Yazganite  \( \text{NaFe}^{3+}_{2}(\text{Mg,Mn})(\text{AsO}_4)_3 \cdot \text{H}_2\text{O} \)

**Crystal Data:** Monoclinic.  \textit{Point Group: 2/m}.  As prismatic crystals or aggregates, to 10 mm., elongated on [001], flattened on {010} with forms {010}, {100}, {110}, {131}, {111}, and \{3 11\}.

**Physical Properties:**  \textit{Cleavage:} None.  \textit{Fracture:} Conchoidal.  \textit{Tenacity:} Brittle.

Hardness = 5  \( \text{D(meas.} = 4.18(2) \quad \text{D(calc.)} = 4.182(1) \)

**Optical Properties:**  Translucent (slightly metallic).  \textit{Color:} Brown or brown-black.

\textit{Streak:} Bright brown to yellow-gray.  \textit{Luster:} Adamantine.

\textit{Optical Class:} Biaxial (-).  \( \alpha = 1.870(2) \quad \beta = 1.897(2) \quad \gamma = 1.900(2) \quad 2V(\text{meas.}) = 35(2)^\circ \quad 2V(\text{calc.}) = 36.5(3)^\circ \)

\textit{Dispersion:} \( r < v \), strong.  \textit{Orientation:} \( X \wedge a = 5^\circ, Y = b, Z \wedge c = 17^\circ \)

**Cell Data:**  \textit{Space Group:} \( C2/c \).
\( a = 12.181(1) \quad b = 12.807(1) \quad c = 6.6391(5) \quad \beta = 112.441(9)^\circ \)

\( Z = 4 \)

**X-ray Powder Pattern:**  Erciyes volcanic complex, Kiranardi, Turkey.
2.780 (100), 3.202 (40), 2.611 (40), 3.575 (30), 6.400 (20), 5.630 (20), 3.766 (15)

**Chemistry:**

\begin{center}
\begin{tabular}{l c}

<table>
<thead>
<tr>
<th>Element</th>
<th>Formula</th>
<th>Pct.</th>
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<tr>
<td>Na\textsubscript{2}O</td>
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<tr>
<td>MgO</td>
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<tr>
<td>MnO</td>
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<tr>
<td>ZnO</td>
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<td>Fe\textsubscript{2}O\textsubscript{3}</td>
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<td>As\textsubscript{2}O\textsubscript{5}</td>
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<td>H\textsubscript{2}O</td>
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<tr>
<td>Total</td>
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</table>
\end{tabular}
\end{center}

(1) Erciyes volcanic complex, Kiranardi, Turkey; average of 5 electron microprobe analyses, H\textsubscript{2}O by difference and confirmed by IR spectroscopy; corresponding to Na\textsubscript{0.99}Fe\textsuperscript{3+}_{2.19}Mg\textsubscript{0.61}Mn\textsubscript{0.32}Zn\textsubscript{0.02}Z\textsubscript{0.02}H\textsubscript{0.88}O\textsubscript{12} • 0.88H\textsubscript{2}O.

**Occurrence:**  A hydrothermal mineral in fissures cutting porphyritic andesite in a stratovolcano.

**Association:**  Cassiterite, hematite, magnetite, orpiment, realgar, tridymite.

**Distribution:**  Erciyes stratovolcanic complex, 10 km south of the prefecture of Kayseri, near Hisarcik, Kiranardi, Turkey.

**Name:**  Honors Dr. Evren Yazgan (b. 1943), a geologist who found the first specimens.

**Type Material:**  Department of Mineralogy, Natural History Museum of Geneva, Switzerland, (478.188).