

Table A1. Uranium-series dating of flowstones from Batu Caves and Badak Cave C in Peninsular Malaysia: age and supporting data.

Sample Name	Sample location/ depth (cm) ^a	U (ppb)	²³² Th (ppb)	²³⁰ Th/ ²³² Th activity	²³⁰ Th/ ²³⁸ U activity	²³⁴ U/ ²³⁸ U activity ^b	Uncorr. ²³⁰ Th Age (ka) ^{b,c,d}	Corr. ²³⁰ Th Age (ka) ^{c,d}	Initial (²³⁴ U/ ²³⁸ U)
M-BADA-G4-F4	BAD/0	209.3 ± 0.7	176.2 ± 1.5	3.65 ± 0.07	1.012 ± 0.02	0.972 ± 0.005	UC	UC	UC
M-BADA-G4-F4^e	BAD/0	171.5 ± 0.1	128.0 ± 0.5	4.19 ± 0.02	1.010 ± 0.002	1.007 ± 0.001	UC	UC	UC
M-BADA-G5-F5	BAD/0	87.59 ± 0.13	104.9 ± 1.0	2.57 ± 0.05	1.013 ± 0.011	0.996 ± 0.004	UC	UC	UC
M-BADA-G5-F5^e	BAD/0	51.39 ± 0.04	75.7 ± 0.2	2.14 ± 0.01	1.0371 ± 0.004	1.022 ± 0.002	UC	UC	UC
M-BATU-CI-F1	BAT-C/325	2796.8 ± 6.6	48.7 ± 0.3	77.1 ± 0.8	0.4424 ± 0.003	1.027 ± 0.001	61.10 ± 0.53	60.60 ± 0.58	1.032 ± 0.002
M-BATU-SW-F3	BAT-S/0	3476.0 ± 5.8	11.9 ± 0.1	13.0 ± 0.2	0.01471 ± 0.0001	1.043 ± 0.001	1.55 ± 0.02	1.45 ± 0.05	1.043 ± 0.001
M-BATU-VL-F2	BAT-V/0	115.05 ± 0.14	4.99 ± 0.03	14.6 ± 0.2	0.2088 ± 0.002	1.219 ± 0.002	20.32 ± 0.19	19.28 ± 0.54	1.234 ± 0.003

^a BAD samples collected from Badak Cave C in Perak, BAT samples collected from Batu caves complex (incorporating Cistern, Swamp and Villa Cave) in Selangor; (see Figures 2.4, 2.6, 2.7 and 2.12 for cave locations and sampling sites).

^b Uncertainties at 95% confidence interval.

^c UC denotes "unable to calculate". This is because the isotopic ratios of the samples are near secular equilibrium within their analytical errors.

^d ²³⁰Th ages are calculated using Isoplot EX/3.0 Program of Ludwig (2003) using decay constants of Cheng *et al.* (2000). Uncorr. Denotes uncorrected; corr. denotes corrected. The corr. ²³⁰Th ages were calculated assuming detrial ²³⁰Th/²³²Th atomic ratio = 4.4±2.2 x 10⁻⁶.

^e replicate analyses by MC-ICP-MS. The rest of the samples measured by TIMS.