

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-93-24h-28pc

Bond precision: C-C = 0.0018 A

Wavelength=0.70850

Cell: a=17.07(2) b=17.07(2) c=17.07(2)
 alpha=90 beta=90 gamma=90
Temperature: 100 K

	Calculated	Reported
Volume	4974(17)	4977(19)
Space group	P -4 3 m	P -4 3 m
Hall group	P -4 2 3	P -4 2 3
Moiety formula	0.187(C10.50 H6 Co 03.25), 2(C3.50 H 01.08 Zn0.33), 4(C1.75 H1.	C84 H48 N6 O13 Zn4, C11.93 H6.82 Co1.14 O3.69
Sum formula	C15.96 H9.12 Co0.19 N 02.77 Zn0.67	C95.93 H54.82 Co1.14 N6 016.69 Zn4
Mr	313.85	1887.13
Dx, g cm-3	0.629	0.630
Z	6	1
Mu (mm-1)	0.592	0.599
F000	954.6	957.0
F000'	956.55	
h, k, lmax	18, 18, 18	18, 18, 18
Nref	1345[749]	1338
Tmin, Tmax		0.592, 0.745
Tmin'		

Correction method= # Reported T Limits: Tmin=0.592 Tmax=0.745
AbsCorr = MULTI-SCAN

Data completeness= 1.79/0.99 Theta(max)= 22.840

R(reflections)= 0.1902(1011) wR2(reflections)= 0.5465(1338)

S = 2.510 Npar= 55

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

THETM01_ALERT_3_A The value of $\sin(\theta_{\max})/\lambda$ is less than 0.550
Calculated $\sin(\theta_{\max})/\lambda = 0.5479$
PLAT084_ALERT_3_A High wR_2 Value (i.e. > 0.25) 0.55 Report
PLAT601_ALERT_2_A Structure Contains Solvent Accessible Voids of . 1599 Ang**3

Alert level B

PLAT049_ALERT_1_B Calculated Density Less Than 1.0 gcm⁻³ 0.6290 Check
PLAT082_ALERT_2_B High R_1 Value 0.19 Report
PLAT234_ALERT_4_B Large Hirshfeld Difference 02 --C10 . 0.30 Ang.
PLAT315_ALERT_2_B Singly Bonded Carbon Detected (H-atoms Missing). C15 Check

Alert level C

GOODF01_ALERT_2_C The least squares goodness of fit parameter lies
outside the range 0.80 $\leq$ 2.00
Goodness of fit given = 2.510
PLAT041_ALERT_1_C Calc. and Reported SumFormula Strings Differ Please Check
PLAT043_ALERT_1_C Calculated and Reported Mol. Weight Differ by .. 0.67 Check
PLAT077_ALERT_4_C Unitcell Contains Non-integer Number of Atoms .. Please Check
PLAT087_ALERT_2_C Unsatisfactory S value (Too High) 2.51 Check
PLAT148_ALERT_3_C s.u. on the a - Axis is (Too) Large 0.020 Ang.
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 . 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
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 . 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
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 . 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
PLAT232_ALERT_2_C Hirshfeld Test Diff (M-X) Zn1 --02 . 6.0 s.u.
PLAT241_ALERT_2_C High 'MainMol' Ueq as Compared to Neighbors of 02 Check

PLAT241_ALERT_2_C	High	'MainMol' Ueq as Compared to Neighbors of	C10	Check
PLAT242_ALERT_2_C	Low	'MainMol' Ueq as Compared to Neighbors of	Zn1	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	Co2	0.119 Check
PLAT260_ALERT_2_C	Large	Average Ueq of Residue Including	Zn1	0.176 Check

● Alert level G

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: C95.92999 H54.82 Co1.14 N6 016.6
 Atom count from the _atom_site data: C95.76 H54.72 Co1.12 N6 016.64 Z

ABSMU01_ALERT_1_G Calculation of _exptl_absorpt_correction_mu
 not performed for this radiation type.

CELLZ01_ALERT_1_G Difference between formula and atom_site contents detected.

