

# 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: ww

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|                 |                        |                               |
|-----------------|------------------------|-------------------------------|
| Bond precision: | C-C = 0.0078 Å         | Wavelength=0.71073            |
| Cell:           | a=11.421(2)            | b=9.2213(17)      c=15.188(3) |
|                 | alpha=90               | beta=106.112(3)      gamma=90 |
| Temperature:    | 293 K                  |                               |
|                 | Calculated             | Reported                      |
| Volume          | 1536.7(5)              | 1536.7(5)                     |
| Space group     | P 21                   | P21                           |
| Hall group      | P 2yb                  | ?                             |
| Moiety formula  | C32 H32 N4 O7 Zn, H2 O | ?                             |
| Sum formula     | C32 H34 N4 O8 Zn       | C32 H34 Cu0 N4 O8 Zn          |
| Mr              | 668.02                 | 668.00                        |
| Dx,g cm-3       | 1.444                  | 1.444                         |
| Z               | 2                      | 2                             |
| Mu (mm-1)       | 0.857                  | 0.857                         |
| F000            | 696.0                  | 696.0                         |
| F000'           | 696.87                 |                               |
| h,k,lmax        | 15,12,20               | 15,12,20                      |
| Nref            | 7613[ 4039]            | 5465                          |
| Tmin,Tmax       |                        |                               |
| Tmin'           |                        |                               |

Correction method= Not given

Data completeness= 1.35/0.72      Theta(max)= 28.260

R(reflections)= 0.0439( 4217)      wR2(reflections)= 0.1156( 5465)

S = 1.005      Npar= 411

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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 C

|                   |  |        |              |
|-------------------|--|--------|--------------|
| PLAT029_ALERT_3_C | _diffn_measured_fraction_theta_full Low .....    | 0.962  | Note         |
| PLAT041_ALERT_1_C | Calc. and Reported SumFormula Strings Differ     |        | Please Check |
| PLAT052_ALERT_1_C | Info on Absorption Correction Method Not Given . |        | Please Do !  |
| PLAT053_ALERT_1_C | Minimum Crystal Dimension Missing (or Error) ... |        | Please Check |
| PLAT054_ALERT_1_C | Medium Crystal Dimension Missing (or Error) ...  |        | Please Check |
| PLAT055_ALERT_1_C | Maximum Crystal Dimension Missing (or Error) ... |        | Please Check |
| PLAT090_ALERT_3_C | Poor Data / Parameter Ratio (Zmax > 18) .....    | 9.83   | Note         |
| PLAT220_ALERT_2_C | Large Non-Solvent C Ueq(max)/Ueq(min) Range      | 3.2    | Ratio        |
| PLAT241_ALERT_2_C | High Ueq as Compared to Neighbors for .....      |        | C14 Check    |
| PLAT341_ALERT_3_C | Low Bond Precision on C-C Bonds .....            | 0.0078 | Ang.         |

## ● Alert level G

CELLZ01\_ALERT\_1\_G Difference between formula and atom\_site contents detected.

CELLZ01\_ALERT\_1\_G ALERT: Large difference may be due to a

symmetry error - see SYMMG tests

From the CIF: \_cell\_formula\_units\_Z 2

From the CIF: \_chemical\_formula\_sum C32 H34 Cu0 N4 O8 Zn

TEST: Compare cell contents of formula and atom\_site data

| atom | Z*formula | cif sites | diff |
|------|-----------|-----------|------|
| C    | 64.00     | 64.00     | 0.00 |
| H    | 68.00     | 68.00     | 0.00 |
| Cu   | 2.00      | 0.00      | 2.00 |
| N    | 8.00      | 8.00      | 0.00 |
| O    | 16.00     | 16.00     | 0.00 |
| Zn   | 2.00      | 2.00      | 0.00 |

|                   |  |       |             |
|-------------------|--|-------|-------------|
| PLAT004_ALERT_5_G | Polymeric Structure Found with Dimension .....   | 2     | Info        |
| PLAT005_ALERT_5_G | No _iucr_refine_instructions_details in the CIF  |       | Please Do ! |
| PLAT007_ALERT_5_G | Number of Unrefined Donor-H Atoms .....          | 3     | Report      |
| PLAT199_ALERT_1_G | Reported _cell_measurement_temperature .....     | 293   | Check       |
| PLAT200_ALERT_1_G | Reported _diffn_ambient_temperature .....        | 293   | Check       |
| PLAT232_ALERT_2_G | Hirshfeld Test Diff (M-X) Zn1 -- O6 ..           | 6.9   | su          |
| PLAT380_ALERT_4_G | Incorrectly? Oriented X(sp2)-Methyl Moiety ..... | C10   | Check       |
| PLAT380_ALERT_4_G | Incorrectly? Oriented X(sp2)-Methyl Moiety ..... | C21   | Check       |
| PLAT710_ALERT_4_G | Delete 1-2-3 or 2-3-4 Linear Torsion Angle ... # | 1     | Do !        |
|                   | O5 -ZN1 -O1 -C11 123.00 2.00 1.555 1.555 1.555   | 1.555 |             |
| PLAT710_ALERT_4_G | Delete 1-2-3 or 2-3-4 Linear Torsion Angle ... # | 10    | Do !        |
|                   | N4 -ZN1 -N3 -C32 145.00 1.40 1.555 1.555 1.555   | 1.555 |             |
| PLAT710_ALERT_4_G | Delete 1-2-3 or 2-3-4 Linear Torsion Angle ... # | 15    | Do !        |
|                   | N4 -ZN1 -N3 -C28 -35.40 1.90 1.555 1.555 1.555   | 1.555 |             |
| PLAT710_ALERT_4_G | Delete 1-2-3 or 2-3-4 Linear Torsion Angle ... # | 21    | Do !        |
|                   | N3 -ZN1 -N4 -C23 13.30 1.90 1.555 1.555 1.555    | 1.555 |             |
| PLAT710_ALERT_4_G | Delete 1-2-3 or 2-3-4 Linear Torsion Angle ... # | 26    | Do !        |
|                   | N3 -ZN1 -N4 -C27 -172.40 1.50 1.555 1.555 1.555  | 1.555 |             |
| PLAT710_ALERT_4_G | Delete 1-2-3 or 2-3-4 Linear Torsion Angle ... # | 30    | Do !        |
|                   | O1 -ZN1 -O5 -C22 -127.00 2.00 1.555 1.555 1.555  | 1.555 |             |
| PLAT710_ALERT_4_G | Delete 1-2-3 or 2-3-4 Linear Torsion Angle ... # | 36    | Do !        |
|                   | O7 -ZN1 -O6 -C22 -42.00 4.00 1.555 1.555 1.555   | 2.555 |             |
| PLAT791_ALERT_4_G | The Model has Chirality at C8 .....              | S     | Verify      |
| PLAT791_ALERT_4_G | The Model has Chirality at C19 .....             | S     | Verify      |
| PLAT899_ALERT_4_G | SHELXL97 is Deprecated and Succeeded by SHELXL   | 2014  | Note        |

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

20 ALERT level G = General information/check it is not something unexpected

9 ALERT type 1 CIF construction/syntax error, inconsistent or missing data

3 ALERT type 2 Indicator that the structure model may be wrong or deficient  
3 ALERT type 3 Indicator that the structure quality may be low  
12 ALERT type 4 Improvement, methodology, query or suggestion  
3 ALERT type 5 Informative message, 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*, 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 20/08/2014; check.def file version of 18/08/2014**

