Carbon 14

The most famous radiometric dating method is Carbon-14; also called Radiocarbon. It can only be used to date samples that were once alive. These are things like bones, shells, teeth, leather, wood, coal, etc, - or any remains that came from living things. A common misconception is that C-14 proves millions of years. It does not. C-14 dating technique was developed rather recently in 1946. It is used only for dating organic materials and It is only useful for a maximum of 80,000 years - not millions or billions of years.

The air you are breathing is 78% nitrogen (N) and only 21% oxygen (O). Normal stable Nitrogen (N-14) is turned into radioactive Carbon-14 in the atmosphere when cosmic rays hit the Nitrogen. Carbon-14 can also mix with Oxygen like normal carbon and become part of the carbon dioxide in our air. (CO2).



Plants and animals breathe in the CO2 and it becomes a part of their body. Animals eat the plants, and other animals eat those animals ... which contain the CO2 that has the C-14 in it. This C-14 is in all of the plants, the water, and the animals. It is in our entire food chain in exactly the same amount as is in the atmosphere. As long as you eat and drink and breathe, you have that same amount of C-14 in you, as is in the air.

But all the carbon-14, even when part of CO2, decays back to N14. This is called Betadecay. It goes back to N14 rather quickly. It has a half life of 5730 years. This means half of a sample of C14 is gone in 5730 years, and only half of the original amount is still there. If another half-life of 5730 years passes, only 25% of the original C-14 is left. ($\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$) But people or plants still take in C14 as they breathe and eat. Over time, the amount of CO2 that comes in, matches what decays so it is believed that our entire food chain is at an equilibrium point that matches the amount of C14 in the atmosphere. What we take in of new C14 while we are alive, closely matches what C14 we lose due to C14 decaying back to N-14.

When something dies, or a tree is cut down. It stops taking in CO2 including C-14. If a person dies, he stops eating and drinking and breathing. At that moment, he still has the same amount of C-14 in his body as in the air.

But since that C-14 turns into N-14 as time goes by, eventually all that C-14 in the remaining bones or other organic material will be gone. If we find an animal bone with very little C-14 left in it and we can say "oh look, this bone must be very old ... there's hardly any C-14 left in it." The oldest age we can give to a sample based on C-14 dating is about 80,000 years. Anything older than that, there is no detectable C-14 left. It all went back to the air as N14. This about 14 "half-lives" of beta decay. After being cut in half 14 times, any C-14 left over is so tiny we can not measure it. So if there is no C-14 left in the sample it is called C-14 dead. It could be 120,000 years old or it could be 12 million years old, but we cannot tell from C-14.

When we see a bone or a shell or some wood or cloth with a lot of C-14 still in it we can say, "oh this isn't old, it's pretty recent ... look at all the C-14 still in it." So if we find C-14 in a sample, it wipes out millions of years. It can only be thousands of years old. What is especially interesting is that every time a dinosaur bone is tested for C-14 it comes back with dates of 6,000 to 40,000 years old. Never millions of years or declared "C-14 dead". These numbers indicate the amount of C-14 is significantly more than any contamination could cause. These dinosaur bones cannot be millions of years old.

But the dates assigned by the laboratories are still based on some assumptions. In fact there are a number of assumptions that go into radiocarbon dating. The major one is how much C-14 was <u>originally</u> in the material. If we do not know or guess how much C-14 was originally present, we would not be able to work backwards to figure out the age of the material. Remember the original amount of C-14 in any sample would be the amount that was in the atmosphere, *when the sample died*.

Since we don't know that, an assumption is made. The assumption is that the amount of C-14 in the atmosphere has been the same for eons of time. So the calculation is based not on how much C-14 was in the air when the sample died, but how much is in the air **today**. But we know this assumption is wrong. The amount of C-14 in the air is still going up. So just thousands of years ago, there was much less C-14 in the atmosphere.



The inventor of radiocarbon dating, Nobel Prize winner Willard Libby, calculated that the level of C-14 in the Earth's atmosphere should become level (or at a steady state) 30,000 years after the formation of the atmosphere. He could figure this out because C-14 is not a naturally occurring isotope. Remember that C-14 is created by cosmic rays passing through the atmosphere. The more cosmic rays entering the atmosphere, the more C-14 is being formed. As the cosmic rays hit nitrogen in the atmosphere, it is turned into C-14, which is unstable.

In 5730 years, half any C-14 turns back into Nitrogen. Eventually the amount of new C-14 that is forming, equals the amount turning back to nitrogen, and the C-14 level in the atmosphere, reaches a 'steady state'.

But Libby's own experiments showed that the level of C-14 is increasing in our atmosphere and is not at a constant level. Since C-14 levels in the atmosphere are still increasing in the air, it may mean that the Earth's atmosphere should be less than 30,000 years old. Libby declared that his findings were due to experimental error, but more recent experiments continue to show C-14 levels are continuing to increase. Libby's findings were not experimental error and are of a significant issue.

Another important point is that earth's magnetic field protects us and our atmosphere from cosmic rays. The stronger the magnetic field, the fewer cosmic rays hit the atmosphere and therefore less C-14 in the atmosphere.

We know that earth's magnetic field is declining at a rapid rate. This is also a reason to believe that there was much less C-14 in the air in the past. All this means that the

calculated numbers for ages based on C-14 dating are *too high*. A sample C-14 dated at 24,000 years old, is much too high a number if the atmosphere had much less C-14 in the past. It could easily be only 4,000 years old.

This has serious implications for the calculations that radiocarbon dating relies upon. The sample being tested for C-14 content would have died or been cut down when there was much less C-14 in the air than in today's atmosphere. Since we can empirically prove that C-14 levels are rising, we need to lower the assumed original amount of C-14 in our calculations. This will result in younger ages for tested materials.

But even without these corrected results, the oldest any material with C-14 in it would still be younger than 80,000 years. This is why no evolutionist actually uses C-14 dating on any sample they believe to be millions of years old. The sample would be C-14 'dead'.



C-14 in diamonds *believed* to be over a billion years old:

"...we note the presence of detectable levels of ¹⁴C in natural diamonds, formed deep within the earth during its early history, hints the age of the planet itself may likewise be constrained by the brief life span of ¹⁴C. We therefore conclude the ¹⁴C data provide noteworthy support for a recent global Flood and a young earth."

Baumgardner, J.R. (2005) RATE Results page 624

Since evolutionists say dinosaur bones are all more than 65,000,000 years old, they would not pay to test a dinosaur bone for C-14. Yet every time a dinosaur sample has been submitted to a lab for C-14 testing it has come back positive and with an age of only thousands. Some say the sample must have been contaminated. But all labs and scientists know how to prepare samples and avoid contamination. If the dinosaur samples are contaminated, then almost all samples would face the same challenge.

Since Carbon-14 is found in just about all samples of organic materials, including deep earth diamonds, it proves that these once living things actually died only several thousands of years ago, not millions of years. This includes dinosaur bones.

Carbon-14 Summary

- Carbon-14 can only be used to date organic material And it is found everywhere.
- 1) Carbon-14 wipes out millions of years!
- 2) We know the assumption of C-14 equilibrium in the atmosphere is FALSE
- So even nominal 'ages' of <u>tens</u> of thousands of years can be recalculated to be less than 6000 years old.
- Ancient fossils as well as coal and DIAMONDS contain C-14 residue therefore they are only thousands of years old and cannot be millions.

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