

# Reference

1) **Active Carbon | Wholesale Suppliers Online | alibaba.com**

[www.alibaba.com/Wholesale/Marketplace](http://www.alibaba.com/Wholesale/Marketplace)

2) **[Radiocarbon dating - Wikipedia](https://en.wikipedia.org/wiki/Radiocarbon_dating)**

[https://en.wikipedia.org/wiki/Radiocarbon\\_dating](https://en.wikipedia.org/wiki/Radiocarbon_dating)

3) **12<sup>th</sup> mathematics Books.**

# Radiocarbon datin

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Main article: [Radiocarbon dating](#)

Radiocarbon dating is a [radiometric dating](#) method that uses ( $^{14}\text{C}$ ) to determine the age of [carbonaceous](#) materials up to about 60,000 years old. The technique was developed by [Willard Libby](#) and his colleagues in 1949<sup>[9]</sup> during his tenure as a professor at the [University of Chicago](#). Libby estimated that the radioactivity of exchangeable carbon-14 would be about 14 disintegrations per minute (dpm) per gram of pure carbon, and this is still used as the activity of the *modern radiocarbon standard*.<sup>[10][11]</sup> In 1960, Libby was awarded the [Nobel Prize in chemistry](#) for this work.

One of the frequent uses of the technique is to date organic remains from archaeological sites. Plants [fix](#) atmospheric carbon during photosynthesis, so the level of  $^{14}\text{C}$  in plants and animals when they die approximately equals the level of  $^{14}\text{C}$  in the atmosphere at that time. However, it decreases thereafter from radioactive decay, allowing the date of death or fixation to be estimated. The initial  $^{14}\text{C}$  level for the calculation can either be estimated, or else directly compared with known year-by-year data from tree-ring data ([dendrochronology](#)) up to 10,000 years ago (using overlapping data from live and dead trees in a given area), or else from cave deposits ([speleothems](#)), back to about 45,000 years before the present. A calculation or (more accurately) a direct comparison of carbon-14 levels in a sample, with tree ring or cave-deposit carbon-14 levels of a known age, then gives the wood or animal sample age-since-formation.

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<https://www.khanacademy.org/science/physics/quantum-physics/in-in-nuclei/v/introduction-to-exponential-deca>