

data_argandite

_audit_creation_method SHELXL-97

_chemical_name_systematic

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_chemical_name_common ?

_chemical_melting_point ?

_chemical_formula_moiety ?

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'H8 As0.54 Mn7 O16 V1.46'

_chemical_formula_weight 763.47

loop_

_atom_type_symbol

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_atom_type_scat_dispersion_imag

_atom_type_scat_source

'H' 'H' 0.0000 0.0000

'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'

'O' 'O' 0.0106 0.0060

'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'

'V' 'V' 0.3005 0.5294

'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'

'Mn' 'Mn' 0.3368 0.7283

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'As' 'As' 0.0499 2.0058

'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4'

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_symmetry_space_group_name_H-M ?

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_symmetry_equiv_pos_as_xyz

'x, y, z'

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'-x, -y, -z'

'x-1/2, -y-1/2, z-1/2'

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_cell_length_b 12.2665(5)

_cell_length_c 10.1055(5)

_cell_angle_alpha 90.00

_cell_angle_beta 95.559(4)

_cell_angle_gamma 90.00

_cell_volume 679.04(5)

_cell_formula_units_Z 2

_cell_measurement_temperature 293(2)

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_reflns_threshold_expression >2sigma(I)

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_computing_molecular_graphics    ?
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Refinement of F^2^ against ALL reflections. The weighted R-factor wR and  

goodness of fit S are based on F^2^, conventional R-factors R are based  

on F, with F set to zero for negative F^2^. The threshold expression of  

F^2^ > 2sigma(F^2^) is used only for calculating R-factors(gt) etc. and is  

not relevant to the choice of reflections for refinement. R-factors based  

on F^2^ are statistically about twice as large as those based on F, and R-  

factors based on ALL data will be even larger.  

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_refine_ls_weighting_scheme    calc  

_refine_ls_weighting_details  

'calc w=1/[s^2^(Fo^2^)+(0.0061P)^2^+0.0000P] where P=(Fo^2^+2Fc^2^)/3'  

_atom_sites_solution_primary   direct  

_atom_sites_solution_secondary difmap  

_atom_sites_solution_hydrogens geom  

_refine_ls_hydrogen_treatment mixed  

_refine_ls_extinction_method  SHELXL  

_refine_ls_extinction_coef    0.0010(2)  

_refine_ls_extinction_expression  

'Fc^*^=kFc[1+0.001xFc^2^|I^3^/sin(2|q)]^-1/4^'  

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_atom_site_adp_type
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 O8 O 0.8205(5) 0.4273(2) 0.6616(3) 0.0182(7) Uani 1 1 d ...
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 V 0.0074(3) 0.0082(3) 0.0078(4) 0.0004(3) -0.0002(2) -0.0001(2)
 As 0.0074(3) 0.0082(3) 0.0078(4) 0.0004(3) -0.0002(2) -0.0001(2)
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 O2 0.0104(15) 0.0143(15) 0.0126(16) 0.0004(13) -0.0014(12) -0.0002(11)
 OH3 0.0128(16) 0.0156(15) 0.0183(19) -0.0007(14) 0.0009(13) 0.0005(12)
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 OH6 0.0139(16) 0.0157(16) 0.0158(17) 0.0028(14) 0.0018(13) -0.0017(12)
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_geom_special_details

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All esds (except the esd in the dihedral angle between two l.s. planes) are estimated using the full covariance matrix. The cell esds are taken into account individually in the estimation of esds in distances, angles and torsion angles; correlations between esds in cell parameters are only used when they are defined by crystal symmetry. An approximate (isotropic) treatment of cell esds is used for estimating esds involving l.s. planes.

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Mn3 OH5 2.170(3) . ?
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Mn3 OH1 2.189(3) 3_667 ?
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Mn4 OH6 2.173(3) 2_546 ?
Mn4 O2 2.259(2) 4_565 ?
Mn4 OH5 2.289(3) 2_646 ?
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V O8 1.690(3) . ?
V O7 1.708(2) . ?
V O2 1.747(3) . ?
OH1 Mn4 2.126(3) 4_566 ?
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O4 V O2 107.30(13) . . ?
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