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>>Entry Name: Yttrium(*III*) carbonate

**CAS Registry Number:** 556-28-5

**Related CAS Registry Numbers(s):** 5970-44-5 19512-16-4 36833-38-2

$\text{Y}_2(\text{CO}_3)_3$

**Molecular Formula:**  $\text{C}_3\text{O}_9\text{Y}_2$

**Molecular Weight:** 357.839

**Accurate Mass:** 357.765933

**Percentage Composition:** C 10.07%; O 40.24%; Y 49.69%

**Use/Importance:** Used in synth. of  $\text{Y}_2\text{O}_3$  etc. Commercially available as hydrate

**Physical Description:** Colourless solid

>>Derivative: Hydrate

**CAS Registry Number:** 38245-39-5

**Physical Description:** Colourless solid

**Solubility:** Insol.  $\text{H}_2\text{O}$

**Other Data:** Compd. has composition  $\text{Y}_2(\text{CO}_3)_3 \cdot 2.35\text{H}_2\text{O}$  as cryst. from soln.

>>Derivative: Mineral

**Synonym(s):** Tengerite

**CAS Registry Number:** 12199-46-1

**Molecular Formula:**  $\text{C}_4\text{H}_9\text{CaO}_{18}\text{Y}_3$

**Molecular Weight:** 651.9

**Percentage Composition:** C 7.37%; H 1.39%; Ca 6.15%; O 44.18%; Y 40.91%

**Source/Synthesis:** Occurs in Sweden, Japan, Quebec and Texas

**Physical Description:** White powdery cryst.

**Other Data:** Formulated as  $\text{CaY}_3(\text{CO}_3)_4(\text{OH})_3 \cdot 3\text{H}_2\text{O}$

**References:**

Head, E.L., *Inorg. Nucl. Chem. Lett.*, 1966, **2**, 33, (*synth*)

Goldsmith, J.A. *et al.*, *Spectrochim. Acta A*, 1967, **23**, 1909, (*ir*)

Nagashima, K. *et al.*, *Bull. Chem. Soc. Jpn.*, 1972, **45**, 2476; 1973, **46**, 152, (*synth, ir, tga, dta, struct*)

*Japan. Pat.*, 1978, 78 95 900; *CA*, **90**, 57337, (*use*)

Tarela, J.A.K. *et al.*, *J. Cryst. Growth*, 1980, **49**, 761, (*synth, ir, struct*)

Firshing, F.H. *et al.*, *J. Chem. Eng. Data*, 1986, **31**, 40, (*soly*)