

## checkCIF/PLATON report

Structure factors have been supplied for datablock(s) shelx

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: shelx

---

Bond precision:	C-C = 0.0091 A	Wavelength=1.54178
Cell:	a=10.4681 (7)	b=14.1306 (10)      c=18.4697 (13)
	alpha=90	beta=92.765 (3)      gamma=90
Temperature:	100 K	
	Calculated	Reported
Volume	2728.9 (3)	2728.9 (3)
Space group	C 2/c	C 1 2/c 1
Hall group	-C 2yc	-C 2yc
Moiety formula	C20 H36 Co N8 O2, 2 (Cl)	C20 H36 Co N8 O2, 2 (Cl)
Sum formula	C20 H36 Cl2 Co N8 O2	C20 H36 Cl2 Co N8 O2
Mr	550.40	550.40
Dx, g cm <sup>-3</sup>	1.340	1.340
Z	4	4
Mu (mm <sup>-1</sup> )	6.991	6.991
F000	1156.0	1156.0
F000'	1152.20	
h, k, lmax	12, 16, 22	12, 16, 22
Nref	2511	2504
Tmin, Tmax	0.288, 0.613	0.550, 0.753
Tmin'	0.184	

Correction method= # Reported T Limits: Tmin=0.550 Tmax=0.753  
AbsCorr = MULTI-SCAN

Data completeness= 0.997      Theta(max)= 68.409

R(reflections)= 0.0758 ( 2466)	wR2(reflections)= 0.1806 ( 2504)
S = 1.153	Npar= 170

---

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.

---



#### Alert level C

PLAT222_ALERT_3_C	NonSolvent Resd 1 H	Uiso(max)/Uiso(min) Range	10.0	Ratio
PLAT245_ALERT_2_C	U(iso) H7	Smaller than U(eq) N7 by	0.014	Ang**2
PLAT341_ALERT_3_C	Low Bond Precision on C-C Bonds .....		0.00912	Ang.
PLAT355_ALERT_3_C	Long O-H (X0.82,N0.98A) O1W	- H1W	1.03	Ang.
PLAT355_ALERT_3_C	Long O-H (X0.82,N0.98A) O1W	- H1W_a	1.03	Ang.
PLAT906_ALERT_3_C	Large K Value in the Analysis of Variance .....		2.814	Check
PLAT911_ALERT_3_C	Missing FCF Refl Between Thmin & STh/L=	0.600	4	Report
PLAT972_ALERT_2_C	Check Calcd Resid. Dens.	2.89Ang From O1W	-1.58	eA-3
PLAT975_ALERT_2_C	Check Calcd Resid. Dens.	0.87Ang From O1W	0.42	eA-3
PLAT976_ALERT_2_C	Check Calcd Resid. Dens.	0.68Ang From O1W	-0.79	eA-3

---



#### Alert level G

PLAT007_ALERT_5_G	Number of Unrefined Donor-H Atoms .....	2	Report
PLAT083_ALERT_2_G	SHELXL Second Parameter in WGHT Unusually Large	52.65	Why ?
PLAT794_ALERT_5_G	Tentative Bond Valency for Co1 (II)	2.13	Info
PLAT910_ALERT_3_G	Missing # of FCF Reflection(s) Below Theta(Min).	1	Note
PLAT912_ALERT_4_G	Missing # of FCF Reflections Above STh/L=	0.600	3 Note
PLAT933_ALERT_2_G	Number of HKL-OMIT Records in Embedded .res File	2	Note
PLAT978_ALERT_2_G	Number C-C Bonds with Positive Residual Density.	0	Info

---

- 0 **ALERT level A** = Most likely a serious problem - resolve or explain  
0 **ALERT level B** = A potentially serious problem, consider carefully  
10 **ALERT level C** = Check. Ensure it is not caused by an omission or oversight  
7 **ALERT level G** = General information/check it is not something unexpected

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

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.

