(a)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample  (Aber86/) | Depth (cm) | Water content (%) | Alpha count rate (cts/ks/cm2) | Beta Dose (Gy/ka) | Calculated concentrations | | | Total Dose (Gy/ka) |
| K (%) | U (ppm) | Th (ppm) |
| SL8-1 | 5 | 5±2 | 0.379±0.001 | 0.49±0.02 | 0.17±0.05 | 1.27±0.22 | 6.46±0.72 | 1.16 ± 0.05 |
| SL8-2 | 23 | 10±5 | 0.141±0.003 | 0.30±0.01 | 0.21±0.02 | 0.50±0.08 | 2.33±0.26 | 0.67 ± 0.03 |
| SL8-3 | 43 | 10±5 | 0.163±0.003 | 0.43±0.01 | 0.36±0.03 | 0.45±0.10 | 3.13±0.33 | 0.81 ± 0.03 |

(b)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample  (Aber86/) | Number of grains: | | | | | Min. Age model  De (Gy) | Age  (ka) | Max. Age model  De (Gy) | Age (ka) |
| Measured | Saturated | | Accepted | |
| SL8-1 | 600 | | 3 | | 240 | 0.24 ± 0.01 | **0.21 ± 0.01** | - | - |
| SL8-2 | 500 | | 11 | | 220 | 1.94 ± 0.01 | 2.88 ± 0.11 | 51.9 ± 4.9 | **77.0 ± 7.9** |
| SL8-3 | 600 | | 149 | | 334 | 8.42 ± 0.43 | 10.4 ± 0.7 | 108 ± 5.0 | 133 ± 8.2 |

Table 1: (a) Dosimetry information for the three OSL samples. The dose rate given in the final column is calculated as the sum of the beta dose rate derived from the beta counting, the gamma dose rate based upon the concentration of K, U and Th and the conversion factors of Adamiec and Aitken (1998), and a cosmic dose rate calculated from the current burial depth (Prescott and Hutton 1994). The beta and gamma dose rates have been corrected for grain size (90-250 µm) and water content. (b) The number of individual quartz grains whose luminescence signal was measured, the number which were saturated, and the number of grains that yielded equivalent dose values that could be used in the age models. Results from both the minimum age and maximum age modelare presented. The ages in bold are thought to be the most likely. See text for discussion.