Understanding the Soilless Media Report

Soilless media analysis provides nutrient and pH levels of container substrates often used in nursery and greenhouse crop production. All measures, except pH, are conducted on a water extract of the media, according to the saturated media extract (SME) procedure; pH is measured on a 1:1 v/v sample to distilled water slurry.

Sample Information: This section contains identifying sample information provided by the client.

Nutrient Measurements & Other Results: Concentrations of mineral elements include N (measured as NH_4-N, NO_3-N and/or urea), P, K, Ca, Mg, S, Fe, Mn, Zn, Cu, B, Na and Cl. They are reported in parts per million (ppm).

pH is the level of acidity or basicity (hydrogen ion concentration) of a solution reported on a logarithmic scale of 1 (most acidic) to 14 (most basic).

EC (electrical conductivity) is a measure of dissolved salts in solution, expressed in units of Siemens$\times 10^{-5}$ /cm, which equals mho$\times 10^{-5}$ /cm.

Nutrient Ratios indicate degree of balance between the relevant nutrients. Ratios do not have units.

Nutrient Balances (K:Ca, Ca:Mg, K:Mg) are expressed as a percentage of total soluble salts (EC).

Recommendations: This section may contain comments and management suggestions from an agronomist.

General Guidelines for Interpretation of Results [from Warncke D. 2011. Recommended test procedures for greenhouse growth media. Northeastern Regional Bulletin 493. p 103–10.; Guidelines vary based on factors such as type and rate of fertilizer used, time since last irrigation or fertigation event, target crop and growth cycle of crop.]

Inorganic-N . . . 40–200 ppm	P . . . . . 0–20 ppm		
NH_4-N . . . . . 0–20 ppm	K . . . 30–300 ppm		
NO_3-N . . . . . 40–200 ppm	Ca . . 20–250 ppm		
EC . . . . . <300 mho$\times 10^{-5}$/cm	Mg . . 15–150 ppm		
pH. 5.0–6.5			

Nutrient Balances (% of EC)

NO_3–N . . . 8–10	Mg 4–6
K. 11–13	Na . . . . . <10
Ca 14–16	Cl . . . . . <10

Report Abbreviations

B	Boron
Ca	Calcium
Cl	Chloride
Cu	Copper
EC	Electrical Conductivity
Fe	Iron
K	Potassium
Mg	Magnesium
Mn	Manganese
N	Nitrogen
NH_4-N	Ammonium N
NO_3-N	Nitrate N
Na	Sodium
P	Phosphorus
pH	Scale of acidity/alkalinity
S	Sulfur
Zn	Zinc

Useful EC Unit Conversions

1 mho$\times 10^{-5}$ /cm = 1 S$\times 10^{-5}$ /cm
1 mmho/cm = 1 mS/cm
1 mS/cm = 1 dS/m