

CeP₃O₉[H₂O]₃

*hP*16

(174) *P*-6 – 1k²ja

CeP₃O₉·3H₂O [1]

Structural features: Ce atoms and rings of three vertex-linked PO₄ tetrahedra in a NiAs-type arrangement; H₂O in the Ce layers.

Bagieu Beucher M. et al. (1971) [1]

CeH₆O₁₂P₃

a = 0.677, *c* = 0.6079 nm, *c/a* = 0.898, *V* = 0.2413 nm³, *Z* = 1

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
O1	6 <i>l</i>	1	0.25233	0.26367	0.296		single atom P
O2	3 <i>k</i>	<i>m</i> ..	0.09533	0.47467	¹ / ₂		non-colinear P ₂
P3	3 <i>k</i>	<i>m</i> ..	0.27933	0.40067	¹ / ₂		tetrahedron O ₄
(OH ₂)4	3 <i>j</i>	<i>m</i> ..	0.40433	0.03667	0		single atom Ce
Ce5	1 <i>a</i>	-6..	0	0	0		tricapped trigonal prism O ₆ (OH ₂) ₃

Transformation from published data: *y*,*x*,*z*; origin shift ²/₃ ¹/₃ ¹/₂

Experimental: powder, diffractometer, X-rays, R = 0.058

Remarks: Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments.

References: [1] Bagieu Beucher M., Tordjman I., Durif A. (1971), Rev. Chim. Miner. 8, 753-760.