TABLE 23.—*Analyses of sandstone from the Shinarump and Moss Back members of the Chinle formation*

[Semiquantitative spectrographic determinations made by the rapid visual-comparison method. Comparisons of similar data with those obtained by quantitative methods show that the assigned semiquantitative class interval includes the quantitative value in about 60 percent of the determinations. These analyses were done on a custom basis as a special study by R. G. Havens, This involved a reexamination of spectrograms for elements reported as zero or trace. Determinations shown within parentheses are the result of reexamination of spectrograms, but are below the safe limit for element sensitivity. Analysts: Spectrographic, J. Hamilton, R. G. Havens, P. R. Barnett; Colorimetric; J. E. Wilson (As); J. S. Wahlberg (Zn) G. T. Burrow (Se); Fluorimetric, M. T. Finch, J. E. Wilson, R. P. Cox, H. H. Lipp; Radiometric: D. L. Shafer, S. P. Furman]

Sample No.[1]	Laboratory No.	Location	Semiquantititative spectrographic analyses							
			Al	Fe	Mg	Ca	Na	K	Ti	Zr
RE-4S	227232	Red House, Utah	x.	x.+	0.x	0.x−	0.0x+	0	0.x−	0.00x+
CH-5S	227235	Clay Hills Pass, Utah	x.+	x.−	.x	.0x+	.x	0	.x	.0x−
JS-186S	227691	Rincon, Utah	.x+	.x−	.0x	.0x	.0x+	.x+	.x−	.0x−
188S	227693	do	x.	.x	.0x	x.	.0x	0	.0x	.00x+
364S	227704	Cottonwood Creek, Utah	x.−	.x+	.0x+	.x−	<0.02	0	.0x	.00x+
365S	227705	do	x.−	.x	.0x	.x−		0	.0x+	.00x+
557S	227723	Black Point, Ariz.	x.	.x	.0x	.x−	(.0x−)	0	.0x+	.00x+
584S	227725	Grand Falls, Ariz.	xx.	x.−	.x−	.x−	.0x	0	.x−	.0x−
585S	227726	do	x.	.x+	.x−	.x−	.0x+	0	.x−	.00x+
608S	227727	Shinumo Altar, Ariz.	x.−	.x	.0x+	.x−	.0x−	0	.0x+	.00x+
609S	22728	do	x.−	.x	.0x+	.x−	.0x	0	.0x+	.00x+
610S	227729	do	x.−	.x+	.0x	.x−	(.0x−)	0	.0x	.00x+
619S	227730	Cameron, Ariz.	x.+	x.−	.x	x.−	.x−	x.	.x−	.00x+
620S	227731	do	xx.	x.−	.x+	x.−	.x	x.	.x−	.00x+
621S	227732	do	x.	.x+	x.−	x.	.x	x.	.x−	.00x
640S	227733	Winslow, Ariz.	x.+	.x−	.0x	.0x+	.x−	x.−	.0x+	.00x+
641S	227734	do	x.−	.x−	.0x	.0x+	.x−	x.−	.0x+	.0x−
642S	227735	do	.x+	.x−	.0x+	.0x+	.0x+	x.−	.0x	.00x−
L-261S	D-73025	White Canyon, Utah	.x	x.−	.00x+	.00x	.0x−	0	.0x−	.00x
660S	D-73037	Monument Valley, Utah	x.−	.x−	.0x−	.0x	.x−	x.−	.0x+	.0x−
662S	81747	do	x.−	x.−	.0x	.x−	.0x+	.x+	.x−	.0x
663S	86783	do	x.+	x.−	.0x+	.x+	.x−	.x+	.x−	.0x
901S	86785	Poncho House, Utah	x.	.x+	.x	.x−	.x−	<.5	.x−	.0x
