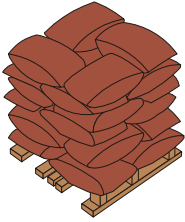


Which SOIL TESTS suit your needs?

You need to have a reason for wanting soils tested before you collect the soil samples. Are you growing pasture, crops, vineyards or lawn? Different soil tests have different requirements for sample collection. There is no benefit from having soil analysed for particular elements if you do not intend reacting to the results. Bags of fertiliser may be wasted unless your soil requires it.



Basic Tests

<p>TYPE 1 - basic Purpose: determine P application rate</p>	<p>TYPE 2 Basic + S Purpose: determine P + S requirements</p>
<p>TYPE 3 -Lime requirement Purpose: determine P + S and lime on acid soils</p>	<p>TYPE 4 Full analysis Purpose: full analysis including micro-nutrients</p>
<p>TYPE - Effluent reuse Purpose: identify soil properties for effluent reuse</p>	<p>Special Test Purpose: select tests for specific purposes</p>

Symbols: P Phosphorus, S Sulphur, K Potassium, N Nitrogen

Who takes the sample?

It is important that the person who takes the sample follows some basic rules and can replicate the sampling procedure at a later date. You can do it!

What equipment is needed?

- shovel or mattock, or soil auger
- clean plastic bucket
- unused plastic bags and elastic bands
- masking tape and permanent marker



Please do not write on plastic bags with felt markers, the writing will rub off. Place a strip of masking tape on the bag and write on the tape, or use a label tie. Complete the details overleaf and send with your sample and payment to Lanfax Labs.

Lanfax Laboratories

Independence

Lanfax Labs - an independent, commercial and research organisation with special interests in soil, water and wastewater analysis, and effluent management.

Quality Management Systems

Lanfax Labs successfully participates in a range of proficiency testing programs at the National level to ensure quality control using recognised methods and standard procedures for soil, water and plant analysis. All tests are performed according to approved methods and proficiency testing programs.

Water Quality Analysis

Lanfax Labs provide a range of tests and assessments to Universities, Government Agencies, Local Authorities, commercial operators and individuals for:

- Drinking water, Irrigation and Stock Water
- Groundwater impact assessment
- Wastewater reuse and recycling
- Greywater and stormwater management
- Domestic effluent and urban sewage
- Surface and river water monitoring
- Liquid Trade Waste

Soil Physical and Chemical Properties

- Lanfax Labs** provide soil sample analysis for:
 - Agricultural, pastoral & horticultural use
 - Wastewater application - commercial and domestic
 - Manure and biosolids application to land
 - Salinity and Sodicty
 - Land reclamation and subdivisions

On-site Effluent Disposal

Lanfax Labs can provide domestic on-site wastewater system design to meet Local Government regulations.

Laundry Product Research & Greywater Reuse

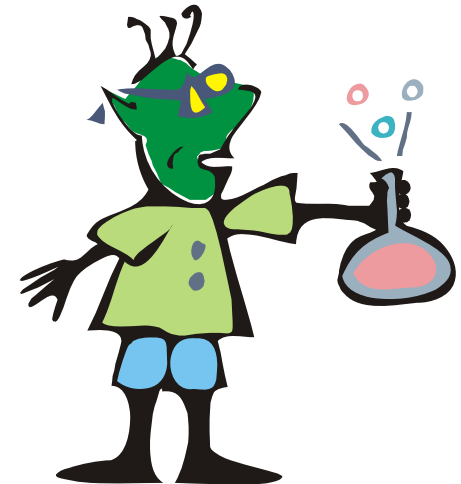
Lanfax Labs has researched phosphorus and salinity components of laundry detergents. This information is published on our website or available from the lab at no charge.

Prices apply from January 2010

Lanfax Laboratories

Soil and Water Resource Consultants
Proficiency tested with ASPAC

SOIL TESTING



PROCEDURES FOR SAMPLE COLLECTION

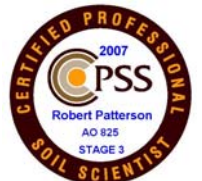
Phone Lab (02) 6775 1157
Fax (02) 6775 1043

ABN: 72 212 385 096

email: lanfaxlabs@bigpond.com.au

Website: <http://www.lanfaxlabs.com.au>

Postal Address: P.O. Box 4690 Armidale NSW 2350
Laboratory: 493 Old Inverell Road Armidale 2350



Taking the sample.

