



GEOARCHAEOLOGICAL XRF LAB

ARCHAEOLOGICAL X-RAY FLUORESCENCE SPECTROMETRY LABORATORY
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AN ENERGY-DISPERSIVE X-RAY FLUORESCENCE ANALYSIS OF OBSIDIAN ARTIFACTS FROM LOS MORTEROS, TUCSON BASIN, ARIZONA

9 December 2011

Stacy Ryan
Desert Archaeology, Inc.
3975 N Tucson Blvd.
Tucson, AZ 85716

Dear Stacy,

The sources present in the collection are rather typical for Sedentary contexts in the Tucson Basin (Shackley 2005). The presence of Tank Mountains is somewhat unusual, but not rare (Table 1).

The samples were analyzed with a Thermo Scientific *Quant'X* EDXRF spectrometer in the Archaeological XRF Laboratory, Albuquerque, New Mexico. Specific instrumental methods can be found at <http://www.swxrflab.net/analysis.htm>, and Shackley (2005). 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

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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 specimens and USGS RGM-1 standard. All measurements in parts per million (ppm).

Sample	Ti	Mn	Fe	Rb	Sr	Y	Zr	Nb	Pb	Th	Source
4294	1408	450	1014	186	156	19	129	13	25	20	Tank Mountains
4038	1635	323	1178	169	115	29	183	20	19	26	Sauceda Mountains
4322	1024	515	8305	126	23	24	97	34	25	19	Superior
4339	968	227	1233	241	16	72	221	32	25	33	Los Vidrios
3569	764	425	9023	237	12	41	87	52	40	32	Partridge Creek
4260	1608	299	1131	162	109	27	185	22	22	34	Sauceda Mountains
RGM1-S4	1646	283	1324	151	112	27	211	9	22	18	standard