

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As massive aggregates of tabular grains to 2 mm.

Physical Properties: *Cleavage:* Perfect on {201}, good on {021} and {210}. *Tenacity:* Brittle. *Fracture:* n.d. *Hardness* = n.d. *D(meas.)* = 3.68(2) *D(calc.)* = 3.737

Optical Properties: Transparent to translucent. *Color:* Pink to light pink. *Streak:* White. *Luster:* Vitreous.

Optical Class: Biaxial (+). $\alpha = 1.725(4)$ $\beta = 1.733(4)$ $\gamma = 1.745(5)$ $2V(\text{meas.}) = 75(10)^\circ$ $2V(\text{calc.}) = 79^\circ$ *Orientation:* $Y \wedge b = 22^\circ$. *Dispersion:* Weak, $r < v$.

Cell Data: *Space Group:* $P\bar{1}$. $a = 6.6980(3)$ $b = 7.6203(3)$ $c = 11.8473(5)$ $\alpha = 105.663(3)^\circ$ $\beta = 92.400(3)^\circ$ $\gamma = 94.309(3)^\circ$ $Z = 2$

X-Ray Diffraction Pattern: Vittinki mines, Isokyrö, Western and Inner Finland Region, Finland. 2.749 (100), 2.935 (95), 2.958 (79), 3.138 (61), 3.332 (42), 2.180 (40), 2.226 (32)

Chemistry:	(1)
MgO	0.52
CaO,	0.93
MnO	51.82
FeO	1.26
ZnO	0.11
SiO ₂	46.48
Total	101.12

(1) Vittinki mines, Isokyrö, Western and Inner Finland Region, Finland; average electron microprobe analysis supplemented by IR spectroscopy; corresponds to Mn_{4.71}Ca_{0.11}Fe_{0.11}Mg_{0.08}Zn_{0.01}Si_{4.99}O₁₅.

Mineral Group: Rhodonite group.

Occurrence: n.d.

Association: Quartz, rhodonite, tephroite, pyroxmangite, Mn oxides.

Distribution: From the Vittinki (Vittinge) mines, Isokyrö, Western and Inner Finland Region, Finland [TL]. Other confirmed localities include the New England Range, New South Wales, Australia; the Ridder Mine (now Leninogorskiy Mine), NW Altai, Kazakhstan; Sultanuizdag, Uzbekistan; Nozhiy Lake, Aginsk district, Zabaikal'sky Krai, Russia; and Tsang-Ping, Hebei, China.

Name: For the *Vittinki* iron mines, Isokyrö, Western and Inner Finland Region, Finland, from where the studied material was collected (Fersman Museum #15061).

Type Material: A.E. Fersman Mineralogical Museum, RAS, Moscow, Russia (15061).

References: (1) Shchipalkina, N.V., I.V. Pekov, N.V. Chukanov, N.V. Zubkova, D.I. Belakovskiy, S.N. Britvin, and N.N. Koshlyakova (2020) Vittinkiite, MnMn₄[Si₅O₁₅], a member of the rhodonite group with a long history: definition as a mineral species. *Mineral. Mag.*, 84, 869-880.

(2) Shchipalkina, N.V., I.V. Pekov, N.V. Chukanov, C. Biagioni, and M. Pasero (2019) Crystal chemistry and nomenclature of rhodonite-group minerals. *Mineral. Mag.*, 83, 829-835.