Title
An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from AZ U:9:2 And AZ U:9:310 (ASM), Maricopa County, Arizona

Permalink
https://escholarship.org/uc/item/1hj6z29m

Author
Shackley, M. Steven

Publication Date
2014-07-24

Supplemental Material
https://escholarship.org/uc/item/1hj6z29m#supplemental

License
CC BY-NC 4.0
Dear Stacy,

The artifact from site 9:2 was produced from Sauceda Mountain obsidian in western Maricopa County, and the artifact from 9:310 was produced from the RS Hill/Sitgreaves Peak source in the San Francisco Volcanic Field in northern Arizona (Table 1). San Francisco Volcanic Field obsidian is frequently recovered in Sacaton Phase Hohokam sites along the Lower Salt River (Shackley 2005). Specific instrumental methods can be found at http://www.swxrflab.net/analysis.htm, and Shackley (2005). Source assignment was made by comparison to source standard data in the laboratory. Analysis of the USGS RGM-1 standard indicates high machine precision for the elements of interest (Table 1 here).

Sincerely,

M. Steven Shackley, Ph.D.
Director

VOICE: 510-393-3931
INTERNET: shackley@berkeley.edu; http://www.swxrflab.net/
REFERENCE CITED


Table 1. Elemental concentrations for the archaeological samples, and USGS RGM-1 rhyolite standard. All measurements in parts per million (ppm).

<table>
<thead>
<tr>
<th>Site/Sample</th>
<th>Ti</th>
<th>Mn</th>
<th>Fe</th>
<th>Rb</th>
<th>Sr</th>
<th>Y</th>
<th>Zr</th>
<th>Nb</th>
<th>Ba</th>
<th>Pb</th>
<th>Th</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZ U:9:2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>179</td>
<td>1553</td>
<td>360</td>
<td>10989</td>
<td>161</td>
<td>78</td>
<td>32</td>
<td>199</td>
<td>25</td>
<td>1150</td>
<td>21</td>
<td>19</td>
<td>Sauceda Mtns</td>
</tr>
<tr>
<td>AZ U:9:310</td>
<td>739</td>
<td>414</td>
<td>10431</td>
<td>386</td>
<td>10</td>
<td>92</td>
<td>161</td>
<td>255</td>
<td>&lt;1</td>
<td>81</td>
<td>52</td>
<td>RS Hill/Sitgreaves Pk</td>
</tr>
<tr>
<td>676</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>standard</td>
</tr>
<tr>
<td>RGM1-S4</td>
<td>1537</td>
<td>276</td>
<td>13336</td>
<td>150</td>
<td>110</td>
<td>21</td>
<td>214</td>
<td>7</td>
<td>827</td>
<td>19</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>