906S	86786	Monitor Butte, Utah	x.	x.−	.x−	x.+	.x−	(.x)	.x−	.00x
907S	86787	do	x.+	.x+	.x−	.x	.x	.x	.x	.x−
945S	86788	Comb Wash, Utah	x.+	.x+	.x+	.x+	.x	.x	.x−	.00x+
1002S	86789	Capitol Reef, Utah	x.+	.x+	.0x+	.0x+	.x−	x.−	.x	.0x−
1006S	86790	Silver Falls, Utah	x.+	.x+	.0x+	.x+	.x−	.x+	.0x+	.0x−
1010S	86791	Circle Cliffs, Utah	x.	.x	.0x	.0x−	(.0x)	<.5	.x−	.x−
1023S	86792	Bicknell, Utah	x.+	.x+	.x−	.0x+	.x−	Tr.	.x	.0x+
1029S	86794	Clay Hills Pass, Utah	xx.	x.−	x.	.x	.x+	x.−	.x+	.0x+
1031S	86795	do	xx.	x.−	.x+	.x+	.x−	<.5	.x+	.x−
1032S	86796	Hite, Utah	x.+	x.	.x+	xx.	.x	.x+	.x−	.0x−
1037S	86797	Clear Canyon, Utah	x.+	.x+	.0x+	.x−	<.05	<.5	.x+	.x
1069S	227668	Lampstand Draw, Utah	xx.	.x+	.x+	.x	.x	x.	.x−	.0x
1070S	227669	do	x.	.x+	.x+	x.−	.x−	x.	.x−	.0x
1071S	227670	Chimney Rock, Utah	x.	.x+	.x−	x.−	.0x+	x.−	.0x+	.00x+
1072S	86799	do	x.	.x	.0x+	.x−	.0x+	.x+	.x	.0x
1073S	27671	do	x.+	x.−	.x−	.x−	x.−	x.+	.x−	.00x+
1078S	86801	Midway, Utah	x.	xx.	.x−	.x−	<.05	<.5	.x	.x−
1081S	86802	Red House Pass, Utah	x.−	.x	.x+	.x+	<.05	<.5	.x+	.x−
1083S	286803	North Wash, Utah	xx.	.x+	.x	x.+	.x	x.	.x−	.00x+
CD-1200S	227656	Dewey Cutoff, Utah	xx.	x.−	.x−	.0x+	.0x	0	.x−	.0x−
1201S	227657	do	x.+	.x−	.0x+	.x−	<.02	0	.x−	.0x
1203S	227658	do	x.+	x.−	.0x	.0x+	<.02	0	.x−	.0x
1223S	227660	Deer Flat, Utah	x.	.x−	.0x+	.x−	.0x	0	.0x+	.00x+
1226S	227661	do	.x+	.x+	x.−	x.	.0x+	.x+	.00x+	.00x+
1227S	227662	do	x.−	.0x+	.0x+	.0x+	(.0x−)	0	.0x+	.00x+
1228S	227663	do	.x+	.x	.0x+	.x+	(.0x−)	0	.0x+	.00x+
1246S	227664	Bears Ears, Utah	.x+	.x	.x	x.−	<.02	0	.0x+	.00x+
1247S	227665	do	x.−	x.−	x.−	x.−	<.02	0	.0x+	.00x
1248S	227666	Bears Ears, Utah	.x+	.x+	.x	xx.	.0x	0.	.0x	.00x−
L-1507S	227675	Hite, Utah	x.+	x.	.x	x.−	.0x+	(.x+)	.x−	.0x
1508S	227676	do	x.+	x.−	.x−	xx.	.x	x.	.x−	.00x+
1778S	227679	Kanab area, Arizona	x.−	.x	.0x−	.0x+	<.02	0	.0x+	.00x+
1779S	227680	do	x.	.x	.0x	.x−	<.02	0	.0x+	.00x
1780S	227681	do	x.	.x	.x−	.x	.0x+	0	.x−	.0x
1785S	227682	Rockville, Utah	x.−	x.	.x−	.x−	.0x+	0	.x−	.0x
1786S	227683	do	x.	.x+	.x−	.x	.0x+	.x+	.x−	.0x+
1788S	227684	Santa Clara, Utah	x.	x.	.x−	x.−	.x	0	.0x+	.00x+
1789S	227685	do	x.	x.−	.x−	x.−	.x	0	.0x+	.00x
1790S	227686	Pipe Springs National Monument, Utah	x.−	.x	.0x+	.0x+	<.02	0	.0x+	.00x+
1791S	227687	do	x.	.x	.x−	.x−	.x−	x.−	.0x+	.00x+
1792S	227688	do	x.	.x	.0x	.0x+	.0x+	.x+	.0x+	.0x−
1796S	227689	St. George, Utah	x.	x.−	.x−	.x−	.x−	x.−	.0x+	.00x+
