Perite $PbBiO_2Cl$

Crystal Data: Orthorhombic, pseudotetragonal. *Point Group:* $2/m\ 2/m\ 2/m$. Platy crystals, to 0.5 mm.

Physical Properties: *Cleavage:* {001}, fair. Hardness = 3 D(meas.) = 8.16 D(calc.) = 8.24

Optical Properties: Semitransparent. *Color:* Sulfur-yellow to straw-yellow.
Luster: Adamantine.
Optical Class: Biaxial. $n = > 2.4$ 2V(meas.) = n.d.

Cell Data: *Space Group: Bmmb.* $a = 5.627(50)$ $b = 5.575(20)$ $c = 12.425(90)$ Z = 4

X-ray Powder Pattern: Långban, Sweden.
2.86 (10), 1.620 (9), 3.77 (8), 1.251 (8), 2.78 (7), 2.07 (7), 1.970 (7)

Chemistry:

	(1)
Bi_2O_3	45.74
$PbCl_2$	26.33
PbO	23.69
MnO	0.46
MgO	0.07
CaO	1.44
H_2O^+	0.10
H_2O^-	0.04
CO_2	1.19
insol.	1.00
Total	100.06

(1) Långban, Sweden; after deduction of calcite and hausmannite, corresponds to $Pb_{1.01}Bi_{0.98}O_{3.96}Cl_{0.95}(OH)_{0.06}$.

Occurrence: In fissures in skarn in a metamorphosed Fe–Mn deposit (Långban, Sweden); in oxidized bismuth-bearing base metal deposits.

Association: Hausmannite, calcite (Långban, Sweden); galena, cerussite, plattnerite, kaolinite, muscovite, tourmaline (Glen Florrie Station, Western Australia); kettnerite, hemimorphite, embolite, fluorite, chrysocolla, quartz (Blue Bell claims, California, USA).

Distribution: From Långban, Värmland, Sweden. At Laurium, Greece, in slag. In the USA, from the Blue Bell claims, near Baker, San Bernardino Co., California; at a prospect about 13 km northeast of Benson, Cochise Co., and in the US Mine, near Wickenburg, Maricopa Co., Arizona; in a prospect on the west side of Cucomungo Wash, Tule Canyon district, Esmeralda Co., Nevada. On Glen Florrie Station, 1000 km north of Perth, Western Australia.

Name: Honors Per Adolf Geijer (1886–1976), Swedish economic geologist with the Geological Survey of Sweden.

Type Material: Swedish Museum of Natural History, Stockholm, Sweden; The Natural History Museum, London, England, 1980,106.

References: (1) Gillberg, M. (1960) Perite, a new oxyhalide mineral from Långban, Sweden. Arkiv Mineral. Geol., 2(44), 565–570. (2) (1961) Amer. Mineral., 46, 765 (abs. ref. 1). (3) Bridge, P.J. (1976) A second occurrence of perite. Mineral. Mag., 40, 537.