

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: MUF-91-15h-51pc

Bond precision: = 0.0000 Å

Wavelength=0.71080

Cell: a=17.122(3) b=17.122(3) c=17.122(3)
 alpha=90 beta=90 gamma=90
Temperature: 100 K

	Calculated	Reported
Volume	5020(3)	5020(3)
Space group	P -4 3 m	P -4 3 m
Hall group	P -4 2 3	P -4 2 3
Moiety formula	2(C8.79 H5.02 N0.50 O1.64 Zn0.50)	C84 H48 N6 O13 Zn4, C21.5 H12.28 O6.65 Zn2.05
Sum formula	C17.58 H10.05 N 03.28 Zn	C104.15 H59.52 N6 O19.24 Zn5.92
Mr	353.57	2089.72
Dx, g cm ⁻³	0.702	0.691
Z	6	1
Mu (mm ⁻¹)	0.745	0.731
F000	1073.8	1058.0
F000'	1075.91	
h, k, lmax	21, 21, 21	21, 21, 20
Nref	1970[1084]	1965
Tmin, Tmax		0.656, 0.746
Tmin'		

Correction method= # Reported T Limits: Tmin=0.656 Tmax=0.746
AbsCorr = MULTI-SCAN

Data completeness= 1.81/1.00 Theta(max)= 26.373

R(reflections)= 0.1324(1151) wR2(reflections)= 0.3753(1965)

S = 1.308 Npar= 33

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 B

PLAT043_ALERT_1_B	Calculated and Reported Mol. Weight Differ by ..	5.29	Check
PLAT049_ALERT_1_B	Calculated Density Less Than 1.0 gcm-3	0.7017	Check
PLAT084_ALERT_3_B	High wR2 Value (i.e. > 0.25)	0.38	Report
PLAT213_ALERT_2_B	Atom Zn0A has ADP max/min Ratio	4.3	oblate
PLAT315_ALERT_2_B	Singly Bonded Carbon Detected (H-atoms Missing).	C14	Check
PLAT315_ALERT_2_B	Singly Bonded Carbon Detected (H-atoms Missing).	C34	Check
PLAT987_ALERT_1_B	The Flack x is >> 0 - Do a BASF/TWIN Refinement		Please Check

● Alert level C

RADNW01_ALERT_1_C The radiation wavelength lies outside the expected range
for the supplied radiation type. Expected range 0.71065-0.71075
Wavelength given = 0.71080

STRVA01_ALERT_4_C Flack test results are ambiguous.

From the CIF: _refine_ls_abs_structure_Flack 0.367

From the CIF: _refine_ls_abs_structure_Flack_su 0.019

PLAT041_ALERT_1_C	Calc. and Reported SumFormula Strings Differ		Please Check
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
PLAT068_ALERT_1_C	Reported F000 Differs from Calcd (or Missing)...		Please Check
PLAT077_ALERT_4_C	Unitcell Contains Non-integer Number of Atoms ..		Please Check
PLAT082_ALERT_2_C	High R1 Value	0.13	Report
PLAT094_ALERT_2_C	Ratio of Maximum / Minimum Residual Density	3.23	Report
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	01	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	ZN0A	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	02	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C10	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C11	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C12	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C13	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C14	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	N1	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C15	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C16	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C17	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C18	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C19	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C20	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C21	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	ZN1	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	03	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	04	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C30	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C31	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C32	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C33	Check
PLAT161_ALERT_4_C	Missing or Zero s.u. (esd) on x-coordinate for .	C34	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	01	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	ZN0A	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	02	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C10	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C11	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C12	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C13	Check

PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C14	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	N1	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C15	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C16	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C17	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C18	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C19	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C20	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C21	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	ZN1	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	03	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	04	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C30	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C31	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C32	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C33	Check
PLAT162_ALERT_4_C	Missing or Zero s.u. (esd) on y-coordinate for .	C34	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	01	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	ZN0A	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	02	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C10	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C11	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C12	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C13	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C14	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	N1	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C15	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C16	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C17	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C18	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C19	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C20	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C21	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	ZN1	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	03	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	04	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C30	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C31	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C32	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C33	Check
PLAT163_ALERT_4_C	Missing or Zero s.u. (esd) on z-coordinate for .	C34	Check
PLAT250_ALERT_2_C	Large U3/U1 Ratio for Average U(i,j) Tensor	3.8	Note
PLAT260_ALERT_2_C	Large Average Ueq of Residue Including Zn1	0.145	Check

● Alert level G

FORMU01_ALERT_1_G There is a discrepancy between the atom counts in the
 _chemical_formula_sum and _chemical_formula_moiety. This is
 usually due to the moiety formula being in the wrong format.
 Atom count from _chemical_formula_sum: C104.15 H59.52 N6 019.24 Zn5.
 Atom count from _chemical_formula_moiety: C105.5 H60.28 N6 019.65 Zn6.0

FORMU01_ALERT_2_G There is a discrepancy between the atom counts in the
 _chemical_formula_sum and the formula from the _atom_site* data.
 Atom count from _chemical_formula_sum: C104.15 H59.52 N6 019.24 Zn5.92
 Atom count from the _atom_site data: C78.94800 H54.14400 N6 09.135 Zn

CELLZ01_ALERT_1_G Difference between formula and atom_site contents detected.

