



>>Entry Name: Hexafluoronioate(*V*)(1–), 11Cl

CAS Registry Number: 16918-69-7

[NbF<sub>6</sub>]<sup>(-)</sup>

Molecular Formula: F<sub>6</sub>Nb<sup>(-)</sup>

Molecular Weight: 206.897

Accurate Mass: 206.896795

Percentage Composition: F 55.10%; Nb 44.90%

corner shared octahedra surrounding alternating Nb and Se or Sb

Other Data: Many salts have been synth.

<sup>(+)</sup> and SbF<sub>4</sub><sup>(+)</sup> salts are best described as variously

>>Derivative: Li salt

Synonym(s): Lithium hexafluoronioate(*V*) (LiNbF<sub>6</sub>)

CAS Registry Number: 53607-97-9

Molecular Formula: F<sub>6</sub>LiNb

Molecular Weight: 213.838

Accurate Mass: 213.912798

Percentage Composition: F 53.31%; Li 3.25%; Nb 43.45%

Source/Synthesis: Synth. by dissolving Nb or Nb<sub>2</sub>O<sub>5</sub> in BrF<sub>3</sub> and adding LiBrF<sub>4</sub>, or from LiF and NbF<sub>5</sub> in HF aq.

Physical Description: Colourless cryst.

>>Derivative: Cs salt

Synonym(s): Caesium hexafluoronioate(*V*) (CsNbF<sub>6</sub>)

CAS Registry Number: 12062-12-3

Molecular Formula: CsF<sub>6</sub>Nb

Molecular Weight: 339.802

Accurate Mass: 339.802224

Percentage Composition: Cs 39.11%; F 33.55%; Nb 27.34%

Source/Synthesis: Synth. similarly to the Li salt

Physical Description: Colourless cryst.

>>Derivative: NH<sub>4</sub> salt

Synonym(s): Ammonium hexafluoronioate

CAS Registry Number: 12062-13-4

Molecular Formula: F<sub>6</sub>H<sub>4</sub>NNb

Molecular Weight: 224.935

Percentage Composition: F 50.68%; H 1.79%; N 6.23%; Nb 41.30%

Use/Importance: Commercially available

Aldrich: 20391-2

>>Derivative: Nitrosyl salt

CAS Registry Number: 54496-10-5

Molecular Formula: F<sub>6</sub>NNbO

Molecular Weight: 236.903

Accurate Mass: 236.894784

Percentage Composition: F 48.12%; N 5.91%; Nb 39.22%; O 6.75%

Source/Synthesis: Synth. by dissolving Nb in a mixture of N<sub>2</sub>O<sub>4</sub> and HF

Physical Description: Colourless solid

>>Derivative: Tetrafluorostibonium salt

Molecular Formula: F<sub>10</sub>NbSb

Molecular Weight: 404.64

Accurate Mass: 403.794228

Percentage Composition: F 46.95%; Nb 22.96%; Sb 30.09%

Source/Synthesis: Synth. from NbF<sub>5</sub> and excess SbF<sub>5</sub>

Physical Description: Colourless cryst.

Melting Point: Mp 60°