

$\text{CsMg}[\text{PO}_4][\text{H}_2\text{O}]_6$	<i>hP26</i>	(186) $P6_3mc - c^3b^2a^2$
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Cs[Mg(H₂O)₆](PO₄) [1]

Structural features: PO₄ tetrahedra, Mg(OH₂)₆ octahedra and Cs atoms in a ZrBeSi-type arrangement.

Ferrari A. et al. (1955) [1]

CsH₁₂MgO₁₀P

$a = 0.6939$, $c = 1.1986$ nm, $c/a = 1.727$, $V = 0.4998$ nm³, $Z = 2$

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
O1	6 <i>c</i>	. <i>m</i> .	0.123	0.877	0.456		single atom P
(OH ₂)2	6 <i>c</i>	. <i>m</i> .	0.528	0.472	0.099		single atom Mg
(OH ₂)3	6 <i>c</i>	. <i>m</i> .	0.805	0.195	0.296		single atom Mg
Cs4	2 <i>b</i>	3 <i>m</i> .	$\frac{1}{3}$	$\frac{2}{3}$	0.287		cuboctahedron O ₃ (OH ₂) ₉
Mg5	2 <i>b</i>	3 <i>m</i> .	$\frac{1}{3}$	$\frac{2}{3}$	0.698		octahedron (OH ₂) ₆
P6	2 <i>a</i>	3 <i>m</i> .	0	0	0.0		tetrahedron O ₄
O7	2 <i>a</i>	3 <i>m</i> .	0	0	0.13		single atom P

Experimental: single crystal, Weissenberg and rotation photographs, X-rays

Remarks: Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments. The structure was confirmed in [2] (same data reported).

References: [1] Ferrari A., Cavalca L., Nardelli M. (1955), Gazz. Chim. Ital. 85, 1232-1238. [2] Cavalca L., Nardelli M., Cesari M. (1955), Gazz. Chim. Ital. 85, 1494-1500.