CELLZ01_ALERT_1_G ALERT: check formula stoichiometry or atom site occupancies.
 From the CIF: _cell_formula_units_Z 1
 From the CIF: _chemical_formula_sum C95.93 H54.82 Co1.14 N6 016.69 Zn4
 TEST: Compare cell contents of formula and atom_site data

atom	Z*formula	cif sites	diff
C	95.93	95.76	0.17
H	54.82	54.72	0.10
Co	1.14	1.12	0.02
N	6.00	6.00	0.00
O	16.69	16.64	0.05
Zn	4.00	4.00	0.00

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 ... 16 Report

PLAT004_ALERT_5_G Polymeric Structure Found with Maximum Dimension 3 Info

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

PLAT092_ALERT_4_G Check: Wavelength Given is not Cu,Ga,Mo,Ag,In Ka 0.70850 Ang.

PLAT152_ALERT_1_G The Supplied and Calc. Volume s.u. Differ by ... -2 Units

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 2 Report

PLAT178_ALERT_4_G The CIF-Embedded .res File Contains SIMU Records 2 Report

PLAT186_ALERT_4_G The CIF-Embedded .res File Contains ISOR Records 3 Report

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 H12 Constrained at 0.5 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 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

PLAT300_ALERT_4_G Atom Site Occupancy of N1 Constrained at 0.25 Check

PLAT300_ALERT_4_G Atom Site Occupancy of H13 Constrained at 0.25 Check

PLAT301_ALERT_3_G Main Residue Disorder(Resd 1) 100% Note

PLAT302_ALERT_4_G Anion/Solvent/Minor-Residue Disorder (Resd 2) 39% Note

PLAT302_ALERT_4_G Anion/Solvent/Minor-Residue Disorder (Resd 3) 100% Note

PLAT302_ALERT_4_G Anion/Solvent/Minor-Residue Disorder (Resd 4) 100% Note

PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..N1	2.52 Ang.
		x,y,z =	1_555 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..N1	2.52 Ang.
		y,x,z =	20_555 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..N1	2.52 Ang.
		-1-x,-1-y,z =	3_445 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..N1	2.52 Ang.
		-1-y,-1-x,z =	19_445 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..N1	3.00 Ang.
		y,-1-x,-2-z =	2_543 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..N1	3.00 Ang.
		-1-x,y,-2-z =	9_453 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..N1	3.00 Ang.
		-1-y,x,-2-z =	4_453 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..N1	3.00 Ang.
		x,-1-y,-2-z =	6_543 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..C15	3.17 Ang.
		-1-y,-1-x,z =	19_445 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..C15	3.17 Ang.
		x,y,z =	1_555 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..C15	3.17 Ang.
		y,x,z =	20_555 Check
PLAT432_ALERT_2_G Short Inter X...Y Contact	C14	..C15	3.17 Ang.
		-1-x,-1-y,z =	3_445 Check
PLAT779_ALERT_4_G Suspect or Irrelevant (Bond) Angle(s) in CIF . #			34 Check
	C12 -C11 -C12	20.555 1.555 1.555	21.26 Deg.
PLAT789_ALERT_4_G Atoms with Negative _atom_site_disorder_group #			17 Check
PLAT794_ALERT_5_G Tentative Bond Valency for Zn1 (II) .			2.18 Info
PLAT811_ALERT_5_G No ADDSYM Analysis: Too Many Excluded Atoms			! Info
PLAT860_ALERT_3_G Number of Least-Squares Restraints			223 Note
PLAT883_ALERT_1_G No Info/Value for _atom_sites_solution_primary .			Please Do !
PLAT933_ALERT_2_G Number of OMIT Records in Embedded .res File ...			1 Note
PLAT984_ALERT_1_G The Zn-f' = 0.2839 Deviates from the B&C-Value			0.2932 Check

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

12 ALERT type 1 CIF construction/syntax error, inconsistent or missing data
 29 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
 59 ALERT type 4 Improvement, methodology, query or suggestion
 3 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.

