eurofins | Agro

Insight in water

Water quality is a hot topic in high intensity horticulture. Eurofins Agro analyses provide more insight in water quality. The results of an analysis are the basis and justification for water and fertilizer management in greenhouse crops. Eurofins Agro analyses well water, drain water, drip- and slab water.

Optimum growing conditions result in optimum plant quality and yield. Sufficient, good quality water is a primary requirement.

The chemical composition of water is an important factor when drawing up a fertilization plan. For crops grown in hydroponic substrates, the irrigation water should only contain limited concentrations of sodium (Na) and chlorine (Cl) and the EC value must not be too high. The damage threshold depends on the crop and growing conditions (such as growing stage, substrate etc.).

If the drain water is re-circulated, it is important there is no accumulation of unusable or undesirable elements in the water. It is also important to ensure drippers don't get blocked by contamination and pathogens will not be circulate in the system.

Eurofins Agro offers multiple analyses to monitor the water quality in your system:

- Input water from a reservoir
- Composition of nutrient solutions
- Composition of drain water
- Efficacy of disinfection systems

After the analysis you will receive a report with a clear overview of the measured values as well as practical recommendation. The results of the analysis clearly indicate what measures are necessary, both in terms of fertilization or disinfection.

Chemical composition

Insight in the chemical composition of water is a primary requirement to develop an accurate fertilization plan. It is therefore vital to analyse your input water and nutrient solution regularly. Once the samples have arrived at the lab, results of the analysis are available within a day. You will receive a report including the results of the analysis and, if you wish, target values and crop-specific fertilization recommendation.

Eurofins Agro measures the following parameters in a basic chemical water analysis: pH, EC, NH_4, K, Na, Ca, Mg, NO_3, Cl, S, HCO_3, P, Fe, Mn, Zn, B, Cu, Mo, Si. Additional parameters can be included, depending on your specific needs.

Microbiology

Another important issue is the biological quality of the water. The growing system must be free from pathogens, such as viruses, bacteria and fungal diseases, which quickly spread through the re-circulation and irrigation systems. To avoid contamination, many nurseries use disinfection systems. Our analysis clearly indicates the efficacy of your disinfection system. Within five to eight working days you will receive a report which provides essential information to tune your hygiene protocol.

Analyses

Basic chemical water analyses consists of the following parameters:
pH, EC, NH_4, K, Na, Ca, Mg, NO_3, Cl, S, HCO_3, P, Fe, Mn, Zn, B, Cu, Mo, Si.
Depending on the purpose of use additional parameters are available.

CHEMICAL ANALYSES

Drain-/SlabwaterCheck	Basic analysis
DripwaterCheck	Basic analysis
BasicwaterCheck	Basic analysis + total and temporary hardness of water
WellwaterCheck	Basic analysis, Fe-total + total and temporary hardness of water
Additional:	N-area, Al, F
PurificationCheck	Waste water analyses and broad pesticide analysis
Methane	CH_4 in well water
Heavy metals	Cr, Ni, Cu, Zn, As, Cd, Hg, Pb, Al, Ba, Co, Mo, Se

BIOLOGICAL ANALYSES

DisinfectorCheck	Before and after disinfector (number of bacteria and fungi) and total number fungi
DNA Multiscan	Common plant pathogens
Human pathogens	E. coli, coliformen, enterococcen

Eurofins Agro, Binnenhaven 5, 6709 PD Wageningen, The Netherlands
Phone | +31 (0)88 876 10 14, E-mail | horti@eurofins.com