



>>Entry Name: Heptafluorotantalate(*V*)(2−), 11Cl

CAS Registry Number: 33971-34-5

[TaF₇]^{2(−)}

Molecular Formula: F₇Ta^{2(−)}

Molecular Weight: 313.937

Accurate Mass: 313.936813

Percentage Composition: F 42.36%; Ta 57.64%

>>Derivative: Di-Na salt

Synonym(s): Sodium heptafluorotantalate(*V*) (Na₂TaF₇)

CAS Registry Number: 19469-74-0

Molecular Formula: F₇Na₂Ta

Molecular Weight: 359.916

Accurate Mass: 359.916347

Percentage Composition: F 36.95%; Na 12.78%; Ta 50.27%

Source/Synthesis: Synth. from NaF and TaF₅ in aq. HF

Physical Description: Colourless solid

>>Derivative: Di-K salt

Synonym(s): Potassium heptafluorotantalate(*V*) (K₂TaF₇)

CAS Registry Number: 16924-00-8

Molecular Formula: F₇K₂Ta

Molecular Weight: 392.133

Accurate Mass: 391.864227

Percentage Composition: F 33.91%; K 19.94%; Ta 46.14%

Source/Synthesis: Synth. from a melt of KF and TaF₅

Physical Description: Colourless cryst.

Melting Point: Mp 730°

Aldrich: 33665-3

>>Derivative: Ba salt

Synonym(s): Barium heptafluorotantalate(*V*) (BaTaF₇)

CAS Registry Number: 104979-57-9

Molecular Formula: BaF₇Ta

Molecular Weight: 451.264

Accurate Mass: 451.842045

Percentage Composition: Ba 30.43%; F 29.47%; Ta 40.10%

Source/Synthesis: Synth. from Ta₂O₅, BaF₂ and [NH₄]HF₂

Physical Description: Colourless solid

>>Derivative: Di-NH₄ salt

Synonym(s): Ammonium heptafluorotantalate(*V*)

CAS Registry Number: 12022-02-5

Use/Importance: Commercially available

Aldrich: 33252-6

References:

Fordyce, J.S. *et al.*, *J. Chem. Phys.*, 1965, **44**, 1166, (*synth from melts*)

Griffiths, J.E. *et al.*, *Spectrochim. Acta A*, 1975, **31**, 1207, (*Raman*)

English, R.B. *et al.*, *J. Phys. C: Solid State Phys.*, 1983, **16**, 829, (*cryst struct, ir, Raman, nmr, K salt*)

Tsikaeva, D.V. *et al.*, *Koord. Khim.*, 1986, **12**, 929; *CA*, **105**, 182742k, (*synth, Ba salt*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, PLH000