

Nov 21, 2023

4% Paraformaldehyde in .1M PB preparation

 In 1 collection

DOI

<https://dx.doi.org/10.17504/protocols.io.ewov1yr6kvr2/v1>

Monique Copeland¹

¹HHMI Janelia Research Campus



Monique Copeland

HHMI Janelia Research Campus

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.ewov1yr6kvr2/v1>

Protocol Citation: Monique Copeland 2023. 4% Paraformaldehyde in .1M PB preparation. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.ewov1yr6kvr2/v1>

License: This is an open access protocol distributed under the terms of the **Creative Commons Attribution License**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working



Created: August 16, 2019

Last Modified: November 21, 2023

Protocol Integer ID: 26993

Keywords: perfusion solution, preparation

Funders Acknowledgements:

HHMI

Abstract

For perfusion solution.

Materials

MATERIALS

 Paraformaldehyde **Catalog #19200**

Protocol materials

 Paraformaldehyde **Catalog #19200**

 Sodium Hydroxide, 10.0N **Thomas Scientific Catalog #C871W32**

 Corning™ Disposable Vacuum Filter/Storage Systems **Fisher Scientific Catalog #09-761-5**

 Falcon Tube (50 mL) **Fischer Scientific**

 Sodium Phosphate Dibasic Dihydrate (USP/FCC/EP/BP), Fisher Chemical **Fisher Scientific Catalog #S472-500**

 Sodium Phosphate Monobasic Anhydrous (Colorless-to-White Crystals), Fisher BioReagent **Fisher Scientific Catalog #BP329-500**



Paraformaldehyde prep

- 1 Add  400 mL of MilliQ water to a  1000 mL beaker

Equipment

Milli-Q® Integral Water Purification System for Ultrapure Water

NAME

filter

TYPE

Millipore Sigma

BRAND

ZRXQ010WW

SKU

http://www.emdmillipore.com/US/en/product/Milli-Q-Integral-10-Water-Purification-System,MM_NF-ZRXQ010WW

LINK

- 2 Add stir bar in beaker and set on hot plate at  50 °C

- 3 Add 5 drops (500ul) of 10N NaOH (from 60ml dropper)

 Sodium Hydroxide, 10.0N **Thomas Scientific Catalog #C871W32**

(this makes the solution basic to help dissolve the paraformaldehyde)

- 4 Weigh  20 g of Paraformaldehyde and add to MilliQ water.

(Stir about  01:00:00 or until all paraformaldehyde is dissolved and solution is clear)

 Paraformaldehyde **Catalog #19200**

- 5 Make  1 Mass Percent Phosphate buffer at PH 7.4



- 5.1 Prepare [M] 1 Mass Percent Sodium Phosphate Dibasic Dihydrate (Store stock at Room temperature .)



Sodium Phosphate Dibasic Dihydrate (USP/FCC/EP/BP), Fisher Chemical **Fisher Scientific Catalog #S472-500**

- 5.2 Prepare [M] 1 Mass Percent Sodium Phosphate Monobasic Anhydrous (store stock at Room temperature)



Sodium Phosphate Monobasic Anhydrous (Colorless-to-White Crystals), Fisher BioReagent **Fisher Scientific Catalog #BP329-500**

- 5.3 To make 100 mL 1M PB at PH 7.4 add 19 mL Monobasic plus 81 mL Dibasic (store as stock at Room temperature)

- 5.4 Add 50 mL 1M PB PH 7.4 to paraformaldehyde solution.

6 Test PH and adjust solution to final desired pH using HCl or NaOH.

7 Top off to 500ml with MilliQ water.

8 Filter solution through .2um CA member filter.



Corning™ Disposable Vacuum Filter/Storage Systems **Fisher Scientific Catalog #09-761-5**

9 Lable container with '4% paraformaldehyed in .1M PB' and date. Store at

🌡️ 4 °C for up to 1 week.

(Can also be aliquouted into



Falcon Tube (50 mL) **Fischer Scientific**

and stored at 🌡️ -20 °C for 3 months.)