Plant Sap Sodium Meter

Excessive sodium in the plant can be a response to water supply problems or it can reflect the misuse and abuse of salt-based fertilisers. Either way, the ability to monitor sodium problems is important. Pro-activity is only possible with a sound monitoring program.

The Plant Sap Sodium Meter accurately measures the amount of sodium in the plant at any stage of the crop cycle. The increasing salinity of many irrigation sources and the build-up of sodium through the use of high sodium chemical fertilisers can sometimes create plant health problems.
The sodium meter can identify any potential problems at the onset. If sodium base saturation percentages exceed potassium base saturation in the soil, the plant will begin to take up sodium instead of potassium. The Plant Sap Sodium Meter, used in conjunction with the Plant Sap Potassium Meter, allows early diagnosis of these problems to facilitate rapid correction.

Benefits

- Only a few drops of test solution are required for a measurement.
- The unit automatically switches between 1 (0-99 ppm), x10 (100-990 ppm), and x100 (1000-9990 ppm).
- It has an estimated deviation of +/-0.2. The sample temperature must lie with the 5-35ºC range. It is generally accepted that Horiba ion meters will be within 5% accuracy of traditional leaf testing techniques.

Mode of Action

The unit measures the voltage change across electrodes due to the concentration of sodium in the test solution. Problems can be indicated when sodium levels exceed potassium (this also applies if testing soil solution levels). It is important that sodium levels remain within the acceptable range to prevent toxicities. Note that the meter will not measure sodium that has been used by the plant in building its structure nor can you compare ideal levels from a whole leaf sample to those derived from plant sap values.

PACKAGING

Weight: 120 g
Product Code: METNACARDY

Plant Sap Sodium Meter

Extra Packaging Info

The unit comes in 2 sections (the sensor & digital control panel are separate) with battery, 5 mL standard solution (STD 20x100ppm), 5 mL slope solution (SLOPE 15x10ppm), 10 mL washing liquid (deionised water), sampling sheet, plastic transfer pipette and calibration tool (screwdriver/tweezers) and a soft carry case.

Testing Method

The meter can be used in two ways:
Direct method: sufficient quantity of expressed sap is placed directly onto the electrode surface so that it stretches across both electrodes.
Sampling sheet method: a piece of the sampling sheet is placed over the electrode prior to introducing the liquid into the meter. Alternatively, the sheet is dipped into a test solution and then placed over the electrodes. The sheet aids in spreading the solution across the electrodes.

Calibration

1. Raise the plastic protective cover and switch the unit on.
2. Rinse the electrode surface with deionised water and carefully dab dry with a tissue.
3. Squeeze sufficient standard solution to cover the electrode surface and carefully turn the dial on the top on the unit until the display reads 20 in the x100 range.
4. Dab the sensor area dry with a clean tissue and then add a few drops of deionised water as a rinse.
5. Dry the sensor before adding sufficient slope solution to cover the electrode.
6. With the calibration tool, carefully lift the rubber flap above the sensor area to expose a trimmer screw. Use the screwdriver end of the combination tool to turn the trimmer screw either clockwise or anti-clockwise until the display reads 15 in the x10 range.
7. Rinse and dab the electrode area dry. Calibration has now been completed and the unit is ready for use.

Miscellaneous

- The Plant Sap Sodium Meter can be used at any time. It can also be used to assess the sodicity of irrigation water. It is at its most powerful as a diagnostic tool when used in combination with the refractometer, pH meter, Plant Sap Potassium meter and Plant Sap Nitrate meter.
- This is a sensitive piece of equipment and should not be subjected to mechanical impacts or flexing. The unit is not waterproof and should not be immersed in solution nor should the sensor be dipped into a solution to gain a sample.
- The unit can tend to lose its calibration values and should always be calibrated prior to use.

Accessories include:
Sodium Electrode Replacement
- Product Code: METNACARDY
- Weight: 30 grams

Sodium Standard Solution Set
- Includes 2 x 5 mL standard solution (STD 20x100ppm), 2 x 5 mL slope solution (SLOPE 15x10ppm) and 4 x 10 mL washing liquid (deionised water).
- Product Code: METNASOL
- Weight: 125 grams

Disclaimer: Any recommendations provided by Nutri-Tech Solutions Pty Ltd (NTS) or its Distributors are advice only. As no control can be exercised over storage, handling, mixing application or use, or weather, plant or soil conditions before, during or after application (all of which may affect the performance of our program), no responsibility for, or liability for any failure in performance, losses, damages, or injuries (consequential or otherwise), arising from such storage, mixing, application, or use will be accepted under any circumstances whatsoever. NTS recommend you contact an Agronomist prior to product application. The buyer assumes all responsibility for the use of any NTS products.

NUTRI-TECH SOLUTIONS

NUTRI-TECH SOLUTIONS P/L (NTS)
PO Box 338, Eumundi, QLD 4562, Australia
7 Harvest Rd, Yandina, QLD 4561, Australia
Ph: +61 7 5472 9900 Fax: +61 7 5472 9999
Email: info@nutri-tech.com.au
Web: www.nutri-tech.com.au

Your Local NTS Distributor: