



>>Entry Name: Yttrium(III) trifluoromethanesulfonate

Synonym(s): Yttrium triflate

CAS Registry Number: 52093-30-8

Related CAS Registry Numbers(s): 34629-26-0

$\text{Y}(\text{OSO}_2\text{CF}_3)_3$

Molecular Formula: $\text{C}_3\text{F}_9\text{O}_9\text{S}_3\text{Y}$

Molecular Weight: 536.117

Accurate Mass: 535.761921

Percentage Composition: C 6.72%; F 31.89%; O 26.86%; S 17.94%; Y 16.58%

Other Data: Affords YF_3 on pyrolysis

Aldrich: 42574-5

Fluka: 95840

>>Derivative: Nonahydrate

CAS Registry Number: 85920-60-1

Molecular Formula: $\text{C}_3\text{H}_{18}\text{F}_9\text{O}_{18}\text{S}_3\text{Y}$

Molecular Weight: 698.254

Accurate Mass: 697.857006

Percentage Composition: C 5.16%; H 2.60%; F 24.49%; O 41.24%; S 13.78%; Y 12.73%

Use/Importance: Used in template + other synth.

Physical Description: Colourless cryst.

Solubility: Sol. H_2O , EtOH, MeCN

Other Data: Contains $\text{Y}(\text{OH}_2)_9^{3(+)}$ ions which are tricapped trigonal prismatic

References:

Roberts, J.E. *et al.*, *Thermochim. Acta*, 1978, **25**, 233, (struct, tga)

Harrowfield, J.Mc.B. *et al.*, *Aust. J. Chem.*, 1983, **36**, 483, (synth, cryst struct)

Vincentini, G. *et al.*, *J. Less-Common Met.*, 1983, **94**, 285, (struct, adducts)

Forsberg, J.H. *et al.*, *J.O.C.*, 1987, **52**, 1017, (use)

Smith, P.H. *et al.*, *Inorg. Chem.*, 1988, **27**, 4154, (use)