

**TABLE 2.** Comparison of the activities of  $^{238}\text{U}$ ,  $^{232}\text{Th}$ , and radon emanation coefficients in different size fractions determined in this study with the values reported in literature<sup>a</sup>

Mineral	Locality	Estimated age (MA)	Size fraction ( $\mu\text{m}$ )	U-238 (Bq/g)	Th-232 (Bq/g)	Radon emanation coefficient (%)	Reference
Uraninite	Wilberforce, Ontario	1000 $\pm$ 200	<63	5829 $\pm$ 69	376.73 $\pm$ 7.32	0.53 $\pm$ 0.01	Garver et al. 2004
			1000–2000			0.53 $\pm$ 0.01	
Zircon	Oklo, Gabon	1968 $\pm$ 50	bulk	9465 $\pm$ 216	5.1 $\pm$ 2	0.000049	Malczewski et al. 2015
	NA	NA	NA	6550	NA	1.9	Rama 1990a
	Bancroft, Ontario	ca. 1150	125–250	6487 $\pm$ 49	446 $\pm$ 3	0.18 $\pm$ 0.001	This study
	Malawi, Africa	730 $\pm$ 20	125–250	8.87 $\pm$ 0.07	4.13 $\pm$ 0.1	2.21 $\pm$ 0.23	Eakin et al. 2016
			125–250			0.37 $\pm$ 0.02	This study
	Bancroft, Ontario	1050 $\pm$ 12	125–250	80.27 $\pm$ 0.58	39.58 $\pm$ 0.87	2.11 $\pm$ 0.35	Eakin et al. 2016
			125–250			0.19 $\pm$ 0.01	This study
	Mud Tank, Australia	732 $\pm$ 5	125–250	0.388 $\pm$ 0.008	0.235 $\pm$ 0.027	1.76 $\pm$ 0.64	Eakin et al. 2016
			125–250			0.38 $\pm$ 0.2	This study
	Goiás, Brazil	2900 $\pm$ 200	<63	50.1 $\pm$ 0.5	4.6 $\pm$ 0.1	1.04 $\pm$ 0.01	Garver et al. 2004
			1000–2000			0.47 $\pm$ 0.01	
	NA	NA	NA	3.831 $\pm$ 2.986	NA	0.01 $\pm$ 0.00	Rama 1990a
	NA	NA	NA	NA	NA	0.2 – 4.8	Barretto 1973
	NA	NA	NA	NA	NA	12.1	
	Tory Hill, Ontario	1000 $\pm$ 200	<63	104 $\pm$ 2	869 $\pm$ 9	5.38 $\pm$ 0.08	Garver et al. 2004
	Cardiff Twp, Canada	1250 - 1340	bulk	120 $\pm$ 9	1054 $\pm$ 22	0.077	Malczewski et al. 2015
Apatite	Bancroft, Ontario	ca. 1150	125–250	121 $\pm$ 1	776 $\pm$ 5	0.60 $\pm$ 0.01	This study
	NA	NA	<5000	0.25 – 0.095	NA	0.5–25	Rama 1990a
Hornblende	NA	NA	NA	NA	NA	0.8	
	Bancroft, Ontario	1200	<125	0.64 $\pm$ 0.01	1.08 $\pm$ 0.01	5.4 $\pm$ 0.11	This study
	NA	NA	212–425	0.0106 $\pm$ 0.0005	NA	3.42 $\pm$ 0.38	Krishnaswami and Seidemann 1988
Quartz	Bancroft, Ontario	1200	<125	1.52 $\pm$ 0.01	0.308 $\pm$ 0.006	0.90 $\pm$ 0.03	This study
	Austria	NA	250–500	0.800 $\pm$ 0.03	NA	4.6 $\pm$ 0.5	Sakoda et al. 2010
	Bancroft, Ontario	1200	<125	0.0177 $\pm$ 0.0005	BDL	3.8 $\pm$ 0.46	This study

Note: NA = Not available.

<sup>a</sup>Sakoda et al. 2011; Nazaroff 1992.