

## Growing Media pH and EC Testing: Method (for soil-less growing media)

The pH measures the hydrogen ions in the growing media, while EC (electrical conductivity) measures the soluble salts in the mix. For optimal plant health, the pH and EC of the growing media should be in accordance with the plant's requirements because different plants can have different preferred pH and EC ranges (see Container Media Management; K. Bodman & Dr. K.V. Sharman which can be purchased from NGIQ).

Growing media samples should be taken from the bulk growing media pile and from growing stock pots. From the bulk growing media pile, take five handfuls or scoops (sub-samples) of damp mix by digging into the pile at five different locations around the pile. From the growing stock pots, take five small scoops (sub-samples) from the outside edge of the plant's root ball. Mix together the 5 sub-samples from the bulk growing media to create 1 combined sample.

Mix together the 5 sub-samples from the growing stock pots to create 1 combined sample.

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### Equipment and materials:

- ✓ pH and EC electrodes and meter
- ✓ 400mL glass jars with sealed lids
- ✓ Containers for collecting samples
- ✓ Tube or scoop for collecting samples from pots
- ✓ Bucket for rinsing
- ✓ Work bench
- ✓ Deionised water
- ✓ Measure for measuring growing media and water
- ✓ Recording sheets
- ✓ Permanent marker
- ✓ Container to hold mix for replacing mix in pots

### pH and EC testing method:

- Slowly add deionised water to the growing media combined sample while mixing by hand
- Firmly squeeze the media sample so that water just squeezes out through the fingers
- Measure 100mL of the wet growing media and pour into a 400mL straight sided, screw top jar
- Add 150mL of deionised water to the 100mL of wet growing media (or 30mL for soil)
- Shake jar 30 times
- Stand jar for 15 minutes
- Shake jar again 30 times
- Filter the sample into a clean jar
- Dip the pH electrode into the water to measure pH
- Dip the EC electrode into the water to measure electrical conductivity
- Gently wash the electrodes with clean water before testing the next sample



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### Remember:

Maintain good hygiene when working with plants

Test the pH and EC of growing media regularly

Use the same sampling procedure each time to compare the results

Calibrate the meter & protect it from moisture and heat

Take care to not scratch or damage electrodes

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