

# checkCIF/PLATON report

Structure factors have been supplied for datablock(s) agada, xsc1678\_0m

THIS REPORT IS FOR GUIDANCE ONLY. IF USED AS PART OF A REVIEW PROCEDURE FOR PUBLICATION, IT SHOULD NOT REPLACE THE EXPERTISE OF AN EXPERIENCED CRYSTALLOGRAPHIC REFEREE.

No syntax errors found.      CIF dictionary      Interpreting this report

## Datablock: xsc1678\_0m

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Bond precision:	C-C = 0.0129 A	Wavelength=0.71073
Cell:	a=19.2289(7)      b=18.6472(6)      c=23.2634(8)	alpha=90      beta=112.739(1)      gamma=90
Temperature:	273 K	
	Calculated	Reported
Volume	7693.1(5)	7693.1(5)
Space group	P 21/n	P 1 21/n 1
Hall group	-P 2yn	-P 2yn
Moiety formula	C34 H38 Ag N10, C F3 O3 S	C34 H38 Ag N10, C F3 O3 S
Sum formula	C35 H38 Ag F3 N10 O3 S	C35 H38 Ag F3 N10 O3 S
Mr	843.68	843.68
Dx,g cm-3	1.457	1.457
Z	8	8
Mu (mm-1)	0.641	0.641
F000	3456.0	3456.0
F000'	3451.20	
h,k,lmax	22,22,27	22,20,27
Nref	13575	12764
Tmin,Tmax	0.926,0.950	0.666,0.745
Tmin'	0.908	

Correction method= # Reported T Limits: Tmin=0.666 Tmax=0.745  
AbsCorr = MULTI-SCAN

Data completeness= 0.940      Theta(max)= 25.018

R(reflections)= 0.0902( 9788)      wR2(reflections)= 0.2878( 12764)

S = 1.037      Npar= 925

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The following ALERTS were generated. Each ALERT has the format  
**test-name\_ALERT\_alert-type\_alert-level.**  
Click on the hyperlinks for more details of the test.

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**Alert level B**

PLAT029_ALERT_3_B	_diffn_measured_fraction_theta_full	value Low	.	0.940	Note
PLAT910_ALERT_3_B	Missing # of FCF Reflection(s)	Below Theta(Min)		11	Note
PLAT972_ALERT_2_B	Check Calcd Residual Density	0.15A From	05	-3.03	eA-3

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**Alert level C**

PLAT084_ALERT_3_C	High wR2 Value (i.e. > 0.25)	.....		0.29	Report
PLAT220_ALERT_2_C	Non-Solvent Resd 1	N	Ueq(max)/Ueq(min) Range	3.1	Ratio
PLAT220_ALERT_2_C	Non-Solvent Resd 2	C	Ueq(max)/Ueq(min) Range	4.0	Ratio
PLAT220_ALERT_2_C	Non-Solvent Resd 2	N	Ueq(max)/Ueq(min) Range	3.3	Ratio
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	N0AA	-- C14 ..	5.1	s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	N0AA	-- C15 ..	5.4	s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	N6	-- C45 ..	6.5	s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	N10	-- C50 ..	6.6	s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	N11	-- C48 ..	5.1	s.u.
PLAT231_ALERT_4_C	Hirshfeld Test (Solvent)	S1	-- O1 ..	6.1	s.u.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N5AA	-- C31 ..	0.19	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N4AA	-- C30 ..	0.19	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N2AA	-- C13 ..	0.21	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N2AA	-- C14 ..	0.16	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N2AA	-- C16 ..	0.18	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N3AA	-- C30 ..	0.17	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N1AA	-- C12 ..	0.17	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N1AA	-- C13 ..	0.20	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N9	-- C46 ..	0.21	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N9	-- C47 ..	0.16	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N9	-- C51 ..	0.21	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N10	-- C48 ..	0.19	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N11	-- C49 ..	0.20	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N11	-- C51 ..	0.17	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N12	-- C65 ..	0.21	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N12	-- C66 ..	0.18	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	N14	-- C67 ..	0.18	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	S1	-- O3 ..	0.21	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	S1	-- C69 ..	0.16	Ang.
PLAT234_ALERT_4_C	Large Hirshfeld Difference	F4	-- C70 ..	0.20	Ang.
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	N5AA	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	N4AA	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	N3AA	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	N0AA	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	C12	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	C16	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	N9	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	N10	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	N11	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	C63	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	C64	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	C66	Check		
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	C67	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C11	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C17	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C31	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	N6	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C46	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C47	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C49	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C50	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C62	Check		
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C65	Check		
PLAT244_ALERT_4_C	Low 'Solvent' Ueq as Compared to Neighbors of	S1	Check		