1797S	227690	do	x.+	.x	.0x+	.x	(.0x−)	0	.0x−	.00x+
TC-4M	227290	Taylor Canyon, Utah	x.+	x.−	.x+	x.−	.x+	x.+	.x	.0x−
RA-7M	227298	Richardsons Amphitheater, Utah	x.−	.x+	.x	xx.	.x	x.−	.0x	.00x
JS-210M	227695	North-sixshooter Peak, Utah	x.−	.x+	.x	x.+	.x+	x.−	.0x	.00x+
230M	227697	Muddy River, Utah	x.−	.x+	x.−	x.+	.x−	x.−	.0x+	.00x
231M	227698	do	x.	.x+	.x	xx.	.x−	x.	.0x	.00x+
291M	227699	Buckhorn Wash, Utah	x.−	.x+	.x+	x.	.0x+	.x+	.0x+	.00x+
292M	227700	do	x.−	x.−	.x+	xx.	.0x+	x.−	.0x	.0x
335M	227701	Bridger Jack Mesa, Utah	x.	.x+	.x	x.−	.x	x.−	.0x+	.0x
336M	227702	do	x.	.x+	.x	x.+	.x+	x.−	.0x+	.0x
337M	227703	do	x.−	.x+	.x−	x.	.x−	.x+	.0x	.00x+
397M	227707	Lockhart Canyon, Utah	x.	.x+	.x	xx.	.x+	x.−	.0x+	.0x
398M	227708	do	xx.	x.−	x.−	x.	x.−	x.	.x	.0x
399M	227709	do	x.+	x.−	.x+	xx.	x.−	x.−	.x−	.0x−
400M	227710	do	x.	.x+	.x+	xx.	.x+	x.−	.0x+	.0x−
419M	227711	Range Canyon, Utah	x.	.x+	.x	.x−	.0x+	x.−	.x−	.00x
420M	227712	do	x.	.x	.x−	.x	.0x+	x.−	.0x	.0x−
429M	227713	Millard Canyon, Utah	x.	.x	.x	.x+	.0x+	x.−	.0x+	.0x−
430M	227714	do	x.	.x−	.x−	.x+	.0x+	x.−	.0x	.00x+
431M	227715	do	x.	.x	.x−	x.	.0x+	x.−	.0x	.00x
443M	227716	Taylor Canyon, Utah	x.−	.x+	.x	x.+	.0x+	.x+	.0x−	.00x
444M	227717	do	x.	.x	.x+	x.	.x−	x.	.x−	.0x
445M	227718	do	x.−	.x+	.x−	xx.	.0x+	.x+	.0x	.00x+
457M	227719	Spring Canyon, Utah	x.−	.x−	.x−	x.+	.0x+	x.−	.0x	.00x+
458M	227720	do	x.	.x+	.x−	x.	.x−	x.	.x−	.0x
474M	227622	Dynamite Point, Utah	x.	.x+	.x+	x.+	.x−	x.	.0x+	.0x−
L-1086M	227672	Jacobs Chair, Utah	x.+	.x+	.x+	x.−	.x−	x.	.x−	.0x−
1088M	227673	do	x.+	.x+	.x+	x.−	.x−	x.	.x−	.0x
1089M	227674	Hite, Utah	x.+	.x+	.x	xx.	.x+	x.	.x−	.00x+
1546M	227678	Clear Canyon, Utah	x.+	x.−	.x+	xx.	x.−	x.+	.0x+	.00x
CD-1269M	227667	North Wash, Utah	x.	.x+	.x+	x.+	.x−	x.−	.x−	.0x−
1265M	227659	Dewey Cutoff, Utah	x.	.x	.0x+	.x+	<.02	0	.0x+	.00x+

Sample No.[1]	Semiquantititative spectrographic analyses (continued)										
	Mn	Ba	Sr	Be	B	Sc	V	Cr	Co	Ni	Cu
RE-4S	0.0x−	0.x	0.x−	0	0.00x−	0.000x+	0.00x+	0.00x−	0.000x	0.000x+	0.00x+
CH-5S	.00x	.00x−	.00x+	.000x−	.00x−	.00x−	.00x+	.00x+	.000x+	.00x−	.00x
JS-186S	.000x+	.0x	.00x	0	.00x−	0	.00x−	.000x+	.000x+	.00x	.000x+
188S	.0x	.0x+	.00x+	0	.00x−	0	.00x−	.000x+	.00x+	.00x+	.000x+
364S	.0x	.0x−	.00x−	0	<.001	0	.00x−	.000x+	.000x	.00x−	.000x+
365S	.000x+	.00x+	.00x−	0	0	0	.00x	.000x+	.000x−	.000x−	.00x−
