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Title

An Energy-Dispersive X-Ray Fluorescence Analysis of Obsidian Artifacts from AZ V:1:150 and 166 (ASM), Central Arizona

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Author

Shackley, M. Steven

Publication Date

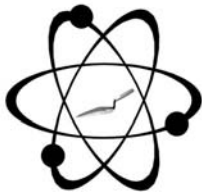
2011-11-02

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GEOARCHAEOLOGICAL XRF LAB

ARCHAEOLOGICAL X-RAY FLUORESCENCE SPECTROMETRY LABORATORY
8100 Wyoming Blvd., Ste M4-158
USA

Albuquerque, NM 87113

LETTER REPORT

AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM AZ V:1:150 AND 166 (ASM), CENTRAL ARIZONA

2 November 2011

Richard Lange
Arizona State Museum
University of Arizona
Tucson, AZ 85721

Dear Richard,

The two artifacts submitted by Arizona State Museum were produced from Cow Canyon and Government Mountain obsidian. All analyses for this study were conducted on a ThermoScientific Quant'X XRF spectrometer at the Archaeological XRF Laboratory, Albuquerque, New Mexico. 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 Archaeological XRF Laboratory. Analysis of the USGS RGM-1 standard indicates high machine precision for the elements of interest (USGS; Table 1 here).

Sincerely,

M. Steven Shackley, Ph.D.
Director

VOICE: 510-393-3931
INTERNET: shackley@berkeley.edu
<http://www.swxrflab.net/>

REFERENCE CITED

Shackley, M.S.

2005 *Obsidian: Geology and Archaeology in the North American Southwest*. University of Arizona Press, Tucson.

Table 1. Elemental concentrations for the archaeological samples. All measurements in parts per million (ppm).

Sample	Ti	Mn	Fe	Rb	Sr	Y	Zr	Nb	Ba	Pb	Th	Source
V:1:150 IN169 I-15	134	451	9683	140	131	18	123	18	137	22	10	Cow Canyon
V:1:166 IN225 I-37	794	468	9399	104	81	21	78	54	425	30	11	Government Mtn standard
RGM1-S4	165	294	1328	147	109	25	221	13	905	20	17	