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Nutrient Concentrate Preparation

Nutrient solutions of 4 concentrations are placed in marked buckets beneath the dosatrons, which dilute & deliver the designated solution to each ebb & flood tank in which plants are grown. This protocol describes the procedures for making the concentrates.

There are two component groups in the concentrate: micronutrients and macronutrients. The micronutrients go into a solution first. After the micros are dissolved, macronutrients are added in the order listed with continuous stirring. All solutions are made with deionized water.

Micronutrients:

Boron from H_3BO_4
Mn from $MnCl_2$
Cu from $CuSO_4$
Zn from $ZnSO_4$
Mo from $NaMoO_4$
Co from $CoCl_2$

Macronutrients:

KNO_3
KH_2PO_4
K_2HPO_4

For 4000 ml of any of the nutrient concentrates, the following amounts of source chemicals are required:

For all N levels:		for N level ====>	**55ppm**	**51ppm**	**6ppm**	**1ppm**
Boron from H_3BO_4	1,546mg	1. KNO_3	396.94g	361.1g	43.34g	7.222g
Mn from $MnCl_2$	396mg	2. KH_2PO_4	81.64g	81.64g	81.64g	81.64g
Cu from $CuSO_4$	125mg	3. K_2HPO_4	104.5g	104.5g	104.5g	104.5g
Zn from $ZnSO_4$	575mg	4. KOH	0	39.74g	0	0
Mo from $NaMoO_4$	44mg	5. H_2SO_4	0	to make pH 7	0	0
Co from $CoCl_2$	2.38mg					

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