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 = 0.0072 A	Wavelength=0.71073		
Cell:	a=12.5849(6)	b=11.9847	(7)	c=16.4909(8)
	alpha=90	beta=98.5	49(5)	gamma=90
Temperature:	293 K			
	Calculated		Reported	
Volume	2459.6(2)		2459.6(2)	
Space group	P 21/n		P 21/n	
Hall group	-P 2yn		−P 2yn	
Moiety formula	C12 H16 N8 Ni S4,	2(B F4)	?	
Sum formula	C12 H16 B2 F8 N8 N	Ni S4	C12 H16 B2	F8 N8 Ni S4
Mr	632.88		632.90	
Dx,g cm-3	1.709		1.709	
Z	4		4	
Mu (mm-1)	1.208		1.208	
F000	1272.0		1272.0	
F000'	1275.98			
h,k,lmax	16,15,21		16,15,21	
Nref	5655		5643	
Tmin, Tmax	0.785,0.941		0.725,1.00	0
Tmin'	0.785			
Correction method= # Reported T Limits: Tmin=0.725 Tmax=1.000 AbsCorr = MULTI-SCAN				
Data completeness= 0.998 Theta(max)= 27.481				
R(reflections) = 0.0574(3527)				wR2(reflections) = 0.1780(5643)
S = 0.992	Npar= 33	36		3.17.00 (3013)

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
PLAT085_ALERT_2_C SHELXL Default Weighting Scheme is not Optimized
                                                                     Please Check
PLAT094_ALERT_2_C Ratio of Maximum / Minimum Residual Density ....
                                                                        2.27 Report
PLAT260_ALERT_2_C Large Average Ueq of Residue Including F1
PLAT260_ALERT_2_C Large Average Ueq of Residue Including F5
                                                                       0.135 Check
                                                                      0.171 Check
PLAT341_ALERT_3_C Low Bond Precision on C-C Bonds .....
                                                                     0.00717 Ang.
                                                     ..H5C . x, y, z =
PLAT414_ALERT_2_C Short Intra D-H..H-X
                                             H3N
                                                                        1.95 Ang.
                                                                    1_555 Check
{\tt PLAT601\_ALERT\_2\_C~Unit~Cell~Contains~Solvent~Accessible~VOIDS~of~.}
                                                                           52 Ang**3
PLAT910_ALERT_3_C Missing # of FCF Reflection(s) Below Theta(Min).
                                                                           5 Note
PLAT911_ALERT_3_C Missing FCF Refl Between Thmin & STh/L=
                                                           0.600
                                                                            3 Report
Alert level G
PLAT002_ALERT_2_G Number of Distance or Angle Restraints on AtSite
                                                                          10 Note
PLAT172_ALERT_4_G The CIF-Embedded .res File Contains DFIX Records
                                                                           1 Report
PLAT199_ALERT_1_G Reported _cell_measurement_temperature .... (K)
                                                                          293 Check
PLAT200_ALERT_1_G Reported __diffrn_ambient_temperature ..... (K)
                                                                         293 Check
PLAT244_ALERT_4_G Low
                       'Solvent' Ueq as Compared to Neighbors of
                                                                          B1 Check
                                                                         B2 Check
                       'Solvent' Ueq as Compared to Neighbors of
PLAT244_ALERT_4_G Low
PLAT720_ALERT_4_G Number of Unusual/Non-Standard Labels .....
                                                                           4 Note
                                                 (II) .
PLAT794_ALERT_5_G Tentative Bond Valency for Ni1
                                                                         2.12 Info
PLAT860_ALERT_3_G Number of Least-Squares Restraints .....
                                                                           6 Note
PLAT883_ALERT_1_G No Info/Value for _atom_sites_solution_primary .
                                                                      Please Do !
PLAT912_ALERT_4_G Missing # of FCF Reflections Above STh/L= 0.600
                                                                          4 Note
PLAT933_ALERT_2_G Number of HKL-OMIT Records in Embedded .res File
                                                                            4 Note
                                                                          2.0 Low
PLAT941_ALERT_3_G Average HKL Measurement Multiplicity ......
PLAT978_ALERT_2_G Number C-C Bonds with Positive Residual Density.
                                                                            0 Info
   0 ALERT level A = Most likely a serious problem - resolve or explain
   0 ALERT level B = A potentially serious problem, consider carefully
   9 ALERT level C = Check. Ensure it is not caused by an omission or oversight
  14 ALERT level G = General information/check it is not something unexpected
   3 ALERT type 1 CIF construction/syntax error, inconsistent or missing data
   9 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
   5 ALERT type 4 Improvement, methodology, query or suggestion
   1 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* 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 18/05/2022; check.def file version of 17/05/2022