Select a part of the paddock that is a fair example of the whole paddock, or selected areas that represent different soil types. Avoid sheep camps, stock tracks, water washed areas or those which are "different" to the rest of that paddock. Of course, if you are looking for the reasons why these small areas are different, then you may need to sample these areas for comparison. You may need more samples per paddock.

In the "selected site" place a peg or some other permanent mark in the ground, something you can come back to next year if needed. Each year you should sample in the same location to reduce sampling variability because of spatial variation.

Mark out an imaginary circle about six paces in radius around that peg. Within that imaginary circle take about 8-10 samples of the top 100 mm (4 inches) of soil. Sample evenly within the circle, and take samples of about equal weight. Place each small sample in the clean plastic bucket. Collect the remaining samples in the same way and place in same bucket. When using a core sampler, take about 20-30 cores within the circle.

When you have collected all the samples (8-10) in the bucket, mix all the sampled soil with a stick, remove stones, grasses, twigs and throw them away. Mix up the remaining soil sample until it looks evenly mixed - similar consistency and colour throughout. Take a "good double handful" (0.5 kg) of the soil from the bucket and place in a clean plastic bag.

Tie off the top of the bag and write on the label to show:
 unique sample number
 exact location of sample (for your information),
 date sample taken, and your property name.

This soil sample should be sent to Lanfax Laboratories as soon as possible, certainly within 24 hours. Keep sample cool and out of bright light. Some tests require special sampling techniques, check with Lanfax Labs beforehand.

Note: Other methods of sampling are used, but each method has its own variability. The aim is to reduce variability so that the sample closely represents the soil chemistry.

TESTS are available for manures and plant analysis

Soil Tests - Charges

A basic charge of \$18.00 for sample preparation is included in the Types 1-4 tests below. **All costs include GST.**

Basic Soil Test (Type 1) sample preparation, pH in water, pH in calcium chloride, Electrical conductivity (EC), salinity hazard, available phosphorus (Bray)	\$66
Basic test plus sulphate (Type 2) pH in water, pH in calcium chloride, EC, salinity, available P (Bray method), extractable S (KCl 40)	\$96
Lime requirement (Type 3) pH in water, pH in calcium chloride, EC, salinity, available P (Bray method), extractable S (KCl 40), lime requirement (Mehlich single buffer method)	\$110
Pasture analysis (Type 4) pH in water, pH in calcium chloride, EC, salinity, available P (Bray method), extractable S (KCl 40), organic matter, lime requirement (Mehlich single buffer method), exch. metals (zinc, copper, iron, manganese) exchangeable cations: sodium, calcium, potassium, magnesium, Exch. acidity (Al & H), exchangeable sodium percentage, effective cation exchange capacity (Mo and B not tested)	\$220

Other tests - sample preparation not included in these prices

Sample preparation, includes air drying and sieving and soil texture classification (each soil sample)	\$20.00
moisture content (gravimetric)	\$20.00
pH & EC (1:5 soil:water), pH (1:5 soil:0.01M CaCl ₂)	\$22.00
organic matter (organic carbon W&B wet oxidation)	\$44.00
Total organic carbon (Heanes wet oxidation)	\$55.00
total nitrogen (TN) (micro-Kjeldahl)	\$55.00
Extractable phosphorus (Colwell P)	\$40.00
total phosphorus (TP)	\$66.00
phosphorus sorption isotherm (5 point)	\$110.00
exchangeable cations, Na, Ca, K, Mg, effective cation exchange capacity, exchangeable sodium percentage	\$55.00
available water capacity (field capacity, wilting point)	
Field texture and soil colour	\$33.00

Complete details and submit with sample

Name

Contact Phone No.

Fax number for sample results

Address

Town Post code

Email address

Source of soil:
 General soil type - basalt "trap" granite

Present site conditions
 crop - improved pasture - native pastures - mixed pastures
 - timbered areas - saline areas - grapes - effluent reuse

Stocking rate

Fertiliser history

Date sample taken

Number of samples submitted.....

TESTS REQUIRED

Type	Number	Total cost

Other tests available on request.

Check that each sample has a unique number, and you have recorded the location of that sample in your records.

Prices apply from January 2010