

Tetrahydroxosulfatotrimagnesium Octahydrate, 2Mg(OH)₂ · MgSO₄ · 8H₂O

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Abstract

Magnesium hydroxosulfate (2Mg(OH)₂·MgSO₄·8H₂O) was synthesized. The compound was studied by chemical, thermal, and X-ray powder diffraction analyses, as well as by microscopy and IR spectroscopy. The structure of its crystals was suggested and the unit cell parameters were determined: monoclinic space group Pm, a = 1884.7 ± 0.4 pm, b = 1093.5 ± 0.4 pm, c = 1143.0 ± 0.4 pm, β = 95.44 ± 0.05°, Z = 4, d_{calc} = 2.162 g/cm³, d_{obs} = 2.152 g/cm³. The crystal-chemical formula is [Mg₃(OH)₄(H₂O)₅] ∞ · SO₄ · 3H₂O.
