Ameghinite  

Crystal Data: Monoclinic.  
Point Group: 2/m.  
Crystals are elongated along [010], may be bent or curved, showing {001}, {010}, {100}, {110}, {011}, {101}, {101}, {310}, to 5 mm; as cluster of crystals and nodular masses.

Physical Properties:  
Cleavage: {100}, very good; {001} and {010}, poor.  
Fracture: Conchoidal.  
Tenacity: Brittle.  
Hardness = 2.5  
D(meas.) = 2.030(6)  
D(calc.) = 2.037  
Soluble in H2O; pale blue fluorescence and phosphorescence under SW and LW UV.

Optical Properties:  
Transparent.  
Color: Colorless.  
Luster: Vitreous.  
Optical Class: Biaxial (−).  
Orientation: Z = b, X ∧ c = 9°.  
Dispersion: r < v, weak.  
α = 1.429(1)  
β = 1.528(1)  
γ = 1.538(1)  
2V(meas.) = 33°

Cell Data:  
Space Group: C2/c.  
a = 18.428(3)  
b = 9.882(2)  
c = 6.326(2)  
β = 104°23'(6)  
Z = 8

X-ray Powder Pattern:  
Tincalayu deposit, Argentina.  
3.064 (100), 3.147 (76), 2.548 (29), 3.352 (17), 2.914 (17), 4.951 (13), 2.655 (11)

Chemistry:  

\[
\begin{array}{ccc}
B_2O_3 & 59.3 & 60.91 \\
Na_2O & 19.5 & 18.08 \\
H_2O^+ & 20.7 & \\
H_2O^- & 0.6 & \\
H_2O & 21.01 & \\
\hline
\text{Total} & 100.1 & 100.00
\end{array}
\]

(1) Tincalayu deposit, Argentina; corresponds to Na_{1.11}B_{3.06}O_3(OH)_{4.05}.  
(2) NaB_3O_3(OH)_4.

Occurrence:  
Formed in massive borax in a borate-rich playa.

Association:  
Tincalconite, borax, ezcurrite, rivadavite.

Distribution:  
From the Tincalayu borax deposit, Salar del Hombre Muerto, Salta Province, Argentina.

Name:  
Honors two brothers, Carlos Ameghino (1865–1936) and Florentino Ameghino (1854–1911), Argentine geologists.

Type Material:  
Natural History Museum, Paris, France; Harvard University, Cambridge, Massachusetts, 109054; National Museum of Natural History, Washington, D.C., USA, 137297.

References:  