

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:	= 0.0000 A	Wavelength=0.29060
Cell:	a=6.4480 (8) b=6.751 (2) c=6.2630 (5)	alpha=90 beta=102.063 (11) gamma=90
Temperature:	293 K	
	Calculated	Reported
Volume	266.61 (9)	266.61 (9)
Space group	P 21/n	P 1 21/n 1
Hall group	-P 2yn	-P 2yabc
Moiety formula	As0.17 Ce1.83 La0.84 Nd0.74 O16 P3.83 Pr0.20 Sm0.12 ? Th0.08, 0.1	
Sum formula	As0.17 Ca0.19 Ce1.83 La0.84 Nd0.74 O16 P3.83 Pr0.20 Sm0.12 Th0.	Ce0.457 La0.21 Nd0.185 Pr0.05 Ca0.047 Th0.02 Sm0.031 P0.958 As0
Mr	939.71	234.90
Dx, g cm ⁻³	5.853	5.853
Z	1	4
Mu (mm ⁻¹)	6.370	6.451
F000	419.8	420.0
F000'	411.64	
h, k, lmax	14, 14, 13	13, 8, 13
Nref	2954	773
Tmin, Tmax		0.726, 1.000
Tmin'		

Correction method= # Reported T Limits: Tmin=0.726 Tmax=1.000
AbsCorr = MULTI-SCAN

Data completeness= 0.262

Theta (max)= 18.600

R(reflections)= 0.0370(741)

wR2(reflections)=

wR= 0.0476(773)

S = 2.980

Npar= 36

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 A

EXPT005_ALERT_1_A _exptl_crystal_description is missing

Crystal habit description.

The following tests will not be performed.

CRYSR_01

PLAT027_ALERT_3_A _diffrn_reflns_theta_full value (too) Low	9.61 Degree
PLAT029_ALERT_3_A _diffrn_measured_fraction_theta_full value Low .	0.470 Why?
PLAT699_ALERT_1_A Missing _exptl_crystal_description Value	Please Do !

Alert level C

GOODF01_ALERT_2_C The least squares goodness of fit parameter lies outside the range 0.80 <> 2.00

Goodness of fit given = 2.980

PLAT041_ALERT_1_C Calc. and Reported SumFormula Strings Differ	Please Check
Calc.: As0.04 Ca0.05 Ce0.46 La0.21 Nd0.18 O4 P0.96 Pr0.05 Sm0.03 Th	
Rep.: Ce0.457 La0.21 Nd0.185 Pr0.05 Ca0.047 Th0.02 S	
m0.031 P0.958 As0.042 O4	

PLAT051_ALERT_1_C Mu(calc) and Mu(CIF) Ratio Differs from 1.0 by .	1.26 %
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
PLAT077_ALERT_4_C Unitcell Contains Non-integer Number of Atoms ..	Please Check
PLAT127_ALERT_1_C Implicit Hall Symbol Inconsistent with Explicit	-P 2yabc Check

Alert level G

ABSMU01_ALERT_1_G Calculation of _exptl_absorpt_correction_mu not performed for this radiation type.

PLAT004_ALERT_5_G Polymeric Structure Found with Maximum Dimension	3 Info
PLAT005_ALERT_5_G No Embedded Refinement Details Found in the CIF	Please Do !
PLAT820_ALERT_5_G Internal PLATON Read Problem with ALERT Number .	_820
PLAT045_ALERT_1_G Calculated and Reported Z Differ by a Factor ...	0.250 Check
PLAT068_ALERT_1_G Reported F000 Differs from Calcd (or Missing)...	Please Check
PLAT092_ALERT_4_G Check: Wavelength Given is not Cu,Ga,Mo,Ag,In Ka	0.29060 Ang.
PLAT199_ALERT_1_G Reported _cell_measurement_temperature (K)	293 Check
PLAT200_ALERT_1_G Reported _diffrn_ambient_temperature (K)	293 Check
PLAT300_ALERT_4_G Atom Site Occupancy of Th	Constrained at 0.0199 Check
PLAT300_ALERT_4_G Atom Site Occupancy of Sm	Constrained at 0.0312 Check
PLAT300_ALERT_4_G Atom Site Occupancy of Nd	Constrained at 0.1848 Check
PLAT300_ALERT_4_G Atom Site Occupancy of Pr	Constrained at 0.0503 Check
PLAT300_ALERT_4_G Atom Site Occupancy of Ce	Constrained at 0.4566 Check
PLAT300_ALERT_4_G Atom Site Occupancy of La	Constrained at 0.2104 Check
PLAT300_ALERT_4_G Atom Site Occupancy of As	Constrained at 0.0416 Check
PLAT300_ALERT_4_G Atom Site Occupancy of P	Constrained at 0.9584 Check
PLAT300_ALERT_4_G Atom Site Occupancy of Ca	Constrained at 0.0467 Check

PLAT301_ALERT_3_G	Main Residue Disorder	(Resd 1)	33%	Note
PLAT302_ALERT_4_G	Anion/Solvent/Minor-Residue Disorder (Resd 2)		100%	Note
PLAT808_ALERT_5_G	No Parseable SHELXL Style Weighting Scheme Found			Please Check
PLAT811_ALERT_5_G	No ADDSYM Analysis: Too Many Excluded Atoms			! Info
PLAT883_ALERT_1_G	No Info/Value for _atom_sites_solution_primary .			Please Do !
PLAT951_ALERT_5_G	Calculated (ThMax) and CIF-Reported Kmax Differ		6	Units
PLAT966_ALERT_5_G	Note: Non-Standard (i.e. 2.0) OMIT Threshold of		3.0	Sig(I)
PLAT984_ALERT_1_G	The Ce-f' = -2.0261 Deviates from the B&C-Value		-2.0173	Check
PLAT984_ALERT_1_G	The La-f' = -1.4695 Deviates from the B&C-Value		-1.4559	Check
PLAT984_ALERT_1_G	The Nd-f' = -3.1323 Deviates from the B&C-Value		-3.1595	Check
PLAT984_ALERT_1_G	The Pr-f' = -3.2550 Deviates from the B&C-Value		-3.2225	Check
PLAT984_ALERT_1_G	The Sm-f' = -2.0065 Deviates from the B&C-Value		-2.0091	Check
PLAT984_ALERT_1_G	The Th-f' = -0.9622 Deviates from the B&C-Value		-0.8911	Check
PLAT985_ALERT_1_G	The As-f" = 0.4019 Deviates from the B&C-Value		0.4005	Check
PLAT985_ALERT_1_G	The Ce-f" = 3.1615 Deviates from the B&C-Value		3.1748	Check
PLAT985_ALERT_1_G	The Nd-f" = 0.6212 Deviates from the B&C-Value		0.6180	Check
PLAT985_ALERT_1_G	The Pr-f" = 3.3462 Deviates from the B&C-Value		3.3560	Check
PLAT985_ALERT_1_G	The Sm-f" = 0.7152 Deviates from the B&C-Value		0.7111	Check
PLAT985_ALERT_1_G	The Th-f" = 3.4684 Deviates from the B&C-Value		3.4345	Check

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

26 ALERT type 1 CIF construction/syntax error, inconsistent or missing data
 1 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
 7 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.

