

Yaroslavite**Ca₃Al₂F₁₀(OH)₂•H₂O**

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Crystal Data: Orthorhombic. *Point Group:* n.d. As compact oval to spherical growths with radiating fibrous structure, to 3 mm.

Physical Properties: *Cleavage:* One direction, pinacoidal. *Fracture:* Irregular. Hardness = n.d. VHN = 264 D(meas.) = 3.09 D(calc.) = 3.15 Pale violet fluorescence under UV.

Optical Properties: Transparent. *Color:* White. *Luster:* Vitreous. *Optical Class:* Biaxial (+). *Orientation:* Elongation negative. $\alpha = 1.413$ $\beta = \text{n.d.}$ $\gamma = 1.423$ $2V(\text{meas.}) = 74^\circ$

Cell Data: *Space Group:* n.d. $a = 8.74(1)$ $b = 5.53(3)$ $c = 4.51(2)$ $Z = [1]$

X-ray Powder Pattern: Yaroslavsk deposit, Russia. 3.445 (10), 2.222 (8), 3.653 (7), 4.50 (6), 1.835 (6), 1.454 (6), 2.827 (5)

Chemistry:	(1)	(2)
Al ₂ O ₃	21.55	24.50
MgO	0.24	
CaO	42.77	40.42
F	46.90	45.64
H ₂ O ⁺	8.97	8.66
-O = F ₂	19.70	19.22
Total	[100.73]	100.00

(1) Yaroslavsk deposit, Russia; original total given as 100.77%; corresponds to Ca_{3.09}Al_{1.76}F_{10.08}(OH)₂•H₂O. (2) Ca₃Al₂F₁₀(OH)₂•H₂O.

Occurrence: From the oxidized zone of a banded sellaite-tourmaline-fluorite deposit.

Association: Sellaite, gearsutite, chukhrovite-(Ce).

Distribution: From Russia, in the Yaroslavsk tin deposit, 50 km south of Lake Khanka, Primorskiy Territory, Siberia.

Name: For its occurrence in the Yaroslavsk deposit, Russia.

Type Material: Vernadsky Geological Museum, Moscow, Russia.

References: (1) Novikova, M.I., G.A. Sidorenko, and M.N. Kuznetsova (1966) Yaroslavite – a new calcium aluminum fluoride. Zap. Vses. Mineral. Obshch., 95, 39–44 (in Russian). (2) (1966) Amer. Mineral., 51, 1546–1547 (abs. ref. 1).