Appendix I

Methodology of chemical analysis of liquid samples

Concentrations of Na⁺, K⁺, Ca²⁺, Mg²⁺, Mn²⁺, and Fe₉ₒ₉ were measured by flame atomic absorption spectrometry (FAAS; AAnalyst 100, PerkinElmer) with the limits of quantification (LOQ) of 0.01 mg L⁻¹ and 0.005 mg L⁻¹ for Fe. Concentrations of NH₄⁺ and Pₒₒ were determined spectrophotometrically (PMT; Perkin-Elmer Lambda 25; LOQ of 0.02 and 0.006 mg L⁻¹, respectively). Concentrations of Cl⁻, SO₄²⁻ and NO₃⁻ were determined by ion chromatography (HPLC; Knauer 1000; LOQ of 0.15, 0.5, and 0.3 mg L⁻¹, respectively). Concentrations of F⁻ were measured potentiometrically (ION 85 Radiometer Inc.; 0.02 mg L⁻¹). Concentrations of HCO₃⁻ were measured by titration (LOQ of 0.6 mg L⁻¹). Dissolved organic carbon (DOC) and total dissolved nitrogen (TN) were determined on an Apollo 9000 analyzer (Tekmar-Dohrmann; LOQ of 0.1 and 0.5 mg L⁻¹). Measurement of pH was carried out on PHM-62 Radiometer, and conductivity on CDM-83 Radiometer Denmark.

Methodology of chemical analysis of solid samples

Ash content in peat was determined on a 0.5 g aliquot at 550 °C. Concentrations of Na, Mg, K, and Ca were measured by flame atomic absorption spectrometry (FAAS; AAnalyst 100, PerkinElmer) with the limits of quantification (LOQ) of 50 ppm. Phosphorus content was determined spectrophotometrically (P-E Hitachi 200; LOQ of 50 ppm). A 10-mg aliquot of each homogenized peat sample was placed in a tin capsule and combusted in a Fisons 1108 elemental analyzer at 1040 °C. Carbon concentrations in peat were determined with a reproducibility of 1.0 %.