D	0.54	0/2637	0.73	0/3573
1	E	0.56	0/2630	0.71	0/3564
1	F	0.54	0/2634	0.74	0/3570
All	All	0.54	0/15788	0.72	0/21401

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	2566	0	2316	64	0
1	B	2570	0	2322	67	0
1	C	2553	0	2290	64	0
1	D	2571	0	2328	85	0
1	E	2564	0	2319	82	0
1	F	2568	0	2329	69	0
2	A	32	0	21	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	B	32	0	21	2	0
2	D	32	0	21	0	0
2	F	32	0	21	2	0
3	A	62	0	91	5	0
3	B	30	0	39	1	0
3	C	13	0	17	0	0
3	D	20	0	26	1	0
3	E	10	0	13	0	0
3	F	51	0	73	7	0
4	A	3	0	0	0	0
4	B	2	0	0	0	0
4	C	3	0	0	0	0
4	D	3	0	0	0	0
4	E	3	0	0	0	0
4	F	2	0	0	0	0
5	A	9	0	0	1	0
5	B	2	0	0	0	0
5	C	3	0	0	0	0
5	D	3	0	0	1	0
5	E	2	0	0	1	0
5	F	2	0	0	0	0
All	All	15743	0	14247	411	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 14.

All (411) 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:F:173:GLY:HA3	1:F:183:ASP:HB2	1.37	1.03
1:E:173:GLY:HA3	1:E:183:ASP:HB2	1.46	0.98
1:B:51:ASN:HB2	1:B:83:SER:HB3	1.53	0.91
1:C:80:VAL:HG11	1:F:96:THR:HG21	1.55	0.87
1:D:239:TYR:HB2	3:D:403:C8E:H192	1.58	0.85
1:F:61:LYS:HG2	1:F:72:ILE:HG22	1.57	0.84
1:B:61:LYS:HG2	1:B:72:ILE:HG22	1.58	0.84
1:D:61:LYS:HG2	1:D:72:ILE:HG22	1.60	0.84
1:E:128:PRO:HD3	1:E:271:LYS:HE2	1.61	0.82
1:D:252:GLU:HG2	1:D:282:ARG:HG3	1.64	0.80
1:D:127:ASN:HB3	1:D:128:PRO:HD3	1.64	0.79
1:E:128:PRO:HB3	1:E:271:LYS:HD3	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:114:LEU:HD22	1:B:118:TYR:HD2	1.53	0.74
1:F:110:LEU:HD21	1:F:153:ILE:HD12	1.69	0.73
1:B:348:TYR:CE1	1:E:62:LYS:HD2	2.24	0.72
1:F:143:ALA:N	1:F:218:ASN:OD1	2.22	0.72
1:A:146:GLN:HB3	1:A:149:GLN:HG2	1.70	0.72
1:E:296:SER:HB2	1:E:314:ARG:HB3	1.72	0.72
1:D:114:LEU:HD22	1:D:118:TYR:HD2	1.54	0.72
1:D:146:GLN:NE2	1:D:174:ASP:OD1	2.24	0.71
1:C:80:VAL:HG13	1:F:92:GLY:HA3	1.74	0.70
1:E:332:THR:H	1:E:335:THR:HG1	1.38	0.69
1:F:92:GLY:HA2	1:F:96:THR:OG1	1.93	0.69
1:E:157:SER:HB3	1:E:166:ILE:H	1.58	0.68
1:A:24:ILE:HD11	3:A:405:C8E:H13	1.73	0.68
1:A:281:GLU:HA	1:A:286:THR:HA	1.75	0.68
1:A:110:LEU:HD21	1:A:153:ILE:HD12	1.75	0.68
1:C:114:LEU:HD22	1:C:118:TYR:HD2	1.60	0.67
1:A:92:GLY:HA2	1:A:96:THR:OG1	1.95	0.67
1:C:102:SER:HB3	1:C:105:TRP:CE2	2.30	0.66
1:C:129:GLY:O	1:C:314:ARG:NH1	2.27	0.66
1:E:137:GLY:HA2	1:E:333:SER:HB3	1.77	0.66
1:C:25:ILE:HB	1:C:348:TYR:HB3	1.77	0.66
1:E:146:GLN:OE1	1:E:149:GLN:NE2	2.28	0.66
1:E:234:SER:HB2	1:E:262:MET:HG3	1.77	0.65
1:C:128:PRO:HG3	1:C:271:LYS:HG2	1.79	0.65
1:D:224:GLY:HA3	1:D:238:GLN:HG2	1.79	0.65
1:D:31:TYR:HB2	1:D:48:MET:HE2	1.79	0.65
1:E:25:ILE:HB	1:E:348:TYR:HB3	1.79	0.64
1:C:133:VAL:HA	1:C:137:GLY:HA3	1.79	0.64
1:B:53:GLU:O	1:B:55:ARG:NH1	2.31	0.64
1:C:152:THR:H	1:D:50:LEU:HD12	1.63	0.63
1:D:298:GLN:HE21	1:D:300:MET:HB2	1.64	0.62
1:E:193:LYS:HD2	1:E:197:LEU:O	1.99	0.62
1:A:281:GLU:HG2	1:A:286:THR:HG22	1.80	0.62
1:F:112:ARG:NH1	1:F:150:SER:OG	2.32	0.62
1:E:315:MET:HG3	1:E:340:ASN:OD1	2.00	0.62
1:F:129:GLY:O	1:F:314:ARG:NH1	2.33	0.62
1:A:50:LEU:HB2	1:B:151:ASN:HA	1.81	0.62
1:C:118:TYR:CG	1:C:147:ASP:HA	2.35	0.62
1:E:135:ASP:HB3	1:E:136:TRP:CE3	2.35	0.62
1:E:264:THR:HG23	1:E:269:GLN:HB2	1.80	0.61
1:D:20:GLU:N	5:D:501:HOH:O	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:112:ARG:HA	1:A:150:SER:HA	1.81	0.61
1:F:173:GLY:HA3	1:F:183:ASP:CB	2.23	0.61
1:C:92:GLY:HA2	1:C:96:THR:OG1	2.00	0.61
1:F:94:ARG:HH22	3:F:403:C8E:H142	1.64	0.61
1:B:61:LYS:NZ	1:B:101:GLU:OE1	2.30	0.61
1:F:75:ILE:HA	1:F:96:THR:HG23	1.83	0.60
1:F:117:MET:O	1:F:121:VAL:HG23	2.01	0.60
1:D:252:GLU:OE2	1:D:282:ARG:NH1	2.35	0.60
1:C:252:GLU:HG2	1:C:282:ARG:HG3	1.84	0.60
1:D:262:MET:HG2	1:D:271:LYS:HE2	1.84	0.60
1:B:77:GLY:O	1:B:94:ARG:HG3	2.01	0.60
1:A:117:MET:O	1:A:121:VAL:HG23	2.01	0.59
1:E:163:LYS:HD2	1:E:192:TYR:CZ	2.37	0.59
1:E:173:GLY:HA3	1:E:183:ASP:CB	2.29	0.59
1:E:51:ASN:ND2	1:E:53:GLU:OE2	2.36	0.59
1:A:114:LEU:HD23	1:A:148:ARG:HB2	1.84	0.59
1:C:114:LEU:HD22	1:C:118:TYR:CD2	2.38	0.59
1:F:144:LYS:HE2	1:F:145:TYR:CE1	2.38	0.59
1:A:135:ASP:HB3	1:A:136:TRP:CE3	2.37	0.58
1:A:166:ILE:HD11	1:A:188:ILE:HD11	1.84	0.58
1:E:137:GLY:O	1:E:277:ASN:ND2	2.36	0.58
1:F:137:GLY:O	1:F:277:ASN:ND2	2.37	0.58
1:A:102:SER:HB3	1:A:105:TRP:NE1	2.18	0.58
1:D:154:ARG:NH2	1:D:156:ASP:OD2	2.32	0.58
1:F:94:ARG:HH12	3:F:403:C8E:H172	1.69	0.58
1:E:257:MET:O	1:E:257:MET:HG3	2.02	0.58
1:A:112:ARG:HB2	1:A:150:SER:HB3	1.85	0.58
1:D:31:TYR:HB2	1:D:48:MET:CE	2.33	0.58
1:F:67:PHE:CD1	1:F:69:PRO:HD2	2.39	0.58
1:C:62:LYS:HG2	1:D:348:TYR:CE1	2.38	0.57
1:D:221:TYR:HD2	1:D:241:TYR:HD2	1.52	0.57
1:D:114:LEU:HD22	1:D:118:TYR:CD2	2.37	0.57
1:E:115:THR:HG21	1:E:146:GLN:HB2	1.86	0.57
1:B:207:ARG:HH12	1:B:219:ASN:HD21	1.53	0.57
1:C:257:MET:HG3	1:C:257:MET:O	2.05	0.57
1:A:59:ARG:HH12	3:A:405:C8E:H22	1.70	0.56
1:A:298:GLN:HG3	1:A:312:ARG:HB3	1.87	0.56
1:D:128:PRO:HD2	1:D:130:LEU:HG	1.86	0.56
1:B:115:THR:HG22	1:B:185:TRP:CH2	2.40	0.56
1:C:62:LYS:HD2	1:C:63:GLN:N	2.20	0.56
1:F:218:ASN:HD22	1:F:218:ASN:N	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:207:ARG:HH11	1:B:217:GLU:HB3	1.71	0.56
1:D:51:ASN:HB2	1:D:83:SER:HB3	1.87	0.55
1:E:134:TYR:CE1	1:E:240:LYS:HE2	2.41	0.55
1:C:168:ALA:HB2	1:C:188:ILE:HG13	1.88	0.55
1:D:212:GLU:OE1	1:D:325:LEU:N	2.34	0.55
1:F:135:ASP:HB3	1:F:136:TRP:CE3	2.41	0.55
1:A:50:LEU:HD12	1:B:152:THR:H	1.72	0.55
1:A:134:TYR:CE1	1:A:240:LYS:HE2	2.42	0.55
1:A:64:PHE:HB3	1:E:303:VAL:HG22	1.88	0.55
1:F:67:PHE:CE1	1:F:69:PRO:HD2	2.42	0.55
1:D:213:GLY:O	1:D:214:GLN:HG3	2.07	0.55
1:D:255:ASP:OD1	1:D:255:ASP:N	2.35	0.54
1:B:303:VAL:HG22	1:E:64:PHE:HB3	1.88	0.54
1:E:229:PHE:HB2	1:E:231:ASN:OD1	2.07	0.54
1:E:214:GLN:NE2	1:E:248:ASN:HB3	2.23	0.54
1:D:134:TYR:O	1:D:240:LYS:NZ	2.41	0.54
1:C:222:LEU:HD11	1:C:238:GLN:OE1	2.08	0.54
1:D:182:ASP:OD1	1:D:182:ASP:N	2.40	0.54
1:E:191:HIS:HB3	1:E:198:GLN:NE2	2.23	0.54
1:E:214:GLN:HG2	1:E:246:ALA:HB1	1.90	0.54
1:F:298:GLN:HG3	1:F:312:ARG:HG3	1.89	0.53
1:D:20:GLU:O	1:D:58:PHE:HA	2.08	0.53
1:C:64:PHE:HB3	1:D:303:VAL:HG22	1.90	0.53
1:A:207:ARG:HD3	1:A:217:GLU:HG2	1.90	0.53
1:B:112:ARG:HB2	1:B:150:SER:OG	2.09	0.53
1:B:123:TRP:CZ3	1:B:127:ASN:ND2	2.77	0.53
1:B:139:ALA:O	1:B:330:ARG:NH1	2.41	0.53
1:C:252:GLU:OE2	1:C:282:ARG:NH1	2.41	0.53
1:F:234:SER:OG	1:F:262:MET:HG3	2.09	0.53
1:B:30:ALA:HA	1:B:343:SER:HB3	1.91	0.52
1:B:248:ASN:OD1	1:B:250:VAL:HG23	2.09	0.52
1:E:222:LEU:HD11	1:E:238:GLN:OE1	2.09	0.52
1:A:129:GLY:HA3	1:A:314:ARG:HD3	1.91	0.52
1:F:318:PHE:CD2	1:F:334:GLY:HA2	2.44	0.52
1:D:152:THR:H	1:F:50:LEU:HD12	1.74	0.52
1:E:298:GLN:HE21	1:E:300:MET:HE2	1.74	0.52
1:B:311:ALA:HB2	1:B:344:VAL:HG12	1.91	0.52
1:F:59:ARG:HH22	3:F:403:C8E:H31	1.73	0.52
1:D:262:MET:SD	1:D:271:LYS:HE2	2.50	0.52
1:A:24:ILE:HD13	1:A:55:ARG:NH2	2.25	0.52
1:B:348:TYR:HE1	1:E:62:LYS:HD2	1.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:298:GLN:HE21	1:E:300:MET:CE	2.23	0.52
1:F:128:PRO:HD3	1:F:271:LYS:HE2	1.92	0.52
1:C:229:PHE:HB2	1:C:231:ASN:OD1	2.11	0.51
1:D:318:PHE:HB3	1:D:334:GLY:HA3	1.92	0.51
1:B:298:GLN:OE1	1:B:312:ARG:NH2	2.32	0.51
1:E:133:VAL:HG21	1:E:294:VAL:HB	1.93	0.51
1:C:254:GLN:HB2	1:C:280:LEU:HD12	1.91	0.51
1:D:31:TYR:O	1:D:341:GLU:HA	2.11	0.51
1:E:102:SER:HB3	1:E:105:TRP:CE2	2.45	0.51
1:E:234:SER:HB2	1:E:262:MET:CG	2.41	0.51
1:F:129:GLY:HA3	1:F:314:ARG:HD2	1.93	0.51
1:F:217:GLU:C	1:F:218:ASN:HD22	2.14	0.51
1:D:221:TYR:CD2	1:D:241:TYR:HD2	2.28	0.51
1:B:107:GLN:OE1	1:B:109:ARG:HD3	2.11	0.51
1:D:252:GLU:CD	1:D:330:ARG:HH22	2.14	0.51
1:C:282:ARG:HB2	1:C:287:LEU:HD21	1.93	0.50
1:E:163:LYS:HD2	1:E:192:TYR:OH	2.11	0.50
1:B:300:MET:HG3	1:B:310:TYR:HB3	1.92	0.50
1:C:160:TYR:N	1:C:164:PHE:O	2.40	0.50
1:D:252:GLU:OE2	1:D:330:ARG:NH2	2.44	0.50
1:F:32:ARG:HG2	1:F:341:GLU:HB2	1.92	0.50
1:B:41:GLN:HG3	1:B:45:LEU:HD13	1.93	0.50
1:C:75:ILE:HD13	1:D:80:VAL:HG11	1.93	0.50
1:D:332:THR:H	1:D:335:THR:HG1	1.60	0.50
1:B:148:ARG:HH12	2:B:401:DXT:H423	1.77	0.50
1:B:229:PHE:CE1	3:B:403:C8E:H192	2.46	0.50
1:C:151:ASN:HB2	1:C:172:ALA:HB3	1.94	0.50
1:D:127:ASN:HB3	1:D:128:PRO:CD	2.38	0.50
1:E:39:ALA:HA	1:E:42:ASP:HB2	1.94	0.50
1:A:236:PHE:CE2	1:A:260:GLY:HA3	2.47	0.49
1:B:146:GLN:HB3	1:B:149:GLN:HG2	1.94	0.49
1:D:209:ILE:O	1:D:215:THR:HA	2.12	0.49
1:F:243:GLU:HG3	1:F:244:ALA:N	2.26	0.49
1:D:20:GLU:OE2	1:D:59:ARG:HD2	2.12	0.49
1:D:72:ILE:HG12	1:D:99:GLY:O	2.12	0.49
1:F:332:THR:H	1:F:335:THR:HG1	1.59	0.49
1:B:117:MET:HE1	1:B:220:THR:HG21	1.95	0.49
1:A:128:PRO:HD3	1:A:271:LYS:HE2	1.93	0.49
1:D:80:VAL:HG23	1:D:81:ASP:H	1.78	0.49
1:A:318:PHE:CD2	1:A:334:GLY:HA2	2.48	0.49
2:B:401:DXT:O13	2:B:401:DXT:H422	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:134:TYR:O	1:E:240:LYS:NZ	2.45	0.49
1:A:98:VAL:HG22	1:E:27:MET:HE3	1.94	0.49
1:B:39:ALA:HA	1:B:42:ASP:HB2	1.94	0.48
1:C:26:ALA:H	1:C:54:SER:HB3	1.78	0.48
1:E:75:ILE:HA	1:E:96:THR:OG1	2.13	0.48
1:E:326:ASP:C	1:E:328:ALA:H	2.16	0.48
1:D:183:ASP:N	1:D:183:ASP:OD1	2.46	0.48
1:F:23:GLY:HA3	1:F:350:PHE:CE2	2.48	0.48
1:F:38:ASP:HB3	1:F:41:GLN:HB3	1.95	0.48
1:F:149:GLN:NE2	1:F:174:ASP:OD1	2.46	0.48
1:C:124:PRO:HG3	1:C:226:GLN:OE1	2.14	0.48
1:E:225:VAL:O	1:E:226:GLN:HG2	2.13	0.48
1:A:115:THR:HG21	1:A:146:GLN:HB2	1.95	0.48
1:C:209:ILE:O	1:C:216:TRP:N	2.43	0.48
1:F:140:ILE:HD11	1:F:244:ALA:HB3	1.94	0.48
1:B:72:ILE:HG12	1:B:99:GLY:O	2.13	0.48
1:B:24:ILE:HG21	1:B:55:ARG:NH2	2.29	0.48
1:D:115:THR:HG22	1:D:185:TRP:CH2	2.48	0.48
1:E:280:LEU:HD23	1:E:287:LEU:HD23	1.95	0.48
1:B:120:LEU:HD23	1:B:120:LEU:HA	1.59	0.47
1:B:160:TYR:N	1:B:164:PHE:O	2.47	0.47
1:F:89:ALA:HB1	1:F:93:GLU:OE1	2.14	0.47
1:A:264:THR:HG23	1:A:268:TRP:O	2.13	0.47