PLAT342_ALERT_3_C	Low Bond Precision on C-C Bonds .....	0.0129	Ang.
PLAT410_ALERT_2_C	Short Intra H...H Contact H46B .. H51B ..	1.93	Ang.
PLAT410_ALERT_2_C	Short Intra H...H Contact H48A .. H49B ..	1.92	Ang.
PLAT601_ALERT_2_C	Structure Contains Solvent Accessible VOIDS of .	37	Ang3
PLAT906_ALERT_3_C	Large K value in the Analysis of Variance .....	2.391	Check
PLAT911_ALERT_3_C	Missing # FCF Refl Between THmin & STh/L= 0.595	688	Report
PLAT918_ALERT_3_C	Reflection(s) with I(obs) much Smaller I(calc) .	2	Check
PLAT971_ALERT_2_C	Check Calcd Residual Density 1.20A From O6	2.09	eA-3
PLAT971_ALERT_2_C	Check Calcd Residual Density 0.16A From S2	1.91	eA-3
PLAT971_ALERT_2_C	Check Calcd Residual Density 1.38A From C46	1.87	eA-3
PLAT971_ALERT_2_C	Check Calcd Residual Density 1.04A From O6	1.85	eA-3
PLAT971_ALERT_2_C	Check Calcd Residual Density 1.32A From C50	1.73	eA-3
PLAT971_ALERT_2_C	Check Calcd Residual Density 1.31A From C49	1.70	eA-3
PLAT971_ALERT_2_C	Check Calcd Residual Density 0.07A From C45	1.63	eA-3
PLAT972_ALERT_2_C	Check Calcd Residual Density 0.15A From O6	-2.15	eA-3
PLAT976_ALERT_2_C	Check Calcd Residual Density 0.88A From O3	-0.43	eA-3
PLAT977_ALERT_2_C	Check the Negative Difference Density on H48A	-0.33	eA-3
PLAT978_ALERT_2_C	Number C-C Bonds with Positive Residual Density	0	Note

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### ● Alert level G

PLAT003_ALERT_2_G	Number of Uiso or Uij Restrained non-H Atoms ...	16	Report
PLAT072_ALERT_2_G	SHELXL First Parameter in WGHT Unusually Large	0.17	Report
PLAT083_ALERT_2_G	SHELXL Second Parameter in WGHT Unusually Large	31.64	Why ?
PLAT171_ALERT_4_G	The CIF-Embedded .res File Contains EADP Records	5	Report
PLAT177_ALERT_4_G	The CIF-Embedded .res File Contains DELU Records	1	Report
PLAT178_ALERT_4_G	The CIF-Embedded .res File Contains SIMU Records	3	Report
PLAT187_ALERT_4_G	The CIF-Embedded .res File Contains RIGU Records	6	Report
PLAT199_ALERT_1_G	Reported _cell_measurement_temperature ..... (K)	273	Check
PLAT200_ALERT_1_G	Reported _diffrn_ambient_temperature ..... (K)	273	Check
PLAT244_ALERT_4_G	Low 'Solvent' Ueq as Compared to Neighbors of	C69	Check
PLAT244_ALERT_4_G	Low 'Solvent' Ueq as Compared to Neighbors of	C70	Check
PLAT720_ALERT_4_G	Number of Unusual/Non-Standard Labels .....	7	Note
PLAT860_ALERT_3_G	Number of Least-Squares Restraints .....	34	Note
PLAT909_ALERT_3_G	Percentage of Observed Data at Theta(Max) Still	49	%
PLAT933_ALERT_2_G	Number of OMIT records in Embedded RES .....	18	Note
PLAT951_ALERT_5_G	Calculated (ThMax) and CIF-Reported Kmax Differ	2	Units
PLAT957_ALERT_1_G	Calculated (ThMax) and Actual (FCF) Kmax Differ	2	Units

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72 **ALERT level C** = Check. Ensure it is not caused by an omission or oversight  
17 **ALERT level G** = General information/check it is not something unexpected

3 ALERT type 1 CIF construction/syntax error, inconsistent or missing data  
50 ALERT type 2 Indicator that the structure model may be wrong or deficient  
9 ALERT type 3 Indicator that the structure quality may be low  
29 ALERT type 4 Improvement, methodology, query or suggestion  
1 ALERT type 5 Informative message, check

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## Datablock: agada

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Bond precision: C-C = 0.0024 A

Wavelength=0.77490

Cell: a=18.9803(7) b=18.6631(7) c=22.8795(8)  
alpha=90 beta=112.823(2) gamma=90  
Temperature: 150 K

	Calculated	Reported
Volume	7470.1(5)	7470.1(5)
Space group	P 21/n	P 1 21/n 1
Hall group	-P 2yn	-P 2yn
Moiety formula	C40 H44 Ag N4, C F3 O3 S	C40 H44 Ag N4, C F3 O3 S
Sum formula	C41 H44 Ag F3 N4 O3 S	C41 H44 Ag F3 N4 O3 S
Mr	837.73	837.73
Dx,g cm-3	1.490	1.490
Z	8	8
Mu (mm-1)	0.814	0.814
F000	3456.0	3456.0
F000'	3457.17	
h,k,lmax	31,30,37	31,30,37
Nref	34641	34412
Tmin,Tmax		0.619,0.745
Tmin'	0.908	

Correction method= # Reported T Limits: Tmin=0.619 Tmax=0.745  
AbsCorr = MULTI-SCAN

Data completeness= 0.993 Theta(max)= 39.507

R(reflections)= 0.0397( 27900) wR2(reflections)= 0.1113( 34412)

S = 1.021 Npar= 955

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The following ALERTS were generated. Each ALERT has the format  
**test\_name\_ALERT\_alert-type\_alert-level**.  
Click on the hyperlinks for more details of the test.

