Energy, Mines and Resources Canada

CANADA CENTRE FOR MINERAL AND ENERGY TECHNOLOGY

REFERENCE SOIL SAMPLE SO-3

CERTIFICATE OF ANALYSIS

	Recommended Values ± 95% Confidence Interval						
Si	15.86	±	0.19%	Sr	217	±	29 µg/g
Ca	14.63	±	0.40%	Zn	52	±	3 µg/g
Mg	4.98	±	0.10%	Rb	39	±	3 µg/g
Al	3.06	±	0.11%	V	38	±	6 µg/g
Fe	1.51	±	0.06%	Cr	26	±	3 µg/g
K	1.16	±	0.05%	Cu	17	±	1 µg/g
Na	0.74	±	0.04%	Ni	16	±	3 µg/g
Ti	0.20	±	0.02	Pb	14	±	3 µg/g
Mn	0.052	±	0.002%	Co	8	±	3 µg/g
P	0.048	±	0.005%	Hg	0.017	±	0.007 µg/g
Ba	296	±	39 µg/g				

DESCRIPTION

SO-3 is of the calcareous till parent material of the Guelph series, a Gray Brown Luvisol. It has an appreciable content of both calcite and dolomite. The sampling sight was near Guelph, Ontario at 43°33'N, 80°19'W.

The soil was dried in 70-kg batches at 120°C for 17 hours. The gravel fragments were removed and the soil was ball-milled to -74 µm. The batches were blended in one lot and bottled in 200-g units.

Six bottles were selected on a random basis to assess the homogeneity by X-ray fluorescence. Although some bottle-to-bottle differences were detected, these were assumed to be minor compared to the anticipated between-laboratory standard deviations. Indeed, the statistical treatment of the analytical results of the interlaboratory certification program indicated no abnormal inhomogeneity.

CERTIFICATION

SO-3 was characterized by an interlaboratory analysis method. The recommended values are the unweighted means of 67 to 230 accepted analytical results from 8 to 30 laboratories for the various constituents. Atomic absorption was the most widely used technique. X-ray fluorescence, emission spectroscopy, colorimetric, neutron activation analysis and titrimetric techniques were also employed.

CANADIAN CERTIFIED REFERENCE MATERIALS PROJECT

INSTRUCTIONS FOR USE

SO-3 should be dried at 105°C for 16 hours before use.

LEGAL NOTICE

The Canadian Certified Reference Materials Project has prepared this reference material and statistically evaluated the analytical data of the interlaboratory certification program to the best of its ability. The Purchaser by receipt hereof releases and indemnifies the Canadian Certified Reference Materials Project from and against all liability and costs arising out of the use of this material and information.

REFERENCE

The preparation and certification procedures used for SO-3 are described in CANMET Report 79-3 "Soil Samples SO-1, SO-2, SO-3 and SO-4 - Certified Reference Materials" which is available free of charge on application to:

Coordinator, CCRMP

CANMET

555 Booth Street

Ottawa, Ontario K1A OG1

Canada

This Certificate of Analysis is available in French on request to the Coordinator, CCRMP.