

Feb 11, 2020

Version 1

## 3.7% Paraformaldehyde solution V.1

DOI

[dx.doi.org/10.17504/protocols.io.bcfpitmn](https://dx.doi.org/10.17504/protocols.io.bcfpitmn)



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Optical Clearing of Tissue



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**Protocol Citation:** Institute of Medical Biotechnology 2020. 3.7% Paraformaldehyde solution. **protocols.io**  
<https://dx.doi.org/10.17504/protocols.io.bcfpitmn>

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**Protocol status:** Working

**We use this protocol and it's working**

**Created:** February 11, 2020

**Last Modified:** February 11, 2020

**Protocol Integer ID:** 32975


**Keywords:** PFA, paraformaldehyde, tissue fixative, tissue fixation , fixation, pfa, tissue,

## Abstract

Protocol for preparing a 3.7% Paraformaldehyde (PFA) solution. 3.7% PFA solution can be used to fix tissues.

## Materials

### MATERIALS

 Paraformaldehyde powder

 DPBS

 NaOH

 HCl

Equipment:

- Hot plate with a magnetic stirrer
- Thermometer
- Glassware

## Troubleshooting

## Safety warnings



- ❗ Formaldehyde is toxic. Please refer to the SDS (Safety Data Sheet) for detailed safety warnings and hazard information.

## Before start

### Safety information


Formaldehyde is toxic. Please be sure to work under a ventilated fume hood and wear gloves and safety glasses.



- 1 For  1 L 3.7% Formaldehyde , add  800 mL 1X DPBS to a glass beaker on a stir plate.

#### Safety information

Be sure to work under a ventilated fume hood.

- 2 Heat while stirring to approximately  55 °C .

- 3 Add  37 g paraformaldehyde powder to the heated DPBS solution.

- 4 Keep stirring until all PFA powder is dissolved.


#### Note


Take care that the solution does not boil to prevent formic acid formation.

#### Note

For better dissolubility of PFA, you can add NaOH -- one drop at the time.

- 5 Once all PFA powder is dissolved, adjust the pH to  7.4 using HCl.

- 6 Add DPBS subsequently until the total volume of  1 L is reached.

- 7 Transfer the solution into tubes of the desired proportions and store at  -20 °C until use.

