

AQUA SURE®

What is it?

AQUA-SURE® measures several water quality indicators, which affect the growth and health of plants.

Why do you need to be sure about water quality?

Water quality influences the availability and uptake of nutrients, as well as the plant's ability to absorb water and the efficiency of pesticides.

AQUA SURE® can provide the following answers

Hydroponic Solution

- Is your nutrient mix balanced, supplying each element in the correct amount?
- Are pH, hardness and electrical conductivity (EC) correct?
- How is recycling the run-off water affecting the nutrient balance and EC?

Irrigation Water

- Is your water suitable for irrigation?
- What effect is it having on your soil nutrients and their availability?
- Is it locking up or leaching essential nutrients?
- Is it affecting soil salinity or sodicity (EC, Cl, Na), soil structure or pH?
- Do you need to consider water nutrient levels in your crop nutrient budget?

Waste Water

- Does the water have properties that may be harmful long term to your soil or the environment i.e. high sodium levels, high or low pH, high phosphorus, high nitrogen?
- Does the water contain high concentrations of nutrients which have to be considered in the crop nutrient budget?

Spray Water

- Is the water too alkaline to provide good efficacy and stability for most products (check product label for optimum pH)
- Does the water contain ions that may affect product efficacy or the functionality of the spray unit (corrosion, blockages)

For more information on AQUA SURE®:

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Sampling Instructions

General sampling guidelines

In order to achieve a representative water sample, a composite sample made up of 5-10 sub samples needs to be taken. The sampling method will depend on the source of water to be analysed, local guidelines may apply. Specific water sampling standards and guidelines are available from Standards Australia www.standards.org.au

Bore water should not be collected until after the bore has pumped for a period of one to two hours or until the water has cleared up, with sub samples taken at 5 minute intervals. Sample size: 500ml.

Sample **Dam water** from different positions at the side and to a depth where the water is being drawn from. It may be necessary to collect several composite samples during the season to correlate results to evaporation and dilution and observe seasonal changes in water quality. Sample size: 500ml.

Water drawn from **Streams** needs to be sampled from different locations in the main stream body. If it is used for irrigation, sample near the suction area. Sample size: 500ml.

For **Waste water**, a composite sample is recommended, which consists of numerous individual discrete samples taken at regular intervals over a period of time, e.g. every 1-4 hours over a 24 hour period. Sample size: 500ml.

Depending on the **Hydroponic** system, any or all of the supply water, supply nutrient solution and recycled water may be sampled. It is recommended to take a composite sample over a period of 6-12 hours, e.g. every 2 hours, while the system is operating. Sample size: 300ml.

Sampling procedure

Sampling bottles are available from AgVita Analytical

When using bottles other than those supplied by AgVita Analytical, clean 500ml plastic water drink bottles are suitable. Ensure that they have a watertight lid and are durable to avoid damage in transit. Triple rinsing with the water source to be analysed will ensure it is clean before sampling. Dispose of the rinse water away from the sampling site.

To fill the bottle, sub sample with a clean beaker, filling the bottle to the top. Samples should be kept cool, and away

Analyses conducted:

We analyse inorganic components and quality indicators, not biological properties or pesticides.

Water type	Analyses
Irrigation	NO ₃ , P, K, Ca, Mg, Zn, B, S, Cu, Mn, Fe, Na, Mo, Cl, pH, E.C., SAR, RSC, HCO ₃ ⁻ , CO ₃ ⁻² , TDS, TDI
Waste water	NO ₃ , NH ₄ , P, K, Ca, Mg, Zn, B, S, Cu, Mn, Fe, Na, Mo, Cl, pH, E.C., SAR, RSC, TDS, TDI, HCO ₃ ⁻ , CO ₃ ⁻²
Hydroponics	NO ₃ , NH ₄ , P, K, Ca, Mg, Zn, B, S, Cu, Mn, Fe, Na, Mo, Cl, pH, E.C., hardness, TDS
Spray water	NO ₃ , Ca, Na, SO ₄ , Mn, Cu, Zn, Fe Cl, pH, E.C., hardness, TDS

from direct light. Samples should reach the laboratory in the same condition they were in at sampling and should not be stored for extended periods.

Bottles need to be identified with a completed sample label available from AgVita Analytical. Wrap the bottles in bubble wrap or other padding to protect them during postage.

Send all samples as soon as possible using **express post** to:

AgVita Analytical Pty Ltd,
PO Box 188, Devonport, TAS 7310



Member of ASPAC,
Australasian Soil and
Plant Analysis Council

