

Kaveri TL dates from Japan

Miss Uchida, PhD Student of Prof. Toyoda, sent me gamma ray dose rate of B/1 and B/2. Her results for B/1 sample were as follows;

U: 1.93 ± 0.04 ppm

Th: 37.83 ± 2.58 ppm

K20: 1.69 ± 0.04 wt%

Water content: 15%

Then gamma ray dose rate from surrounding soil is 2.02 ± 0.11 mGy/y.

Dr. Shitaoka has already got data as follows;
TL paleodose Paleodose: 6.0 ± 1.3 Gy T9/Ch/1
Beta-ray dose rate from T9/Ch/1 itself: 1.47 ± 0.07 mGy/y
Cosmic-ray dose rate: 0.10 ± 0.01 mGy/y This dose rate was supposed that the T9/Ch/1 have been at surface on earth.

Annual dose rate is 3.59 ± 0.13 mGy/y ($=1.47 + 2.02 + 0.1$).

Then calculated TL age of T9/Ch/1 in the case that surrounding soil was B/1 is 1672 ± 367 years
($=6000 / (1.47 + 2.02 + 0.1)$).

Miss Uchida also got data for B/2.

U: 12.49 ± 0.25 ppm

Th: 7.58 ± 0.48 ppm

K20: 0.40 ± 0.02 wt%

Water content: 5%

Then gamma ray dose rate from surrounding soil is 1.75 ± 0.03 mGy/y.

Annual dose rate is 3.32 ± 0.08 mGy/y ($=1.47 + 1.75 + 0.1$).

Then calculated TL age of T9/Ch/1 in the case that surrounding soil was B/2 is 1807 ± 394 years
($=6000 / (1.47 + 1.75 + 0.1)$).

With best regards,
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