Versiliaite 

Crystal Data: Orthorhombic.  

Point Group: 2/m 2/m 2/m.  

Crystals, very rare, platy on {001}; commonly in massive aggregates.

Physical Properties: Cleavage: Perfect on {110}.  

Hardness = n.d.  

VHN = 330 (20 g load).  

D(meas.) = 5.12  

D(calc.) = [5.32]

Optical Properties: Opaque.  

Color: Black.  

Luster: Metallic.  

Optical Class: Uniaxial.

R1–R2: (470) 18.5–19.4, (546) 18.5–17.8, (589) 18.3–16.9, (650) 17.7–16.2

Cell Data: Space Group: Pbam.  

a = 8.492(5)  

b = 8.326(5)  

c = 11.938(7)  

Z = 1

X-ray Powder Pattern: Buca della Vena mine, Italy.  

3.196 (100), 3.167 (97), 2.972 (81), 2.682 (40), 1.946 (40), 1.652 (33), 5.94 (25)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FeO</td>
<td>11.70</td>
<td>10.62</td>
</tr>
<tr>
<td>Fe2O3</td>
<td>14.92</td>
<td>23.59</td>
</tr>
<tr>
<td>As2O3</td>
<td>4.63</td>
<td></td>
</tr>
<tr>
<td>Sb2O3</td>
<td>60.12</td>
<td>64.60</td>
</tr>
<tr>
<td>ZnO</td>
<td>2.96</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>1.50</td>
<td>2.37</td>
</tr>
<tr>
<td>−O = S</td>
<td>0.75</td>
<td>1.18</td>
</tr>
<tr>
<td>Total</td>
<td>95.08</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Buca della Vena mine, Italy; by electron microprobe, Fe2+:Fe3+ from crystal-structure analysis; corresponds to Fe2+:Zn1.04Fe5.33As1.34Sb1.76O32S1.33.  

Occurrence: In an iron ore deposit in barite formed by metasomatic processes at the contact between phyllites and dolostones.

Association: Schafarzikite, apuanite, derbylite, barite, magnetite, hematite, pyrite.

Distribution: In the Buca della Vena mine, northeast of Stazzema, Apuan Alps, Tuscany, Italy.

Name: For the Versilia Valley, Apuan Alps, Italy, where it was found.

Type Material: University of Pisa, Pisa, Italy, 3211.

References: (1) Mellini, M., S. Merlino, and P. Orlandi (1979) Versiliaite and apuanite, two new minerals from the Apuan Alps, Italy. Amer. Mineral., 64, 1230–1234.  
