

# Lecture 03: Fractionation

<http://www.ggl.ulaval.ca/cgi-bin/isotope/generisotope.cgi>

---

---

---

---

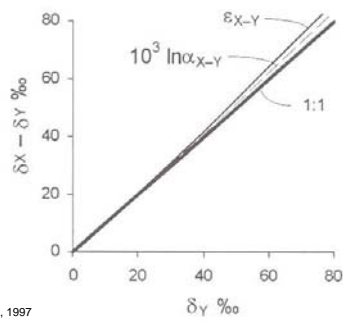
---

---

---

---

## Fractionation and Separation



• Clark and Fritz, 1997

---

---

---

---

---

---

---

---

## Fractionation

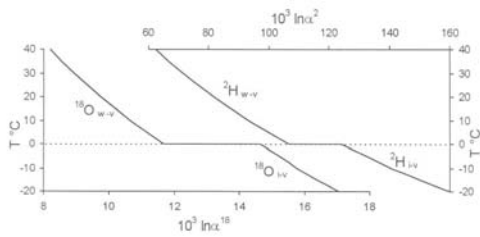


Fig. 1-6 Fractionation of  $^{18}\text{O}$  and  $^2\text{H}$  for water-vapour (from equations of Majoube, 1971) and ice-vapour (Majoube, 1971 and O'Neil, 1968) for the temperature range of  $-30$  to  $+50^\circ\text{C}$ .

• Clark and Fritz, 1997

---

---

---

---

---

---

---

---



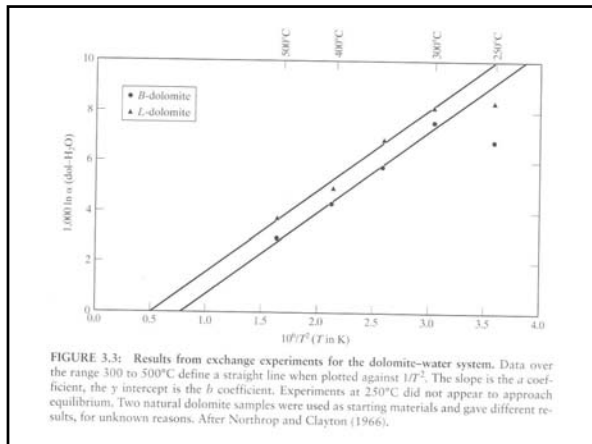


FIGURE 3.3: Results from exchange experiments for the dolomite-water system. Data over the range 300 to 500°C define a straight line when plotted against  $1/T^2$ . The slope is the  $a$  coefficient, the  $y$  intercept is the  $b$  coefficient. Experiments at 250°C did not appear to approach equilibrium. Two natural dolomite samples were used as starting materials and gave different results, for unknown reasons. After Northrop and Clayton (1966).

---



---



---



---



---



---



---