

**Miyahisaite****Crystal Data:** Hexagonal. *Point Group:* 6/m. As irregular grains to 10 μm.**Physical Properties:** *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness* = 5  
D(meas.) = n.d. D(calc.) = 4.511**Optical Properties:** Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous.  
*Optical Class:* n.d.**Cell Data:** *Space Group:* P6<sub>3</sub>/m. *a* = 9.921(2) *c* = 7.469(3) *Z* = 2**X-ray Powder Pattern:** Shimoharai mine, Oita Prefecture, Japan.  
2.981 (100), 1.976 (23), 3.248 (22), 2.865 (21), 1.864 (17), 3.427 (16), 1.874 (16)

<b>Chemistry:</b>	(1)	(2)
CaO	4.69	
SrO	16.51	23.25
BaO	52.05	51.62
P <sub>2</sub> O <sub>5</sub>	24.85	23.89
F	1.99	2.13
Cl	0.06	
-O = Cl+F	0.85	-0.90
H <sub>2</sub> O	[0.09]	-
Total	99.39	100.00

(1) Shimoharai mine, Oita Prefecture, Japan; average of 4 electron microprobe analyses, H<sub>2</sub>O calculated for charge balance; corresponding to (Sr<sub>1.366</sub>Ca<sub>0.717</sub>)<sub>Σ=2.083</sub>Ba<sub>2.991</sub>P<sub>3.002</sub>O<sub>12</sub> (F<sub>0.898</sub>OH<sub>0.088</sub>Cl<sub>0.014</sub>)<sub>Σ=1</sub>. (2) Sr<sub>2</sub>Ba<sub>3</sub>(PO<sub>4</sub>)<sub>3</sub>F.

**Mineral Group:** Hedyphane subgroup of the apatite group.**Occurrence:** In a metamorphosed (low grade) bedded Mn and chert deposit.**Association:** Fluorapatite, namansilite, quartz.**Distribution:** From the Shimoharai mine, Yayoi Udoki area, Saiki City, Oita Prefecture, Japan.**Name:** Honors Michitoshi Miyahisa (1928-1983) for his contribution to the study of ore deposits on Kyushu.**Type Material:** National Museum of Nature and Science, Tokyo, Japan (NSMM-41299).**References:** (1) Nishio-Hamane, D., Y. Ogoshi, and T. Minakawa (2012) Miyahisaite, (Sr,Ca)<sub>2</sub>Ba<sub>3</sub>(PO<sub>4</sub>)<sub>3</sub>F, a new mineral of the hedyphane group in the apatite supergroup from the Shimoharai mine, Oita Prefecture, Japan. *Journal of Mineralogical and Petrological Sciences*, 107, 121-126. (2) (2014) *Amer. Mineral.*, 99, 1516-1517 (abs. ref. 1).