



>>Entry Name: Sodium tetrafluoroborate (NaBF₄)

Synonym(s): Sodium fluoborate, 8Cl. Sodium borofluoride. Tetrafluoroborate, sodium salt

CAS Registry Number: 13755-29-8

NaBF₄

Molecular Formula: BF₄Na

Molecular Weight: 109.794

Accurate Mass: 109.992684

Percentage Composition: B 9.85%; F 69.21%; Na 20.94%

Source/Synthesis: Synth. either by neutralisation of NaOH or Na₂CO₃ with aq. HBF₄ (excess HF) or by reaction of BF₃ with NaF. Alternatively HF can be absorbed in aq. borax to produce NaBF₄ directly

Use/Importance: Commercially available. Used in the electroplating industry. Grain refining agent for aluminium

Physical Description: White orthorhombic cryst. Dec. on heating >200° to form NaF and BF₃

Melting Point: Mp 322°

Solubility: V. sol. H₂O (108 g per 100 cm³ at 26°; 210 g per 100 cm³ at 100°); spar. sol. EtOH

Hazard & Toxicity: Corrosive

Aldrich: 20221-5

Fluka: 71523

>>Variant: Mineral-form

Synonym(s): Ferruccite

CAS Registry Number: 24203-02-9

Molecular Formula: BF₄Na

Molecular Weight: 109.794

Accurate Mass: 109.992684

Percentage Composition: B 9.85%; F 69.21%; Na 20.94%

Source/Synthesis: Occurs as a sublimation product around fumaroles on Mt. Vesuvius

Physical Description: Minute tabular cryst.

References:

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