



**>>Entry Name: Holmium phosphate (HoPO<sub>4</sub>)**

**Synonym(s):** Holmium(3+) phosphate (1:1), 9Cl, 8Cl. Holmium(3+) orthophosphate

**CAS Registry Number:** 14298-39-6

**Related CAS Registry Numbers(s):** 34054-53-0

HoPO<sub>4</sub>

**Molecular Formula:** HoO<sub>4</sub>P

**Molecular Weight:** 259.902

**Accurate Mass:** 259.883741

**Percentage Composition:** Ho 63.46%; O 24.62%; P 11.92%

**Source/Synthesis:** Synth. from Ho<sub>2</sub>O<sub>3</sub> or HoF<sub>3</sub> + SiP<sub>2</sub>O<sub>7</sub> at 1000-1200°; Ho(NO<sub>3</sub>)<sub>3</sub> + NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub> and product heated at 800-1200°

**Other Data:** Antiferromagnetic phase trans. at -272°.  $\Delta H_{1298}^{\circ} = -1924 \text{ kJ mol}^{-1}$ . No magnetic trans. between -269° and ca. 350°

**>>Derivative: Dihydrate**

**CAS Registry Number:** 16827-78-4

**Source/Synthesis:** Synth. from Ho(NO<sub>3</sub>)<sub>3</sub> + H<sub>3</sub>PO<sub>4</sub> aq.

**>>Derivative: Trihydrate (?)**

**CAS Registry Number:** 17070-02-9

**Source/Synthesis:** Synth. from Ho(NO<sub>3</sub>)<sub>3</sub> + H<sub>3</sub>PO<sub>4</sub> aq.

**Other Data:** Tetragonal

**References:**

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