Berryite

Crystal Data: Monoclinic, pseudo-orthorhombic. Point Group: 2/m. Lathlike aggregates of approximately parallel individuals, to 1 mm; granular, massive. Twinning: Repeated.

Physical Properties: Cleavage: Poor. Hardness = n.d. VHN = 131-152 (100 g load), 171 (100 g load). D(meas.) = 6.7 (corrected for admixed quartz). D(calc.) = 6.90


Cell Data: Space Group: P2₁/m. a = 12.703(2) b = 4.0305(7) c = 28.925(5) β = 102.484(2)° Z = 2

3.47 (10), 2.89 (8), 2.80 (7), 2.18 (4), 3.70 (2), 2.86 (2), 3.23 (1)

Chemistry: (1) (2) (3) (1) (2) (3)
Pb 21.6 20.8 20.9 Bi 49.2 47.5 49.5
Ag 4.9 6.8 7.4 S 17.2 17.2 17.0
Cu 7.1 7.8 5.3 Total [100.0] [100.1] 100.1

(1) Ivigtut, Greenland; by electron microprobe, sulfur by difference, recalculated to be near 100%; corresponds to Cu₃Ag₂Pb₃Bi₂±Si₁₆. (2) Do.; corresponds to Cu₃.60Ag₁.80Pb₂.95Bi₁.65S₁₅.₆₅. (3) Owen Lake, Canada; by electron microprobe; corresponds to Cu₂.₅₅Ag₂.₁₀Pb₁.₀₉Bi₁.₂₅Si₁₆.₂₅.

Occurrence: In quartz veins with sulfides and sulfosalts in siderite-rich cryolite (Ivigtut).

Association: Emplectite, aikinite, cuprobismutite, cupropavonite (Colorado, USA); galena, chalcopyrite, sphalerite, quartz (Nordmark, Sweden); galena, cosalite, ourayite, matildite, aikinite (Ivigtut, Greenland); aikinite, matildite, benjaminite, quartz, barite (Tary Ekan deposit, Kazakhstan).

Distribution: In the USA, in Colorado, from the Missouri mine, Park Co. [TL], the Mike mine, Silverton district, San Juan Co., and Cinnamon Gulch, Northeast Montezuma district, Clear Creek Co.; at the Outlaw mine, Round Mountain, Manhattan, Nye Co., Nevada. From near Owen Lake, south of Houston, British Columbia, Canada. In the Ivigtut cryolite deposit, southwestern Greenland. At Nordmark, Värmland, Sweden. From the Catarama mine, Baia Borşa district, Baia Mare (Nagybánya), Romania. In the Svishti Plaz gold deposit, central Balkan Mountains, Bulgaria. From two km west of Lairg, Scotland. In the Adrasman, Kaptar-Hana, and Tary Ekan deposits, eastern Karamazar, Tajikistan. From the Kochbulak gold deposit, Chatkal-Kuramin Mountains, eastern Uzbekistan. At the Funiushan copper skarn deposit, near Nanjing, Jiangsu Province, China. Several additional localities are known.

Name: Honors Professor Leonard Gascoigne Berry (1914-1982), Canadian mineralogist, Queen’s University, Kingston, Ontario, Canada, who obtained the first X-ray powder pattern of the mineral.

Type Material: University of Copenhagen, Copenhagen, Denmark; National Museum of Natural History, Washington, D.C., USA, 92902.