To evaluate the dating uncertainty of the palaeodata, we have created a chronological reliability index (Q), based on the sampling resolution and the sample age model:

$$Q = \frac{CA + R + D}{3} \qquad (1)$$

CA (calibration) equals 1 if ages are calibrated or 0 if they are not calibrated. R (resolution) refers to the mean number of samples per core length ratio, where

$$R = \begin{cases} 0.1 \; \textit{for ratio between } 0.01 \textit{ and } 0.1 \\ 0.2 \; \textit{for ratio between } 0.11 \textit{ and } 0.2 \\ \vdots \\ 11.0 \; \textit{for ratio between } 10.01 \textit{ and } 11.00 \end{cases} \qquad (2)$$

D (dating) is the number of datings within the interval 7,000-5,000 cal yr BP, divided by 10. This index is a semi-quantitative approach that simply involves the computation of an arithmetic mean, where the same weight is given to all parameters. Therefore, because Q encompasses a sum, the greater its value, the higher the chronological reliability of the palaeodata.