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Propionic Acid Preparation

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Protocol status: Working
 We use this protocol and it's working

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ABSTRACT

A protocol for the making of 1M Propionic Acid for the use in Drosophila food.

SAFETY WARNINGS

- ❗
 - When making the correct molarity of Hydrochloric Acid, always add acid to water, and not water to acid.
 - Avoid contact with skin. If you get acid on your skin, immediately wash well with water. Do not attempt to neutralize acid on skin.
 - In the case of an acid spill, neutralize acid with Sodium Bicarbonate. Do not attempt to neutralize spill with strong base.

BEFORE START INSTRUCTIONS

Be sure to have the following materials:

- Propionic Acid, Sodium Salt
- Hydrochloric Acid
- Distilled water
- Deionized water

To make 1L 1M Propionic Acid from Propionic Acid, Sodium ..

- 1 Dissolve 96.06g of Propionic Acid, Sodium salt in 500 mL distilled water to make 2M Propionic Acid, Sodium Salt solution.

🧪 96.06 g Propionic Acid, Sodium Salt

🧪 500 mL Distilled water

- 2 Add 500 mL 2M HCl to 2M Sodium Propionate solution to make 1L 1M Propionic Acid.

To make 2M HCl (1L): 172 mL HCl to 828 mL deionized H₂O.

To make 2M HCl (0.5L): 86 mL HCl to 414 mL deionized H₂O.

Note: If you are making a different concentration of Propionic Acid, it is important that the concentration of HCl is equal to the concentration of the dissolved Propionic, Sodium Salt in water.

🧪 500 mL 2M HCl

- 3 Test pH of Propionic Acid. The pH should be between pH 4.6-4.7. If the pH is above 4.7, titrate the solution with HCl to bring the pH down to specification.
- 4 The newly made 1M Propionic Acid may be diluted to the desired concentration and added to fly food according to the recipe.