Severn Biotech Ltd.

4% Paraformaldehyde, in 1X PBS PH7.4 Solution

Product Codes: 500ml 40-7401-05 / 1000ml 40-7401-10

Histochemistry

This reagent is a 4% Paraformaldehyde, in PBS which is a ready-to-use fixation solution for cells or tissues and used to preserve cells in routine histology. It is electron microscopy-grade ultra-pure paraformaldehyde dissolved in in PBS 1X (Phosphate Buffered Saline) pH 7.4 which does not contain added methanol. This pre-prepared histology buffer can be used at room temperature.

- **Methanol-free Histology/Pathology**
- **Prepared from EM Ultra-Pure grade paraformaldehyde**
- **Safer and more convenient than handling paraformaldehyde.**
- **Store: Room temperature**

(Once opened store 4% paraformaldehyde in the dark and the cold (4°C) Long term storage aliquot and store frozen at -20°C. Clear colourless solution)

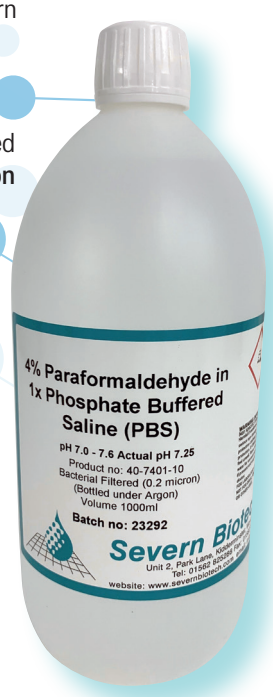
Paraformaldehyde: Preference

Aldehyde fixatives act by chemically cross-linking free amine groups on proteins. Formaldehyde is a commonly used fixative, but it is not stable in solution, because under exposure to light and oxygen it polymerizes and precipitates. Formaldehyde solution is commonly stabilized by the addition of methanol. The classic fixative used for cells contains up to 1.5% v/v methanol. Typical solutions used in pathology contain 10% neutral buffered formalin, which is a solution of 10% formaldehyde in sodium phosphate buffer.

4% Paraformaldehyde fixative is a convenient and safer alternative to preparing fixative from scratch. Severn Biotech's paraformaldehyde fixative is stabilized by packaging under inert argon gas in HDPE plastic bottles. (Recyclable plastic)

4% paraformaldehyde Solution (PFA) is not fixative itself; it is required that formaldehyde is freshly prepared from the PFA stock. **PFA is recommended to be made in 1X PBS buffer. Neutral pH7.4 prevents the formation of formic acid, which is known to form "formalin pigments" in tissue and slower fixation rates.** (Paraformaldehyde: typically, polymerization of 8–100 units)

Paraformaldehyde must be depolymerized to form formaldehyde in solution. In cell culture, typical formaldehyde fixing procedure would involve using a 4% formaldehyde solution in phosphate buffered saline (PBS) on ice for 10 minutes. Room temp can also be used. Fixing, ensures that sample cell structures stay intact and that antigens are immobilized, while ideally still permitting unaltered access of antibodies to target antigens. Use of 4% paraformaldehyde can improve consistency in both the physical and chemical properties of the cell, reducing changes in chemical and morphology characteristics of the cells and tissues.



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