



>>Entry Name: Diammonium arsenate, 9CI, 8CI

Synonym(s): Diammonium hydrogen orthoarsenate. Ammonium arsenate ((NH₄)₂HAsO₄)

CAS Registry Number: 7784-44-3

(NH₄)₂HAsO₄

Molecular Formula: AsH₉N₂O₄

Molecular Weight: 176.004

Accurate Mass: 175.977827

Percentage Composition: As 42.57%; H 5.15%; N 15.92%; O 36.36%

General Statement: Monoclinic. Cations and anions held by H-bonding. Mean: As-O 169.5 pm, OAsO 109.4°

Source/Synthesis: From As₂O₅ + NH₃(l)

Physical Description: Plate-like colourless cryst. (prisms)

Other Data: Antiferroelectric

References:

Gmelin Handbook Inorg. Chem., Syst. No. 23, 1936, 445, (rev, bibl)

Khan, A.A. *et al.*, *Acta Cryst. B*, 1970, **26**, 1889, (synth, cryst struct)

Milia, F. *et al.*, *J. Chem. Phys.*, 1977, **66**, 1703, (nqr)

Milia, F. *et al.*, *Phys. Status Solidi A*, 1977, **42**, 315, (pmr)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, DCG800