

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As massive to powdery aggregates to 1 cm.

Physical Properties: *Cleavage:* None. *Fracture:* Uneven. *Tenacity:* Brittle.
Hardness = 5-5.5 D(meas.) = n.d. D(calc.) = 4.82

Optical Properties: Transparent. *Color:* Gray to white. *Streak:* White. *Luster:* Vitreous to oily.
Optical Class: Biaxial (-). $\alpha = 1.755(5)$ $\beta = \text{n.d.}$ $\gamma = 1.760(5)$ 2V(meas.) = n.d.
2V(calc.) = n.d. *Pleochroism:* None.

Cell Data: *Space Group:* $P\bar{1}$. $a = 6.527(6)$ $b = 8.656(9)$ $c = 5.519(5)$ $\alpha = 99.09(8)^\circ$
 $\beta = 104.17(7)^\circ$ $\gamma = 91.48(8)^\circ$ $Z = 1$

X-ray Powder Pattern: Souri Valley, Komono, Mie Prefecture, central Japan.
3.08 (100), 3.54 (38), 3.64 (37), 4.95 (33), 2.68 (32), 2.63 (28), 2.92 (26)

Chemistry:		(1)		(1)
SiO ₂	28.61	Tb ₂ O ₃	0.69	
FeO	2.94	Dy ₂ O ₃	4.87	
MnO	0.35	Ho ₂ O ₃	0.50	
MgO	2.77	Er ₂ O ₃	1.64	
CaO	0.03	Tm ₂ O ₃	0.34	
Y ₂ O ₃	36.02	Yb ₂ O ₃	2.02	
La ₂ O ₃	0.29	Lu ₂ O ₃	0.69	
Ce ₂ O ₃	2.64	ThO ₂	0.24	
Pr ₂ O ₃	0.64	F	4.56	
Nd ₂ O ₃	4.72	<u>-O = F₂</u>	<u>1.92</u>	
Sm ₂ O ₃	2.82	Total	99.91	
Gd ₂ O ₃	4.45			

(1) Souri Valley, Komono, Mie Prefecture, central Japan; average of 16 electron microprobe analyses; corresponding to (Y_{2.71}Nd_{0.24}Dy_{0.22}Gd_{0.21}Ce_{0.14}Sm_{0.14}Yb_{0.09}Er_{0.07}Pr_{0.03}Tb_{0.03}Lu_{0.03}Ho_{0.02}Tm_{0.02}La_{0.01}Ca_{0.01}Th_{0.01}) $\Sigma=3.98$ (Mg_{0.58}Fe_{0.35}Mn_{0.04}) $\Sigma=0.97$ Si_{4.00}O_{13.97}F_{2.03}.

Occurrence: In a block of granitic pegmatite collected from a talus slope.

Association: Quartz, albite, K-feldspar, muscovite, allanite-(Ce), gadolinite-(Y).

Distribution: In the Souri Valley, Komono, Mie Prefecture, central Japan.

Name: As the magnesium analog of *rowlandite*-(Y).

Type Material: National Museum of Nature and Science, Tokyo, Japan (NSM-M43624).

References: (1) Matsubara, S., R. Miyawaki, K. Yokoyama, M. Shigeoka, K. Momma and S. Yamamoto (2014) Magnesiorowlandite-(Y), Y₄(Mg,Fe)(Si₂O₇)₂F₂, a new mineral in a pegmatite at Souri Valley, Komono, Mie Prefecture, central Japan. *Journal of Mineralogical and Petrological Sciences*, 109, 109-117. (2) (2016) *Amer. Mineral.*, 101, 748-750 (abs. ref. 1).