557S	.000x+	.0x−	.00x−	0	<.001	0	.00x	.000x+	0	0	.000x+
584S	.00x+	.0x	.00x	0	.00x−	.00x−	.00x+	.00x	0	0	.00x
585S	.00x+	.x−	.x−	0	.00x−	.000x+	.00x	.00x+	0	.000x−	.00x
608S	.00x−	.0x−	.00x	0	<.001	0	.000x+	.000x	0	0	.00x−
609S	.000x+	.0x−	.00x−	0	<.001	0	.000x+	.000x	(.000x−)	0	.000x
610S	.00x	.00x+	.00x−	0	<.001	0	.000x+	.000x+	0	.000x+	.00x
619S	.0x−	.0x+	.0x−	0	<.001	.000x	.00x−	.000x	(.000x−)	(.000x−)	.00x−
620S	.0x	.x−	.0x+	0	<.001	.000x+	.00x	.000x	.000x+	.000x−	.00x−
621S	.0x+	.x−	.0x+	0	<.001	0	.00x	.000x	.000x+	.000x+	.00x
640S	.0x−	.0x	.00x	0	<.001	0	.000x+	.000x	.000x−	.000x+	.000x+
641S	.0x−	.0x	.00x	0	<.001	0	.000x+	.000x	.000x	.000x+	.000x
642S	.00x−	.0x+	.00x	0	<.001	0	<.0005	.000x−	0	.000x−	(.0000x+)
L-261S	.000x−	.00x+	.000x	0	.00x−	0	.00x−	.000x−	.000x	.000x−	.0x
660S	.000x+	.00x+	.00x	0	.00x−	0	.00x−	.00x−	0	.000x	.00x−
662S	.0x	.x−	.00x+	.000x−	.00x−	.000x+	.00x	.000x+	.000x+	.000x	.00x
663S	.0x	.x−	.00x+	0	<.001	0	.000x+	.000x+	.000x+	.00x−	.0x−
901S	.0x−	.00x+	.000x+	0	.00x	0	.00x−	.000x+	.000x+	.00x−	.0x−
906S	.x−	.0x+	.00x+	0	<.001	0	.000x+	.00x−	.000x+	.00x−	.0x
907S	.00x+	.0x+	.00x	0	.00x−	(.000x)	.000x+	.00x	<.0002	(.000x)	.0x−
945S	.00x+	.x+	.0x−	0	.00x−	0	.00x+	.00x−	.00x−	.00x−	.0x+
1002S	.0x−	.x−	.0x−	0	.00x−	0	.00x	.00x−	.000x+	.00x−	.0x−
1006S	.0x+	.0x+	.0x−	0	.00x−	0	.000x+	.000x+	.00x−	.00x	.00x+
1010S	.0x	.0x+	.00x−	0	.00x−	0	.000x+	.000x	<.0002	<.0002	.00x
1023S	.0x−	.0x−	.00x+	0	.00x−	(.000x)	.00x−	.000x+	<.0002	<.0002	.00x−
1029S	.0x−	.0x	.0x	.000x	.00x+	.00x−	.0x+	.00x+	.00x−	.00x	.00x+
1031S	.0x−	.0x+	.00x+	0	.00x+	.00x−	.00x+	.00x+	.00x−	.00x	.00x+
1032S	.x	.0x	.0x−	0	<.001	.000x+	.00x+	.00x.	.000x+	.00x−	.0x
1037S	.0x−	.x−	.00x	0	.00x+	.000x+	.00x	.00x−	<.0002	<.0002	.0x−
1069S	.0x−	.0x	.0x+	(.0000x+)	.00x+	.000x+	.0x−	.00x+	.000x	.000x	.0x−
1070S	.x−	.0x+	.0x−	0	.00x	.000x+	.00x+	.00x−	.000x−	.000x+	.00x
1071S	.0x+	.0x+	.0x−	0	.00x−	0	.00x−	.000x+	.000x	.000x+	.00x
1072S	.0x−	.0x+	.00x+	0	.00x+	0	.000x+	.000x+	.00x−	.00x−	.00x−
1073S	.0x	.0x+	.0x	0	.00x−	.000x	.00x	.000x+	.000x+	.00x−	.00x−
1078S	.0x−	.0x	.0x−	0	<.001	.00x−	.0x−	.00x	.000x+	.00x−	.0x−
1081S	.0x−	x.−	x.−	0	.00x	.000x+	.00x	.00x	.000x+	.00x−	.0x−
1083S	.x−	.x+	.0x+	0	<.001	Tr.	.00x+	.00x−	<.0002	(.000x−)	.00x+
CD-1200S	.00x	.00x+	.00x−	.000x	.00x	.00x	.00x+	.0x−	.000x	.00x−	.00x+
1201S	(0.000x−)	.00x+	.00x−	0	.00x	.000x+	.000x+	.00x	0	.000x+	.00x−
