

Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$. As thin elongate crystals to 50 μm in isolated oval polyminerale inclusions to 2 cm in rankinite. Also in angular aggregates interstitial to grains in paralava.

Physical Properties: *Cleavage:* Good on {0001}. *Tenacity:* n.d. *Fracture:* Irregular. Hardness = n.d. D(meas.) = n.d. D(calc.) = 5.044

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Uniaxial. *n*(calc.) = 1.945 *Pleochroism:* None.

Cell Data: *Space Group:* $R\bar{3} m$. *a* = 5.784(1) *c* = 21.132(1) *Z* = 3

X-ray Powder Pattern: Calculated pattern from synthetic analog.

3.2434 (100), 2.8906 (79), 2.1580 (48), 1.7292 (26), 1.9591 (25), 2.2652 (19), 1.4143 (16)

Chemistry:	(1)	(2)
MoO ₃	n.d.	2.15
CrO ₃	n.d.	0.29
SO ₃	1.17	2.06
V ₂ O ₅	26.80	16.42
P ₂ O ₅	0.59	7.92
TiO ₂	n.d.	0.30
SiO ₂	0.04	0.21
Fe ₂ O ₃	0.04	n.d.
Al ₂ O ₃	0.33	0.42
CaO	0.76	0.35
SrO	0.33	n.d.
BaO	69.10	67.56
K ₂ O	0.70	2.26
Na ₂ O	0.16	0.41
Total	100.03	100.35

(1) Gurim Anticline, near Arad, Negev Desert, Israel; average of 18 electron microprobe analyses supplemented by Raman spectroscopy; corresponds to (Ba_{2.794}K_{0.092}Ca_{0.084}Na_{0.033}Sr_{0.017}) Σ =3.020 (V⁵⁺_{1.827}S⁶⁺_{0.091}P⁵⁺_{0.05}Al_{0.040}Si_{0.005}Fe³⁺_{0.05}) Σ =2.017O₈. (2) Zuk Tamrur, Israel; electron microprobe analyses supplemented by Raman spectroscopy; corresponds to (Ba_{2.577}K_{0.281}Ca_{0.036}Na_{0.077}) Σ =2.971 (V⁵⁺_{1.056}S⁶⁺_{0.150}P⁵⁺_{0.653}Al_{0.048}Si_{0.020}Cr⁶⁺_{0.022}Mo_{0.087}Ti⁴⁺_{0.022}) Σ =2.058O₈ or stated differently Ba₃(PO₄)₂ $\approx$ 32% gurimite, Ba₃(VO₄)₂ $\approx$ 53%, K₂Ba(SO₄)₂ $\approx$ 8%, K₂Ba(MoO₄)₂ $\approx$ 5%.

Occurrence: A common accessory mineral in thin veins of paralava cutting gehlenite-flamite hornfels and formed at >1100° C from the relatively fast crystallization of residual melt.

Association: Hexacelsian, rankinite, gehlenite, pseudowollastonite, schorlomite, fluorapatite-fluorellestadite, minerals of the zadovite-aradite series, walstromite.

Distribution: Found at the Gurim Anticline, near Arad, and at Zuk Tamrur, Negev Desert, Israel.

Name: After the geographical region of *Gurim*, Israel, its type locality.

Type Material: Museum of Natural History, Bern, Switzerland (NMBE 42103).

References: (1) Galuskina, I.O., E.V. Galuskin, Ye. Vanek, K. Prusik, M. Stasiak, P. Dzierzanowski, and M. Murashko (2017) Gurimite, Ba₃(VO₄)₂ and hexacelsian, BaAl₂Si₂O₈ - two new minerals from schorlomite-rich paralava of the Hatrurim Complex, Negev Desert, Israel. Mineral. Mag., 81(4), 1009-1019. (2) (2018) Amer. Mineral., 103, 2526-2527 (abs. ref. 1).