Haigerachite $\mathrm{KFe}^{3+}_3(\mathrm{H}_2\mathrm{PO}_4)_6(\mathrm{HPO}_4)_2\cdot4\mathrm{H}_2\mathrm{O}$

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Crystal Data:  Triclinic.  Point Group: $T$.  As bladed crystals, to 0.4 mm, flattened on $\{110\}$ and striated on $\{001\} \parallel \{010\}$ and on $\{100\} \parallel \{001\}$; dominant forms include $\{110\}$, $\{100\}$, $\{010\}$, $\{001\}$; as fine-grained coatings.


Cell Data:  Space Group: $P\overline{1}$.  $a = 7.123$  $b = 10.469$  $c = 6.844$  $\alpha = 100^\circ34'\beta = 94^\circ48'\gamma = 91^\circ16'\ Z = 2$

X-ray Powder Pattern:  Michael mine, Germany; nearly identical to parsonite.  3.42 (10b), 2.85 (8), 4.42 (6), 3.03 (6), 4.26 (5), 3.33 (5b), 7.09 (3)

Chemistry:  (1) Michael mine, Germany; microchemical and spectrographic analysis confirmed Pb, U, and As as major components, P absent; formula established by the similarity of the X-ray powder pattern with that of parsonite and synthetic $\text{Pb}_2(\text{UO}_2)(\text{AsO}_4)_2$.

Occurrence:  A secondary mineral found on a museum specimen from an oxidizing As–Pb-bearing deposit, formed by alteration of galena.

Association:  Hügelite, widenmannite, mimetite, barite, galena, quartz.

Distribution:  In Germany, from the Michael mine, Weiler, near Lahr, Black Forest, and on the Bühlskopf, near Ellweiler, Rhineland-Palatinate.

Name:  Honors Dr. Arthur Francis Hallimond (1890–1968), British mineralogist, London, England, for his work with secondary uranium minerals.

Type Material:  n.d.