

Propionic Acid Preparation

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Abstract

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

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Before start

Be sure to have the following materials:

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

Protocol

To make 1L 1M Propionic Acid from Propionic Acid, Sodium Salt:

Step 1.

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

AMOUNT

96.06 g Additional info: Propionic Acid, Sodium Salt

AMOUNT

500 ml Additional info: Distilled water

ANNOTATIONS

Rita Graze 03 Jun 2018

I don't think you need an 'and' between propionic acid 'and' sodium salt

Step 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.

AMOUNT

500 ml Additional info: 2M HCl

Step 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.

Step 4.

The newly made 1M Propionic Acid may be diluted to the desired concentration and added to fly food according to the recipe.

ANNOTATIONS

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I would say 'according to the recipe'.

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.