Title
An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from Casas Grandes Outlier Site 317, Northern Chihuahua

Permalink
https://escholarship.org/uc/item/75f5w8rf

Author
Shackley, M. Steven

Publication Date
2014-10-02

Supplemental Material
https://escholarship.org/uc/item/75f5w8rf#supplemental

License
CC BY-NC 4.0
LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM CASAS GRANDES OUTLIER SITE 317, NORTHERN CHIHUAHUA

ADDENDUM

2 October 2014

Sean Dolan
Department of Anthropology
University of Oklahoma
Norman, OK

Dear Sean,

The six artifacts were produced from a similar mix of sources as the larger study from Sites 204, 242, and 315 (Table 1). I refer you to the larger report for specifics concerning sources and other relevant information (Shackley 2014). This report can be seen as an addendum to that report. Specific instrumental methods can be found at http://www.swxrflab.net/anlysis.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/
REFERENCES CITED

Shackley, M.S.  


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>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>1</td>
<td>1320</td>
<td>376</td>
<td>9654</td>
<td>216</td>
<td>60</td>
<td>28</td>
<td>165</td>
<td>22</td>
<td>515</td>
<td>25</td>
<td>18</td>
<td>Agua Fria, SON</td>
</tr>
<tr>
<td>2</td>
<td>1289</td>
<td>348</td>
<td>9566</td>
<td>214</td>
<td>68</td>
<td>23</td>
<td>128</td>
<td>20</td>
<td>410</td>
<td>22</td>
<td>27</td>
<td>Chihuahua unknown A</td>
</tr>
<tr>
<td>3</td>
<td>1021</td>
<td>252</td>
<td>11970</td>
<td>287</td>
<td>38</td>
<td>60</td>
<td>145</td>
<td>19</td>
<td>91</td>
<td>31</td>
<td>48</td>
<td>Sierra Fresnal, CHIH</td>
</tr>
<tr>
<td>4</td>
<td>1408</td>
<td>289</td>
<td>9770</td>
<td>210</td>
<td>95</td>
<td>26</td>
<td>162</td>
<td>20</td>
<td>772</td>
<td>25</td>
<td>27</td>
<td>Agua Fria, SON</td>
</tr>
<tr>
<td>5</td>
<td>1416</td>
<td>409</td>
<td>10333</td>
<td>237</td>
<td>79</td>
<td>27</td>
<td>149</td>
<td>21</td>
<td>537</td>
<td>27</td>
<td>26</td>
<td>Agua Fria, SON</td>
</tr>
<tr>
<td>6</td>
<td>1399</td>
<td>356</td>
<td>9639</td>
<td>207</td>
<td>59</td>
<td>25</td>
<td>163</td>
<td>22</td>
<td>490</td>
<td>22</td>
<td>22</td>
<td>Agua Fria, SON</td>
</tr>
<tr>
<td>RGM1-S4</td>
<td>1617</td>
<td>283</td>
<td>13284</td>
<td>151</td>
<td>107</td>
<td>25</td>
<td>214</td>
<td>8</td>
<td>801</td>
<td>19</td>
<td>15</td>
<td>standard</td>
</tr>
</tbody>
</table>

www.escholarship.org/uc/item/75f5w8rf