

Report on the assessment of age by the luminescent method  
62/2020

Customer: Customer  
Job no.: Job

Catalog no.: 4153      Sample name: VNR 1017 osl2 M1

A. Laboratory number and dating result

|                          |
|--------------------------|
| GdTL-3461<br>14.7(12) ka |
|--------------------------|

B. Laboratory measurements

1. Determination of the dose rate

radioactivity measured by: germanium spectrometer

mineral: quartz

etched in 40% HF for 60 min

grain size: 90-125  $\mu\text{m}$

alpha rad. effect.: 0.03(1) assumed

assumed mean water content: 15(5)%

| Activity, Bq/kg |          |         |
|-----------------|----------|---------|
| Th-232          | U-238    | K-40    |
| 22.1(16)        | 18.5(10) | 385(34) |

| Effective dose rate, Gy/ka |           |           |             |           |
|----------------------------|-----------|-----------|-------------|-----------|
| alpha                      | beta      | gamma     | cosmic rays | total     |
| 0.0110(29)                 | 1.066(90) | 0.631(34) | 0.193(19)   | 1.900(98) |

2. Determination of the equivalent dose

method – OSL-SAR single aliquot regenerative

doses of beta radiation (in Gy):

regenerative: 10, 20, 35, 60

nonlinearity of growth of OSL - taken into account

|                                |
|--------------------------------|
| Equivalent dose<br>28.1(15) Gy |
|--------------------------------|

3. Notes:

DE otrzymana dla 19 naważek

☐ CAM (Central Age Model) dla 19 naważek

Director of Laboratory

C. Explanatory notes

- Age stated in section A is expressed in years (a), thousand (ka) or million (Ma) years before the year 1950.
- Total standard uncertainties expressed in parentheses are given in the last two (or one) digits of the result. Standard uncertainties have been assessed basing on estimated accuracy of laboratory measurements and do not account for any extra-laboratory factors.
- Please state the laboratory number when quoting the result of dating and give references to papers indicated above.