Appendix 2. Lab Procedures for LFC and OM (%)

The Norwest lab values for the percent organic matter were obtained using a loss on ignition method (McKeague 1978).

The University of Alberta lab values for the light fraction carbon (LFC) were obtained using a loss on ignition method (University of Alberta 2002). The carbon and nitrogen content of the light fraction material was obtained through a dry combustion process using Carlo Erba instrumentation.

Calculation of the LFC (mg/kg) was then completed as outlined below (Figure 10).

Example of Calculation of Light Fraction Carbon
Used data from B.H. Prairie, Site #586

From Lab:
LF (Wt) g = 0.1776 per 20 grams soil
% Carbon as LF material = 28.918
Therefore:

$$\frac{0.1776 \text{ g LF}}{20 \text{ grams soil}} \times \frac{28.918\% \text{ Carbon as LF}}{100} \text{ equals } \frac{0.00256792 \text{ g LFC}}{1 \text{ g soil}}$$

To convert to mg/kg:

$$\frac{0.00256792 \text{ g LFC}}{1 \text{ g soil}} \times \frac{1000 \text{ mg}}{1 \text{ g}} \times \frac{1000 \text{ g}}{1 \text{ kg}} \text{ equals } \frac{2567.92 \text{ mg LFC}}{\text{kg soil}}$$

Figure 10. Calculation of light fraction carbon (LFC)