In this appendix, the terms used in equations 5 and 6 are defined and calculated.

(A-1)

(Chang and Li, 1990)

(A-2)

(A-3)

(A-4)

Modfied from Baertschi (1976)

(A-5)

(Assonov and Brenninkmeijer, 2003; Barkan and Luz, 2005)

(A-6)

(A-7)

(A-8)

The abundance of oxygen isotope species bound to 13C are calculated using the same equations as above, but using the δ18OC13 value.

(A-9)

(A-10)

(A-11)

(A-12)

(A-13)