1203S	.00x	.00x+	.00x	0	.00x−	.000x+	.00x	.00x	0	0	.00x−
1223S	.000x	.0x	.000x+	0	.00x−	0	.00x	.000x+	0	(.000x−)	.00x−
1226S	.0x+	.0x	.0x−	0	<.001	0	<.0005	<.0002	.000x+	.00x−	.00x
1227S	<.0002	.0x	.00x−	0	<.001	0	.00x−	.000x+	0	0	.00x−
1228S	.0x−	.0x	.00x	0	<.001	0	<.0005	.000x+	.000x+	.00x	.00x
1246S	.0x−	.x−	.00x	0	<.001	0	<.0005	.000x+	(.000x−)	(.000x−)	.00x
1247S	.0x+	.x	.0x	0	<.001	.000x+	.00x	.00x−	.000x−	.000x−	.0x−
1248S	.0x+	.00x+	.0x−	0	.00x−	0	.00x+	.00x	0	<.0002	.00x+
L-1507S	.x−	.x	.0x	0	.00x	.00x−	.00x	.00x+	.000x+	.000x+	.00x−
1508S	.x−	.0x	.0x	0	.00x−	0	.00x+	.00x−	.000x−	(.000x−)	.000x+
1778S	.0x+	.0x−	.00x−	0	.00x−	0	<.0005	.000x	0	0	.000x+
1779S	.00x+	.0x+	.00x−	0	.00x−	0	<.0005	.000x	.000x−	.000x+	.00x−
1780S	.00x+	.0x	.00x	0	.00x	0	.00x	.00x+	.000x−	.000x−	.000x+
1785S	.x−	.0x	.00x	0	.00x	0	.00x−	.00x−	.000x+	.000x	.00x+
1786S	.0x−	.0x	.00x	0	.00x	0	.00x−	.00x+	(.000x−)	0	.00x−
1788S	.x+	.x+	.0x−	0	.00x	(.000x)	.00x−	.00x−	.000x	.000x+	.00x−
1789S	.x−	.x−	.0x	0	.00x	0	.00x	.00x−	.000x	.000x+	.00x
1790S	.00x+	.0x	.00x−	0	<.001	0	.00x−	.000x+	0	<.0002	.00x−
1791S	.000x+	.0x	.00x	0	.00x−	0	.00x−	.00x−	0	0	.00x−
1792S	.00x+	.0x+	.00x	0	.00x−	0	00x−	.000x+	.000x	0	.00x−
1796S	.x−	.0x	.00x+	0	.00x−	0	.00x−	.00x−	.00x	.000x+	.00x+
1797S	.000x+	.0x+	.00x	0	<.001	0	<.0005	.000x	0	0	.000x+
TC-4M	.0x	.0x	.0x−	(.0000x+)	.00x+	.00x−	.00x+	.00x+	.000x+	.00x−	.00x−
RA-7M	.0x+	.00x	.0x+	0	0	<.002	.00x	.00x−	.000x	(.000x)	.000x+
JS-210M	.0x+	.0x	.0x−	0	.00x−	0	.00x−	.00x−	.000x−	.000x	.000x+
230M	.0x	.0x−	.0x−	0	.00x−	0	.00x−	.00x−	.000x−	.000x	.00x
231M	.0x	.0x	.0x	0	.00x−	0	.00x	.00x	0	.000x−	.00x−
291M	.0x	.0x	.00x+	0	.00x	0	.00x−	.000x+	.000x−	.000x−	.000x+
292M	.0x+	.0x	.00x+	0	.00x−	0	.00x−	.00x−	.000x−	.000x	.000x+
335M	.0x	.0x+	.0x−	0	.00x	0	.00x	.00x−	.000x−	.000x+	.000x+
336M	.0x	.0x+	.0x	0	.00x	0	.00x	.00x−	.000x	.000x+	.000x
337M	.00x+	.x	.0x−	0	<.001	0	.00x+	.000x+	.000x	.000x+	.00x−
397M	.x−	.0x	.0x	0	.00x−	0	.00x	.00x−	.000x	.000x+	.00x−
398M	.0x	.0x+	.0x	.000x	.00x+	.00x−	.0x−	.00x+	.00x−	.00x	.00x
399M	.0x+	.x−	.0x+	0	.00x	.000x+	.00x	.00x	.000x−	.000x+	.000x
400M	.x	.0x+	.0x	0	.00x−	0	.00x	.00x−	(.000x−)	.000x	.000x+
419M	.0x−	.0x	.00x	0	<.001	0	.00x	.00x−	.000x+	.00x	.00x−
420M	.00x+	.0x	.00x	0	<.001	0	.00x	.00x−	0	.000x	.000x+
429M	.00x+	.0x+	.00x+	0	<.001	0	.00x	.0x−	.000x−	.000x	.000x+
