

**Crystal Data:** Cubic. *Point Group:* n.d. As euhedral grains up to 7 x 4  $\mu\text{m}$  in diameter, but typically below 2  $\mu\text{m}$ , many showing the cube and octahedron as common forms.

**Physical Properties:** Hardness = 4.5 VHN = 255 D(meas.) = n.d. D(calc.) = 8.32 Highly magnetic.

**Optical Properties:** Opaque. *Color:* In polished section, white. *Luster:* Metallic.

R: n.d.

**Cell Data:** *Space Group:* n.d.  $a = 2.86$   $Z = [1]$

**X-ray Powder Pattern:** n.d.

<b>Chemistry:</b>	(1)	(2)	(3)
Co	48.8	50.2	51.34
Fe	49.8	49.7	48.66
Ni	0.5	0.4	
Total	99.1	100.3	100.00

(1) Wairau Valley, New Zealand; by electron microprobe. (2) Muskox intrusion, Canada; by electron microprobe. (3) CoFe.

**Occurrence:** In a dominantly lizardite serpentine at the western contact of an ultramafic intrusion; thought to have formed under low-sulfur reducing conditions during the serpentinization process (Wairau Valley, New Zealand).

**Association:** Chromite, magnetite, awaruite, copper (Wairau Valley, New Zealand).

**Distribution:** From the Red Hills, Wairau Valley, Marlborough district, South Island, New Zealand. In the Muskox intrusion, Northwest Territories, Canada.

**Name:** For the Wairau Valley locality in New Zealand.

**Type Material:** Geological Survey of New Zealand, Lower Hutt, New Zealand, P25574; Cambridge University, Cambridge, England; National Museum of Natural History, Washington, D.C., USA, 137192.

**References:** (1) Challis, G.A. and J.V.P. Long (1964) Wairauite – a new cobalt–iron mineral. *Mineral. Mag.*, 33, 942–948. (2) (1965) *Amer. Mineral.*, 50, 520 (abs. ref. 1).