CELLZ01_ALERT_1_G ALERT: Large difference may be due to a
 symmetry error - see SYMMG tests
 From the CIF: _cell_formula_units_Z 1
 From the CIF: _chemical_formula_sum C104.15 H59.52 N6 019.24 Zn5.92
 TEST: Compare cell contents of formula and atom_site data

atom	Z*formula	cif sites	diff		
C	104.15	78.95	25.20		
H	59.52	54.14	5.38		
N	6.00	6.00	0.00		
O	19.24	9.14	10.10		
Zn	5.92	1.01	4.91		
PLAT002_ALERT_2_G	Number of Distance or Angle Restraints on AtSite			11	Note
PLAT003_ALERT_2_G	Number of Uiso or Uij Restrained non-H Atoms ...			10	Report
PLAT012_ALERT_1_G	No _shelx_res_checksum Found in CIF				Please Check
PLAT042_ALERT_1_G	Calc. and Reported MoietyFormula Strings Differ				Please Check
PLAT045_ALERT_1_G	Calculated and Reported Z Differ by a Factor ...			6.00	Check
PLAT072_ALERT_2_G	SHELXL First Parameter in WGHT Unusually Large			0.20	Report
PLAT171_ALERT_4_G	The CIF-Embedded .res File Contains EADP Records			3	Report
PLAT172_ALERT_4_G	The CIF-Embedded .res File Contains DFIX Records			11	Report
PLAT174_ALERT_4_G	The CIF-Embedded .res File Contains FLAT Records			3	Report
PLAT178_ALERT_4_G	The CIF-Embedded .res File Contains SIMU Records			3	Report
PLAT186_ALERT_4_G	The CIF-Embedded .res File Contains ISOR Records			1	Report
PLAT300_ALERT_4_G	Atom Site Occupancy of Zn0A	Constrained at		0.1667	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of O2	Constrained at		0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of O1	Constrained at		0.0417	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C12	Constrained at		0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C13	Constrained at		0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of N1	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C10	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C11	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C14	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C15	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C16	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C17	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C18	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C19	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C20	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of C21	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of H12	Constrained at		0.5	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of H13	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of H17	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of H18	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of H19	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of H20	Constrained at		0.25	Check
PLAT300_ALERT_4_G	Atom Site Occupancy of H21	Constrained at		0.25	Check
PLAT301_ALERT_3_G	Main Residue Disorder(Resd 1)			100%	Note
PLAT304_ALERT_4_G	Non-Integer Number of Atoms in Resd 1			16.46	Check
PLAT432_ALERT_2_G	Short Inter X...Y Contact C13 ..C15			2.75	Ang.
		z,y,x =	24_555		Check
PLAT432_ALERT_2_G	Short Inter X...Y Contact N1 ..C15			2.40	Ang.
		z,y,x =	24_555		Check
PLAT432_ALERT_2_G	Short Inter X...Y Contact C14 ..C15			3.18	Ang.
		1-x,y,1-z =	9_656		Check
PLAT432_ALERT_2_G	Short Inter X...Y Contact C14 ..C15			3.18	Ang.
		1-z,y,1-x =	23_656		Check
PLAT432_ALERT_2_G	Short Inter X...Y Contact C14 ..C15			3.18	Ang.
		z,y,x =	24_555		Check
PLAT607_ALERT_4_G	VOID Test Skipped Due to Severe Disorder			!	Info
PLAT720_ALERT_4_G	Number of Unusual/Non-Standard Labels			1	Note
PLAT789_ALERT_4_G	Atoms with Negative _atom_site_disorder_group #			32	Check
PLAT860_ALERT_3_G	Number of Least-Squares Restraints			99	Note
PLAT883_ALERT_1_G	No Info/Value for _atom_sites_solution_primary .				Please Do !

0 ALERT level A = Most likely a serious problem - resolve or explain
7 ALERT level B = A potentially serious problem, consider carefully

84 **ALERT level C** = Check. Ensure it is not caused by an omission or oversight
50 **ALERT level G** = General information/check it is not something unexpected

16 ALERT type 1 CIF construction/syntax error, inconsistent or missing data
16 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
106 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 07/08/2019; check.def file version of 30/07/2019

