

Haiweeite

Ca(UO₂)₂Si₆O₁₅•5H₂O

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Crystal Data: Monoclinic. *Point Group:* 2/m (probable). As spherulites consisting of minute, bladelike grains; also as single flakelike grains, flattened on {100}.

Physical Properties: *Cleavage:* Good on {100}. *Hardness* = 3.5 *D*(meas.) = 3.35 *D*(calc.) = [4.93] Fluoresces weakly dull green under UV; radioactive.

Optical Properties: Semitransparent. *Color:* Pale yellow to greenish yellow. *Luster:* Pearly on the cleavage.

Optical Class: Biaxial (-). *Pleochroism:* *Y* = pale yellow; *Z* = colorless. *Orientation:* *Y* = *b*. *Dispersion:* *r* > *v*, very strong. $\alpha = 1.533\text{--}1.571$ $\beta = 1.572\text{--}1.580$ $\gamma = 1.573\text{--}1.582$ *2V*(meas.) = 15°–20°

Cell Data: *Space Group:* P2/c (probable). *a* = 15.4 *b* = 7.05 *c* = 7.10 $\beta = 107^\circ 52'$ *Z* = [2]

X-ray Powder Pattern: Coso Mountains, California, USA.
9.14 (100), 4.56 (60), 4.42 (60), 3.19 (50), 3.11 (50), 7.05 (40), 3.54 (40)

Chemistry:

	(1)	(2)
SiO ₂	33.1	33.42
UO ₃	52.8	53.03
CaO	5.4	5.20
H ₂ O	8.7	8.35
Total	[100.0]	100.00

(1) Coso Mountains, California, USA; inseparably combined with metahaiweeite, average of four analyses, recalculated to 100.0% after deduction of insolubles, mainly quartz.

(2) Ca(UO₂)₂Si₆O₁₅•5H₂O.

Occurrence: On fracture surfaces in granite and in voids in neighboring loosely consolidated lake bed sediments (Coso Mountains, California, USA); along fractures in tourmaline-bearing granite and granite pegmatite (Perus, Brazil).

Association: Autunite, meta-autunite, uranophane, uranophane-beta, phosphuranylite, torbernite, meta-torbernite, chernikovite, uranian "opal" (Perus, Brazil).

Distribution: From the Haiwee Reservoir, Coso Mountains, Inyo Co., California, USA. At Perus, 25 km north of São Paulo, Brazil. On Portezuelo Hill, Ranquil district, Mendoza Province, Argentina. From Badgastein, Salzburg, Austria.

Name: For the Haiwee Reservoir, Coso Mountains, California, USA, above which the mineral was first found to occur.

Type Material: n.d.

References: (1) McBurney, T.C. and J. Murdoch (1959) Haiweeite, a new uranium mineral from California. *Amer. Mineral.*, 44, 839–843. (2) de Camargo, W.G.R. and D.P. Svisero (1969) Haiweeite, a new occurrence in Brazil. *Amer. Mineral.*, 54, 966–969.