

Sona 1 Medium

(Minimum Salts/Soil Extract)

This medium is used for the **photoautotrophic growth** of auxenic cultures of *Chlorella* species. It uses the inorganic salts as specified by Bold, and adds a 20 ml soil extract from Palm Beach State College – Gardens campus. (Bold, H.C. 1949. The morphology of *Chlamydomonas chlamydogama*, sp. Nov. Bull. Torrey Bot. Club 76: 101-8).

For **1 L of medium** (Final Volume)

1. To approximately 900 ml of distilled water (dH₂O), add each of the components (listed below in stock solutions) in the order specified while stirring continuously. This will add an additional 60 mL to the salts solution.
2. Add 20.0 mL of a soil extract.
 - a. **To prepare the soil extract:** Collect approximately 40 g of soil from next to the drainage canal on the west side of Palm Beach State, add 50 mL of water and stir. Allow the slurry to settle, and filter first through a Kimwipe, and then pass the filtrate through a Number 1 Whatman filter paper using a funnel.
3. Bring total volume to 1.0L with dH₂O. Check the pH every time and note in lab notebook. pH should be approximately 6.8. (We have noted that pH can vary between 6.65 and 7.40.)
4. IF preparing plates, stabs, or slants, then add the following amount of agar:
 - For **1.5% agar medium**, add 15 g of bacteriological agar into the flask; do not mix.
 - For **soft agar (0.8% agar) medium**, add 8.0g of agar into the flask; melt agar in a microwave, swirl to mix, and dispense into screw-cap tubes.
5. Cover and autoclave medium for 20 minutes at 121°C.
6. Use after cooling, or store at refrigerator temperature until use.

Stock Solutions

Salt	Mass in 100 mL of Distilled Water	Volume of Stock in 1.0L of medium	Millimolarity
NaNO ₃	2.50g	10.0 mL	2.90 mM
CaCl ₂ *2H ₂ O	0.25g	10.0 mL	0.17 mM
MgSO ₄ *7H ₂ O	0.75g	10.0 mL	0.30 mM
K ₂ HPO ₄	0.75g	10.0 mL	0.43 mM
KH ₂ PO ₄	1.75g	10.0 mL	1.29 mM
NaCl	0.25g	10.0 mL	0.43 mM