



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

Synonym(s): Disodium hydrogen arsenate. Sodium arsenate (Na_2HAsO_4)

CAS Registry Number: 7778-43-0

Related CAS Registry Numbers(s): 7631-89-2 13510-46-8

Type of Compound Code(s): XA0970 XA6220

Na_2HAsO_4

Molecular Formula: AsHNa_2O_4

Molecular Weight: 185.907

Accurate Mass: 185.888613

Percentage Composition: As 40.30%; H 0.54%; Na 24.73%; O 34.42%

Use/Importance: Commercially available. ^{74}As labelled compd. used as radioactive agent. (*Sodium Arsenate As 74*, USAN). Wood preservative, herbicide. Formerly used in the treatment of chronic skin diseases, in parasitic diseases of the blood, and in some forms of anaemia

Physical Description: White solid

Solubility: Sol. H_2O (10.1 g per 100 cm^3 at 5°)

Other Data: Yields Tetrasodium diarsenate [HTH28-W](#) at *ca.* 195°

Hazard & Toxicity: MEL: long-term 0.1 mg m^{-3} (as As). Arsenic compounds are human carcinogens (IARC Group 1) and eye, skin and mucous membrane irritants. Occup. exposure can cause arsenical dermatoses and epidermal carcinoma. Other target organs incl. liver, bone marrow, central and peripheral nervous systems, lungs and cardiovascular system. Exp. teratogen

>>Derivative: Dihydrate

Physical Description: Lozenge-shaped, colourless cryst.

>>Derivative: Pentahydrate

CAS Registry Number: 20670-84-2

Source/Synthesis: Formed by melting heptahydrate at 60°

Physical Description: Colourless square plates

Melting Point: Mp 67°

Other Data: At 66-99° dehydrates further

>>Derivative: Heptahydrate

CAS Registry Number: 10048-95-0

Source/Synthesis: Formed by cryst. at >8°

Use/Importance: Commercially available

Physical Description: Prisms

Melting Point: Mp 40°

Solubility: V. sol. H_2O (5.5 g per 100 cm^3 at 0°); spar. sol. EtOH

Other Data: Dehydrates at 105° or at 30° *in vacuo*. Monoclinic. Layer struct. in which the two crystallographically independent Na atoms are each coordinated by six O atoms (of H_2O molecules); the octahedra sharing terminal edges. The AsO_4 tetrahedra (AsO 1.66-174 pm) lie between the layers, and are linked by H-bonds between arsenate and water molecules

Aldrich: 40303-2

Fluka: 71625

Sigma: S9663

>>Derivative: Octahydrate

CAS Registry Number: 74193-27-4

Physical Description: Irregular granules: sometimes prisms

>>Derivative: Dodecahydrate

Source/Synthesis: Formed by low temp. crystn.

Physical Description: Prisms

Melting Point: Mp 22-23° (20°)

Other Data: Monoclinic

References: