



>>Entry Name: Arsenic iodide (AsI₃), 8Cl

Synonym(s): Arsenous triiodide, 9Cl. Triiodoarsine. Triiodoarsenic(III)

CAS Registry Number: 7784-45-4

AsI₃

Molecular Formula: AsI₃

Molecular Weight: 455.635

Accurate Mass: 455.635013

Percentage Composition: As 16.44%; I 83.56%

General Statement: Possibly dimorphic. Rhombohedral, hcp struct. with interatomic distance: As–I 259.1 pm; angle IAsI 99.7°

Source/Synthesis: Synth. from As + I₂, or from As₂O₃ + HCl + HI

Use/Importance: Commercially available

Physical Description: Lustrous red or orange-red leaves or platelets (CS₂ or Et₂O); dec. in air → As₂O₃ + I₂

Melting Point: Mp 146° (142°)

Boiling Point: Bp 403°

Solubility: Sol. H₂O, Et₂O, CS₂, xylene, dioxan; spar. sol. conc. HCl

Other Data: $\Delta H_f^\circ(\text{g})$ 29 kJ mol^{−1}, −58.2 kJ mol^{−1}

Hazard & Toxicity: Poison

Aldrich: 40114-5

Sigma: A2067

References:

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