1:E:114:LEU:HD22	1:E:118:TYR:CD2	2.49	0.47
1:D:53:GLU:O	1:D:55:ARG:NH1	2.47	0.47
1:D:215:THR:H	1:D:247:SER:HB2	1.80	0.47
1:E:107:GLN:O	1:E:107:GLN:HG3	2.12	0.47
1:A:278:PHE:CE2	3:A:403:C8E:H112	2.50	0.47
1:B:182:ASP:OD1	1:B:182:ASP:N	2.46	0.47
1:D:23:GLY:HA3	1:D:56:ILE:HD13	1.96	0.47
1:A:23:GLY:HA3	1:A:350:PHE:CE2	2.50	0.47
1:D:75:ILE:HD12	1:F:56:ILE:HD11	1.95	0.47
1:E:143:ALA:H	1:E:218:ASN:ND2	2.13	0.47
1:F:127:ASN:HD22	1:F:271:LYS:NZ	2.12	0.47
1:F:191:HIS:HA	1:F:199:LEU:O	2.14	0.47
1:A:177:GLY:O	1:A:178:LEU:HD23	2.15	0.47
1:C:128:PRO:HD3	1:C:271:LYS:HE2	1.97	0.47
1:E:114:LEU:HD12	1:E:119:GLU:HG2	1.97	0.47
1:E:132:ASP:OD2	1:E:339:TYR:OH	2.32	0.47
1:A:99:GLY:HA3	1:A:109:ARG:HA	1.97	0.46
1:A:127:ASN:OD1	1:A:271:LYS:NZ	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:129:GLY:O	1:A:314:ARG:NH1	2.43	0.46
1:D:50:LEU:HD23	1:D:50:LEU:HA	1.65	0.46
1:D:105:TRP:HZ3	1:D:108:VAL:HG12	1.81	0.46
1:E:22:TYR:CE1	1:E:59:ARG:HD3	2.50	0.46
1:D:127:ASN:C	1:D:127:ASN:HD22	2.19	0.46
1:D:212:GLU:OE2	1:D:330:ARG:NE	2.46	0.46
1:E:114:LEU:CD1	1:E:119:GLU:HG2	2.46	0.46
1:A:206:ASN:O	1:A:207:ARG:NH1	2.48	0.46
1:C:54:SER:O	1:C:80:VAL:HG23	2.16	0.46
1:C:298:GLN:OE1	1:C:312:ARG:NE	2.48	0.46
1:D:123:TRP:HA	1:D:124:PRO:HA	1.58	0.46
1:F:252:GLU:HG2	1:F:282:ARG:HG3	1.98	0.46
1:A:22:TYR:OH	1:A:76:GLU:HB2	2.15	0.46
1:C:112:ARG:CZ	1:C:148:ARG:HG2	2.46	0.46
1:E:248:ASN:OD1	1:E:250:VAL:HG23	2.15	0.46
1:F:318:PHE:HB3	1:F:334:GLY:HA3	1.96	0.46
1:B:212:GLU:OE1	1:B:325:LEU:N	2.41	0.46
1:A:62:LYS:HD2	1:E:348:TYR:CE1	2.50	0.46
1:F:123:TRP:HA	1:F:124:PRO:HA	1.47	0.46
1:C:87:GLU:OE1	1:C:87:GLU:N	2.29	0.46
1:C:134:TYR:CE1	1:C:240:LYS:HE2	2.51	0.46
1:E:136:TRP:CD1	1:E:333:SER:HB2	2.51	0.46
1:A:278:PHE:CD2	3:A:403:C8E:H132	2.51	0.46
1:E:151:ASN:HB2	1:E:172:ALA:HB3	1.98	0.45
1:C:21:VAL:HG22	1:C:58:PHE:CD1	2.51	0.45
1:C:229:PHE:HZ	1:C:235:PHE:HE1	1.64	0.45
1:A:20:GLU:N	5:A:501:HOH:O	2.49	0.45
1:B:114:LEU:HD22	1:B:118:TYR:CD2	2.42	0.45
1:D:107:GLN:OE1	1:D:109:ARG:HD3	2.16	0.45
1:D:302:PHE:HD1	1:D:308:VAL:HG12	1.81	0.45
1:E:298:GLN:OE1	1:E:312:ARG:NE	2.39	0.45
1:F:312:ARG:NH2	3:F:402:C8E:O18	2.48	0.45
1:C:134:TYR:O	1:C:240:LYS:NZ	2.50	0.45
1:F:301:TYR:CE2	1:F:303:VAL:HA	2.52	0.45
1:A:89:ALA:HB1	1:A:93:GLU:OE1	2.17	0.45
1:B:313:ALA:HA	1:B:341:GLU:O	2.16	0.45
1:E:214:GLN:OE1	1:E:248:ASN:N	2.49	0.45
1:D:183:ASP:HA	1:D:208:ASN:HB2	1.99	0.45
1:D:262:MET:CG	1:D:271:LYS:HE2	2.46	0.45
1:E:274:TYR:CD1	1:E:295:VAL:HG22	2.52	0.45
1:B:298:GLN:HB2	1:B:312:ARG:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:21:VAL:HG22	1:C:58:PHE:CE1	2.51	0.45
1:D:298:GLN:OE1	1:D:312:ARG:NH2	2.50	0.45
1:F:107:GLN:OE1	1:F:109:ARG:HD3	2.17	0.45
1:A:348:TYR:HE1	1:B:62:LYS:HD3	1.81	0.45
1:B:128:PRO:HB3	1:B:298:GLN:OE1	2.17	0.45
1:C:234:SER:HB2	1:C:262:MET:CG	2.46	0.45
1:D:225:VAL:HG22	1:D:226:GLN:N	2.32	0.45
1:E:123:TRP:HA	1:E:124:PRO:HA	1.61	0.45
1:F:122:ASP:OD2	3:F:403:C8E:H131	2.17	0.45
1:C:326:ASP:C	1:C:328:ALA:H	2.20	0.45
1:E:256:ALA:HB2	1:E:277:ASN:HA	1.99	0.45
1:B:309:LEU:HD23	1:B:346:VAL:HG23	1.99	0.44
1:D:307:ALA:HA	1:D:347:GLU:O	2.16	0.44
1:C:135:ASP:HB3	1:C:136:TRP:CE3	2.52	0.44
1:D:214:GLN:HB3	1:D:247:SER:HB3	1.99	0.44
1:E:23:GLY:HA3	1:E:350:PHE:CZ	2.52	0.44
1:E:159:MET:HB3	1:E:162:ASP:HA	2.00	0.44
1:B:239:TYR:CE1	1:B:255:ASP:HB2	2.53	0.44
1:C:332:THR:H	1:C:335:THR:HG1	1.60	0.44
1:A:262:MET:SD	1:A:271:LYS:HD2	2.58	0.44
1:B:310:TYR:O	1:B:344:VAL:HA	2.17	0.44
1:D:215:THR:H	1:D:247:SER:CB	2.29	0.44
1:E:23:GLY:HA3	1:E:350:PHE:CE2	2.53	0.44
1:C:150:SER:HB3	1:D:81:ASP:OD2	2.17	0.44
1:D:41:GLN:HG3	1:D:45:LEU:HD12	2.00	0.44
1:D:136:TRP:O	1:D:138:GLY:N	2.50	0.44
1:C:24:ILE:O	1:C:54:SER:HA	2.18	0.44
1:A:50:LEU:HD23	1:A:50:LEU:HA	1.79	0.44
1:C:62:LYS:HG2	1:D:348:TYR:CZ	2.52	0.44
1:E:137:GLY:HA2	1:E:333:SER:CB	2.47	0.44
1:E:332:THR:N	1:E:335:THR:HG1	2.10	0.44
1:B:215:THR:H	1:B:247:SER:HB3	1.83	0.44
1:C:152:THR:N	1:D:50:LEU:HD12	2.31	0.44
1:E:214:GLN:OE1	1:E:247:SER:HB3	2.18	0.44
1:C:256:ALA:HB2	1:C:277:ASN:HA	1.99	0.44
1:D:32:ARG:HD3	1:D:34:TYR:CE1	2.53	0.44
1:D:279:ASP:OD1	1:D:291:SER:HB3	2.17	0.44
1:E:20:GLU:N	5:E:501:HOH:O	2.50	0.44
1:F:40:LYS:HG3	1:F:44:ASN:HD21	1.83	0.44
2:F:401:DXT:H421	3:F:405:C8E:H142	2.00	0.44
1:A:200:ASP:OD2	1:A:226:GLN:NE2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:280:LEU:HD22	1:A:287:LEU:HD22	1.99	0.43
1:F:59:ARG:HA	1:F:74:GLN:HA	2.01	0.43
1:F:158:PRO:HD2	1:F:160:TYR:CZ	2.53	0.43
1:A:51:ASN:OD1	1:A:83:SER:N	2.43	0.43
1:C:124:PRO:HG2	1:C:236:PHE:CG	2.53	0.43
1:C:245:ASP:OD1	1:C:251:ASN:ND2	2.48	0.43
1:D:23:GLY:O	1:D:24:ILE:HD13	2.18	0.43
1:D:32:ARG:HD3	1:D:34:TYR:HE1	1.83	0.43
1:C:23:GLY:HA3	1:C:350:PHE:CE1	2.54	0.43
1:C:272:LEU:HD12	1:C:272:LEU:HA	1.86	0.43
1:C:307:ALA:HB2	1:C:348:TYR:HD1	1.83	0.43
1:D:76:GLU:HG2	1:D:94:ARG:HB2	1.99	0.43
1:D:144:LYS:H	1:D:144:LYS:HG3	1.40	0.43
1:E:129:GLY:O	1:E:314:ARG:NH1	2.52	0.43
1:C:313:ALA:HA	1:C:341:GLU:O	2.19	0.43
1:B:255:ASP:OD1	1:B:255:ASP:N	2.51	0.43
1:A:88:GLY:HA2	1:B:91:LEU:O	2.18	0.43
1:A:234:SER:O	1:A:261:LEU:HD12	2.18	0.43
1:B:209:ILE:O	1:B:215:THR:HA	2.18	0.43
1:F:61:LYS:HA	1:F:71:PHE:O	2.18	0.43
1:A:87:GLU:HG3	1:B:93:GLU:HA	1.99	0.43
1:A:203:TYR:CG	1:A:204:GLU:N	2.87	0.43
1:A:332:THR:H	1:A:335:THR:HG1	1.64	0.43
1:F:130:LEU:HA	1:F:294:VAL:HG11	2.01	0.43
1:B:315:MET:HG3	1:B:340:ASN:OD1	2.19	0.43
1:F:113:VAL:O	1:F:148:ARG:O	2.36	0.43
1:F:298:GLN:NE2	1:F:300:MET:HE2	2.33	0.43
1:C:32:ARG:HG2	1:C:341:GLU:HB2	2.00	0.42
1:C:250:VAL:HG11	1:C:325:LEU:HD11	2.01	0.42
1:D:53:GLU:HG2	1:D:79:TYR:CD2	2.54	0.42
1:E:124:PRO:HD2	1:E:238:GLN:HE22	1.84	0.42
1:E:163:LYS:HZ1	1:E:164:PHE:HB2	1.84	0.42
1:C:325:LEU:HD23	1:C:325:LEU:HA	1.75	0.42
1:D:271:LYS:HB2	1:D:271:LYS:HE3	1.71	0.42
1:D:183:ASP:HB3	1:D:208:ASN:O	2.18	0.42
1:C:114:LEU:CD1	1:C:119:GLU:HG2	2.49	0.42
1:F:115:THR:HG21	1:F:146:GLN:HB2	2.01	0.42
1:A:74:GLN:O	1:A:96:THR:HA	2.19	0.42
1:B:124:PRO:HG3	1:B:226:GLN:CD	2.40	0.42
1:C:118:TYR:CE1	1:C:147:ASP:HB3	2.55	0.42
1:D:158:PRO:HD2	1:D:160:TYR:CZ	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:112:ARG:HA	1:E:150:SER:HA	2.01	0.42
1:A:203:TYR:CB	3:A:404:C8E:H101	2.50	0.42
1:B:50:LEU:HA	1:B:50:LEU:HD23	1.59	0.42
1:B:207:ARG:HH12	1:B:219:ASN:ND2	2.17	0.42
1:D:120:LEU:HA	1:D:120:LEU:HD23	1.60	0.42
1:D:124:PRO:HG3	1:D:226:GLN:OE1	2.19	0.42
1:F:110:LEU:HD12	1:F:110:LEU:N	2.34	0.42
3:F:403:C8E:H171	3:F:403:C8E:H141	1.80	0.42
1:A:24:ILE:O	1:A:54:SER:HA	2.20	0.42
1:D:113:VAL:O	1:D:148:ARG:HA	2.20	0.42
1:E:104:SER:O	1:E:158:PRO:HG2	2.20	0.42
1:A:61:LYS:HA	1:A:71:PHE:O	2.19	0.42
1:A:123:TRP:HA	1:A:124:PRO:HA	1.53	0.42
1:A:134:TYR:OH	1:A:240:LYS:HB2	2.20	0.42
1:B:301:TYR:HD2	1:B:309:LEU:HD12	1.85	0.42
1:F:74:GLN:O	1:F:96:THR:HA	2.20	0.42
1:F:192:TYR:O	1:F:198:GLN:HA	2.19	0.42
1:F:326:ASP:C	1:F:328:ALA:H	2.24	0.42
1:B:118:TYR:OH	1:B:135:ASP:OD2	2.25	0.42
1:B:183:ASP:HA	1:B:208:ASN:HB2	2.02	0.42
1:E:114:LEU:HD23	1:E:148:ARG:HG2	2.02	0.42
1:B:170:VAL:HG12	1:B:186:GLY:HA3	2.01	0.41
1:B:315:MET:HE2	1:B:315:MET:HB2	1.84	0.41
1:D:61:LYS:HA	1:D:71:PHE:O	2.19	0.41
1:C:348:TYR:OH	1:F:62:LYS:HD3	2.19	0.41
1:D:72:ILE:HG12	1:D:99:GLY:C	2.40	0.41
1:E:61:LYS:HG2	1:E:72:ILE:HG22	2.01	0.41
1:E:160:TYR:N	1:E:164:PHE:O	2.50	0.41
2:F:401:DXT:H611	2:F:401:DXT:H7	1.82	0.41
1:C:143:ALA:N	1:C:218:ASN:OD1	2.30	0.41
1:F:127:ASN:ND2	1:F:271:LYS:NZ	2.69	0.41
1:B:198:GLN:HG2	1:B:200:ASP:OD1	2.20	0.41
1:D:216:TRP:CZ3	1:D:246:ALA:HB2	2.55	0.41
1:A:203:TYR:HE1	1:A:219:ASN:HB3	1.85	0.41
1:A:248:ASN:OD1	1:A:250:VAL:HG23	2.21	0.41
1:D:140:ILE:HG22	1:D:144:LYS:HG2	2.03	0.41
1:F:236:PHE:CZ	1:F:260:GLY:HA3	2.56	0.41
1:F:243:GLU:HG3	1:F:244:ALA:H	1.85	0.41
1:A:199:LEU:HD23	1:A:199:LEU:HA	1.70	0.41
1:F:134:TYR:CE1	1:F:240:LYS:HE3	2.56	0.41
1:F:148:ARG:O	1:F:149:GLN:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:137:GLY:HA2	1:B:333:SER:OG	2.20	0.41
1:B:307:ALA:HA	1:B:347:GLU:O	2.20	0.41
1:D:117:MET:CE	1:D:204:GLU:HB3	2.50	0.41
1:E:21:VAL:HG22	1:E:58:PHE:CD2	2.56	0.41
1:E:202:ALA:HB3	1:E:222:LEU:HB3	2.01	0.41
1:F:203:TYR:CG	1:F:204:GLU:N	2.88	0.41
1:B:50:LEU:HB2	1:E:151:ASN:HA	2.02	0.41
1:C:347:GLU:OE1	1:C:349:TYR:OH	2.37	0.41
1:A:158:PRO:HD2	1:A:160:TYR:CZ	2.56	0.40
1:A:314:ARG:NH2	1:A:339:TYR:OH	2.54	0.40
1:B:215:THR:H	1:B:247:SER:CB	2.34	0.40
1:B:241:TYR:OH	1:B:253:LYS:HE3	2.22	0.40
1:C:324:GLY:HA2	1:C:330:ARG:NH2	2.36	0.40
1:E:231:ASN:OD1	1:E:231:ASN:N	2.54	0.40
1:B:255:ASP:O	1:B:278:PHE:HD1	2.04	0.40
1:C:123:TRP:HA	1:C:124:PRO:HA	1.73	0.40
1:F:205:GLY:HA2	1:F:218:ASN:O	2.21	0.40
1:E:121:VAL:HG13	1:E:134:TYR:HD2	1.85	0.40
1:F:24:ILE:O	1:F:54:SER:HA	2.21	0.40
1:B:123:TRP:HA	1:B:124:PRO:HA	1.65	0.40
1:E:64:PHE:CE2	1:E:71:PHE:HB2	2.57	0.40
1:E:300:MET:HE2	1:E:300:MET:HB2	1.83	0.40
1:A:236:PHE:CZ	1:A:260:GLY:HA3	2.56	0.40
1:A:307:ALA:HA	1:A:347:GLU:O	2.21	0.40
1:B:23:GLY:H	1:B:350:PHE:HA	1.86	0.40
1:B:112:ARG:HA	1:B:149:GLN:O	2.22	0.40
1:D:282:ARG:NH2	1:D:323:ASP:O	2.55	0.40
1:E:121:VAL:HG13	1:E:134:TYR:CD2	2.56	0.40
1:F:58:PHE:O	1:F:74:GLN:HA	2.21	0.40
1:F:280:LEU:CD2	1:F:287:LEU:HD22	2.52	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	329/331 (99%)	306 (93%)	21 (6%)	2 (1%)	25	57
1	B	329/331 (99%)	311 (94%)	16 (5%)	2 (1%)	25	57
1	C	329/331 (99%)	308 (94%)	19 (6%)	2 (1%)	25	57
1	D	329/331 (99%)	303 (92%)	22 (7%)	4 (1%)	13	41
1	E	329/331 (99%)	308 (94%)	19 (6%)	2 (1%)	25	57
1	F	329/331 (99%)	307 (93%)	18 (6%)	4 (1%)	13	41
All	All	1974/1986 (99%)	1843 (93%)	115 (6%)	16 (1%)	19	51

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	23	GLY
1	D	148	ARG
1	E	137	GLY
1	E	147	ASP
1	A	148	ARG
1	C	137	GLY
1	D	137	GLY
1	F	137	GLY
1	D	127	ASN
1	F	149	GLN
1	F	325	LEU
1	B	325	LEU
1	A	137	GLY
1	C	128	PRO
1	B	128	PRO
1	F	128	PRO

### 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	249/252 (99%)	247 (99%)	2 (1%)	81	91
1	B	250/252 (99%)	243 (97%)	7 (3%)	43	70
1	C	245/252 (97%)	236 (96%)	9 (4%)	34	62
1	D	250/252 (99%)	246 (98%)	4 (2%)	62	81
1	E	247/252 (98%)	240 (97%)	7 (3%)	43	70
1	F	250/252 (99%)	248 (99%)	2 (1%)	81	91
All	All	1491/1512 (99%)	1460 (98%)	31 (2%)	53	76

All (31) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	247	SER
1	A	279	ASP
1	B	132	ASP
1	B	154	ARG
1	B	156	ASP
1	B	238	GLN
1	B	291	SER
1	B	315	MET
1	B	349	TYR
1	C	48	MET
1	C	67	PHE
1	C	112	ARG
1	C	157	SER
1	C	229	PHE
1	C	279	ASP
1	C	314	ARG
1	C	323	ASP
1	C	338	ASP
1	D	127	ASN
1	D	174	ASP
1	D	257	MET
1	D	319	ASN
1	E	156	ASP
1	E	198	GLN
1	E	228	TRP
1	E	229	PHE
1	E	231	ASN
1	E	279	ASP
1	E	323	ASP
1	F	67	PHE

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Mol	Chain	Res	Type
1	F	350	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	49	GLN
1	D	206	ASN
1	D	214	GLN
1	D	248	ASN
1	F	127	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](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 35 ligands modelled in this entry, 16 are monoatomic - leaving 19 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
2	DXT	A	401	-	33,35,35	1.17	2 (6%)	42,57,57	1.21	3 (7%)
3	C8E	D	403	-	9,9,20	0.53	0	8,8,19	0.44	0



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	C8E	B	402	-	9,9,20	0.50	0	8,8,19	0.23	0
2	DXT	F	401	-	33,35,35	1.22	2 (6%)	42,57,57	1.33	6 (14%)
3	C8E	B	404	-	9,9,20	0.51	0	8,8,19	0.37	0
3	C8E	F	404	-	9,9,20	0.66	0	8,8,19	0.76	0
3	C8E	F	402	-	9,9,20	0.46	0	8,8,19	0.25	0
3	C8E	A	402	-	9,9,20	0.45	0	8,8,19	0.24	0
3	C8E	A	404	-	14,14,20	0.53	0	13,13,19	0.34	0
2	DXT	D	401	-	33,35,35	1.20	2 (6%)	42,57,57	1.14	3 (7%)
3	C8E	E	401	-	9,9,20	0.51	0	8,8,19	0.35	0
3	C8E	B	403	-	9,9,20	0.49	0	8,8,19	0.35	0
3	C8E	F	403	-	20,20,20	0.43	0	19,19,19	0.53	0
3	C8E	C	401	-	12,12,20	0.45	0	11,11,19	0.34	0
3	C8E	F	405	-	9,9,20	0.44	0	8,8,19	0.39	0
3	C8E	D	402	-	9,9,20	0.53	0	8,8,19	0.38	0
3	C8E	A	405	-	20,20,20	0.42	0	19,19,19	0.33	0
3	C8E	A	403	-	15,15,20	0.46	0	14,14,19	0.53	0
2	DXT	B	401	-	33,35,35	1.18	2 (6%)	42,57,57	1.32	5 (11%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	DXT	A	401	-	-	4/8/74/74	0/4/4/4
3	C8E	D	403	-	-	4/7/7/18	-
3	C8E	B	402	-	-	4/7/7/18	-
2	DXT	F	401	-	-	8/8/74/74	0/4/4/4
3	C8E	B	404	-	-	5/7/7/18	-
3	C8E	F	404	-	-	4/7/7/18	-
3	C8E	F	402	-	-	5/7/7/18	-
3	C8E	A	402	-	-	5/7/7/18	-
3	C8E	A	404	-	-	9/12/12/18	-
2	DXT	D	401	-	-	7/8/74/74	0/4/4/4
3	C8E	E	401	-	-	5/7/7/18	-
3	C8E	B	403	-	-	3/7/7/18	-
3	C8E	F	403	-	-	13/18/18/18	-
3	C8E	C	401	-	-	7/10/10/18	-
3	C8E	F	405	-	-	6/7/7/18	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	C8E	D	402	-	-	6/7/7/18	-
3	C8E	A	405	-	-	11/18/18/18	-
3	C8E	A	403	-	-	9/13/13/18	-
2	DXT	B	401	-	-	1/8/74/74	0/4/4/4

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	401	DXT	C21-N21	5.79	1.48	1.33
2	A	401	DXT	C21-N21	5.49	1.48	1.33
2	B	401	DXT	C21-N21	5.45	1.47	1.33
2	D	401	DXT	C21-N21	5.43	1.47	1.33
2	F	401	DXT	O11-C11	2.35	1.28	1.23
2	A	401	DXT	O11-C11	2.30	1.28	1.23
2	B	401	DXT	O11-C11	2.29	1.28	1.23
2	D	401	DXT	O11-C11	2.20	1.27	1.23

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	401	DXT	C4B-C4A-C5	4.68	114.29	110.59
2	D	401	DXT	C4B-C4A-C5	4.55	114.18	110.59
2	B	401	DXT	C1-C4B-C12	4.23	114.84	109.88
2	B	401	DXT	O13-C4B-C12	-3.61	104.36	110.14
2	F	401	DXT	C4B-C4A-C5	3.56	113.40	110.59
2	F	401	DXT	C1-C4B-C12	3.35	113.81	109.88
2	F	401	DXT	C21-C2-C1	3.06	124.59	120.97
2	B	401	DXT	C5A-C5-C4A	-2.71	106.10	110.62
2	A	401	DXT	C4B-C4A-C4	2.61	115.86	111.36
2	F	401	DXT	C4A-C4B-C12	2.51	113.31	110.03
2	F	401	DXT	C11-C5B-C12	2.45	120.74	118.80
2	D	401	DXT	C21-C2-C1	-2.37	118.16	120.97
2	B	401	DXT	C4B-C4A-C5	2.33	112.43	110.59
2	A	401	DXT	C4A-C4B-C12	2.16	112.85	110.03
2	B	401	DXT	O12-C12-C5B	-2.12	121.00	123.90
2	D	401	DXT	C4A-C4B-C12	2.05	112.71	110.03
2	F	401	DXT	C6A-C6B-C11	2.00	121.00	119.39

There are no chirality outliers.

