

# checkCIF/PLATON report

You have not supplied any structure factors. As a result the full set of tests cannot be run.

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: ad26

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Bond precision:    C-C = 0.0045 A

Wavelength=0.71073

Cell:                a=10.0995(8)                b=10.1606(14)                c=9.0768(10)  
                      alpha=114.210(11)        beta=91.365(8)                gamma=94.020(9)  
Temperature:        293 K

	Calculated	Reported
Volume	846.01(18)	846.01(16)
Space group	P -1	P -1
Hall group	-P 1	?
Moiety formula	C28 H40 Cu2 N8 O2, 2(C H4 O)	?
Sum formula	C30 H48 Cu2 N8 O4	C30 H48 Cu2 N8 O4
Mr	711.86	711.84
Dx,g cm-3	1.397	1.397
Z	1	1
Mu (mm-1)	1.303	1.303
F000	374.0	374.0
F000'	374.74	
h,k,lmax	12,12,11	12,12,11
Nref	3682	3682
Tmin,Tmax	0.562,0.771	0.894,0.999
Tmin'	0.551	

Correction method= # Reported T Limits: Tmin=0.894 Tmax=0.999  
AbsCorr = PSI-SCAN

Data completeness= 1.000

Theta(max)= 26.970

R(reflections)= 0.0248( 2905)

wR2(reflections)= 0.0655( 3682)

S = 1.115

Npar= 201

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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	C6	--C7	.	13.5 s.u.
PLAT230_ALERT_2_B	Hirshfeld Test Diff for	C6	--C9	.	26.7 s.u.
PLAT232_ALERT_2_B	Hirshfeld Test Diff (M-X) Cu		--O1_a	.	22.0 s.u.

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### ● Alert level C

WEIGH01\_ALERT\_1\_C Extra text has been found in the  
\_refine\_ls\_weighting\_scheme field. This should be in the  
\_refine\_ls\_weighting\_details field.  
Weighting scheme given as calc w=1/[\s^2^(Fo^2^)+(0.0235P)^2^+0.3357  
Weighting scheme identified as calc

PLAT155_ALERT_4_C	The Triclinic Unitcell is NOT Reduced .....	Please Do !
PLAT230_ALERT_2_C	Hirshfeld Test Diff for O1 --N1 .	5.1 s.u.
PLAT230_ALERT_2_C	Hirshfeld Test Diff for C5 --C6 .	7.0 s.u.
PLAT241_ALERT_2_C	High 'MainMol' Ueq as Compared to Neighbors of	C5 Check
PLAT242_ALERT_2_C	Low 'MainMol' Ueq as Compared to Neighbors of	C6 Check
PLAT250_ALERT_2_C	Large U3/U1 Ratio for Average U(i,j) Tensor ....	2.7 Note
PLAT412_ALERT_2_C	Short Intra XH3 .. XHn H4A ..H5B ..	1.88 Ang.

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### ● Alert level G

PLAT005_ALERT_5_G	No Embedded Refinement Details Found in the CIF	Please Do !
PLAT007_ALERT_5_G	Number of Unrefined Donor-H Atoms .....	1 Report
PLAT152_ALERT_1_G	The Supplied and Calc. Volume s.u. Differ by ...	2 Units
PLAT199_ALERT_1_G	Reported _cell_measurement_temperature .....	293 Check
PLAT200_ALERT_1_G	Reported _diffrn_ambient_temperature .....	293 Check
PLAT232_ALERT_2_G	Hirshfeld Test Diff (M-X) Cu --N3 .	5.4 s.u.
PLAT380_ALERT_4_G	Incorrectly? Oriented X(sp2)-Methyl Moiety .....	C3 Check
PLAT380_ALERT_4_G	Incorrectly? Oriented X(sp2)-Methyl Moiety .....	C4 Check
PLAT794_ALERT_5_G	Tentative Bond Valency for Cu (II) .	2.34 Info
PLAT808_ALERT_5_G	No Parseable SHELXL Style Weighting Scheme Found	Please Check
PLAT881_ALERT_1_G	No Datum for _diffrn_reflns_av_R_equivalents ...	Please Do !
PLAT899_ALERT_4_G	SHELXL97 is Deprecated and Succeeded by SHELXL	2016 Note

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

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

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## Validation response form

Please find below a validation response form (VRF) that can be filled in and pasted into your CIF.

```
# start Validation Reply Form
_vrf_WEIGH01_ad26
;
PROBLEM: Extra text has been found in the
```

```
RESPONSE: ...
;
_vrf_PLAT155_ad26
;
PROBLEM: The Triclinic Unitcell is NOT Reduced ..... Please Do !
RESPONSE: ...
;
_vrf_PLAT230_ad26
;
PROBLEM: Hirshfeld Test Diff for  O1      --N1      .      5.1 s.u.
RESPONSE: ...
;
_vrf_PLAT241_ad26
;
PROBLEM: High 'MainMol' Ueq as Compared to Neighbors of      C5 Check
RESPONSE: ...
;
_vrf_PLAT242_ad26
;
PROBLEM: Low 'MainMol' Ueq as Compared to Neighbors of      C6 Check
RESPONSE: ...
;
_vrf_PLAT250_ad26
;
PROBLEM: Large U3/U1 Ratio for Average U(i,j) Tensor ....      2.7 Note
RESPONSE: ...
;
_vrf_PLAT412_ad26
;
PROBLEM: Short Intra XH3 .. XHn  H4A      ..H5B      ..      1.88 Ang.
RESPONSE: ...
;
# end Validation Reply Form
```

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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 13/08/2017; check.def file version of 12/12/2017**

