

Nutrient Meters

Nutrient meters check the electrical conductivity (EC) of water. Electrical current cannot pass through pure water. When one adds fertilizer to that water electricity can now pass through the water.

Fertilizers break down into salts when added to water but it is not a simple task to measure the amount of fertilizer one has added to the water by measuring the EC . There are too many variables. Some of the variables are listed below.

1. Salt in tap water – All house water has some salt already in it e.g. Victoria water has 60 ppm of salt.
2. Different salts dissolve at different rates and fertilizers are nothing more than a combination of salts.

Because of the variables a novice user of a Nutrient Meter should only use it as a quick check of the concentration. Calculate the amount of fertilizer you need in one (1) gallon of water, measure the EC of that gallon. Using that EC reading you can change the volume of water and add fertilizer till the meter reads the same as you test volume.

Example: Lets say you are using 20-20-20 fertilizer and you want to feed your plants at a rate of 150 parts per million (ppm).

step 1 150 ppm concentration X 1 gal. = 150

step 2 20% nitrogen X 75 (formula constant) = 1500

step 3 150 ÷ 1500 = .1 oz or 2.8 gr.

Now that you have the concentration you want, add 2.8 gr. to a gallon of water mixing well till dissolved. Depending on your scale (some meters read in mS/cm and some in ppm) you will have a reading. Save that reading and now you can add fertilizer to any amount of water (must be from the same water source) until you get to that same reading and you will have your 150 ppm.