checkCIF/PLATON report

Structure factors have been supplied for datablock(s) tkd-589

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: tkd-589

```
Bond precision:   C-C = 0.0052 A          Wavelength=1.54184

Cell:             a=9.5084(1)     b=10.3554(1)        c=13.2056(1)
                  alpha=90        beta=93.092(1)      gamma=90
Temperature:      298 K
```

	Calculated	Reported
Volume	1298.37(2)	1298.37(2)
Space group	P 21/n	P 1 21/n 1
Hall group	-P 2yn	-P 2yn
Moiety formula	C13 H10 Br2 O2	C13 H10 Br2 O2
Sum formula	C13 H10 Br2 O2	C13 H10 Br2 O2
Mr	358.01	358.03
Dx,g cm-3	1.832	1.832
Z	4	4
Mu (mm-1)	7.820	7.820
F000	696.0	696.0
F000'	691.91	
h,k,lmax	12,13,16	12,13,16
Nref	2766	2681
Tmin,Tmax	0.123,0.131	0.144,1.000
Tmin'	0.055	

```
Correction method= # Reported T Limits: Tmin=0.144 Tmax=1.000
AbsCorr = MULTI-SCAN

Data completeness= 0.969           Theta(max)= 77.809

R(reflections)= 0.0509( 2486)                    wR2(reflections)=
                                                 0.1471( 2681)
S = 1.054                  Npar= 156
```

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

```
PLAT242_ALERT_2_C Low    'MainMol' Ueq as Compared to Neighbors of         C1 Check
PLAT906_ALERT_3_C Large K Value in the Analysis of Variance ......    238.842 Check
PLAT906_ALERT_3_C Large K Value in the Analysis of Variance ......      2.248 Check
PLAT911_ALERT_3_C Missing FCF Refl Between Thmin & STh/L=    0.600         12 Report
```

Alert level G

```
PLAT142_ALERT_4_G s.u. on b - Axis Small or Missing ..............    0.00010 Ang.
PLAT143_ALERT_4_G s.u. on c - Axis Small or Missing ..............    0.00010 Ang.
PLAT912_ALERT_4_G Missing # of FCF Reflections Above STh/L=  0.600         74 Note
PLAT913_ALERT_3_G Missing # of Very Strong Reflections in FCF ....          2 Note
PLAT933_ALERT_2_G Number of HKL-OMIT Records in Embedded .res File          4 Note
PLAT941_ALERT_3_G Average HKL Measurement Multiplicity ...........        3.8 Low
PLAT978_ALERT_2_G Number C-C Bonds with Positive Residual Density.          5 Info
```

0 **ALERT level A** = Most likely a serious problem - resolve or explain
0 **ALERT level B** = A potentially serious problem, consider carefully
4 **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
3 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
3 ALERT type 4 Improvement, methodology, query or suggestion
0 ALERT type 5 Informative message, check

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_PLAT242_tkd-589
;
PROBLEM: Low    'MainMol' Ueq as Compared to Neighbors of         C1 Check
RESPONSE: ...
;
_vrf_PLAT906_tkd-589
;
PROBLEM: Large K Value in the Analysis of Variance ......    238.842 Check
RESPONSE: ...
;
_vrf_PLAT911_tkd-589
;
PROBLEM: Missing FCF Refl Between Thmin & STh/L=    0.600         12 Report
RESPONSE: ...
;
# end Validation Reply Form
```

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 28/11/2022; check.def file version of 28/11/2022

Datablock tkd-589 - ellipsoid plot