

How do we use and refer to the delta values?

UNIT 3

Comparative terms



LIGHT vs. HEAVY SAMPLES

DEPLETED vs. ENRICHED SAMPLES

Comparative terms



LIGHT vs. HEAVY SAMPLES

LIGHTER sample contains more of the lighter isotope, relative to another sample.

HEAVIER samples contains more of the heavier isotope, relative to another sample.

DEPLETED vs. ENRICHED SAMPLES

Comparative terms



LIGHT vs. HEAVY SAMPLES

LIGHTER sample contains more of the lighter isotope, relative to another sample.

HEAVIER samples contains more of the heavier isotope, relative to another sample.

DEPLETED vs. ENRICHED SAMPLES

A sample "DEPLETED" IN THE LIGHT ISOTOPE contains less of the light isotope and more of the heavy isotope, relative to another sample.

A sample "ENRICHED" IN THE LIGHT ISOTOPE contains more of the light isotope and less of the heavy isotope, relative to another sample.

Example



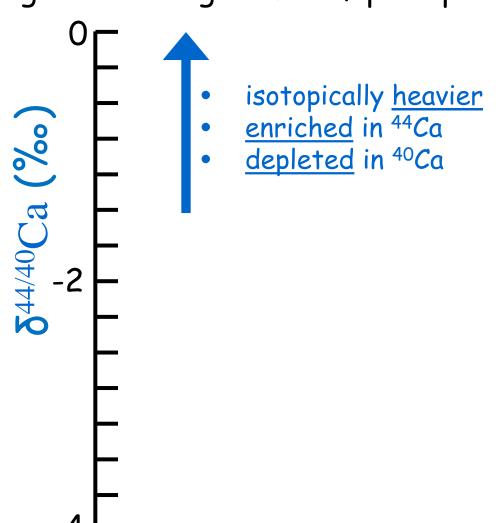
Using $d^{44/40}Ca$ signature of precipitated $CaCO_3$ as an example:







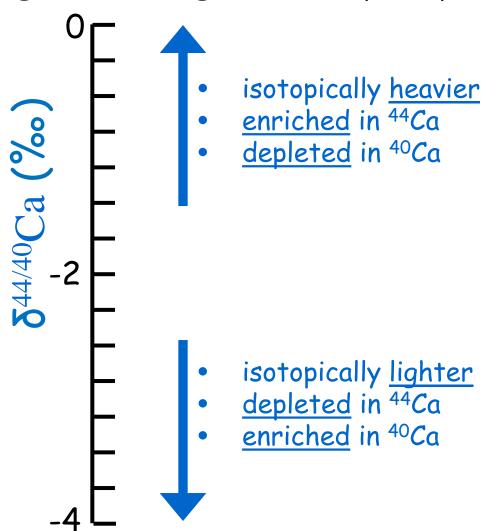
Using $d^{44/40}Ca$ signature of precipitated $CaCO_3$ as an example:







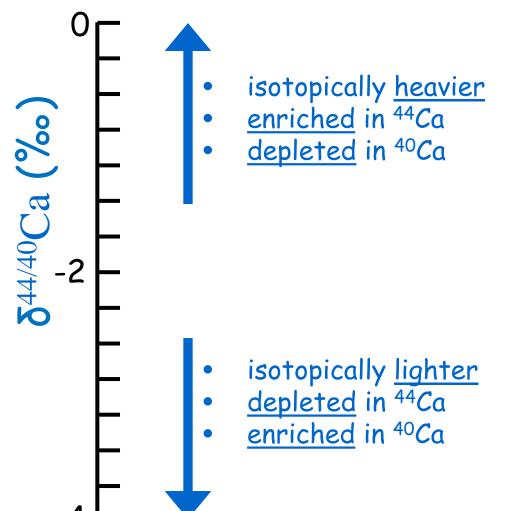
Using $d^{44/40}Ca$ signature of precipitated $CaCO_3$ as an example:







Using $d^{44/40}Ca$ signature of precipitated $CaCO_3$ as an example:



(such signatures are found in calcite and at higher temperatures)

(such signatures are found in aragonite and at carbonates precipitated in low temperatures)



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