All (116) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	401	DXT	C3-C4-N4-C41
2	D	401	DXT	C3-C4-N4-C42
2	F	401	DXT	C1-C2-C21-N21
2	F	401	DXT	C3-C2-C21-N21
2	F	401	DXT	C3-C4-N4-C41
2	F	401	DXT	C3-C4-N4-C42
2	F	401	DXT	C4A-C4-N4-C42
3	A	405	C8E	O12-C13-C14-O15
3	F	403	C8E	O9-C10-C11-O12
3	A	402	C8E	C17-C16-O15-C14
3	A	404	C8E	O12-C13-C14-O15
3	F	403	C8E	C17-C16-O15-C14
3	B	403	C8E	O15-C16-C17-O18
3	D	403	C8E	O15-C16-C17-O18
3	A	405	C8E	O9-C10-C11-O12
3	A	402	C8E	O12-C13-C14-O15
3	A	405	C8E	O18-C19-C20-O21
3	B	402	C8E	O12-C13-C14-O15
3	D	402	C8E	O12-C13-C14-O15
3	B	404	C8E	O12-C13-C14-O15
3	B	404	C8E	O18-C19-C20-O21
3	C	401	C8E	O18-C19-C20-O21
3	E	401	C8E	O18-C19-C20-O21
3	F	405	C8E	O18-C19-C20-O21
3	C	401	C8E	O12-C13-C14-O15
3	A	402	C8E	O15-C16-C17-O18
3	D	402	C8E	O15-C16-C17-O18
3	A	403	C8E	O12-C13-C14-O15
3	F	404	C8E	O15-C16-C17-O18
3	F	404	C8E	O12-C13-C14-O15
3	A	403	C8E	C3-C4-C5-C6
3	F	403	C8E	C4-C5-C6-C7
3	F	405	C8E	O12-C13-C14-O15
3	F	403	C8E	C3-C4-C5-C6
3	A	404	C8E	C16-C17-O18-C19
3	A	405	C8E	C1-C2-C3-C4
3	A	405	C8E	C2-C3-C4-C5
3	F	403	C8E	C2-C3-C4-C5
3	A	403	C8E	C2-C3-C4-C5
3	B	403	C8E	O12-C13-C14-O15
3	D	402	C8E	O18-C19-C20-O21
3	C	401	C8E	O9-C10-C11-O12
3	F	402	C8E	O15-C16-C17-O18

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Mol	Chain	Res	Type	Atoms
3	F	402	C8E	C17-C16-O15-C14
3	F	405	C8E	C16-C17-O18-C19
3	A	403	C8E	C4-C5-C6-C7
3	A	403	C8E	C5-C6-C7-C8
3	F	402	C8E	O18-C19-C20-O21
3	A	405	C8E	C16-C17-O18-C19
3	D	402	C8E	C13-C14-O15-C16
3	F	403	C8E	O18-C19-C20-O21
3	E	401	C8E	C17-C16-O15-C14
3	A	405	C8E	C14-C13-O12-C11
3	B	402	C8E	C17-C16-O15-C14
3	D	402	C8E	C20-C19-O18-C17
3	A	404	C8E	C10-C11-O12-C13
3	A	404	C8E	C13-C14-O15-C16
3	F	403	C8E	C14-C13-O12-C11
3	D	402	C8E	C17-C16-O15-C14
3	A	405	C8E	C20-C19-O18-C17
3	C	401	C8E	C13-C14-O15-C16
3	F	403	C8E	C13-C14-O15-C16
3	A	404	C8E	C17-C16-O15-C14
2	A	401	DXT	C3-C4-N4-C42
2	A	401	DXT	C4A-C4-N4-C41
2	A	401	DXT	C4A-C4-N4-C42
2	D	401	DXT	C3-C4-N4-C41
2	D	401	DXT	C4A-C4-N4-C41
2	D	401	DXT	C4A-C4-N4-C42
2	F	401	DXT	C4A-C4-N4-C41
3	B	404	C8E	C20-C19-O18-C17
3	F	402	C8E	C20-C19-O18-C17
2	D	401	DXT	C3-C2-C21-N21
3	C	401	C8E	C20-C19-O18-C17
2	D	401	DXT	C3-C2-C21-O21
2	F	401	DXT	C3-C2-C21-O21
3	A	405	C8E	C13-C14-O15-C16
3	E	401	C8E	C13-C14-O15-C16
2	F	401	DXT	C1-C2-C21-O21
2	D	401	DXT	C1-C2-C21-N21
3	A	402	C8E	C16-C17-O18-C19
3	F	403	C8E	C16-C17-O18-C19
3	F	402	C8E	O12-C13-C14-O15
3	F	403	C8E	C20-C19-O18-C17
3	B	402	C8E	O15-C16-C17-O18

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Mol	Chain	Res	Type	Atoms
3	A	405	C8E	C6-C7-C8-O9
3	F	405	C8E	C13-C14-O15-C16
3	D	403	C8E	O12-C13-C14-O15
3	F	403	C8E	C5-C6-C7-C8
3	F	404	C8E	C20-C19-O18-C17
3	E	401	C8E	O12-C13-C14-O15
3	D	403	C8E	C13-C14-O15-C16
3	A	404	C8E	C7-C8-O9-C10
3	C	401	C8E	C10-C11-O12-C13
3	F	405	C8E	C17-C16-O15-C14
3	A	403	C8E	C1-C2-C3-C4
3	A	403	C8E	C13-C14-O15-C16
3	C	401	C8E	C14-C13-O12-C11
3	A	403	C8E	C10-C11-O12-C13
3	D	403	C8E	C16-C17-O18-C19
3	B	402	C8E	C20-C19-O18-C17
3	F	403	C8E	O15-C16-C17-O18
3	F	403	C8E	C7-C8-O9-C10
3	F	404	C8E	C13-C14-O15-C16
3	A	405	C8E	O15-C16-C17-O18
3	B	404	C8E	C16-C17-O18-C19
3	A	403	C8E	O9-C10-C11-O12
3	B	404	C8E	O15-C16-C17-O18
3	A	404	C8E	C20-C19-O18-C17
2	B	401	DXT	C3-C2-C21-N21
3	E	401	C8E	O15-C16-C17-O18
3	A	402	C8E	C20-C19-O18-C17
3	A	404	C8E	O9-C10-C11-O12
3	A	404	C8E	O15-C16-C17-O18
3	B	403	C8E	C17-C16-O15-C14
3	F	405	C8E	O15-C16-C17-O18

There are no ring outliers.

10 monomers are involved in 17 short contacts:

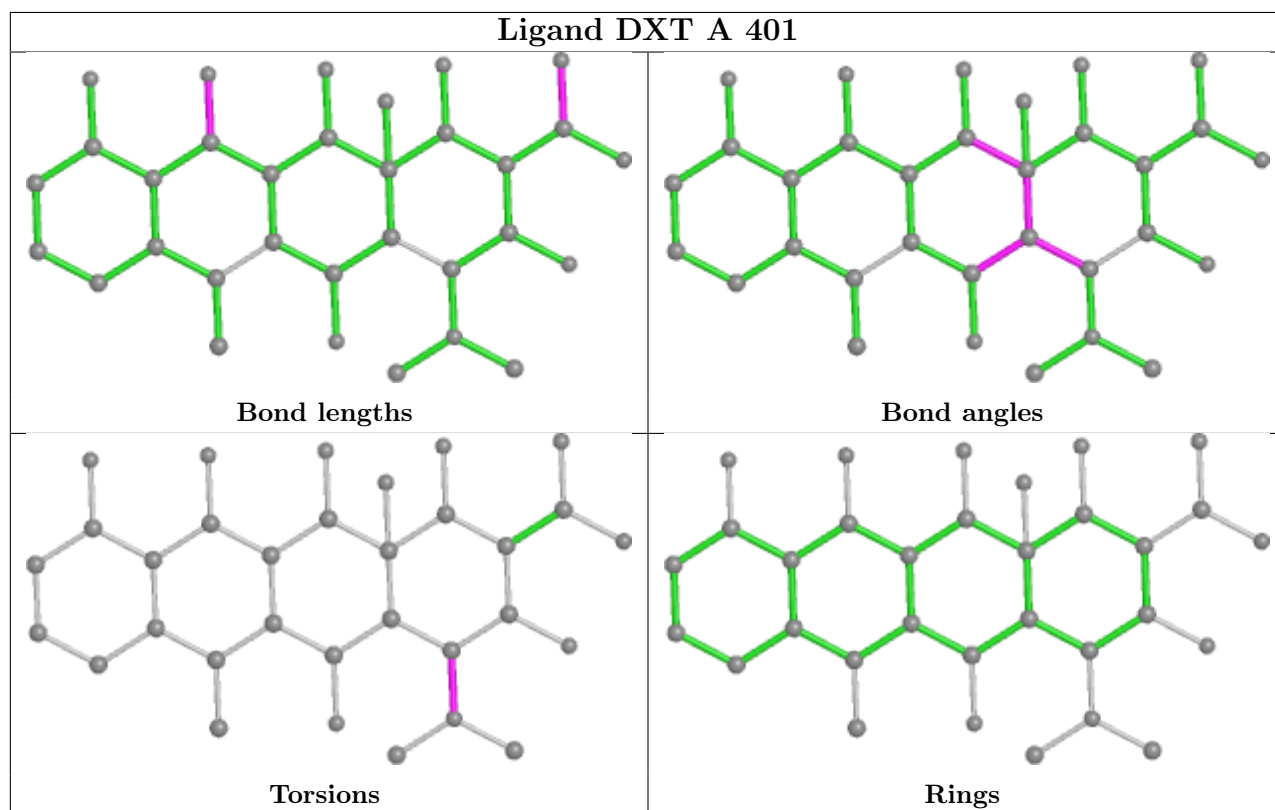
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	403	C8E	1	0
2	F	401	DXT	2	0
3	F	402	C8E	1	0
3	A	404	C8E	1	0
3	B	403	C8E	1	0
3	F	403	C8E	5	0

