Nutrient Testing Laboratories

Nutrient Management Factsheet – No. 1 in Series

September 2010; Revised May 2015 – Order Reference No. 631-500-8

The following is a list of laboratories known to provide agricultural testing services for farmers in British Columbia, in particular for nutrient management. It is not an endorsement of any laboratory. For each laboratory, the types of analyses offered are listed by the following code:

- S = soil fertility
- C = crop or tissue nutrients
- M = manure or compost nutrients
- W = water quality

Note that laboratories may offer additional services not listed in this factsheet. If other services are required, contact the laboratories directly.

For the purposes of developing a Nutrient Management Plan for the Canada-BC Environmental Farm Plan program, only the basic soil fertility, crop nutrient, and manure nutrient analyses are used. Fertilizer recommendations on soil test reports are not used.

Locations in British Columbia

AGAT Laboratories
120 - 8600 Glenlyon Parkway, Burnaby, BC V5J 0B6
Phone: (778) 452-4000
Web: www.agatlabs.com

- Services offered: S, C, M, W
- Analyses are done at the Calgary, AB location

Exova (formerly Bodycote/Norwest)
#104, 19575 - 55A Avenue, Surrey, BC V3S 8P8
Phone: (604) 514-3322 Fax: (604) 514-3323
Toll free: (800) 889-1433
Web: www.exova.com

- Services offered: S*, C, M*, W

*Soil and manure analyses are done at another location

Maxxam Analytics (formerly Cantest Ltd.)
4606 Canada Way, Burnaby BC V5G 1K5
Phone: 604-734-7276 Toll-free: 1 (800) 665-8566
Email : info@maxxamanalytics.com
Web: www.maxxam.ca

- Services offered: S*, M*, W

*Soil analyses are done by another laboratory

MB Laboratories Ltd.
By Courier: 4 - 2062 West Henry Ave, Sidney BC V8L 5Y1
By Mail: PO Box 2103, Sidney BC V8L 3S6
Phone: (250) 656-1334
Email: mblabs@pacificcoast.net
Web: www.mblabs.com

- Services offered: S, C, M, W

Pacific Soil Analysis Inc.
5 – 11720 Voyageur Way, Richmond BC V6X 3G9
Phone: (604) 273-8226
Email: cedora19@telus.net

- Services offered: S, M

Plant Science Lab (affiliated with TerraLink Horticulture Inc.)
464 Riverside Road, Abbotsford, BC V2S 7M1
Phone: (604) 864-9044 x1602
Email: pwarren@terralink-horticulture.com

- Services offered: S, C, M*, W

*manure analyses are done at another laboratory

Some Locations Outside British Columbia

A & L Canada Laboratories Inc.
2136 Jetstream Road, London ON N5V 3P5
Phone: (519) 457-2575 Fax: (519) 457-2664
Web: www.alcanada.com
- Services offered: S, C, M, W
- Provides recommendations on soil test reports

AGAT Laboratories
2910 12 St. Northeast., Calgary, AB T2E 7P7
Phone: (403) 735-2005
Web: www.agatlabs.com
- Services offered: S, C, M, W

ALS Laboratory Group
819 58 St. East, Saskatoon SK S7K 6X5
Phone: (306) 668-8370 Fax: (306) 668-8383
Toll free: (800) 667-7645
Web: www.alsglobal.com
- Services offered: S, C, M, W
- Provides recommendations on soil test reports

Brookside Laboratories Inc.
200 White Mountain Dr., New Bremen OH 45869
Phone: (419) 977-2766
Email: lbaker@blinc.com
Web: www.blinc.com
- Services offered: S, C, M, W

Down to Earth Labs Inc.
3510 6th Avenue North, Lethbridge, Alberta T1H 5C3
Phone: (403) 328.1133
Email: info@downtoearthlabs.com
Web: www.downtoearthlabs.com
- Services offered: S, C, M, W

Soil Foodweb Canada Ltd.
285 Service Rd, Box 420 Vulcan, AB T0L 2B0
Phone: (403) 485-6981 Fax: (403) 485-6410
Email: info@soilfoodweb.ca
Web: www.soilfoodweb.ca
- Services offered: S, C

Know Your Soil Test Methods

Different laboratories use different methods, and soil test values for a soil sample can vary from one laboratory method to another. Soil nitrogen methods are an exception; the choice of the laboratory method should have a small effect on soil test values.

In conventional soil fertility testing, a method involves several factors. A main factor is the **extractant** (the chemical solution added to a given soil to remove what should reflect the 'available' portion of a nutrient from that soil). Knowing this basic information about your soil test methods will help with interpreting soil test values. How extractants compare and other factors behind soil testing are discussed in greater detail in Factsheet 3 of the Nutrient Management Factsheet Series: *Understanding Different Soil Test Methods.*

For each laboratory that provides its soil fertility testing services, default extractants are listed for soil phosphorus and potassium in the table below. In other words, when no specific method has been requested, these extractants have been used. Soil test users should confirm this information with their chosen laboratory. Laboratories may offer other methods depending on client needs and the laboratories' capabilities.

Table 1. Default methods (extractants) for available soil phosphorus (P) and potassium (K) tests of nutrient testing laboratories. Laboratories may offer additional methods.

Laboratory	P extractant	K extractant
AGAT Laboratories	Bray P1 (modified)	Ammonium Acetate
Agrichem Analytical	Kelowna	Kelowna
A & L Canada Laboratories Inc.	Olsen (Bicarbonate)	Ammonium Acetate
	Bray 1	
ALS Laboratory Group (formerly Enviro-Test)	Modified Kelowna 94[a]	Modified Kelowna 94[a]
Brookside Laboratories Inc.	Mehlich 3	Mehlich 3
Down to Earth Labs Inc.	Modified Kelowna 94[a]	Ammonium Acetate
Exova (formerly Bodycote or Norwest)	Modified Kelowna 95[b]	Modified Kelowna 95[b]
MB Laboratories Ltd	Modified Kelowna 94[a]	Modified Kelowna 94[a]
Pacific Soil Analysis	Bray 1	Ammonium Acetate
Plant Science Lab	Mehlich 3	Mehlich 3
Soil Foodweb Canada	Mehlich 1	Mehlich 1

a. Qian, Schoenau and Karamanos (1994) proposed this extractant.

b. Ashworth and Mrazek (1995) proposed this extractant.

Table 2. Common soil test phosphorus and potassium extractants and their compositions.

Extractant	Chemical Composition
Ammonium Acetate	1.0 *M* CH_3COONH_4 at pH 7.0
Bicarbonate (Olsen)	0.5 *M* $NaHCO_3$ at pH 8.5
Bray 1	0.03 *M* NH_4F+ 0.025 *M* HCl
Kelowna	0.015 *M* NH_4F + 0.25 *M* CH_3COOH
Mehlich 3	0.015 *M* NH_4F + 0.2 *M* CH_3COOH + 0.013 *M* HNO_3 + 0.25 *M* NH_4NO_3 + 0.001 *M* EDTA
Modified Kelowna 94[a]	0.015 *M* NH_4F + 0.025 *M* CH_3COOH + 0.25 *M* CH_3COONH_4
Modified Kelowna 95[a]	0.015 *M* NH_4F + 0.5 *M* CH_3COOH + 1.0 *M* CH_3COONH_4

a. See footnotes in Table 1.

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