430M	.00x	.0x+	.00x	0	<.001	0	.00x−	.000x+	0	.000x−	.000x
431M	.0x−	.x−	.00x+	0	<.001	0	.00x	.000x+	.000x−	.000x	.00x−
443M	.0x+	.0x	.0x−	0	<.001	0	.00x	.000x+	.000x−	.000x	.000x+
444M	.0x+	.x−	.0x	0	<.001	.000x	.00x	.00x−	0	<.0002	.000x+
445M	.0x+	.0x	.00x+	0	<.001	0	.00x−	.00x−	0	.000x−	.000x+
457M	.0x−	.0x	.00x+	0	<.001	0	.00x−	.000x+	0	0	.000x+
458M	.0x−	.0x+	.00x	0	.00x	0	.00x	.00x−	.000x−	<.0002	.000x+
474M	.0x+	.0x+	.0x−	0	.00x	.000x	.00x	.00x−	.000x	.000x	.00x−
L-1086M	.x−	.0x	.0x−	0	.00x	.000x+	.00x+	.00x	.000x	.00x−	.000x+
1088M	.0x+	.0x+	.0x−	0	.00x	.000x+	.00x+	.00x	.000x−	.000x−	.00x−
1089M	.x−	.0x	.0x	0	.00x−	.000x+	.0x−	.000x+	<.0002	0	.000x+
1546M	.x−	.0x+	.0x+	0	.00x−	0	.0x−	.00x	<.0002	0	.00x−
CD-1269M	.x−	.0x	.0x−	0	.00x	0	.00x	.00x−	.000x−	.000x	.00x−
1265M	.000x	.00x+	.000x+	0	<.001	0	<.0005	.00x−	0	0	.00x−

Sample No.[1]	Semiquantititative spectrographic analyses (continued)								Colorimetric analyses			Fluorimetric analyses	Radiometric analyses
	Ga	Y	Mo	Ag	La	Yb	Pb	Nb	As (ppm)	Zn (ppm)	Se (ppm)	Percent U	Percent eU
RE-4S	<0.0002	0.00x−	0.000x+	0	0	0.000x	0	0.000x+	5	16	<0.5	0.0004	<.001
CH-5S	.00x−	.00x	0	0	.00x	.000x	(.000x)	.000x+	5	14	<.5	<.0001	<.001
JS-186S	<.0002	.000x+	0	0	0	.000x−	.00x−	0	17	40	<.5	.0003	<.001
188S	<.0002	.000x+	.000x	0	0	.000x−	0	0	3	80	<.5	.0007	<.001
364S	<.0002	.000x+	0	0	0	(.000x−)	0	0	32	17	<.5	.0004	<.001
365S	<.0002	0	0	0	.00x+	(.000x−)	0	0	12	8	<.5	.0006	<.001
557S	<.0002	.000x+	0	0	.00x+	.000x−	0	0	17	8	<.5	<.0001	<.001
584S	<.0002	<.001	0	(.0000x)	.00x	.000x−	(.000x)	0	40	18	.5	.0002	<.001
585S	<.0002	.00x−	0	.000x−	.00x	.00x	.000x+	0	21	4	<.5	.0001	<.001
608S	<.0002	.000x+	0	0	(.00x)	.000x−	0	0	4	2	<.5	.0001	<.001
609S	<.0002	.000x+	0	0	0	.000x−	0	0	4	1	<.5	.0001	.002
610S	<.0002	.000x+	0	0	0	.000x−	0	0	10	3	<.5	.0002	<.001
619S	(.000x−)	.00x−	0	0	.00x+	.000x	.000x+	0	10	14	<.5	.0002	.001
620S	.000x+	.00x−	0	0	.00x+	.000x	.00x−	0	31	27	<.5	.0002	<.001
621S	(.000x−)	.00x−	0	0	0	.000x	.000x+	0	21	110	<.5	.0004	<.001
640S	<.0002	.000x+	0	0	0	.000x−	(.000x)	0	9	17	<.5	.0004	<.001
641S	<.0002	.000x+	0	0	(.00x)	.000x−	(.000x)	0	23	14	<.5	.0002	<.001
642S	<.0002	<.001	0	0	(.00x)	0	(.000x−)	0	3	3	<.5	.0007	<.001
L-261S	<.0002	0	.00x−	(.0000x)	0	0	0	0	120	20	<.5	.0008	.005
660S	<.0002	0	0	0	0	0	0	0	<10	20	<.5	.0002	.001
662S	<.0002	.00x−	0	0	.00x−	<.002	0	0	12	20	1	.0006	.002