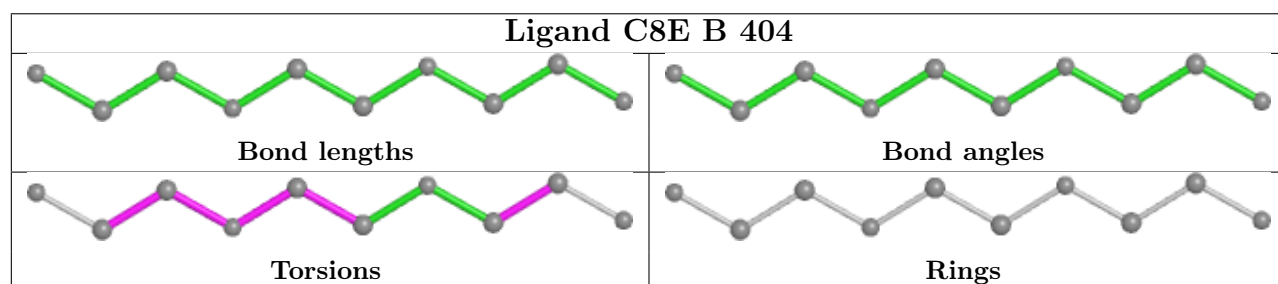
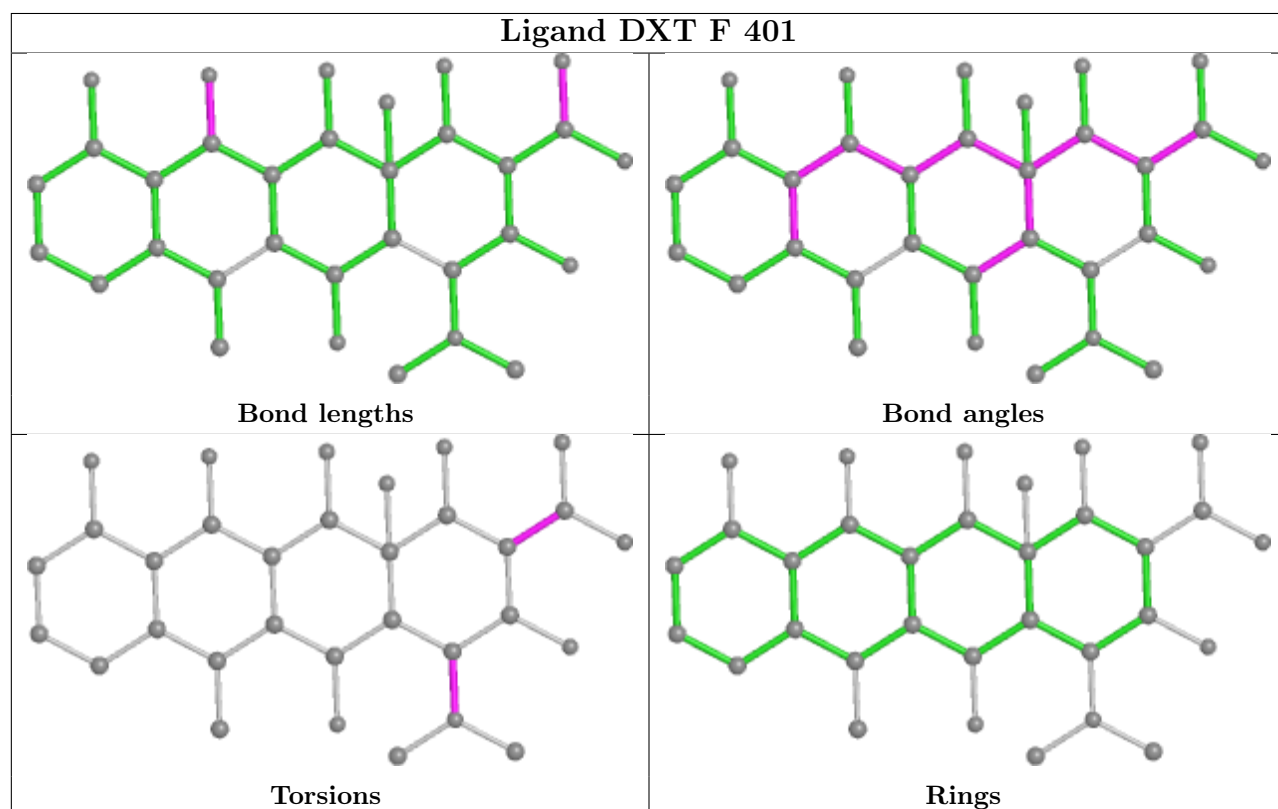
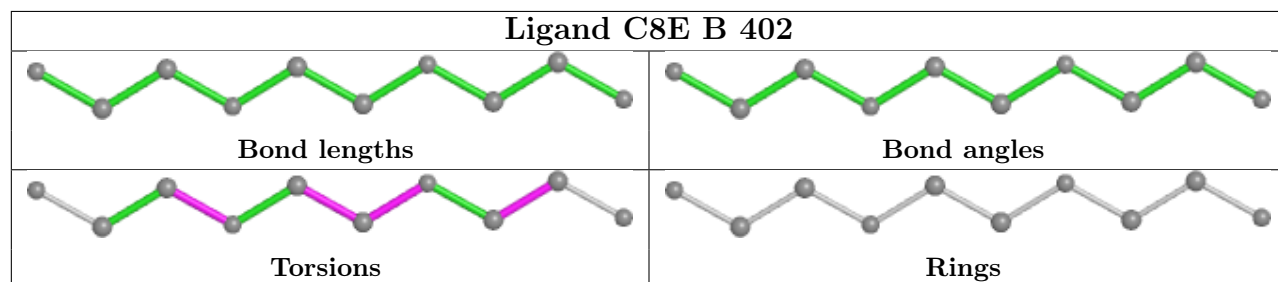
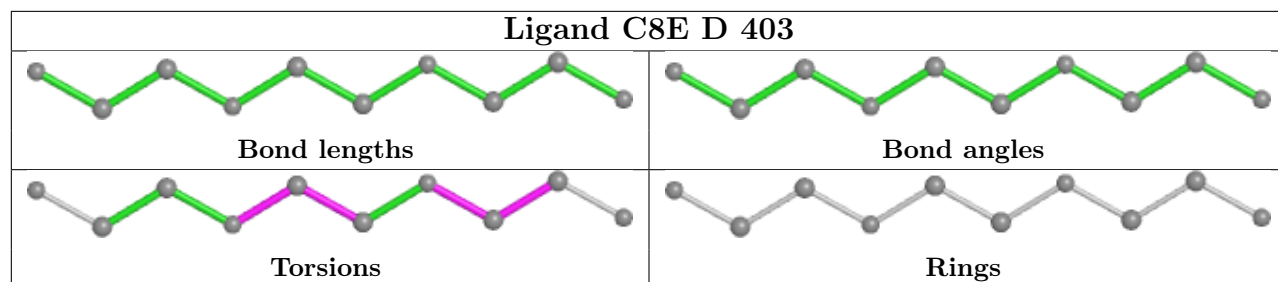
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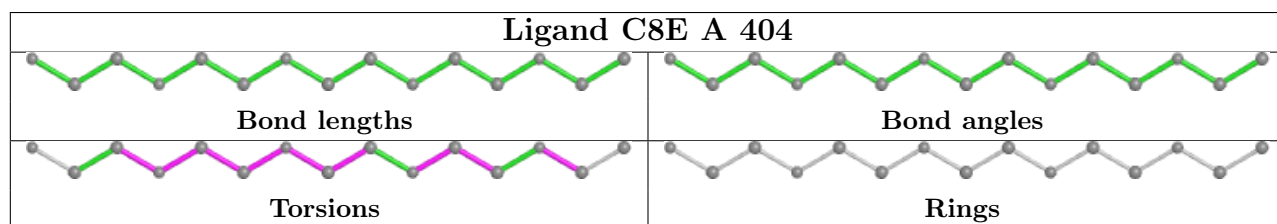
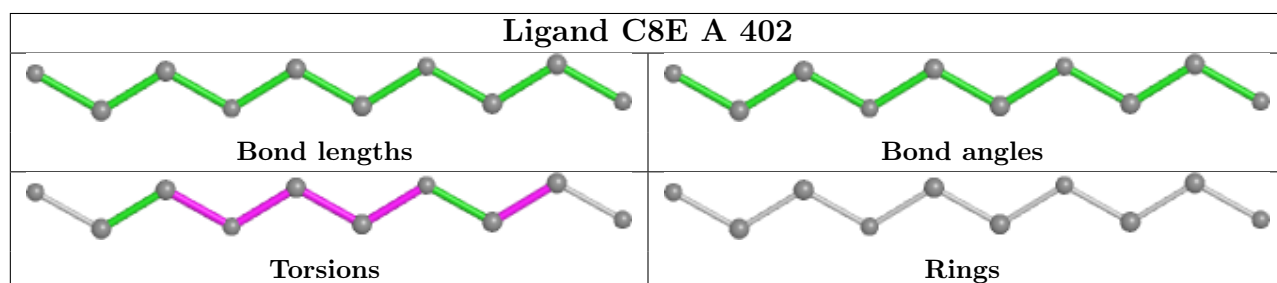
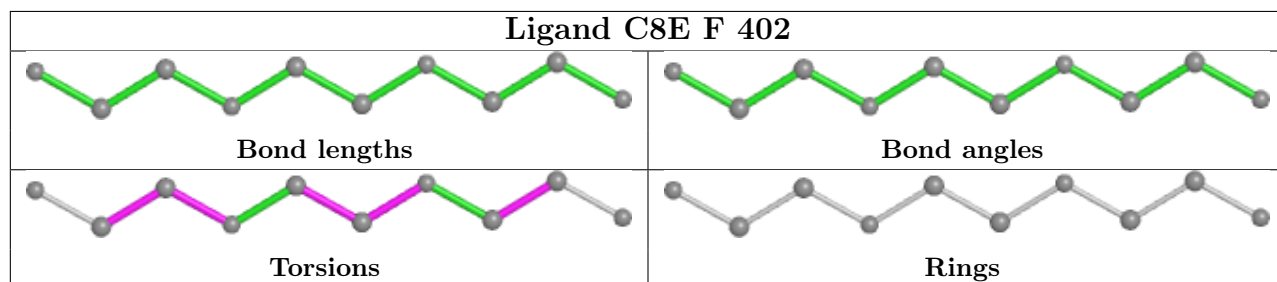
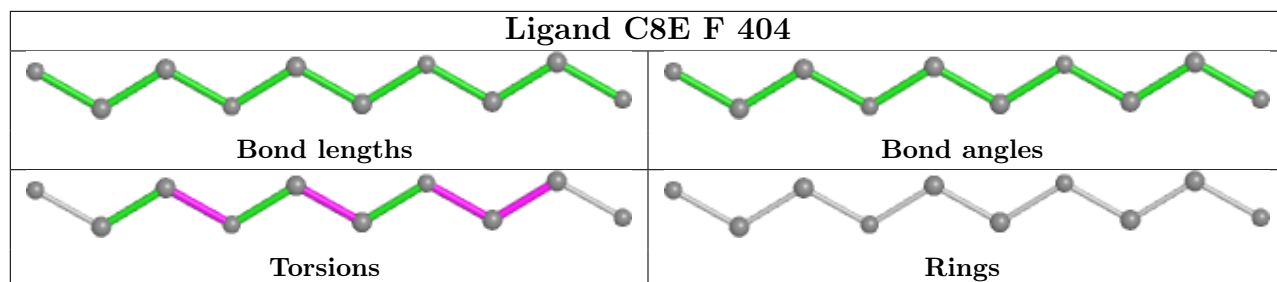
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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	F	405	C8E	1	0
3	A	405	C8E	2	0
3	A	403	C8E	2	0
2	B	401	DXT	2	0

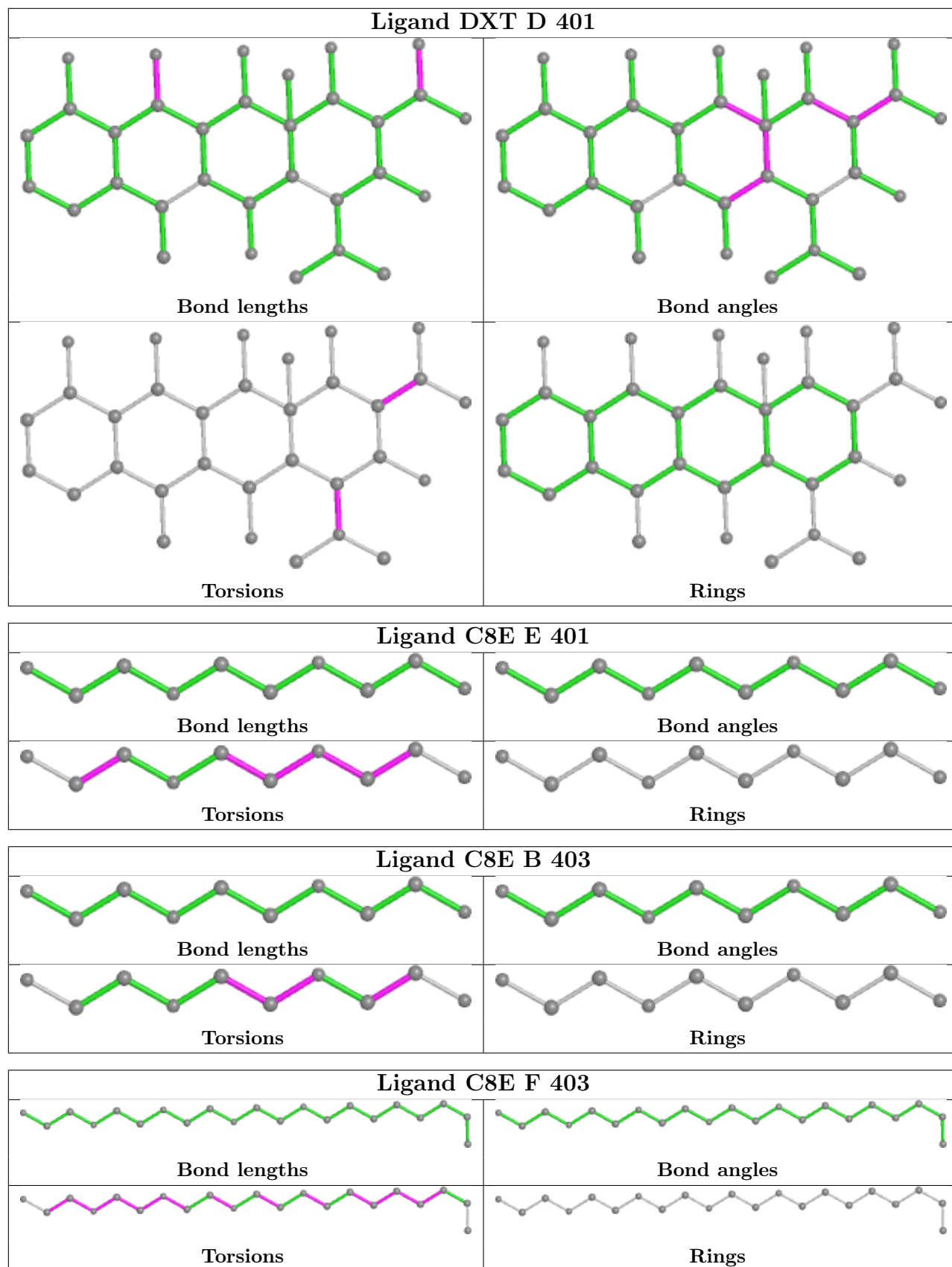
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

