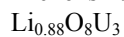


 $hP13$ (189) $P-62m - gf^2dc$ **$\text{Li}_{0.88}\text{U}_3\text{O}_8$ hexagonal [1]**

Structural features: UO_7 pentagonal bipyramids (the seventh O at a slightly longer distance) share edges to form infinite layers, which are interconnected via common vertices to form a 3D-framework. Filled-up derivative of $\alpha\text{-U}_3\text{O}_8$ with Li in trigonal bipyramidal voids.

Dickens P.G., Powell A.V. (1991) [1]

 $a = 0.6849$, $c = 0.4197$ nm, $c/a = 0.613$, $V = 0.1705$ nm³, $Z = 1$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
O1	3g	$m2m$	0.3533	0	$\frac{1}{2}$		4-vertex polyhedron U_2Li_2
U2	3f	$m2m$	0.3542	0	0		octahedron O_6
O3	3f	$m2m$	0.7417	0	0		non-colinear U_2
Li4	2d	-6..	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{2}$	0.44	trigonal bipyramid O_5
O5	2c	-6..	$\frac{1}{3}$	$\frac{2}{3}$	0		trigonal bipyramid Li_2U_3

Experimental: powder, diffractometer, neutrons, time-of-flight, $R_B = 0.014$, $T = 573$ KRemarks: The transformation from orthorhombic $\text{Li}_{0.88}\text{U}_3\text{O}_8$ on heating was found to be irreversible.

References: [1] Dickens P.G., Powell A.V. (1991), J. Solid State Chem. 92, 159-169.