



**CAS Registry Number:** 13494-98-9

**Molecular Formula:**  $\text{H}_{12}\text{N}_3\text{O}_{15}\text{Y}$

**Molecular Weight:** 383.012

**Percentage Composition:** H 3.16%; N 10.97%; O 62.66%; Y 23.21%

**Physical Description:** Deliquescent colourless cryst.

**Solubility:** V. sol.  $\text{H}_2\text{O}$ ; sol. EtOH,  $\text{Me}_2\text{CO}$

**Other Data:** 10-Coord. Y; contains  $\text{Y}(\text{NO}_3)_3 \cdot 4\text{H}_2\text{O}$  units. Isomorphous with Gd, Pr, Nd analogues. Loses 3  $\text{H}_2\text{O}$  at 100°

**Aldrich:** 23795-7

>>**Derivative:** Trihydrate, bis-bipy complex

**Synonym(s):** Triaquatris(nitrato)yttrium bis-bipyridine

**CAS Registry Number:** 84240-13-1

**Molecular Formula:**  $\text{C}_{20}\text{H}_{22}\text{N}_7\text{O}_{12}\text{Y}$

**Molecular Weight:** 641.339

**Accurate Mass:** 641.038497

**Percentage Composition:** C 37.46%; H 3.46%; N 15.29%; O 29.94%; Y 13.86%

**Other Data:** Contains 9-coord.  $\text{Y}(\text{NO}_3)_3(\text{H}_2\text{O})_3$  molecules with bipy unbound. Analogues known for Nd, Sm, Eu, Gd, Th, Dy, Ho

>>**Derivative:** Trihydrate, 18-crown-6 complex (1:1)

**Molecular Formula:**  $\text{C}_{12}\text{H}_{30}\text{N}_3\text{O}_{18}\text{Y}$

**Molecular Weight:** 593.284

**Accurate Mass:** 593.058291

**Percentage Composition:** C 24.29%; H 5.10%; N 7.08%; O 48.54%; Y 14.99%

**Source/Synthesis:** Synth. from  $\text{Y}(\text{NO}_3)_3 \cdot x\text{H}_2\text{O}$  and 18-crown.6 in MeCN/MeOH

**Physical Description:** Colourless cryst.

**Other Data:** Contains 9-coord. Y with  $\text{Y}(\text{NO}_3)_3(\text{H}_2\text{O})_3$  molecules H-bonded to crown ether. Similar compds. formed by M = Y, Eu, Tb-Lu

#### References:

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Eriksson, E., *Acta Chem. Scand., Ser. A*, 1982, **36**, 186-188, (*pentahydrate, synth, cryst struct*)  
Weakley, T.J.R. *et al.*, *Inorg. Chim. Acta*, 1982, **63**, 161, (*cryst struct*)  
Radivojević, P. *et al.*, *Croat. Chem. Acta*, 1984, **57**, 451, (*dta*)  
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Ribár, B. *et al.*, *Acta Cryst. C*, 1988, **44**, 595; 1990, **46**, 525-527, (*monohydrate, synth, cryst struct*)  
Merwin, L.H. *et al.*, *J. Magn. Reson.*, 1990, **88**, 167-171, (*hexahydrate, mas Y-89 nmr*)  
Miyamoto, H. *et al.*, *Kidorui*, 1991, **18**, 78-79; *CA*, **116**, 160134p, (*monohydrate, thermodyn*)  
Rogers, R.D. *et al.*, *J. Chem. Crystallogr.*, 1994, **24**, 321, (*18-crown-6 complex, synth, cryst struct*)  
Bouchet, R. *et al.*, *Thermochim. Acta*, 1994, **241**, 229-246, (*pentahydrate, thermodyn*)