Karibibite $Fe_2^{3+}As_4^{3+}(O,OH)_9$

Crystal Data: Orthorhombic. *Point Group:* n.d. As sharply pointed, spindle-shaped bundles of radiating fibers, to 1 mm, with anhedral individuals, < 1 μ thick. Also massive, cross-vein fibrous, or as reticulated coatings.

Physical Properties: *Cleavage:* Possibly on {100} or {010}, as indicated by preferred orientation of fibers. *Tenacity:* Flexible. Hardness = Very soft. D(meas.) = 4.07 D(calc.) = 4.04 Paramagnetic; may fluoresce yellow under SW UV.

Optical Properties: Transparent. *Color:* Brownish yellow, pale to brownish orange. *Streak:* Bright yellow.
Optical Class: Biaxial (–). *Pleochroism:* Weak; light brownish yellow to straw-yellow.
Orientation: $Z \parallel$ fiber axis. $\alpha = 1.96$ $\beta =$ n.d. $\gamma = > 2.10$ 2V(meas.) = Large.

Cell Data: *Space Group:* n.d. $a = 27.91(4)$ $b = 6.53(2)$ $c = 7.20(3)$ Z = 6

X-ray Powder Pattern: Karibib, Namibia.
2.384 (100), 3.176 (80), 2.802 (80), 3.088 (70), 3.496 (50), 2.672 (45), 6.35 (40)

Chemistry:

	(1)	(2)
Fe_2O_3	29.1	28.69
As_2O_3	68.8	71.14
H_2O^+	1.7	
H_2O^-	0.2	
H_2O		0.28
Total	99.8	100.11

(1) Karibib, Namibia; absence of arsenate groups confirmed by IR; corresponds to $Fe^{3+}_{1.95}As^{3+}_{3.72}O_{7.98}(OH)_{1.02}$. (2) Urucum pegmatite, Brazil.

Occurrence: In granite pegmatites.

Association: Löllingite, eosphorite, scorodite, quartz (Karibib, Namibia); löllingite, scorodite, schneiderhöhnite, parasymplesite, quartz (Bou Azzer, Morocco).

Distribution: From the Rubicon pegmatite, and perhaps others, in the Karibib district, Namibia. In the Kiura mine, Oita Prefecture, Japan. From Bou Azzer, Morocco. In the Córrego do Urucum pegmatite, near Galiléia, and the Mulundu pegmatite, locality not further specified, Minas Gerais, Brazil. From an unidentified pegmatite in eastern Kazakhstan.

Name: For the Karibib pegmatite district, Namibia, where the species occurs.

Type Material: Department of Earth Sciences, University of Leeds, Leeds, England; Department of Geology, University of Helsinki, Helsinki, Finland.

References: (1) von Knorring, O., T.G. Sahama, and P. Rehtijärvi (1973) Karibibite, a new FeAs mineral from South West Africa. Lithos, 6, 265–271. (2) (1974) Amer. Mineral., 59, 382 (abs. ref. 1). (3) Cassedanne, J.P. (1986) The Urucum pegmatite, Minas Gerais, Brazil. Mineral. Record, 17, 307–314.