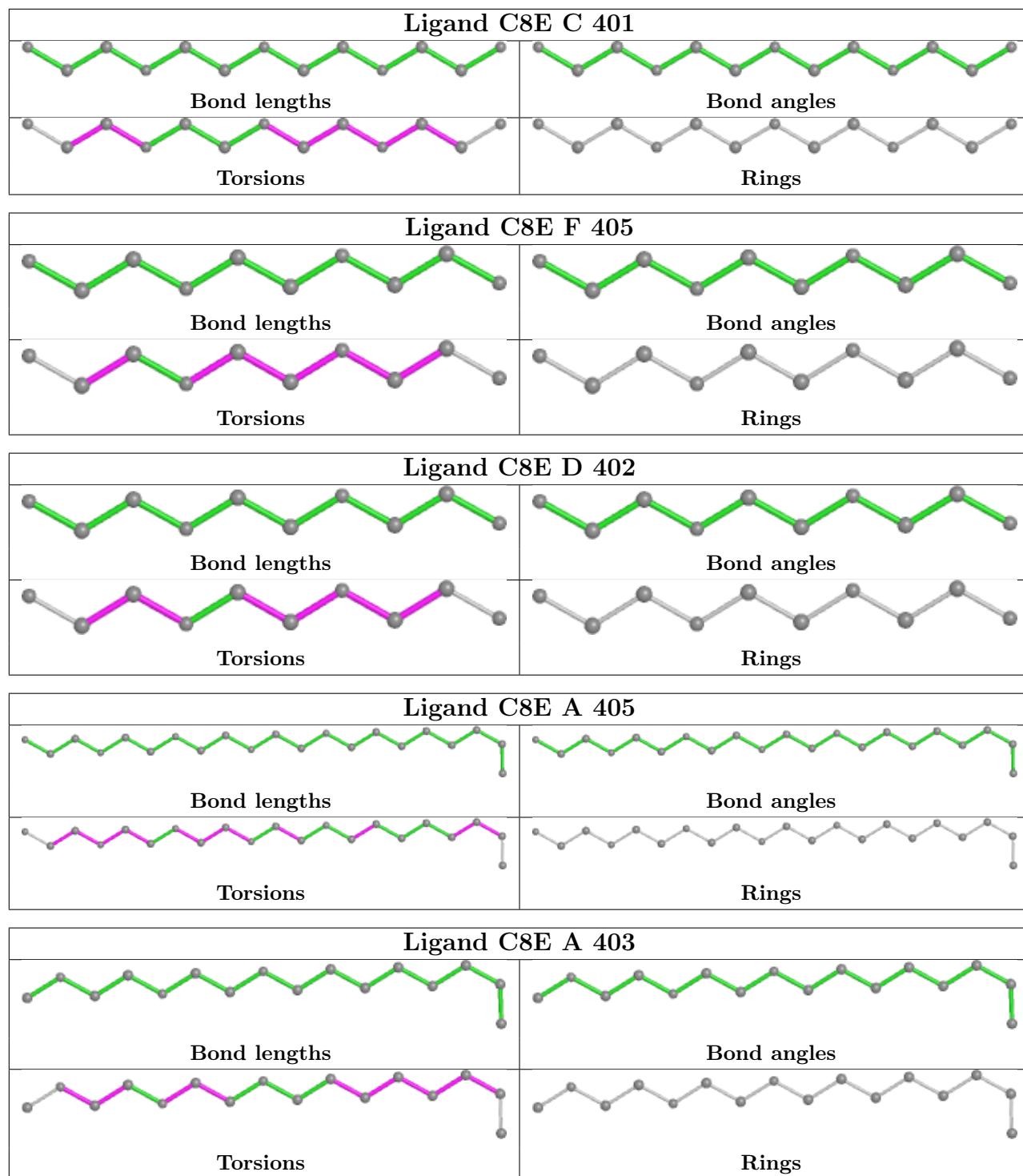


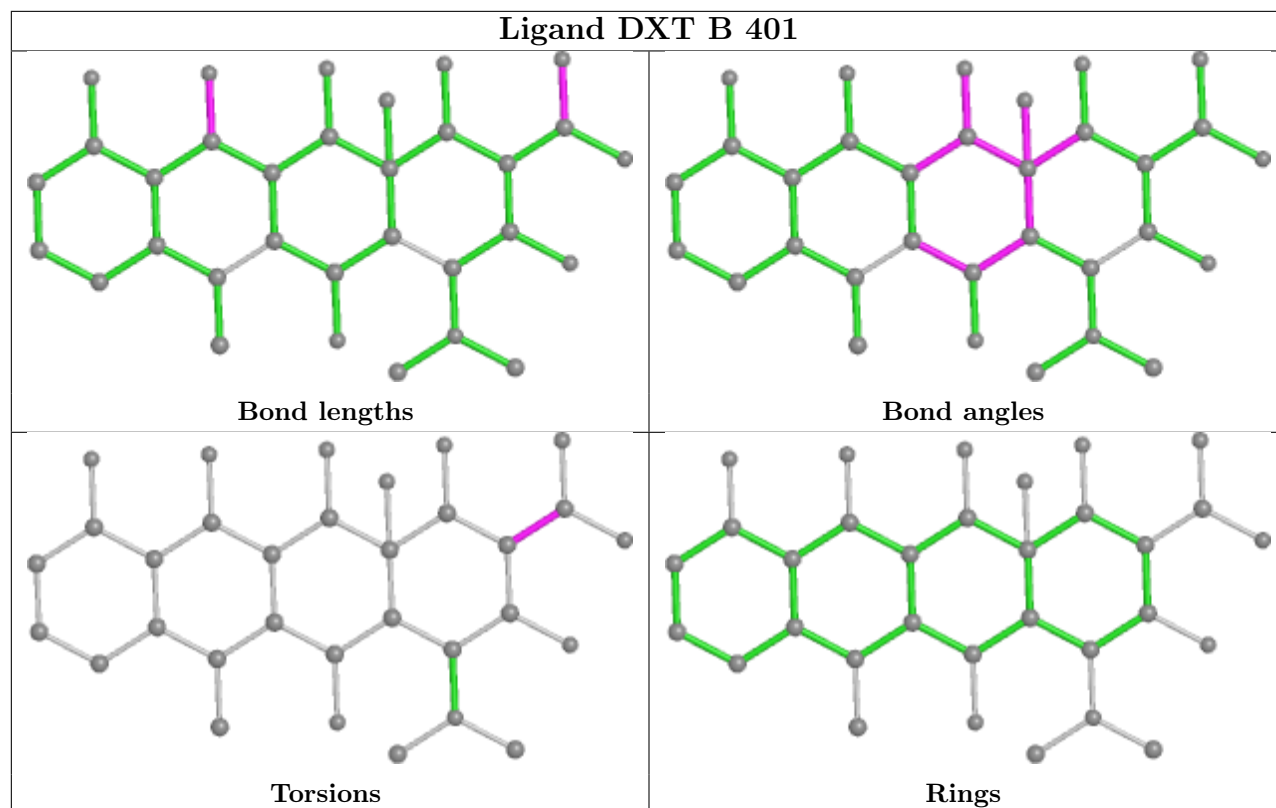












## 5.7 Other polymers [i](#)

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 [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	331/331 (100%)	-0.62	0 100 100	30, 48, 66, 81	0
1	B	331/331 (100%)	-0.58	0 100 100	29, 49, 66, 85	0
1	C	331/331 (100%)	-0.63	0 100 100	32, 50, 63, 75	0
1	D	331/331 (100%)	-0.59	0 100 100	29, 50, 68, 81	0
1	E	331/331 (100%)	-0.60	0 100 100	33, 50, 65, 84	0
1	F	331/331 (100%)	-0.58	0 100 100	30, 48, 65, 76	0
All	All	1986/1986 (100%)	-0.60	0 100 100	29, 49, 66, 85	0

There are no RSRZ outliers to report.

### 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 monosaccharides 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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
2	DXT	A	401	32/32	0.78	0.30	76,103,113,116	0

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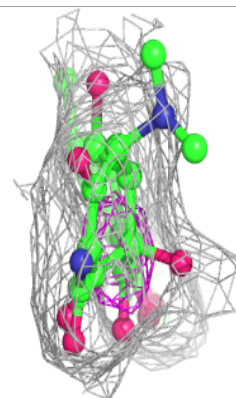
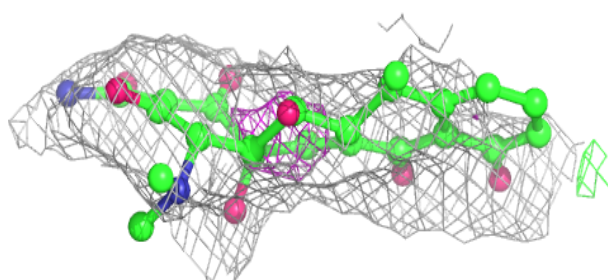
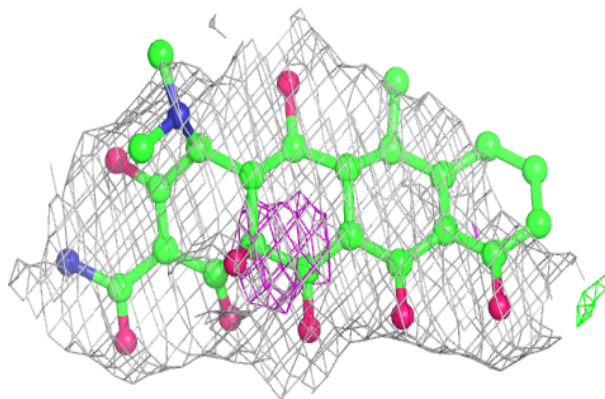
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
2	DXT	F	401	32/32	0.81	0.34	82,109,114,116	0
2	DXT	B	401	32/32	0.83	0.33	73,92,105,108	0
3	C8E	F	404	10/21	0.84	0.24	31,41,46,46	0
3	C8E	C	401	13/21	0.85	0.33	50,56,63,63	0
2	DXT	D	401	32/32	0.86	0.27	70,96,108,112	0
3	C8E	A	405	21/21	0.88	0.39	56,69,88,99	0
3	C8E	B	402	10/21	0.88	0.24	55,63,67,70	0
3	C8E	F	405	10/21	0.88	0.20	59,65,76,83	0
3	C8E	F	403	21/21	0.89	0.30	60,69,83,87	0
3	C8E	D	402	10/21	0.90	0.25	44,59,66,70	0
3	C8E	A	404	15/21	0.91	0.26	37,49,63,63	0
3	C8E	B	404	10/21	0.91	0.28	38,58,60,60	0
3	C8E	F	402	10/21	0.91	0.15	40,47,49,56	0
3	C8E	A	402	10/21	0.92	0.18	40,48,51,52	0
3	C8E	D	403	10/21	0.92	0.21	33,42,53,58	0
3	C8E	E	401	10/21	0.93	0.17	38,57,62,65	0
4	NA	F	406	1/1	0.93	0.12	27,27,27,27	0
4	NA	C	404	1/1	0.94	0.12	50,50,50,50	0
4	NA	A	408	1/1	0.94	0.11	27,27,27,27	0
4	NA	D	406	1/1	0.95	0.11	56,56,56,56	0
3	C8E	B	403	10/21	0.95	0.30	40,45,48,52	0
4	NA	E	402	1/1	0.96	0.18	35,35,35,35	0
3	C8E	A	403	16/21	0.96	0.32	32,46,58,61	0
4	NA	C	402	1/1	0.97	0.19	26,26,26,26	0
4	NA	B	405	1/1	0.97	0.18	34,34,34,34	0
4	NA	E	403	1/1	0.97	0.08	47,47,47,47	0
4	NA	E	404	1/1	0.97	0.18	29,29,29,29	0
4	NA	D	404	1/1	0.97	0.18	36,36,36,36	0
4	NA	D	405	1/1	0.98	0.18	29,29,29,29	0
4	NA	A	407	1/1	0.98	0.12	45,45,45,45	0
4	NA	A	406	1/1	0.98	0.20	37,37,37,37	0
4	NA	F	407	1/1	0.98	0.17	34,34,34,34	0
4	NA	B	406	1/1	0.99	0.15	27,27,27,27	0
4	NA	C	403	1/1	1.00	0.21	31,31,31,31	0

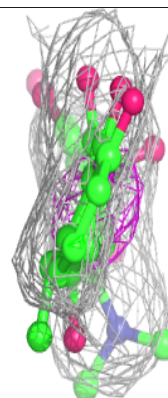
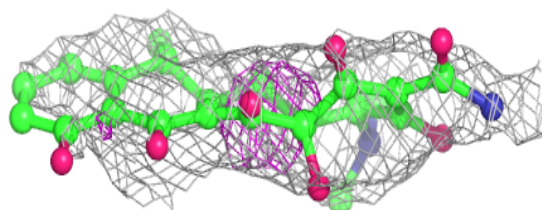
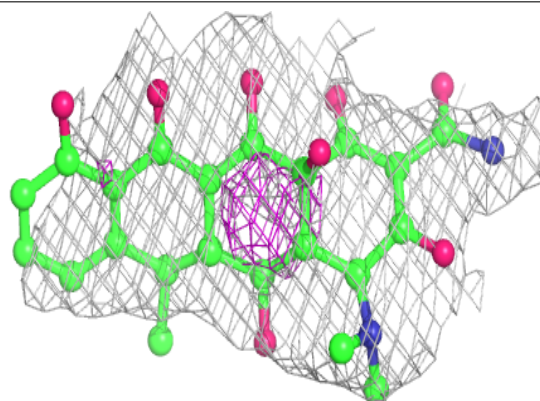
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

**Electron density around DXT A 401:**

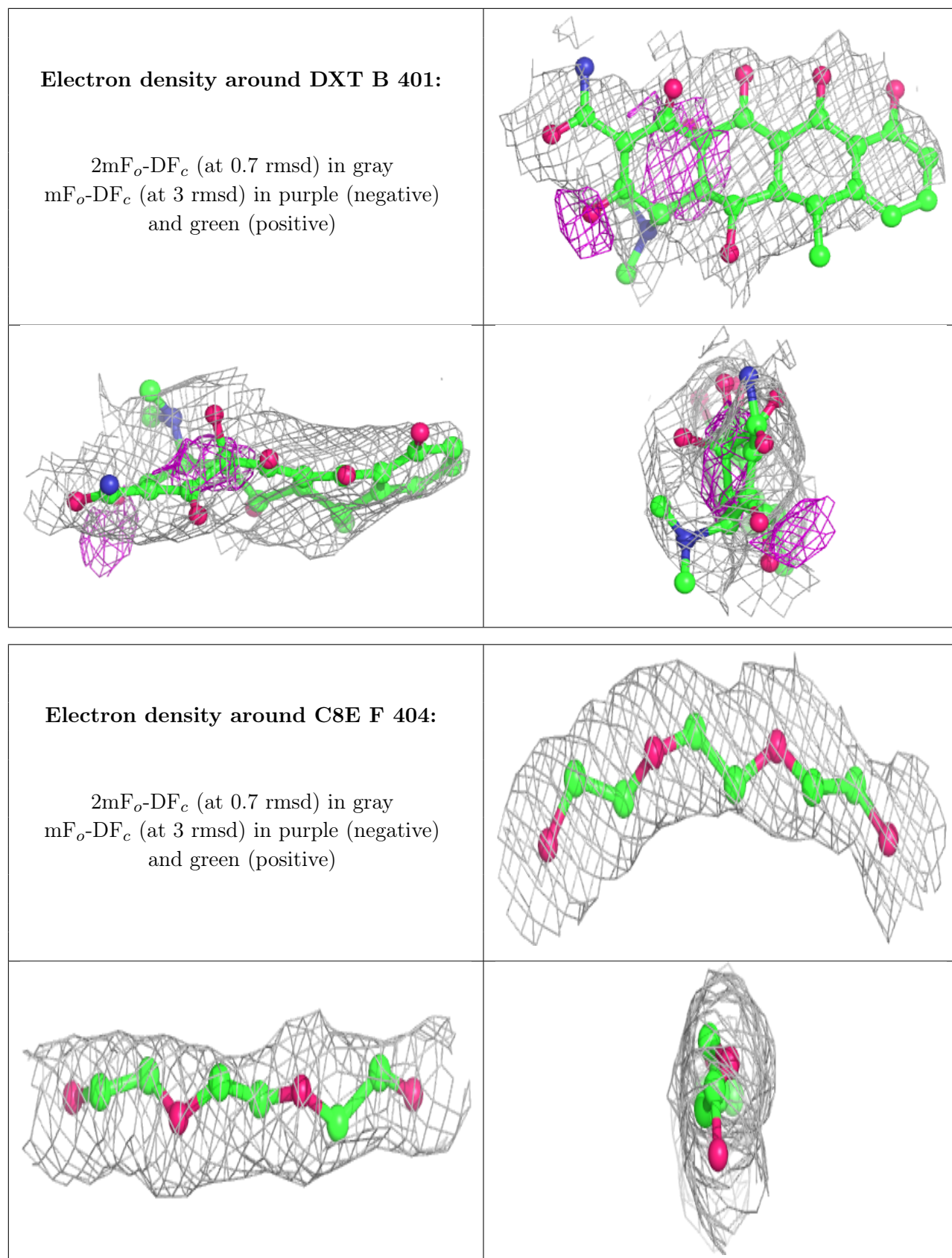
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DXT F 401:**

