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: I

```
Bond precision:  Nb- O = 0.0082 A        Wavelength=0.71073

Cell:            a=20.3471(6)     b=7.8376(3)     c=11.6367(3)
                 alpha=90         beta=90         gamma=90
Temperature:     299 K
```

	Calculated	Reported
Volume	1855.73(10)	1855.73(10)
Space group	P m n 21	P m n 21
Hall group	P 2ac -2	P 2ac -2
Moiety formula	3(F9 Nb2 O2), 2(I), 10(K)	3(F9 Nb2 O2), 2(I), 10(K)
Sum formula	F27 I2 K10 Nb6 O6	F27 I2 K10 Nb6 O6
Mr	1811.26	1811.26
Dx,g cm-3	3.241	3.241
Z	2	2
Mu (mm-1)	4.734	4.734
F000	1666.0	1666.0
F000’	1643.88	
h,k,lmax	27,10,15	27,10,15
Nref	5151[2695]	5149
Tmin,Tmax	0.563,0.839	0.512,0.844
Tmin’	0.458	

```
Correction method= NUMERICAL

Data completeness= 1.91/1.00      Theta(max)= 29.180

R(reflections)= 0.0434( 3915)     wR2(reflections)= 0.1088( 5149)

S = 0.949                 Npar= 250
```

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

```
PLAT241_ALERT_2_C Check High      Ueq as Compared to Neighbors for         F9
PLAT242_ALERT_2_C Check Low       Ueq as Compared to Neighbors for        Nb3
PLAT242_ALERT_2_C Check Low       Ueq as Compared to Neighbors for        Nb4
PLAT242_ALERT_2_C Check Low       Ueq as Compared to Neighbors for        Nb1
PLAT242_ALERT_2_C Check Low       Ueq as Compared to Neighbors for        Nb2
```

Alert level G

```
PLAT004_ALERT_5_G Info: Polymeric Structure Found with Dimension .          3
PLAT004_ALERT_5_G Info: Polymeric Structure Found with Dimension .          2
PLAT004_ALERT_5_G Info: Polymeric Structure Found with Dimension .          1
PLAT005_ALERT_5_G No _iucr_refine_instructions_details  in the CIF          ? Do !
PLAT301_ALERT_3_G Note: Main Residue  Disorder ...................          2 %
PLAT434_ALERT_2_G Short Inter HL..HL Contact  F12    ..  F13     .       2.74 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   I2     --  K4      ..      3.52 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   I2     --  K4      ..      3.52 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   I3     --  K3      ..      3.70 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   I3     --  K3      ..      3.70 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   I3     --  K4      ..      3.65 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   I3     --  K4      ..      3.65 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   I3     --  K5      ..      3.93 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   I3     --  K6      ..      3.57 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   K3     --  I3      ..      3.70 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   K4     --  I2      ..      3.52 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   K4     --  I3      ..      3.65 Ang.
PLAT774_ALERT_1_G Suspect X-Y Bond in CIF:   K5     --  I3      ..      3.93 Ang.
PLAT794_ALERT_5_G Note: Tentative Bond Valency for Nb1     (V)          5.58
PLAT794_ALERT_5_G Note: Tentative Bond Valency for Nb2     (V)          5.65
PLAT794_ALERT_5_G Note: Tentative Bond Valency for Nb3     (V)          5.59
PLAT794_ALERT_5_G Note: Tentative Bond Valency for Nb4     (V)          5.50
```

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

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

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checkCIF publication errors

Alert level A

```
PUBL002_ALERT_1_A  The contact author’s address is missing,
           _publ_contact_author_address.
PUBL005_ALERT_1_A  _publ_contact_author_email, _publ_contact_author_fax and
           _publ_contact_author_phone are all missing.
           At least one of these should be present.
PUBL006_ALERT_1_A  _publ_requested_journal is missing
           e.g. ’Acta Crystallographica Section C’
PUBL008_ALERT_1_A  _publ_section_title is missing. Title of paper.
PUBL009_ALERT_1_A  _publ_author_name is missing. List of author(s) name(s).
PUBL010_ALERT_1_A  _publ_author_address is missing. Author(s) address(es).
```

```
PUBL012_ALERT_1_A  _publ_section_abstract is missing.
            Abstract of paper in English.
```

Alert level G

```
PUBL013_ALERT_1_G The _publ_section_comment (discussion of study) is
            missing. This is required for a full paper submission (but is
            optional for an electronic paper).
PUBL017_ALERT_1_G The _publ_section_references section is missing or
            empty.
```

```
   7 ALERT level A = Data missing that is essential or data in wrong format
   2 ALERT level G = General alerts. Data that may be required is missing
```

Publication of your CIF

You should 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 nature of your study may justify the reported deviations from journal submission requirements and the more serious of these should 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.

If level A alerts remain, which you believe to be justified deviations, and you intend to submit this CIF for publication in Acta Crystallographica Section C or Section E, you should additionally insert an explanation in your CIF using the Validation Reply Form (VRF) below. Your explanation will be considered as part of the review process.

If you intend to submit to another section of Acta Crystallographica or Journal of Applied Crystallography or Journal of Synchrotron Radiation, you should make sure that at least a basic structural check is run on the final version of your CIF prior to submission.

```
# start Validation Reply Form
_vrf_PUBL002_GLOBAL
;
PROBLEM: The contact author’s address is missing,
RESPONSE: ...
;
_vrf_PUBL005_GLOBAL
;
PROBLEM: _publ_contact_author_email, _publ_contact_author_fax and
RESPONSE: ...
;
_vrf_PUBL006_GLOBAL
;
PROBLEM: _publ_requested_journal is missing
RESPONSE: ...
;
_vrf_PUBL008_GLOBAL
```

```
;
PROBLEM: _publ_section_title is missing. Title of paper.
RESPONSE: ...
;
_vrf_PUBL009_GLOBAL
;
PROBLEM: _publ_author_name is missing. List of author(s) name(s).
RESPONSE: ...
;
_vrf_PUBL010_GLOBAL
;
PROBLEM: _publ_author_address is missing. Author(s) address(es).
RESPONSE: ...
;
_vrf_PUBL012_GLOBAL
;
PROBLEM: _publ_section_abstract is missing.
RESPONSE: ...
;
# end Validation Reply Form
```

If you wish to submit your CIF for publication in Acta Crystallographica Section C or E, you should upload your CIF via the web. If your CIF is to form part of a submission to another IUCr journal, you will be asked, either during electronic submission or by the Co-editor handling your paper, to upload your CIF via our web site.

PLATON version of 01/06/2013; check.def file version of 24/05/2013

Datablock I - ellipsoid plot

