Greenhouse Media Test Interpretation

What do the numbers mean?

Interpret 1:2 pH Test

General Recommendations

Growth medium	pH
Soilless media	5.5-6.0
Media with 20% or more field soil	6.2-6.5

Some Important Exceptions

Plant	pH
Marigold, geranium, & impatiens	6.0-6.8
Petunia, calibrachoa, snapdragon, pansy & vinca	5.4-5.8

Interpret 1:2 EC Test

EC	Interpretation
0-0.25	Very low, probable deficiency
0.25-0.75	Suitable for seedlings and salt-sensitive plants.
0.75-1.25	Desirable level for most plants.
1.25-1.75	Slightly high, too high for seedlings and salt-sensitive plants
1.75-2.25	Reduced growth, leaf marginal burn.

Comparing the Numbers - EC

1:2	SME	Pourthru	Indication
0-0.3	0-0.8	0-1.0	Very low
0.3-0.8	0.8-2.0	**1.0-2.6**	Low
0.8-1.3	2.0-3.5	2.6-4.6	Normal
1.3-1.8	3.5-5.0	4.6-6.5	High
1.8-2.3	5.0-6.0	6.5-7.8	Very high
>2.3	>6.0	>7.8	Extreme

Test 1: Garden Impatiens

Grower says: “suspect salts”

Analysis	Value	Optimum Range	Analysis	Value	Optimum Range
Media pH	6.20				
Soluble salts (mS/cm)	**6.06**	Ideal 2-2.5			
Macronutrients, ppm			*Micronutrients, ppm*		
Nitrate-N (NO_3-N)	620	60-175	Iron (Fe)	1.3	0.5-3.0
Ammonium-N	200	0-10	Copper (Cu)	0.7	0.5-3.0
Phosphorus (P)	92	5-15	Manganese (Mn)	2.9	0.1-0.5
Potassium (K)	552	75-200	Zinc (Zn)	2.0	0.5-2.0
Calcium (Ca)	123	75-250	Boron (B)	0.4	0.1-0.5
Magnesium (Mg)	128	40-75			

Test 2: New Guinea Impatiens

Grower says: “routine test”

Analysis	Value	Optimum Range
Media pH	6.7	
Soluble salts (mS/cm)	**1.38**	Ideal 2-2.5
Macronutrients, ppm		
Nitrate-N (NO_3-N)	45	60-175
Ammonium-N	1	0-10
Phosphorus (P)	8	5-15
Potassium (K)	111	75-200
Calcium (Ca)	141	75-250
Magnesium (Mg)	26	40-75
Micronutrients, ppm		
Iron (Fe)	0.2	0.5-3.0
Copper (Cu)	0.0	0.5-3.0
Manganese (Mn)	0.1	0.1-0.5
Zinc (Zn)	0.1	0.5-2.0
Boron (B)	0.1	0.1-0.5

Would the interpretation be the same for Calibrachoa?

Test 3: Geranium

Grower says: “lower leaves have edge burn and small brown spots”

Analysis	Value	Optimum Range
Media pH	4.8	
Soluble salts (mS/cm)	**3.74**	Ideal 2.5-3.0
Macronutrients, ppm		
Nitrate-N (NO_3-N)	280	60-175
Ammonium-N	1	0-10
Phosphorus (P)	3	5-15
Potassium (K)	74	75-200
Calcium (Ca)	354	75-250
Magnesium (Mg)	263	40-75
Micronutrients, ppm		
Iron (Fe)	4.3	0.5-3.0
Copper (Cu)	0.1	0.5-3.0
Manganese (Mn)	1.3	0.1-0.5
Zinc (Zn)	0.1	0.5-2.0
Boron (B)	0.2	0.1-0.5

Analysis	Value	Optimum Range
Media pH	**5.4**	Ideal 6-6.5
Soluble salts (mS/cm)	**0.61**	Ideal 3-3.5
Macronutrients, ppm		
Nitrate-N (NO_3-N)	35	60-175
Ammonium-N	1	0-10
Phosphorus (P)	4	5-15
Potassium (K)	5	75-200
Calcium (Ca)	25	75-250
Magnesium (Mg)	7	40-75
Micronutrients, ppm		
Iron (Fe)	1.3	0.5-3.0
Copper (Cu)	0.7	0.5-3.0
Manganese (Mn)	2.9	0.1-0.5
Zinc (Zn)	2.0	0.5-2.0
Boron (B)	0.4	0.1-0.5

Test 4: Poinsettia

Grower says: “Leaf yellowing, small bracts in December. 200 ppm N stopped in November”

Test 5: Petunia

Serious chlorosis after 1½ mos. of liquid organic fertilizer

Analysis	Value	Optimum Range
Media pH	6.47	
Soluble salts (mS/cm)	**0.7**	Ideal 3.5-5.0
Macronutrients, (ppm)		
Nitrate-N (NO_3-N)	6	60-175
Ammonium-N	17	0-10
Phosphorus (P)	41	5-15
Potassium (K)	88	75-200
Calcium (Ca)	44	75-250
Magnesium (Mg)	12	40-75
Micronutrients, ppm		
Iron (Fe)	0.04	0.5-3.0
Copper (Cu)	0.16	0.5-3.0
Manganese (Mn)	0.03	0.1-0.5
Zinc (Zn)	0.14	0.5-2.0
Boron (B)	0.03	0.1-0.5