Canavesite $Mg_2(HBO_3)(CO_3)\cdot 5H_2O$

Crystal Data: Monoclinic, pseudohexagonal. *Point Group:* n.d. As fibrous [010], flattened pseudohexagonal crystals, to 3 mm, typically in rosettelike aggregates.

Physical Properties: *Cleavage:* On {*h*0*l*}, one or more sets. *Tenacity:* Slightly flexible. Hardness = n.d. D(meas.) = ∼1.8 D(calc.) = 1.790

Optical Properties: Transparent. *Color:* Colorless to milky white. *Luster:* Vitreous, silky in aggregates.
Optical Class: Biaxial (+). *Orientation:* $Z = b$. *Dispersion:* Very weak. $\alpha = 1.485(4)$ $\beta = 1.494(4)$ $\gamma = 1.505(2)$ 2V(meas.) = Very large.

Cell Data: *Space Group:* n.d. $a = 23.49(2)$ $b = 6.164(6)$ $c = 21.91(2)$ $\beta = 114.91(9)°$ Z = 12

X-ray Powder Pattern: Brosso mine, Italy.
9.54 (100), 8.12 (40), 4.56 (21), 3.110 (19), 7.80 (18), 7.53 (14), 2.233 (14)

Chemistry:

	(1)	(2)
CO_2	18.57	17.02
B_2O_3	12.70	13.47
MgO	31.60	31.18
H_2O	37.44	38.33
Total	100.31	100.00

(1) Brosso mine, Italy; average of two analyses, CO_2 and H_2O by elemental analyzer; corresponding to $Mg_{2.03}(HBO_3)_{0.94}(CO_3)_{1.09}\cdot 4.91H_2O$. (2) $Mg_2(HBO_3)(CO_3)\cdot 5H_2O$.

Occurrence: A rare secondary mineral on tunnel surfaces in an abandoned mine in weathering ludwigite–magnetite skarn.

Association: Ludwigite, magnetite.

Distribution: From the Brosso mine, northwest of Ivrea, Piedmont, Italy.

Name: For the Canavese district, in which the mine that produced the first specimens is located.

Type Material: Municipal Natural History Museum, Milan, 17349, M30079, M30099, M300100, M300102; National Museum of Natural History, Washington, D.C., USA, 148483–148485; University of Florence, Florence; University of Torino, Torino, Italy; National School of Mines, Paris, France; The Natural History Museum, London, England, 1981,468.

References: (1) Ferraris, G., M. Franchini-Angela, and P. Orlandi (1978) Canavesite, a new carboborate mineral from Brosso, Italy. Can. Mineral., 16, 69–73. (2) (1979) Amer. Mineral., 64, 652 (abs. ref. 1).