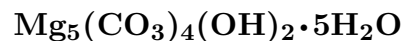


## Dypingite



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**Crystal Data:** Monoclinic (?). *Point Group:* n.d. As reniform, botryoidal, oolitic, or globular aggregates of radially-divergent acicular to flaky crystals, to 0.5 mm.

**Physical Properties:** Hardness = n.d.  $D(\text{meas.}) = \text{n.d.}$   $D(\text{calc.}) = 2.15$  Fluoresces pale blue under SW and LW UV; some material also displays green phosphorescence.

**Optical Properties:** Semitransparent. *Color:* Snow-white to gray; colorless in transmitted light. *Luster:* Pearly.

*Optical Class:* Biaxial (+) or (-). *Orientation:* Elongated  $\parallel$  Y.  $\alpha = 1.508\text{--}1.515$   
 $\beta = 1.510\text{--}1.521$   $\gamma = 1.516\text{--}1.522$   $2V(\text{meas.}) = \text{n.d.}$   $2V(\text{calc.}) = 44.5^\circ$

**Cell Data:** *Space Group:* n.d.  $Z = \text{n.d.}$

**X-ray Powder Pattern:** Dypingdal, Norway.

10.6 (100), 5.86 (90), 6.34 (60), 2.53 (50), 2.17 (50), 3.16 (40), 3.07 (40)

### Chemistry:

	(1)	(2)	(3)
CO <sub>2</sub>	36.3	28.93	36.25
SiO <sub>2</sub>		5.01	
Fe <sub>2</sub> O <sub>3</sub>	0.2	0.21	
MgO	38.3	38.38	41.49
CaO	< 0.2	0.12	
H <sub>2</sub> O <sup>+</sup>		20.90	
H <sub>2</sub> O <sup>-</sup>		6.39	
H <sub>2</sub> O	22.7		22.26
insol.	2.0		
Total	99.5	99.94	100.00

(1) Dypingdal, Norway; total Fe by spectrophotometry, here given as Fe<sub>2</sub>O<sub>3</sub>, Mg by EDTA, Ca by AA, (OH)<sup>1-</sup>, H<sub>2</sub>O, and (CO<sub>3</sub>)<sup>2-</sup> confirmed by IR; corresponds to Mg<sub>4.60</sub>(CO<sub>3</sub>)<sub>4.00</sub>(OH)<sub>1.20</sub>•4.92H<sub>2</sub>O. (2) Yoshikawa, Japan; after deduction of SiO<sub>2</sub> due to chrysotile impurity, corresponds to Mg<sub>5.09</sub>(CO<sub>3</sub>)<sub>4.04</sub>(OH)<sub>2.10</sub>•7.76H<sub>2</sub>O. (3) Mg<sub>5</sub>(CO<sub>3</sub>)<sub>4</sub>(OH)<sub>2</sub>•5H<sub>2</sub>O.

**Occurrence:** Coats fractures and exposed surfaces in serpentine; may be of recent formation on dump materials.

**Association:** Hydrotalcite, magnesite (Norway); brucite, brugnatellite, pyroaurite, artinite, hydromagnesite, nesquehonite (Yoshikawa, Japan).

**Distribution:** From Dypingdal, near Snarum, Modum, Norway. At Hagdale, Unst, Shetland Islands, Scotland. From Kraubath, Styria, Austria. In Japan, at Yoshikawa, Aichi Prefecture; Mashiki, Kumamoto Prefecture; and Naradani, Gifu Prefecture. In the Vestford Hills, east Antarctica. From the Rapid Creek–Big Fish River area, Yukon Territory, Canada. In the USA, at Sterling Hill, Ogdensburg, Sussex Co., New Jersey; from Robinson Gulch, Jefferson Co., Colorado; found at the Akers prospect, about six km south of Idria, San Benito Co., California.

**Name:** For the first-noted occurrence at Dypingdal, Norway.

**Type Material:** Mineralogical-Geological Museum, University of Oslo, Oslo, Norway, 21886, 21887.

**References:** (1) Raade, G. (1970) Dypingite, a new hydrous basic carbonate of magnesium, from Norway. *Amer. Mineral.*, 55, 1457–1465. (2) Dunn, P.J. (1979) Contributions to the mineralogy of Franklin and Sterling Hill, New Jersey. *Mineral. Record*, 10, 160–165. (3) Suzuki, J. and M. Ito (1973) A new magnesium carbonate hydrate mineral, Mg<sub>5</sub>(CO<sub>3</sub>)<sub>4</sub>(OH)<sub>2</sub>•8H<sub>2</sub>O, from Yoshikawa, Aichi Prefecture, Japan. *J. Japan. Assoc. Mineral. Petrol. Econ. Geol.* 68, 353–361. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of Mineral Data Publishing.