$H_{0.25}(Zn_{0.15}Fe_{0.85})_6[SiO_4]_{0.25}[AsO_3]_{3.75}[OH]_3$	*hP*54	(186) $P6_3mc$ – $d^2c^4b^3$

$(Fe,Zn)_{12}(OH)_6(AsO_3)_6(AsO_3,HOSiO_3)_2$ [1], ekatite
Structural features: Columns of edge- and face-linked $(Fe,Zn)(O,OH)_6$ octahedra are interconnected via common vertices, $Si(O_3[OH])$ tetrahedra and $:AsO_3$ ψ-tetrahedra (partial substitutional disorder) to form a 3D-framework with large channels parallel to [001].

Keller P. (2001) [1]
$As_{3.77}Fe_{5.07}H_{3.25}O_{15.25}Si_{0.25}Zn_{0.90}$
a = 1.2773, c = 0.5051 nm, c/a = 0.395, V = 0.7137 nm^3, Z = 2

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
O1	12*d*	1	0.0661	0.3441	0.1		non-coplanar triangle $AsFe_2$
M2	12*d*	1	0.42715	0.08451	0.2565	0.995	octahedron O_6
As3	6*c*	.*m*.	0.14184	0.85815	0.2876		non-coplanar triangle O_3
O4	6*c*	.*m*.	0.4755	0.5245	0.441		non-coplanar square Fe_4
O5	6*c*	.*m*.	0.5968	0.4032	0.386		
O6	6*c*	.*m*.	0.8024	0.1976	0.049		non-coplanar triangle $AsFe_2$
Si7	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.0	0.246	
As8	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.058	0.768	
O9	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.329	0.246	
H10	6*c*	.*m*.	0.498	0.502	0.263		
H11	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.5511	0.246	

M2 = 0.849Fe + 0.151Zn
Transformation from published data: origin shift 0 0 0.33700
Experimental: single crystal, diffractometer, X-rays, R = 0.043, T = 298 K

Remarks: Natural specimen from Tsumeb, Namibia. Composition $(Fe^{3+})_{5.95}(Fe^{2+})_{5.14}Zn_{0.81}As_{7.49}$_ $Si_{0.61}O_{27.33}\cdot xH_2O$ from electron microprobe analysis. When relevant, we changed the last digit of the atom coordinates to respect the symmetry conditions for special positions. Short interatomic distances for partly occupied site(s). Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments.

References: [1] Keller P. (2001), Eur. J. Mineral. 13, 769-777.