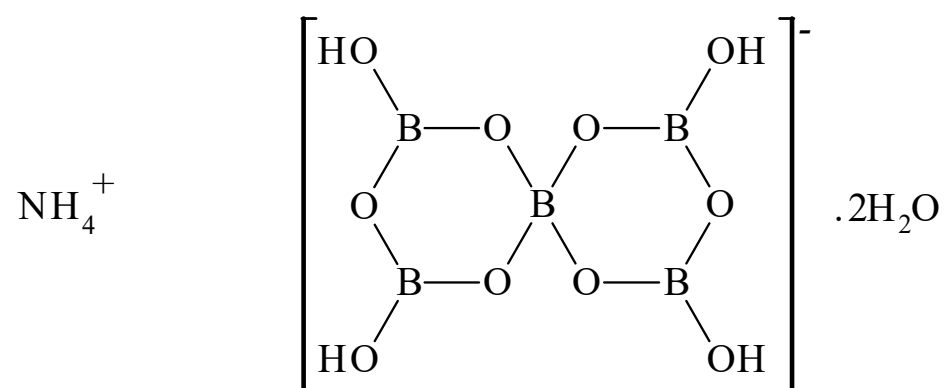




>> **Name:** Ammonium pentaborate tetrahydrate, 10Cl



CAS Registry Number: 12229-12-8

Molecular Formula: B₅H₁₂NO₁₂

Molecular Weight: 272.149

Accurate Mass: 273.082479

Percentage Composition: B 19.86%; H 4.44%; N 5.15%; O 70.55%

Use/Importance: Used in flameproofing materials and in electrolytic capacitors. Has interesting optical props.

Physical Description: Colourless cryst. known in α- and β-forms

Solubility: Sol. H₂O

Other Data: Loses H₂O more easily than NH₃ on heating. At 50° about 75% H₂O is lost compared to <1% NH₃

>>**Variant:** Mineral-form

Synonym(s): Larderellite

Molecular Formula: B₅H₁₂NO₁₂

Molecular Weight: 272.149

Accurate Mass: 273.082479

Percentage Composition: B 19.86%; H 4.44%; N 5.15%; O 70.55%

Source/Synthesis: Occurs in boric acid lagoon at Larderello, Italy

Physical Description: Microscopic white cryst.

References:

- Tolédano, P. *et al.*, *C. R. Hebd. Seances Acad. Sci. Ser. C*, 1968, **266**, 1155, (*synth*)
Janda, R. *et al.*, *Z. Naturforsch., B*, 1979, **34**, 1078, (*B-11 nmr*)
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Solans, X. *et al.*, *J. Appl. Crystallogr.*, 1983, **16**, 637, (*optical props*)