**Petříčekite**

**Crystal Data:** Orthorhombic.  
**Point Group:** 2/m 2/m 2/m.  
As inclusions, to 150 μm; as skeletal and/or myrmekite aggregates to 200 μm.

**Physical Properties:**  
**Cleavage:** None.  
**Fracture:** Uneven.  
**Tenacity:** Brittle.  
Hardness = 2-2.5  
VHN = 28-40, 33 average (15 g load).  
D(meas.) = n.d.  
D(calc.) = 6.673

**Optical Properties:**  
Opaque.  
**Color:** Black; pale blue-gray to pale pinkish in reflected light.  
**Streak:** Black.  
**Luster:** Metallic.  
**Optical Class:** n.d.  
**Pleochroism:** Weak to stronger near endmember composition, pale blue-gray to pale pinkish.  
Weakly birefringent.  
**Anisotropism:** Increases significantly near endmember composition from light gray-blue and light pink tints to copper-red and light gray tints.

**Cell Data:**  
Space Group: **Pnmm**.  
\(a = 4.918(2)\) \(b = 6.001(2)\) \(c = 3.670(1)\)  
**Z = 2**

**X-ray Powder Pattern:**  
Předbořice uranium deposit, Central Bohemia Region, Czech Republic.  
2.639 (100), 2.563 (85), 2.938 (70), 1.935 (70), 1.834 (30), 1.760 (25), 1.492 (25)

**Chemistry:**

<table>
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<tr>
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<th>(1)</th>
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<th>(3)</th>
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<th>(3)</th>
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<tbody>
<tr>
<td>Ag</td>
<td>0.22</td>
<td>0.04</td>
<td>Co</td>
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<tr>
<td>Cu</td>
<td>15.39</td>
<td>28.42</td>
<td>28.69</td>
<td>Ni</td>
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<td>Hg</td>
<td>0.01</td>
<td>Pd</td>
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<tr>
<td>Pb</td>
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<td>S</td>
<td>0.09</td>
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<tr>
<td>Fe</td>
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<td>Se</td>
<td>71.61</td>
<td>71.53</td>
<td>71.31</td>
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</table>

Total 99.64 100.12 100.00

(1) Předbořice, Czech Republic; average of 9 electron microprobe analyses; corresponds to \((\text{Cu}_{0.53}\text{Fe}_{0.48})^{2-}\text{Se}_{1.98}\text{S}_{0.01})^{2-} = 1.996.  
(2) El Dragón, Bolivia; average of 5 electron microprobe analyses; corresponds to \((\text{Cu}_{0.58}\text{Fe}_{0.38}\text{Pd}_{0.03}\text{Ag}_{0.01}\text{Ni}_{0.01})^{2-}\text{Se}_{1.99}\text{S}_{0.01})^{2-} = 2.000.  
(3) CuSe2

**Mineral Group:** Marcasite group.

**Occurrence:** In low-temperature hydrothermal veins cutting metamorphic rocks near the contact with a granitoid pluton (Czech Republic); a late-stage mineral in hydrothermal veinlets cutting black shale and siltstone (Bolivia); in calcite veinlets in porphyry (Argentina).

**Association:** Eucairite, athabascanite/klockmannite, tiemannite, eskebornite, unknown selenides (Czech Republic); krut’aite, klockmannite, watkinsonite, native selenium (Bolivia); claushtalite, krut’aite, molybdemenite, native selenium (Argentina).

**Distribution:** At the Předbořice uranium deposit, Central Bohemia Region, Czech Republic; at the El Dragón mine, Potosí, Bolivia and at Sierra de Cacheuta, Luján de Cuyo Department, Mendoza, Argentina.

**Name:** Honors Václav Petříček (b. 1948), Czech crystallographer, Institute of Physics of the Czech Academy of Sciences, Prague, for his contributions to crystallography.

**Type Material:** Mineralogical and Geological Museum, Harvard University, Cambridge, Massachusetts, USA (MGMH 2016.01).

**References:**  

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Mineralogical Society of America  
Handbook of Mineralogy  
Revised 10/24/2020