663S	<.0002	.00x−	0	0	0	.000x	.00x−	0	10	<20	3	.0006	.001
901S	<.0002	.000x+	0	0	0	.000x−	0	0	5	<20	<.5	.0002	<.001
906S	<.0002	.00x−	0	0	0	.000x−	(.000x+)	0	5	<20	<.5	.0002	<.001
907S	<.0002	.00x−	0	0	0	.000x	.00x−	0	<10	<20	3	.0003	<.001
945S	<.0002	.00x	0	0	0	.000x+	0	0	5	<20	<.5	.0003	.001
1002S	<.0002	.000x+	0	0	0	.000x−	.00x−	0	15	<20	3	.0008	.001
1006S	<.0002	.000x+	0	0	0	.000x−	.00x−	0	15	20	6	.0004	.002
1010S	<.0002	.00x	0	0	0	.000x	0	0	5	<20	8	.0002	.001
1023S	<.0002	.00x−	0	0	0	.000x	0	(.000x+)	10	<20	8	.0002	<.001
1029S	.00x−	.00x	0	0	.00x+	.000x+	.00x	(.000x+)	10	20	15	.0005	.002
1031S	.000x+	.00x	0	0	0	.000x+	.00x−	(.000x+)	5	<20	3	.0004	.001
1032S	.000x+	.00x+	<.0005	0	.00x+	.000x+	.00x−	0	10	20	<2	.0009	.001
1037S	<.0002	.00x	0	0	.00x+	.000x+	0	(.000x+)	10	<20	2	.0006	.001
1069S	.00x−	.00x−	0	0	.00x	.000x	.0x	0	14	30	<.5	.0004	<.001
1070S	(.000x−)	.00x−	0	0	0	.000x	(.000x−)	0	9	24	<.5	.0001	.002
1071S	0	.00x−	0	(.0000x−)	0	.000x	(.000x−)	0	7	210	<.5	.0003	.003
1072S	<.0002	.00x−	0	0	0	.000x	.00x	(.000x+)	10	50	<2	.0004	.001
1073S	(.000x−)	.00x−	0	0	0	.000x	.00x−	0	17	120	<.5	.0004	.001
1078S	<.0002	.00x−	.00x−	0	.00x	.000x	0	0	<10	<20	6	.0003	<.001
1081S	<.0002	.0x	0	(.0000x−)	0	.000x	0	(.000x+)	5	<20	<2	.0007	<.001
1083S	.000x	.00x−	0	0	.0x−	.000x−	.00x−	0	15	<20	6	.0002	.002
CD-1200S	.00x	.00x−	0	0	0	.000x	.00x	0	20	14	1	.0006	<.001
1201S	<.0002	.00x	0	0	0	.000x+	0	0	9	3	<.5	.0002	<.001
1203S	<.0002	.0x−	0	0	.00x+	.00x−	0	0	8	2	<.5	.0001	<.001
1223S	<.0002	0	.000x	0	0	0	(.000x−)	0	6	11	1	.0009	.001
1226S	<.0002	.000x+	0	0	0	.000x−	0	0	7	98	.5	.0005	<.001
1227S	<.0002	0	0	0	0	0	0	0	6	2	<.5	.0003	<.001
1228S	<.0002	.00x	0	0	0	.000x	0	0	10	10	<.5	.0002	<.001
1246S	<.0002	0	0	0	.00x+	.000x−	0	0	5	5	<.5	<.0001	<.001
1247S	<.0002	.00x−	0	0	0	.000x−	0	0	7	11	<.5	.0002	<.001
1248S	<.0002	.00x−	0	0	0	.000x	0	0	7	11	<.5	<.0001	<.001
L-1507S	<.0002	.00x−	0	0	0	.000x+	0	0	9	17	<.5	.0001	<.001
1508S	(.000x−)	.00x−	0	0	0	.000x−	.000x+	0	80	24	<.5	<.0001	.001
1778S	<.0002	(.000x+)	0	0	0	(.000x−)	0	0	11	20	<.5	.0002	<.001
1779S	<.0002	.000x+	0	0	0	(.000x−)	0	0	13	11	<.5	<.0001	<.001
1780S	<.0002	.00x	0	0	0	(.000x)	.000x	0	12	14	<.5	.0002	<.001
1785S	<.0002	.000x+	.000x	(.0000x)	0	.000x	(.000x−)	0	8	540	<.5	.0003	<.001
1786S	<.0002	.000x+	0	(.0000x−)	.00x	.000x	(.000x)	0	21	21	<.5	.0001	<.001