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

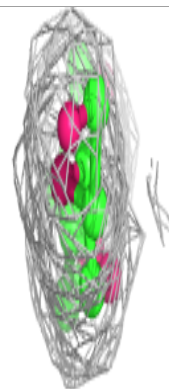
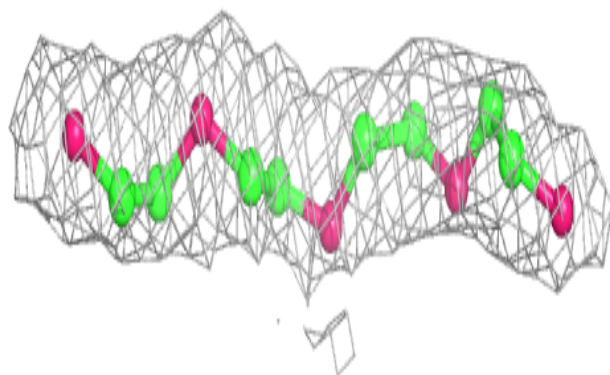
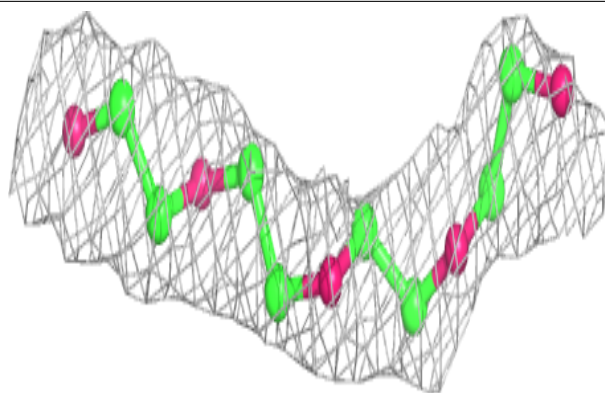




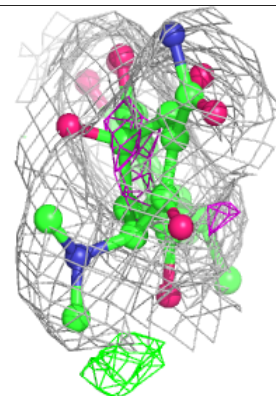
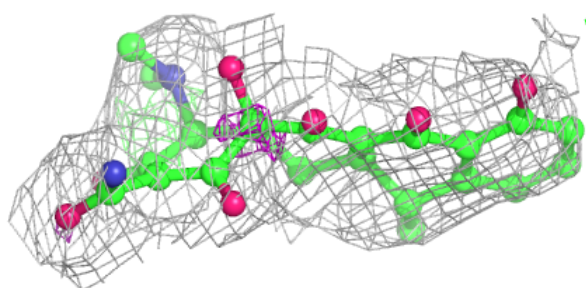
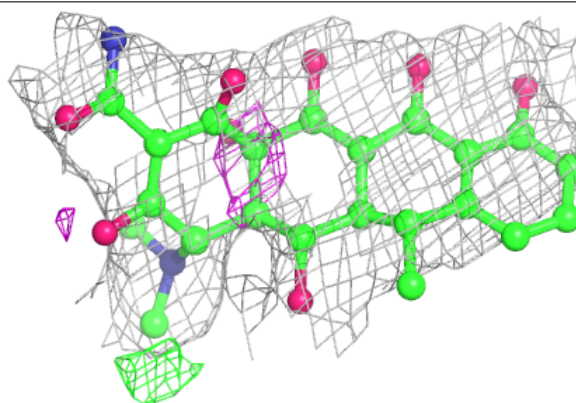


**Electron density around C8E C 401:**

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

**Electron density around DXT D 401:**

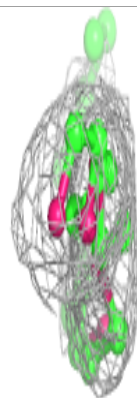
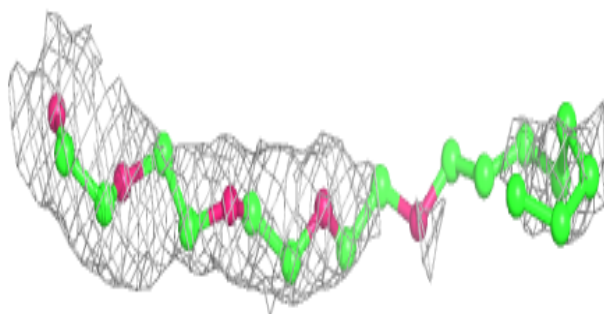
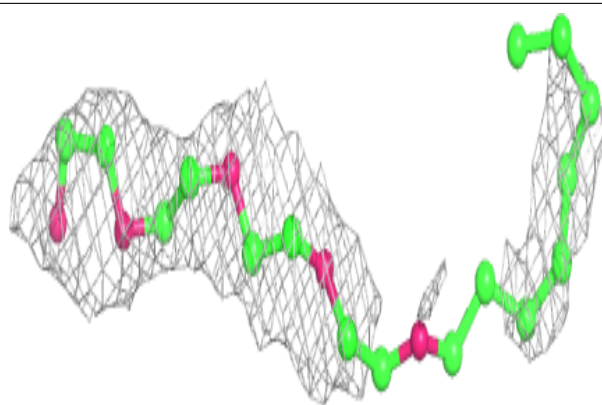
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 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



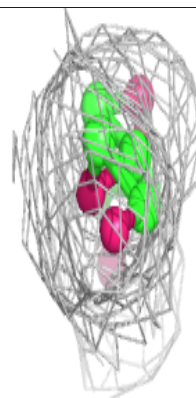
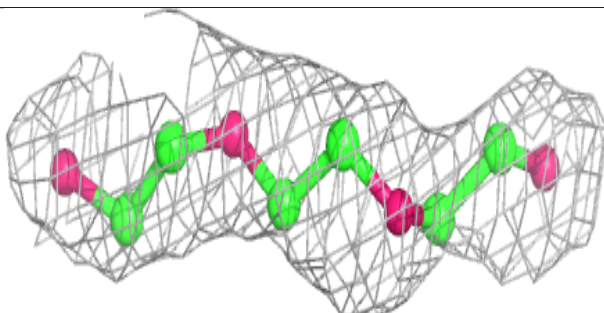
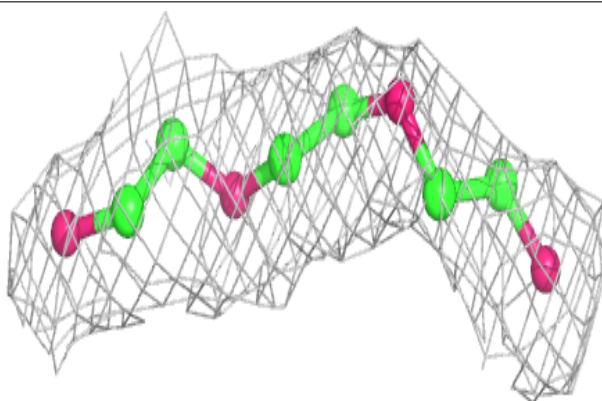


**Electron density around C8E A 405:**

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and green (positive)

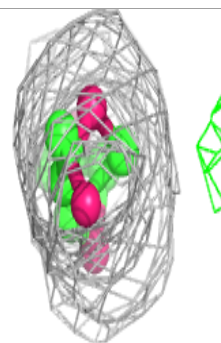
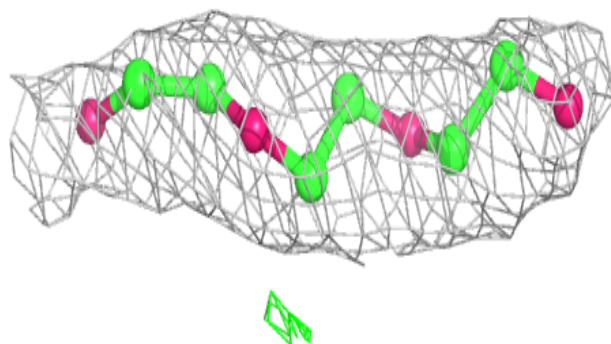
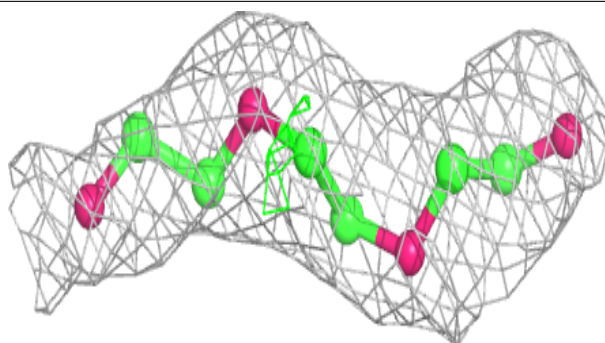
**Electron density around C8E B 402:**

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and green (positive)

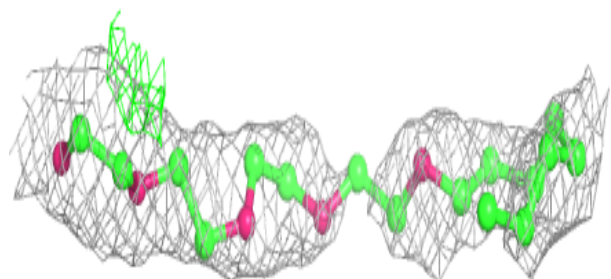
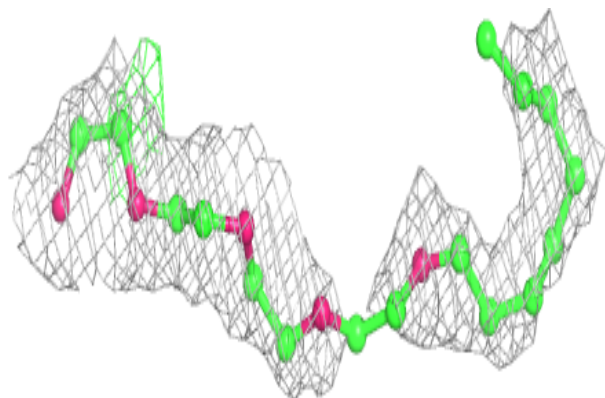


**Electron density around C8E F 405:**

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and green (positive)

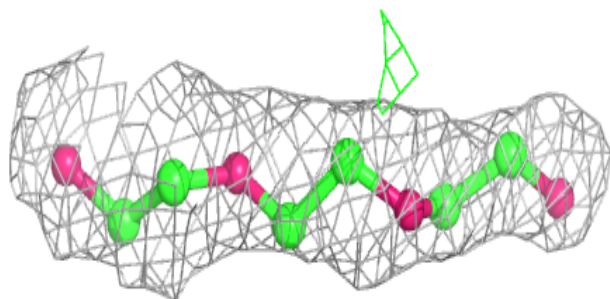
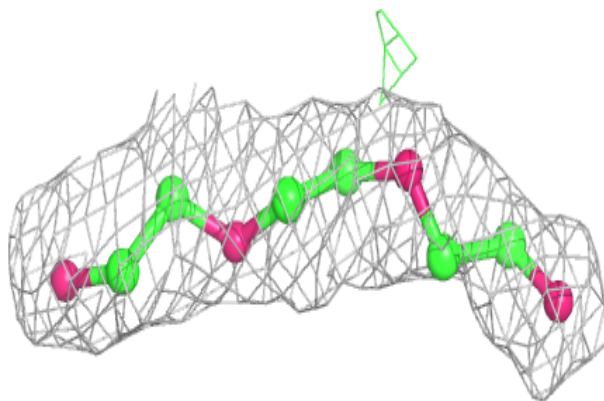
**Electron density around C8E F 403:**

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and green (positive)

