



>>Entry Name: Iodic acid (HIO₃), 11Cl, 10Cl, 9Cl

CAS Registry Number: 7782-68-5

Related CAS Registry Numbers(s): 15454-31-6

HOIO₂

Molecular Formula: HIO₃

Molecular Weight: 175.911

Accurate Mass: 175.897043

Percentage Composition: H 0.57%; I 72.14%; O 27.29%

Source/Synthesis: Formed from I₂ + HNO₃

Use/Importance: Commercially available strong electrolyte

Biological Use/Importance: Antiseptic, astringent

Physical Description: Colourless cryst. Partially dehydrates at 70° giving finally I₂O₅. Darkens on exposure to light

Melting Point: Mp 110 dec.°

Solubility: Insol. Et₂O, CHCl₃, EtOH; v. sol H₂O, HNO₃, EtOH aq.

Density: d⁰ 4.629

pKa Value: pK_a 0.8 (25°)

Hazard & Toxicity: Irritant. Strong oxidant. Dangerous reaction with some non-metals

Aldrich: 37990-5

Fluka: 58062

Sigma: I4763

>>Derivative: Deutero compd.

Synonym(s): Iodic acid-*d*. Deuteroiodic acid

CAS Registry Number: 15117-81-4

Molecular Formula: DIO₃

Molecular Weight: 176.917

Physical Description: White cryst.

pKa Value: pK_a 1.15 (25°)

>>Derivative: K salt

>>Derivative: NH₄ salt

>>Derivative: Me ester

Synonym(s): Methyl iodate

CAS Registry Number: 89706-07-0

Molecular Formula: CH₃IO₃

Molecular Weight: 189.937

Accurate Mass: 189.912693

Percentage Composition: C 6.32%; H 1.59%; I 66.81%; O 25.27%

Source/Synthesis: Formed from IF₅ + (Me₃Si)₂O in CH₂Cl₂

Physical Description: White solid

Solubility: Insol. solvs. with which it does not react

Other Data: Dec. at 80°

References:

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