

Crystal Data: Monoclinic. *Point Group:* 2/m. As tabular to bladed crystals, to 0.06 mm, flattened on {100}, elongated on [010], showing forms {100}, {001}, {010} and perhaps {043}; as druses.

Physical Properties: *Cleavage:* Excellent on {100}. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 3-3.5 D(meas.) = n.d. D(calc.) = 3.53

Optical Properties: Transparent. *Color:* Pale blue. *Streak:* White. *Luster:* Vitreous.

Optical Class: Biaxial (-). $a = \sim 1.74$ $\beta = 1.762(4)$ $\gamma = \sim 1.77$ $2V(\text{calc.}) = \sim 62^\circ$
Orientation: X = b; Y ~ a; Z ~ c.

Cell Data: *Space Group:* $P2_1/c$. $a = 10.863(2)$ $b = 13.129(3)$ $c = 11.169(2)$
 $\beta = 113.04(3)^\circ$ Z = 4

X-ray Powder Pattern: Block 14 Opencut, Broken Hill, New South Wales, Australia. 9.991 (90), 5.001 (90), 3.332 (60), 2.769 (55), 4.591 (45), 2.670 (45), 2.824 (40)

Chemistry:	(1)	(2)
CdO	32.43	32.85
CuO	28.06	30.53
ZnO	2.26	
FeO	0.08	
SO ₃	20.35	20.48
<u>H₂O_{calc.}</u>	<u>16.14</u>	<u>16.14</u>
Total	99.32	100.00

(1) Block 14 Opencut, Broken Hill, New South Wales, Australia; average of 10 electron microprobe analyses, H₂O calculated from structure analysis, OH and SO₄ confirmed by IR, corresponding to Cu_{2.77}Cd_{1.98}Zn_{0.22}Fe_{0.01}(SO₄)_{2.00}(OH)_{5.95}·4.06H₂O. (2) Cu₃Cd₂(SO₄)₂(OH)₆·4H₂O.

Occurrence: A secondary mineral in the oxidized portion of a Ag-Pb-Zn metal deposit.

Association: Niedermayrite, christelite.

Distribution: Block 14 Opencut, Broken Hill, New South Wales, Australia.

Name: Honors Dr. Austin Burton Edwards (1909–1960), mineralogist and petrologist in the Mineragraphic Section of the Council for Scientific and Industrial Research CSIRO), Melbourne, Australia, for his contributions to the study of Australian ore deposits such as Broken Hill.

Type Material: South Australian Museum, Adelaide, South Australia (catalog no. G32703).

References: (1) Elliott, P., J. Brugger, and T. Caradoc-Davies (2010) Description and crystal structure of a new mineral, edwardsite, Cu₃Cd₂(SO₄)₂(OH)₆·4H₂O, from Broken Hill, New South Wales, Australia. *Mineral. Mag.*, 74, 39–54. (2) (2010) *Amer. Mineral.*, 95, 1597-1598 (abs. ref. 1).