

Calibration of radiocarbon dates I

The measured radiocarbon age or ^{14}C age of an ancient material is expressed in ^{14}C years and must be calibrated to yield an age expressed in calendar years. The plot at right is an example of a calibration diagram, with a red calibration curve established from studies of tree-rings. It shows the calibration of three hypothetical samples.

The three samples show three possible results dependent on the shape of the calibration curve. Sample B is positioned most favorably, in that the steep slope of the curve yields a narrow age range on the horizontal (calendar-year) axis. Sample A hits a flat part of the curve that yields a broader age range and thus a less tightly-defined age. Sample C is even more distinctive (and unfortunate) in yielding two ranges of time from which the sample could originate.

