Available online at www.sciencedirect.com
ScienceDirect
Geochimica et Cosmochimica Acta 71 (2007) 2414
Geochimica et Cosmochimica Acta
www.elsevier.com/locate/gca

Erratum

Erratum to I. N. Bindeman, A. M. Davis, and M. J. Drake (1998), "Ion microprobe study of plagioclase-basalt partition experiments at natural concentration levels of trace elements," *Geochimica Cosmochimica Acta* 62, 1175–1193

Feldspar–lead partition coefficients are becoming increasingly important for Pb isotope studies of feldspars using in situ methods. Partition coefficients of Pb, as for many other trace elements, are functions of plagioclase composition and temperature as given by the relationship $RT\ln D_{Pb} = aX_{An} + b$, where a and b are linear fit parameters. Several researchers have called our attention to a very steep dependence (high value of a) in D_{Pb} in Table 4 on page 1191 of our original paper. In checking the old parameterization, we noticed an error of exclusion of two data points and too heavy a weight (due to an unreasonably small analytical uncertainty) given to one existing data point.

The coefficients of parameterization of the $RT\ln D_{Pb} = aX_{An} + b$ in Table 4 should be replaced with the following expression (in kJ):

$$RT\ \ln\ D_{Pb} = -13.0 \pm 9.2X_{An} + 3.7 \pm 5.8. \quad (1)$$

This fit is much more reasonable, as all the data points are well within the error envelope of the fit (Fig. 1).

Furthermore, this parameterization shows Pb to be a moderately incompatible trace element in a wide range of plagioclase compositions. The D_{Pb} value increases only slightly with decreasing anorthite content from ~0.5 for anorthite to ~1 for albite, in accordance with observations in nature.

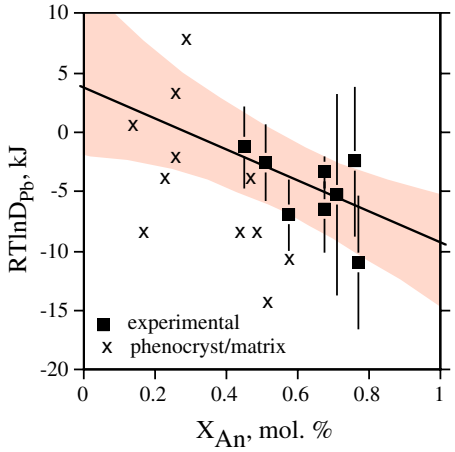

Fig. 1. Plagioclase-lead partition coefficients with the best fit line (Eq. (1)).

I.N. Bindeman
bindeman@uoregon.edu

Department of Geological Sciences,
University of Oregon,
Eugene, OR 97403, USA

DOI of original article: 10.1016/S0016-7037(98)00047-7.

doi:10.1016/j.gca.2007.02.003