

One of the main problems with modern dating methods is that it is based on unverifiable assumptions.

To accurately calculate the time elapsed, you need to know the starting amount, the ending amount, and the half-life rate (Figure 4.1.1) and assume that there is a closed system.

$$A = A_0 * 2^{(-t/h)}$$

A=Ending Amount

A₀=Starting Amount

t=Time Elapsed

h=Half-Life Rate

Fig 4.1.1 Half-Life formula

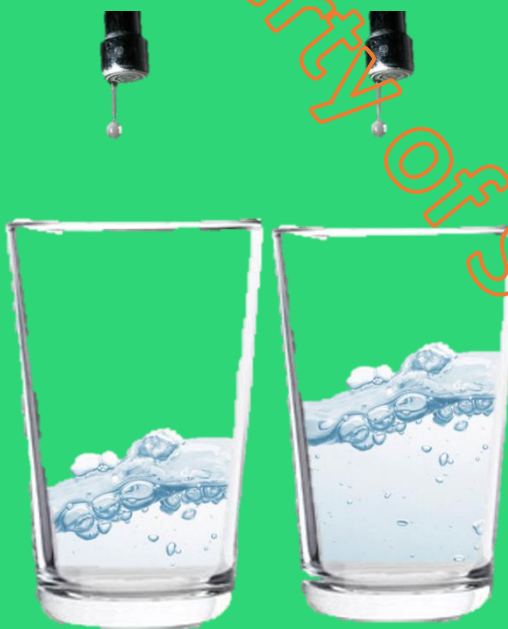


Fig 4.1.2 Water filling up a glass.

Simply put, imagine a glass of water that is half full. Now imagine that water is dripping into the glass that fills it at an average of one tenth of a glass per hour (Figure 4.1.2).

How long has water been dripping into the glass?

You might conclude that it has been on for five hours, but this is not necessarily true. You are assuming that there was no water in the glass to start with (starting amount), no water

evaporated (closed system), and that the water has always been dripping at the same rate (Half-Life Rate).

These assumptions can radically shift the answer.

Let us compare this to radioactive dating.

Radioactive elements decay from one element (parent compound) to another element (daughter compound) (Figure 4.2.2). If there is any of the daughter compound present at the start of the reaction, it will look older than it is. This is the equivalent of having some water in the glass before the faucet was turned on.

We also have to assume a completely closed system. Any outside force that alters the environment can change the decay rate. If water washes away some of the compound or a dog eats part of the sample, the numbers will change. In essence we are assuming that no water evaporated or was poured out of our glass.

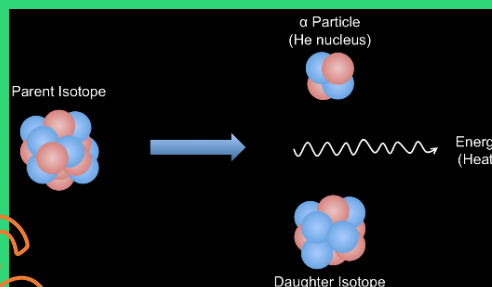


Fig 4.2.2 Radioactive decay illustrated.

Finally, we are assuming that the half-life rate was always the same and no factors were involved to change the rate. Circumstances that could possibly change the rate are myriad including environmental pressures and weather. This would be the equivalent of changing the flow of the faucet during the experiment. Even so, one must consider that the rate is still very theoretical.

Since measuring radioactive decay is based entirely in unverifiable assumptions, it cannot be trusted.

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Chapter 4

Radioactive Dating

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