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**Alert level B**

PLAT230_ALERT_2_B	Hirshfeld Test Diff for	C51	--	C52	..	7.7 s.u.
PLAT230_ALERT_2_B	Hirshfeld Test Diff for	C52	--	C53	..	7.1 s.u.

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**Alert level C**

PLAT230_ALERT_2_C	Hirshfeld Test Diff for	C51	--	C58	..	6.2 s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	C51	--	C59	..	6.1 s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	C55	--	C59	..	6.3 s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	C56	--	C57	..	5.3 s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	C71	--	C79	..	5.4 s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	C72	--	C73	..	5.7 s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for	C77	--	C78	..	6.7 s.u.
PLAT244_ALERT_4_C	Low 'Solvent' Ueq as Compared to Neighbors of					S2 Check
PLAT910_ALERT_3_C	Missing # of FCF Reflection(s) Below Theta(Min)					5 Note
PLAT911_ALERT_3_C	Missing # FCF Refl Between THmin & STh/L=	0.600				56 Report
PLAT971_ALERT_2_C	Check Calcd Residual Density	1.41A	From	C52		1.89 eA-3

PLAT971_ALERT_2_C	Check Calcd Residual Density	1.33A From	C59	1.72 eA-3
PLAT971_ALERT_2_C	Check Calcd Residual Density	1.30A From	C58	1.61 eA-3
PLAT978_ALERT_2_C	Number C-C Bonds with Positive Residual Density			0 Note

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**Alert level G**

ABSMU01\_ALERT\_1\_G Calculation of \_exptl\_absorpt\_correction\_mu  
not performed for this radiation type.

PLAT003_ALERT_2_G	Number of Uiso or Uij Restrained non-H Atoms ...			3 Report
PLAT083_ALERT_2_G	SHELXL Second Parameter in WGHT Unusually Large			5.32 Why ?
PLAT177_ALERT_4_G	The CIF-Embedded .res File Contains DELU Records			2 Report
PLAT178_ALERT_4_G	The CIF-Embedded .res File Contains SIMU Records			2 Report
PLAT187_ALERT_4_G	The CIF-Embedded .res File Contains RIGU Records			1 Report
PLAT232_ALERT_2_G	Hirshfeld Test Diff (M-X) Ag1 -- N1 ..			5.0 s.u.
PLAT232_ALERT_2_G	Hirshfeld Test Diff (M-X) Ag1 -- N3 ..			5.8 s.u.
PLAT232_ALERT_2_G	Hirshfeld Test Diff (M-X) Ag2 -- N5 ..			5.8 s.u.
PLAT232_ALERT_2_G	Hirshfeld Test Diff (M-X) Ag2 -- N8 ..			5.3 s.u.
PLAT244_ALERT_4_G	Low 'Solvent' Ueq as Compared to Neighbors of			C81 Check
PLAT244_ALERT_4_G	Low 'Solvent' Ueq as Compared to Neighbors of			C82 Check
PLAT860_ALERT_3_G	Number of Least-Squares Restraints .....			23 Note
PLAT912_ALERT_4_G	Missing # of FCF Reflections Above STh/L= 0.600			170 Note
PLAT913_ALERT_3_G	Missing # of Very Strong Reflections in FCF ....			2 Note
PLAT933_ALERT_2_G	Number of OMIT records in Embedded RES .....			57 Note
PLAT984_ALERT_1_G	The H-f'= 0.000 Deviates from the B&C-Value			0.011 Check

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It is advisable to attempt to resolve as many as possible of the alerts in all categories. Often the minor alerts point to easily fixed oversights, errors and omissions in your CIF or refinement strategy, so attention to these fine details can be worthwhile. In order to resolve some of the more serious problems it may be necessary to carry out additional measurements or structure refinements. However, the purpose of your study may justify the reported deviations and the more serious of these should normally be commented upon in the discussion or experimental section of a paper or in the "special\_details" fields of the CIF. checkCIF was carefully designed to identify outliers and unusual parameters, but every test has its limitations and alerts that are not important in a particular case may appear. Conversely, the absence of alerts does not guarantee there are no aspects of the results needing attention. It is up to the individual to critically assess their own results and, if necessary, seek expert advice.

### **Publication of your CIF in IUCr journals**

A basic structural check has been run on your CIF. These basic checks will be run on all CIFs submitted for publication in IUCr journals (*Acta Crystallographica*, *Journal of Applied Crystallography*, *Journal of Synchrotron Radiation*); however, if you intend to submit to *Acta Crystallographica Section C* or *E* or *IUCrData*, you should make sure that full publication checks are run on the final version of your CIF prior to submission.

### **Publication of your CIF in other journals**

Please refer to the *Notes for Authors* of the relevant journal for any special instructions relating to CIF submission.

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**PLATON version of 11/08/2016; check.def file version of 04/08/2016**



