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.

Datablock: shelx

Bond precision: C-C = 0.0077 A Wavelength=0.71073 Cell: a=10.81504(14)b=10.81504(14) c=12.7901(3)alpha=90 beta=90 gamma=90 Temperature: 293 K Calculated Reported Volume 1496.00(5) 1495.99(5) Space group P 43 P 43 Hall group P 4cw P 4cw Moiety formula C10 H11 N7 S2 Zn C10 H11 N7 S2 Zn Sum formula C10 H11 N7 S2 Zn C10 H11 N7 S2 Zn Mr 358.77 358.75 1.593 1.593 Dx,g cm-3 Ζ 4 Mu (mm-1)1.921 1.921 F000 728.0 728.0 F000′ 730.22 h,k,lmax 14,14,17 14,13,17 3978[2073] Nref 3528 0.555,0.631 0.859,1.000 Tmin,Tmax Tmin' 0.313 Correction method= # Reported T Limits: Tmin=0.859 Tmax=1.000 AbsCorr = MULTI-SCAN Data completeness= 1.70/0.89 Theta(max) = 29.016 R(reflections) = 0.0305(3283) wR2(reflections) = 0.0745(3528)S = 1.127Npar= 195

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

```
PLAT094_ALERT_2_C Ratio of Maximum / Minimum Residual Density ....
                                                                    2.51 Report
PLAT242_ALERT_2_C Low 'MainMol' Ueq as Compared to Neighbors of
                                                                      C9 Check
PLAT242_ALERT_2_C Low
                       'MainMol' Ueq as Compared to Neighbors of
                                                                     C10 Check
PLAT341_ALERT_3_C Low Bond Precision on C-C Bonds .....
                                                                  0.00767 Ang.
PLAT414_ALERT_2_C Short Intra D-H..H-X
                                         H2
                                                                    1.96 Ang.
                                               .. Н8В
                                                         . .
PLAT420_ALERT_2_C D-H Without Acceptor
                                          N4
                                                -- Н4В
                                                                  Please Check
                                                           . . .
PLAT480_ALERT_4_C Long H...A H-Bond Reported H4A
                                                                   2.98 Ang.
                                               .. S1
                                                          . .
PLAT480_ALERT_4_C Long H...A H-Bond Reported H4B .. S2
                                                                    2.89 Ang.
                                                                     85 %
PLAT915_ALERT_3_C No Flack x Check Done: Low Friedel Pair Coverage
PLAT934_ALERT_3_C Number of (Iobs-Icalc)/SigmaW > 10 Outliers ....
                                                                      1 Check
```

Alert level G

PLAT172_ALERT_4_G The CIF-Embedded .res File Contains DFIX Records 2 Report
PLAT199_ALERT_1_G Reported _cell_measurement_temperature (K) 293 Check
PLAT200_ALERT_1_G Reporteddiffrn_ambient_temperature (K) 293 Check
PLAT860_ALERT_3_G Number of Least-Squares Restraints 6 Note
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= 0.600 156 Note
PLAT978_ALERT_2_G Number C-C Bonds with Positive Residual Density. 1 Info

- 0 ALERT level A = Most likely a serious problem resolve or explain
- 0 ALERT level ${\bf B}$ = A potentially serious problem, consider carefully
- 10 ALERT level C = Check. Ensure it is not caused by an omission or oversight
- 8 ALERT level G = General information/check it is not something unexpected
- 2 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
- 5 ALERT type 3 Indicator that the structure quality may be low
- 4 ALERT type 4 Improvement, methodology, query or suggestion
- 0 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.

PLATON version of 13/08/2017; check.def file version of 27/07/2017