1788S	<.0002	.00x−	.000x	.0000x+	0	.000x−	0	0	18	30	<.5	.0002	<.001
1789S	(.000x−)	<.001	0	0	0	.000x−	0	0	16	18	<.5	.0001	<.001
1790S	<.0002	.00x−	0	0	0	.000x−	0	0	12	4	<.5	.0001	<.001
1791S	<.0002	.00x−	0	0	0	.000x−	0	0	10	7	<.5	.0001	<.001
1792S	<.0002	.00x−	0	0	0	.000x−	(.000x−)	0	13	4	<.5	.0001	.001
1796S	<.0002	.00x−	0	0	0	.000x−	(.000x−)	0	10	22	<.5	.0009	<.001
1797S	<.0002	0	0	0	0	(.000x−)	0	0	25	<1	<.5	.0001	<.001
TC-4M	.000x+	.00x	0	0	.00x	.000x−	(.000x−)	0	8	94	<.5	.0014	<.001
RA-7M	0	.00x	<.001	0	.0x−	.000x	(.000x−)	0	4	10	<.5	.0010	.003
JS-210M	<.0002	.000x+	0	0	0	0	0	0	29	6	<.5	.0004	.002
230M	<.0002	.000x+	0	0	0	0	0	0	17	8	<.5	.0001	.001
231M	<.0002	.00x−	0	0	0	.000x−	(.000x−)	0	12	3	<.5	.0001	<.001
291M	<.0002	.000x+	0	(.0000x)	0	0	0	0	12	6	.5	.0002	<.001
292M	<.0002	.000x+	0	(.0000x−)	0	.000x−	0	0	13	14	<.5	.0001	<.001
335M	<.0002	.00x−	0	0	0	.000x−	(.000x)	0	17	10	<.5	.0005	<.001
336M	<.0002	.00x−	0	0	0	.000x	(.000x−)	0	12	27	<.5	.0004	<.001
337M	<.0002	0	0	0	0	(.000x−)	0	0	20	11	<.5	.0004	<.001
397M	<.0002	.000x+	0	0	0	.000x−	.00x−	0	10	15	<.5	.0008	< 001
398M	.00x	.00x	0	0	.00x	.000x+	.00x−	0	21	56	<.5	.0007	.002
399M	.000x+	.00x−	0	0	0	.000x	.000x+	0	9	29	<.5	.0003	<.001
400M	<.0002	.00x−	0	0	0	.000x	0	0	9	17	<.5	.0006	<.001
419M	<.0002	.00x−	0	0	0	.000x−	(.000x−)	0	17	27	<.5	.0003	<.001
420M	<.0002	.000x+	0	0	0	.000x−	0	0	8	3	<.5	.0002	<.001
429M	<.0002	.000x+	0	0	0	.000x−	0	0	15	5	<.5	.0002	<.001
430M	<.0002	.000x+	0	0	0	.000x−	0	0	12	<1	<.5	.0001	<.001
431M	<.0002	.000x+	0	0	0	.000x−	0	0	14	86	.5	.0004	<.001
443M	<.0002	.000x+	0	0	0	.000x−	.000x	0	18	24	<.5	.0002	<.001
444M	<.0002	.00x−	0	0	0	.000x	0	0	13	15	<.5	.0006	<.001
445M	<.0002	.000x+	0	0	0	.000x−	0	0	15	35	<.5	.0002	<.001
457M	<.0002	.000x+	0	0	0	.000x−	0	0	13	3	<.5	.0001	<.001
458M	<.0002	.000x+	0	0	0	.000x	0	0	13	3	<.5	.0001	<.001
474M	.000x+	.000x+	0	0	0	.000x	0	0	17	22	--------	.0002	<.001
L-1086M	.000x	.00x	0	0	0	.000x+	(.000x−)	0	13	180	<.5	.0004	<.001
1088M	(.000x−)	.00x−	0	0	.00x	.000x	(.000x−)	0	7	51	<.5	.0003	<.001
1089M	(.000x−)	.00x−	0	0	0	.000x	(.000x)	0	82	22	<.5	.0001	.001
1546M	(.000x−)	.00x−	0	0	0	.000x−	.000x+	0	26	41	.5	<.0001	.002
CD-1269M	(.000x−)	.00x−	0	0	0	.000x	(.000x−)	0	10	32	<.5	.0005	<.001
1265M	<.0002	0	0	0	0	0	0	0	--------	--------	<.5	.0001	<.001

[1] Suffix "S" indicates samples from the Shinarump member and "M" from the Moss Back member.