Taniajacoite

SrCaMn\(^{3+}\)\(_2\)Si\(_4\)O\(_{11}\)(OH)\(_4\)·2H\(_2\)O

**Crystal Data:** Triclinic. *Point Group:* 1. As radiating groups or aggregates of acicular or prismatic crystals, with individual crystals to 0.15 mm.

**Physical Properties:** *Cleavage:* Good on {010}. *Tenacity:* Brittle. *Fracture:* n.d. *Hardness:* 5–5.5  
D(meas.) = 3.05(2)  
D(calc.) = 3.09

\(\alpha = 1.686(2)\) \(\beta = 1.729(2)\) \(\gamma = 1.746(2)\)  
2V(meas.) = 63.7(5)°  
2V(calc.) = 62.58°  
Dispersion: \(r > v\), strong.

**Cell Data:** *Space Group:* C\(_1\).  
\(a = 9.1386(5)\)  
\(b = 6.2566(3)\)  
\(c = 12.0043(6)\)  
\(\alpha = 90.019(4)°\)  
\(\beta = 91.643(4)°\)  
\(\gamma = 89.900(4)°\)  
\(Z = 2\)

**X-ray Powder Pattern:** N’Chwaning III mine, Kalahari manganese field, South Africa.  
12.142 (100), 3.134 (38), 2.771 (31), 4.269 (25), 5.164 (20), 2.363 (18), 1.532 (16)

**Chemistry:**

| SiO\(_2\) | 36.85 |
| Al\(_2\)O\(_3\) | 0.06 |
| Mn\(_2\)O\(_3\) | 23.29 |
| Fe\(_2\)O\(_3\) | 1.84 |
| SrO | 19.15 |
| CaO | 7.03 |
| H\(_2\)O | [11.17] |
| **Total** | 99.39 |

(1) N’Chwaning III mine, Kalahari manganese field, South Africa; average electron microprobe analysis supplemented by Raman spectroscopy, H\(_2\)O from structure; corresponds to Sr(Ca\(_{0.81}\)Sr\(_{0.19}\))\(_2\)Mn\(_3\)\(^{2+}\)Fe\(_{0.15}\)Al\(_{0.01}\)\(_2\)O\(_{11}\)(OH)\(_4\)·2H\(_2\)O.

**Occurrence:** On chemically weathered metamorphosed manganese ore.

**Association:** Sugilite, aegirine, pectolite, richterite, potassic-ferri-leakeite, lipuite.

**Distribution:** From the N’Chwaning III mine, Kalahari manganese field, Northern Cape province, South Africa.

**Name:** Honors its finders, *Tania* Janse van Nieuwenhuizen (b. 1973) and Jacobus “Jaco” Stephanus Janse van Nieuwenhuizen (b. 1973), mineral collectors and the owners of “Crystal Springs Minerals CC” in South Africa.

**Type Material:** Mineral Museum, University of Arizona, Tucson, USA (20009) and the RRUFF Project (R140945).