

2.9 % (w/v) PARAFORMALDEHYDE FIXATIVE (SOP-26)

An excellent all around fixative for normal histology, immunochemistry and autoradiology. Useful variations include addition of 0.1 - 0.25% (w/v) glutaraldehyde and/or 5-15% saturated picric acid (v/v). This fix is best used fresh; prepare it (and most other paraformaldehyde based fixatives) no more than 72 h in advance. Final molar concentrations of buffers are 23 mM monobasic and 77 mM dibasic.

FORMULAS

	<u>For 1000 ML</u>	<u>For 4000 ML</u>
0.2 M Na PHOSPHATE BUFFER (pH 7.2)	<u>500 ml</u>	<u>2000 ml</u>
sodium phosphate monobasic (NaH ₂ PO ₄ *H ₂ O, FW 137.99)	3.17 g	12.68 g
sodium phosphate dibasic (Na ₂ HPO ₄ , FW 141.96)	10.93 g	43.72 g
ddH ₂ O	to 500 ml	to 2000 ml
Alternately, use a Phosphate buffer premix	2 packets	4 packets
2X PARAFORMALDEHYDE SOL'N (5.8%)	<u>500 ml</u>	<u>2000ml</u>
Paraformaldehyde	29 g	116 g
ddH ₂ O	to 500 ml	to 2000 ml

PREPARATION

- Heat the paraformaldehyde solution to 60 - 65° C while stirring. Do not overheat, as this may adversely affect immunohistochemical procedures, both by increasing the background as well as decreasing specific staining.
- Reduce heat and add up to ~ 2.5 ml of 1.0 M NaOH, dropwise.
- After the solution clears, filter and add to an equal volume of 0.2 M phosphate buffer.

A concentration of 2.9 % falls within OSHA guidelines for disposal in the sink, rather than as organic waste.