

Northwest Research Obsidian Studies Laboratory

Results of XRF Studies: Sand Spring Valley (Tempiute Mountain) Source Specimens, Lincoln County, Nevada

Site	Specimen		Trace Element Concentrations											Ratios		Geochemical Source
	No.	Catalog No.	Zn	Pb	Rb	Sr	Y	Zr	Nb	Ti	Mn	Ba	Fe ₂ O ₃ ^T	Fe:Mn	Fe:Ti	
Sand Spring Valley	4	1	76 ± 7	28 4	206 3	128 6	35 2	176 6	31 2	446 75	414 46	508 27	1.12 0.11	26.2	81.5	Tempiute Mountain
Sand Spring Valley	5	2	88 ± 7	25 4	196 3	129 6	34 2	168 6	31 2	446 75	471 46	520 27	1.18 0.11	24.0	85.6	Tempiute Mountain
Sand Spring Valley	6	3	85 ± 7	25 4	196 3	126 6	32 2	165 6	26 2	421 75	393 46	508 28	1.06 0.11	26.6	82.7	Tempiute Mountain
Sand Spring Valley	7	4	102 ± 7	25 3	200 3	129 6	35 2	173 6	34 2	525 75	548 46	531 27	1.28 0.11	22.1	78.8	Tempiute Mountain
Sand Spring Valley	12	1	87 ± 7	32 3	212 3	132 6	32 2	169 6	32 2	589 75	460 46	555 27	1.26 0.11	26.1	69.0	Tempiute Mountain
Sand Spring Valley	13	1	81 ± 7	23 3	204 3	129 6	35 2	171 6	34 2	463 75	447 46	547 27	1.19 0.11	25.6	83.5	Tempiute Mountain
Sand Spring Valley	14	2	96 ± 7	25 3	204 3	132 6	34 2	172 6	33 2	547 75	537 46	561 27	1.30 0.11	22.7	76.4	Tempiute Mountain
Sand Spring Valley	15	3	100 ± 7	24 3	193 3	119 6	32 2	163 6	28 2	833 76	456 46	553 27	1.02 0.11	21.8	40.3	Tempiute Mountain
Sand Spring Valley	1	1	67 ± 7	28 4	198 3	125 6	35 2	168 6	32 2	525 75	457 46	515 27	1.22 0.11	25.6	75.2	Tempiute Mountain
Sand Spring Valley	2	2	75 ± 7	26 4	195 3	126 6	32 2	168 6	30 2	566 76	465 46	526 27	1.32 0.11	27.0	75.0	Tempiute Mountain
Sand Spring Valley	3	3	105 ± 7	31 4	207 3	131 6	34 2	172 6	32 2	526 75	527 46	528 27	1.26 0.11	22.6	77.4	Tempiute Mountain
Sand Spring Valley	4	4	86 ± 7	26 3	199 3	124 6	33 2	170 6	31 2	502 75	473 46	534 27	1.32 0.11	26.5	84.4	Tempiute Mountain
Sand Spring Valley	5	5	88 ± 7	33 4	208 3	135 6	35 2	178 6	30 2	481 75	474 46	547 27	1.19 0.11	24.1	80.4	Tempiute Mountain
Sand Spring Valley	6	6	81 ± 7	26 3	203 3	131 6	35 2	168 6	31 2	595 75	464 46	547 27	1.31 0.11	26.8	70.7	Tempiute Mountain
Sand Spring Valley	7	7	97 ± 7	27 3	205 3	135 6	38 2	173 6	31 2	593 76	560 46	554 27	1.36 0.11	22.8	73.8	Tempiute Mountain
Sand Spring Valley	8	8	87 ± 7	27 3	196 3	125 6	33 2	169 6	32 2	471 75	420 46	501 27	1.13 0.11	26.0	77.9	Tempiute Mountain