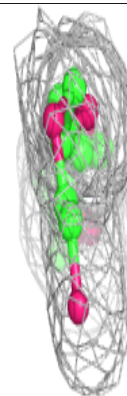
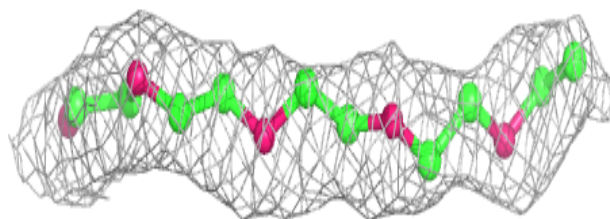
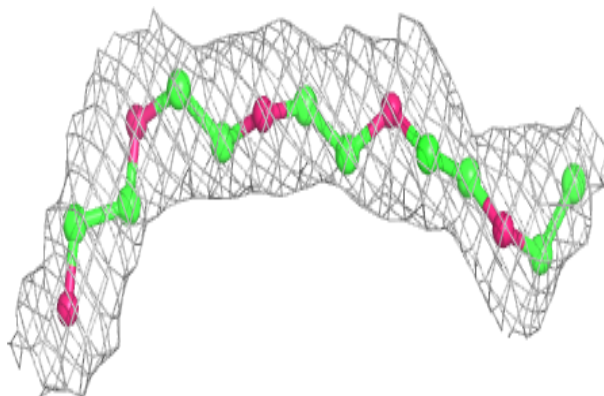


**Electron density around C8E D 402:**

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and green (positive)

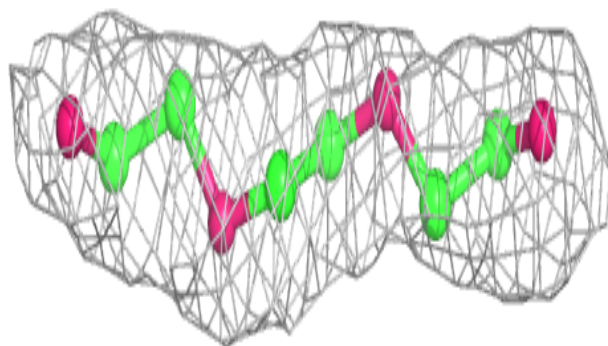
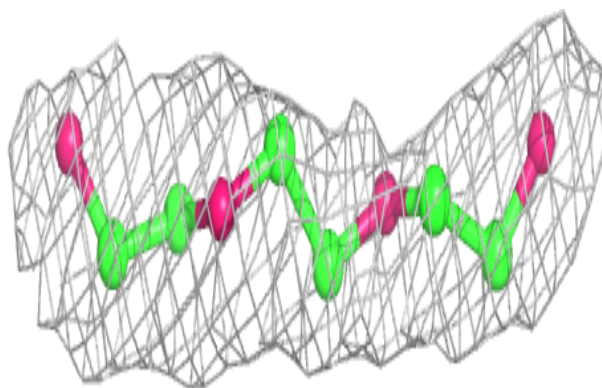
**Electron density around C8E A 404:**

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and green (positive)

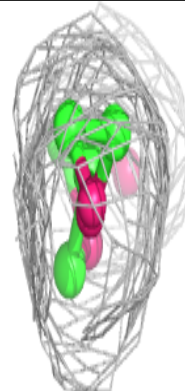
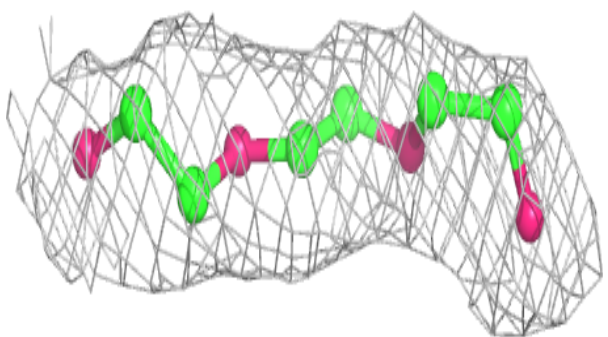
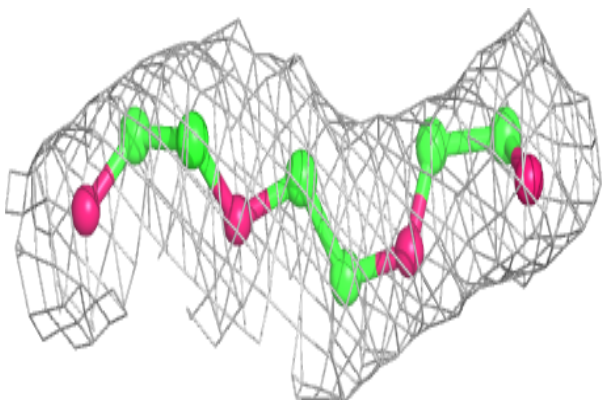


**Electron density around C8E B 404:**

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

**Electron density around C8E F 402:**

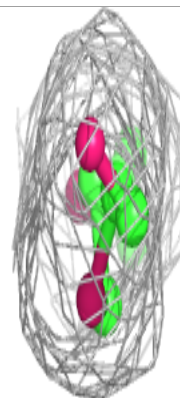
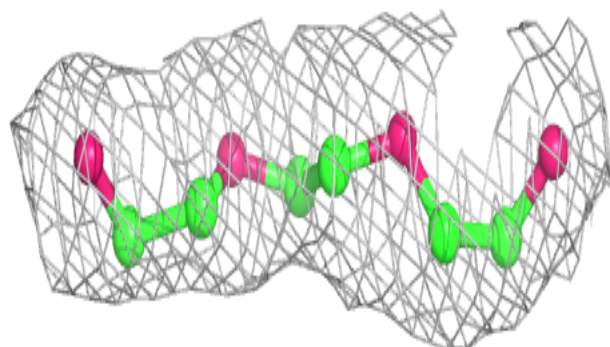
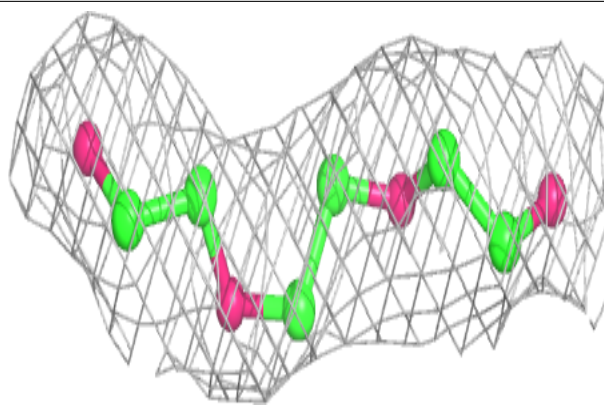
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



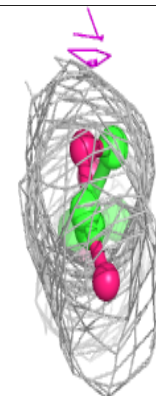
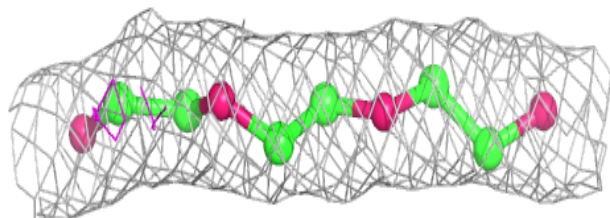
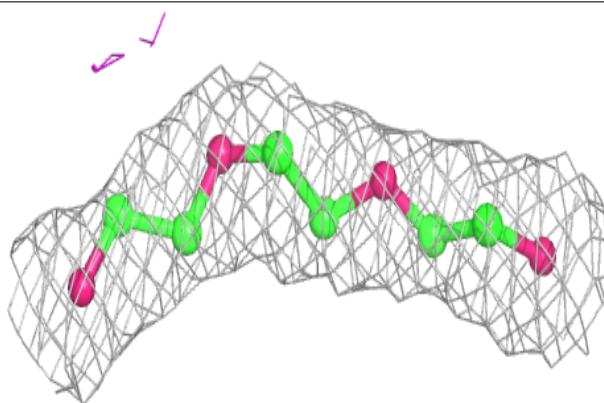


**Electron density around C8E A 402:**

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

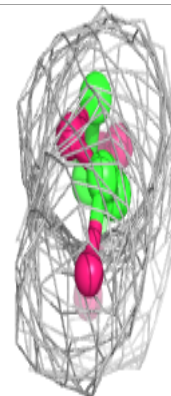
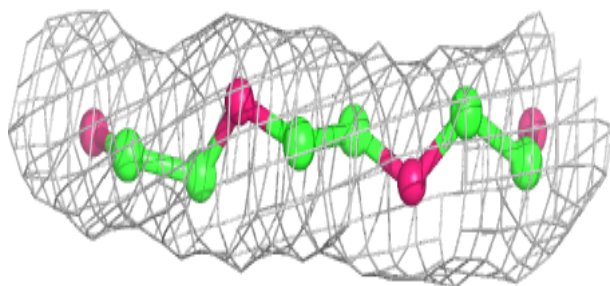
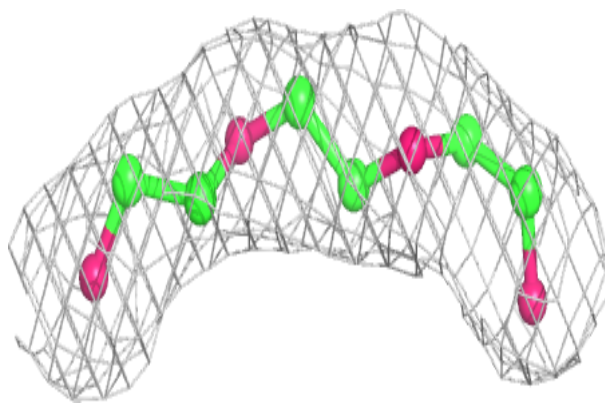
**Electron density around C8E D 403:**

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

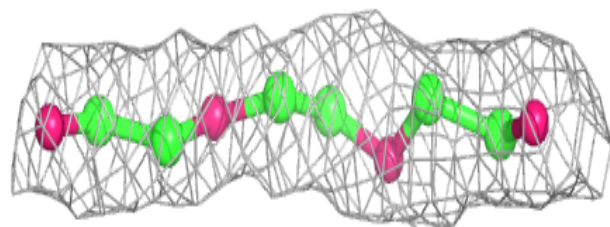
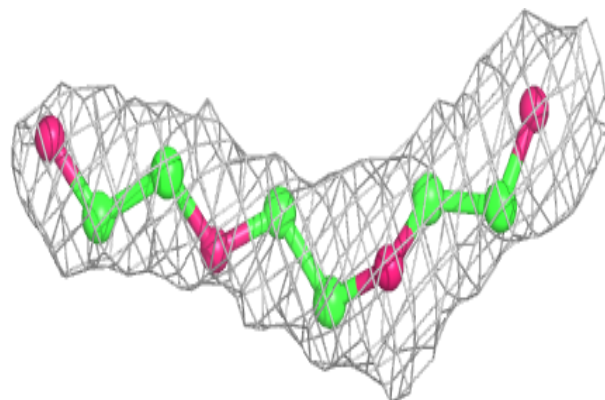


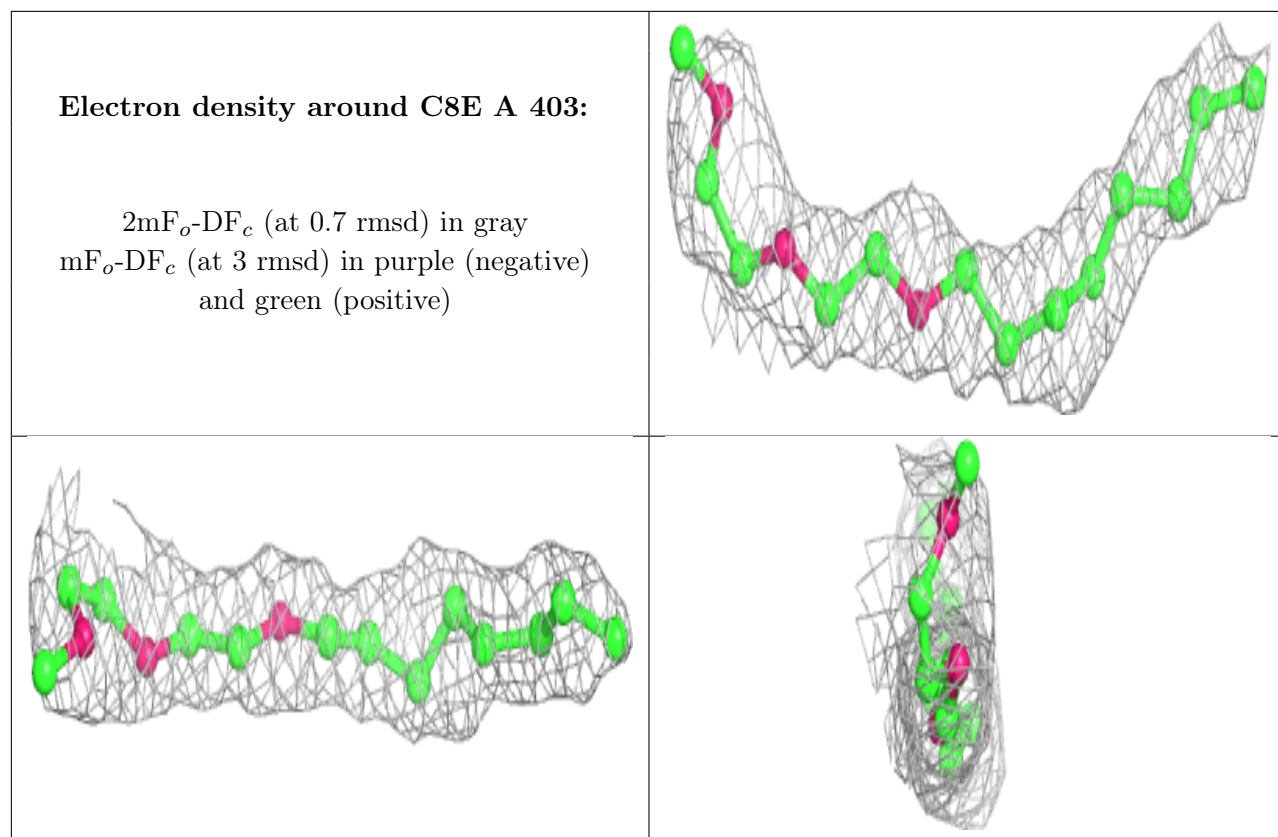
**Electron density around C8E E 401:**

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

**Electron density around C8E B 403:**

$2mF_o-DF_c$  (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.