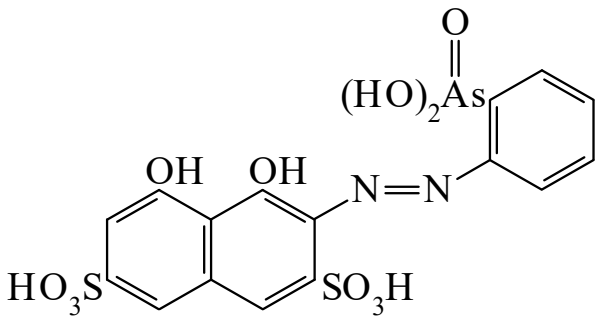
>>**Entry Name: Arsenazo I**

Synonym(s): 3-[(2-Arsonophenyl)azo]-4,5-dihydroxy-2,7-naphthalenedisulfonic acid, 9Cl. *o*-(1,8-Dihydroxy-3,6-disulfo-2-naphthylazo)benzenearsonic acid. 2-(2-Arsonophenylazo)chromotropic acid. Neothovin. Neothoron. Uranon



CAS Registry Number: 520-10-5

Molecular Formula: $C_{16}H_{13}AsN_2O_{11}S_2$
Molecular Weight: 548.339
Accurate Mass: 547.917672
Percentage Composition: C 35.05%; H 2.39%; As 13.66%; N 5.11%; O 32.10%; S 11.70%
pKa Value: pK_{a1} 0.6; pK_{a2} 0.8; pK_{a3} 3.5; pK_{a4} 8.2; pK_{a5} 11.6

Sigma: A9050

>>**Derivative:** Tri-Na salt

CAS Registry Number: 3547-38-4

Use/Importance: Used as 0.1% or 0.5% aq. soln. in photometric detn. of Th, Zr, Nb, Ta (pH 1-2); Sc, rare earth elements, U(*VI*) (pH 6-7); Be, Ca, Sr (pH 9-12); metal indicator in chelatometric titrn. of rare-earth elements, Th, Ca
Physical Description: Red cryst. powder
Melting Point: Mp 300°
Solubility: Sol. H_2O; insol. most org. solvs.
Fluka: 72160

References:

Fritz, J.S. *et al.*, *Anal. Chem.*, 1957, **29**, 158, *(ind)*
Holcomb, H.P. *et al.*, *Anal. Chem.*, 1960, **32**, 612, *(detn, U)*
Onishi, H. *et al.*, *Anal. Chim. Acta*, 1962, **26**, 528, *(detn, Th)*
Hiiro, K. *et al.*, *Anal. Chim. Acta*, 1967, **37**, 209, *(detn, rare earth elements)*
Nakashima, S. *et al.*, *Bull. Chem. Soc. Jpn.*, 1968, **41**, 2632, *(props)*
Budesínský, B., *Talanta*, 1969, **16**, 1277, *(uv, props)*
Pilipenko, A.T. *et al.*, *Zh. Neorg. Khim.*, 1971, **16**, 2124; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1971, **16**, 1134, *(ir)*
Nikoliў, V.N. *et al.*, *Zh. Anal. Khim.*, 1973, **28**, 205; *J. Anal. Chem. USSR (Engl. Transl.)*, 1973, **28**, 175, *(uv, props)*
Cheng, K.L. *et al.*, *Handbook of Organic Analytical Reagents*, CRC Press, Boca Raton, 1982, 159, *(use)*