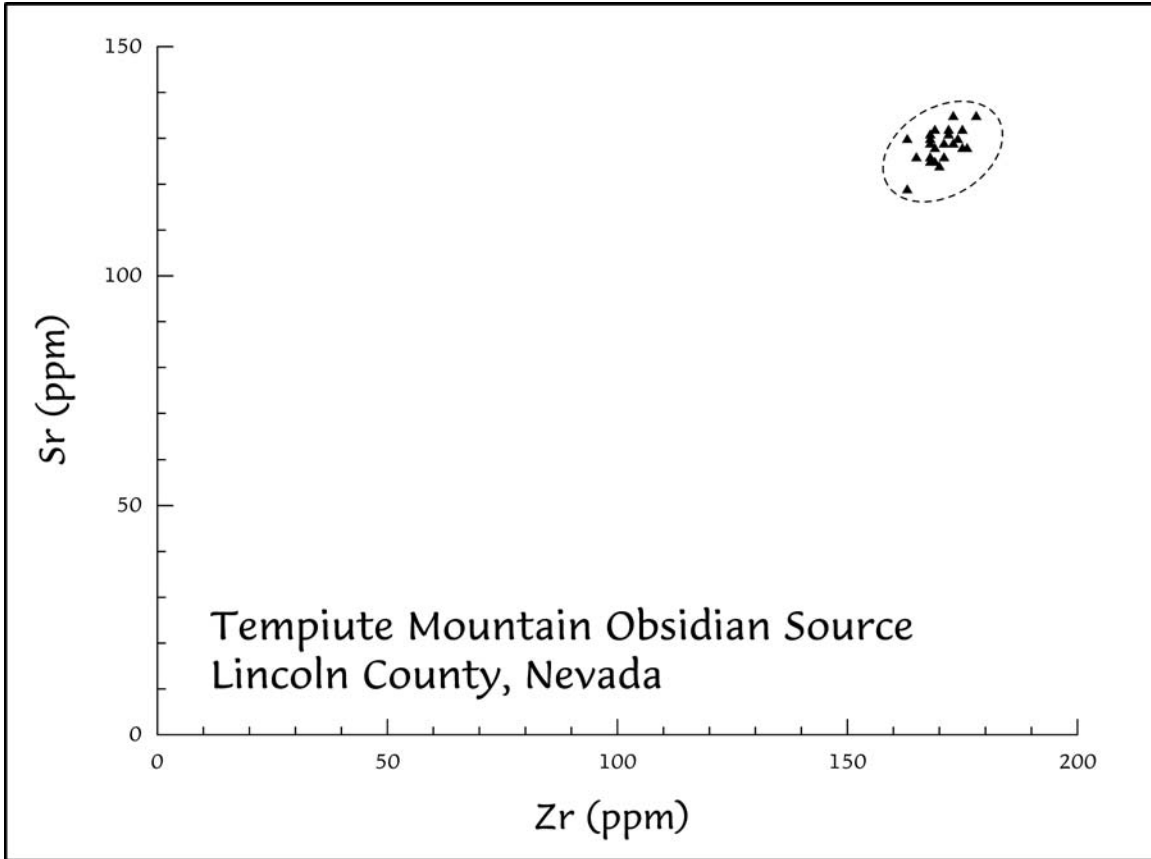
All trace element values reported in parts per million; ± = analytical uncertainty estimate (in ppm). Iron content reported as weight percent oxide.
NA = Not available; ND = Not detected; NM = Not measured.; * = Small sample.

Northwest Research Obsidian Studies Laboratory

Results of XRF Studies: Sand Spring Valley (Tempiute Mountain) Source Specimens, Lincoln County, Nevada

Site	Specimen		Trace Element Concentrations											Ratios		Geochemical Source
	No.	Catalog No.	Zn	Pb	Rb	Sr	Y	Zr	Nb	Ti	Mn	Ba	Fe ₂ O ₃ ^T	Fe:Mn	Fe:Ti	
Sand Spring Valley	9	9	75 ± 7	24 3	202 3	130 6	33 2	174 6	29 2	463 75	455 46	531 27	1.24 0.11	26.1	86.5	Tempiute Mountain
Sand Spring Valley	10	10	105 ± 7	24 3	205 3	130 6	36 2	168 6	31 2	525 75	581 46	527 27	1.23 0.11	19.8	75.5	Tempiute Mountain
Sand Spring Valley	11	11	68 ± 7	30 3	195 3	130 6	34 2	163 6	38 2	474 75	421 46	520 27	1.19 0.11	27.2	81.1	Tempiute Mountain
Sand Spring Valley	12	12	75 ± 7	29 3	200 3	132 6	34 2	175 6	30 2	520 76	476 46	570 27	1.33 0.11	26.5	82.1	Tempiute Mountain
Sand Spring Valley	13	13	74 ± 7	29 3	197 3	126 6	35 2	171 6	31 2	554 75	500 46	514 27	1.28 0.11	24.3	74.5	Tempiute Mountain
Sand Spring Valley	14	14	88 ± 6	27 3	201 3	128 6	37 2	175 6	29 2	512 75	487 46	533 27	1.26 0.11	24.6	79.5	Tempiute Mountain
Sand Spring Valley	15	15	117 ± 7	29 3	196 3	128 6	36 2	169 6	28 2	496 75	540 46	509 27	1.17 0.11	20.5	76.6	Tempiute Mountain

All trace element values reported in parts per million; ± = analytical uncertainty estimate (in ppm). Iron content reported as weight percent oxide.
NA = Not available; ND = Not detected; NM = Not measured.; * = Small sample.



Scatterplot of strontium (Sr) plotted versus zirconium (Zr) for 23 geologic obsidian specimens correlated with the Tempiute Mountain source. Obsidian from this source was previously known only from characterized artifacts, particularly those found in the Butte Valley region of east-central Nevada.