Falcondoite $(Ni, Mg)_4Si_6O_{15}(OH)_2 \cdot 6H_2O$

Crystal Data: Orthorhombic. *Point Group:* n.d. As slightly schistose, friable masses of minute fibrous particles, less than 10 μm in length.

Physical Properties: *Tenacity:* Friable. Hardness = 2–3 D(meas.) = 1.9(1) D(calc.) = 2.54

Optical Properties: Transparent to translucent. *Color:* Whitish green. *Optical Class:* Biaxial. $n = < 1.55$; birefringence ~0.01–0.02. 2V(meas.) = n.d.

Cell Data: *Space Group:* n.d. $a = 13.5$ $b = 26.9$ $c = 5.24$ Z = 4

X-ray Powder Pattern: Near Bonao, Dominican Republic.
12.2 (100), 2.58 (35), 3.33 (30), 2.62 (30), 2.44 (30), 3.19 (25), 2.39 (20)

Chemistry:

	(1)	(2)
SiO_2	45.93	49.2
Al_2O_3	0.39	
Cr_2O_3	0.45	
FeO	1.99	< 0.03
NiO	26.7	23.6
MgO	8.46	9.26
LOI	15.0	[18.0]
Total	98.92	[100.0]

(1) Near Bonao, Dominican Republic; corresponds to $(Ni_{2.66}Mg_{1.55}Fe_{0.22}Al_{0.06}Cr_{0.04})_{\Sigma=4.53}Si_{5.71}O_{16} \cdot 6.22H_2O$. (2) Do.; average of five analyses by electron microprobe and other methods; loss on ignition by difference, taken as H_2O; corresponds to $(Ni_{2.32}Mg_{1.68})_{\Sigma=4.00}Si_6O_{16} \cdot 7.30H_2O$.

Occurrence: In garnierite veins which cut an extensive laterite, associated with a serpentinized harzburgite massif (near Bonao, Dominican Republic).

Association: Sepiolite, talc, quartz (near Bonao, Dominican Republic).

Distribution: From near Bonao, Dominican Republic. In the USA, from near Glamis, Imperial Co., California.

Name: For the familiar name "Falcondo" of the company operating the mine in the Dominican Republic where the mineral was first found.

Type Material: Royal Ontario Museum, Toronto, Canada, M34324.

References: (1) Springer, G. (1976) Falcondoite, nickel analogue of sepiolite. Can. Mineral., 14, 407–409.