

A Riker box of coloured stones

See: <http://www.turnstone.ca/rom206qz.htm>

2144A = milky quartz vein, taken as a reference material

Measured by GCW on 7/11/2018

Number	Extra (g)	In x pc	Sample ID	Wt in air	Wt in water	T°C	SG	Density	Standard	Carats	Descr.	Token ID	Notes
2144A	STD	1		332.98	206.95	18.4	2.642	2.638	Y	Start		Milky quartz STD	White
2144A	STD	1		332.98	207.26	18.4	2.649	2.645	Y	End		Milky quartz STD	White
1		1		4.53	2.81	18.4	2.634	2.630		22.7		Bicolour	Bicolour green+brown
2		1		4.62	2.88	18.4	2.655	2.651		23.1		Smoky quartz	Grey
3		1		5.69	3.62	18.4	2.749	2.745		28.5		Amethyst	Purple
4		1		4.40	2.75	18.4	2.667	2.663		22.0		Green	Green
5		1		8.21	5.13	18.4	2.666	2.662		41.1		Citrine	Yellow
6		1		4.57	2.85	18.4	2.657	2.653		22.9		Rose quartz	Pale pink
7		1		6.87	4.32	18.4	2.694	2.690		34.4		Orange	Orange
8		1		4.68	2.90	18.4	2.629	2.625		23.4		Green	Green
9		1		9.84	6.14	18.4	2.659	2.656		49.2		Brown	Brown

Total

Averages ± 2 σ

267.1

See photo: stones 1-9 are in 3 rows, top designated by the Riker box hanger (at rear), numbered left to right, and top to bottom

Mean (n=9) 2.664

0.072

Mean (n=8, minus amethyst) 2.654

0.020

Quartz, nominal SG 2.651

Given the S.G. measurements shown here, it is likely that all nine stones are varieties of quartz, the most common mineral in the Earth's crust, formula SiO₂ - a hard, durable semi-precious stone

Below, check, 7/12/2018

2144A	STD	1		332.95	206.96	18.4	2.643	2.639	Y	End		Milky quartz STD	White
3		1		5.68	3.62	18.4	2.757	2.753		28.4		Amethyst	Purple

The density estimates shown here are reasonably accurate, but just one reference material was used, once, instead of 2-3, twice. Nevertheless, the data for all but the "amethyst" are close enough to 2.65 to suggest that the suite are all varieties of quartz, or a glass of density similar to quartz.

These coloured stones are quite large but, as quartz varieties, relatively inexpensive.. Possibly they are a jeweller's or gemmologist's display set, showcasing some of many different cuts for gemstones.