10% neutral buffered formalin (ready to use)

Contains Formaldehyde 4%

IVD In-vitro diagnostic medical device CE

CND Code: W01030705

Catalog number	Unit size	Container capacity	Volume contained	Container dimensions (cm)	Plateau dimensions (cm)	Box dimensions (cm)
05-01V3000P	1800 ml x 4	3000 ml	1800 ml	Ø 18 x h 13.5	-	43 x 43 x 19.5

Packaging

Primary container: white container in PP. The container is closed with a cover that ensures a perfect seal during the transport and the intra-hospital movements. The container is equipped with a plastic handle.
Secondary container: dispenser box + label.

Wear, water, alcohol and solvents resistant PVC label. Scratchproof ink resistant to water and alcohol.

Expected aim

Product for the preparation of cyto-histological samples for optical microscopy.

Specifications

pH 7.2 - 7.2 ± 0.2
density 1.003
buffer molarity 0.05 M

Application

Universal fixative for histological specimens.

Principle

The 10% formalin neutral buffered (equivalent to an aqueous solution of 4% formaldehyde) is the fixative most commonly used in the histopathological routine. The interaction between formaldehyde and functional groups present in tissue macromolecules (proteins and nucleic acids) occurs according to the following scheme:
- formation of methylene glycol: the molecule of formaldehyde in water gives rise to the following equilibrium

$$CH2O + H2O = CH2(OH)2$$

- The methylene glycol is the chemical species that interacts primarily with the functional groups present in the side chains of the proteins and with acids stabilizing the nuclear structure.
- secondarily formaldehyde form crosslinks between the free amino groups present in the side chains of amino acids.

Fixation technique

1) Volume ratio specimen/ fixative 1:50
2) Specimen thickness 1 cm max
3) Fixation time at room temperature: for specimens up to 5 mm 5 hours, for greater thickness 1-2 days

Components

Components	CAS	CE	Index
Sodium phosphate dibasic dihydrate 0,7-0,8% p/v	10028-24-7	231-448-7	-
Sodium phosphate monobasic monohydrate 0,15-0,2% p/v	7558-80-7	231-449-2	-
Formaldehyde 4% p/v	50-00-0	200-001-8	605-001-00-5
Methanol 0,1% v/ v	67-56-1	200-659-6	603-001-00-X
Deionized water			

Warning and precaution

The product must be used exclusively by specialized technical operators.
Carefully read the information on the classification of dangerous substances on the label. Always refer to the safety data sheet where are available the information on the risks presented by the mixture, the precautionary measures during use, the measures first aid and the intervention in the event of accidental release.
Do not use if the primary container is damaged.

Storage

Store the preparation at 15-25°C. Keep the containers tightly closed.

Bio Optica Milano s.p.a.
via San Faustino 58 • I - 20134 Milano
tel. +39 02212713.1 • fax +39 022153000
www.bio-optica.it

Stability

After the first opening, the product is usable until the expiry date, if correctly stored. Product validity: 2 years.

Disposal

Hazardous preparation: observe all state and local environmental regulations regarding waste disposal.

References

- American Forces Institute of Pathology: Laboratory Methods in Histotechnology, Washington D.C., A.F.I.P. 1994.
- Fox CH, Johnson FB, Whiting J. and Roller PP: Formaldehyde fixation. The Journal of Histochemistry and Cytochemistry vol. 33, N. 8, pp. 845-853, 1985.
- Le botlan DJ, Mechin BG, and Martin GJ: Proton and carbon-13 nuclear magnetic resonance spectrometry of formaldehyde in water. Anal. Chem. 1983, 55, 587-591.
- Bancroft JD, Gamble M. Theory and Practice of Histological Technique. Churchill Livingstone Elsevier, 2008.

Date of issue: January 2014

Bio Optica Milano s.p.a.
via San Faustino 58 • I - 20134 Milano
tel. +39 02212713.1 • fax +39 022153000
www.bio-optica.it