Formaldehyde solution 38-40%

Minimum titer: 37%

IVD In-vitro diagnostic medical device CE

CND Code: W01030705

Catalog number	Unit size
05-01007Q	2.5 l x 4
05-K01007	20 l

Packaging

- 05-01007Q
Primary container: white bottle in polyethylene terephthalate (PET). Useful capacity 2.5 liters. HDPE cap. Tamper evident cap.
The polyethylenterephthalate is a thermoplastic polymer of the polyester family. PET is an optimal oxygen, carbon dioxide and other gasses barrier. This material has an high resistance to ultraviolet radiation and an inertia toward the mainly chemical agents (solvents: xylene, limonene, liquid paraffines, alcohols, acids, bases etc.). It is biologically inert. It constitutes a good water and humidity barrier. It shows a great hardness and mechanical resistance.
The bottle has an optimal grip. The absence of the handles reduces space for storage. The anti-dropping cap permits a precise and clean use.
Secondary container: carton box.

- 05-K01007
Primary container: PE tank in neutral colour, capacity 20 liters, UN approved. Blue screwcap in PE with a seal. Watertight.
Secondary container: EUR pallet wood 80 x 120 cm. Protective coating: lateral film LLDPE, HDPE top.

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

Assay	37-38%
Free acid (as formic acid)	0,03% max
Methanol	~10 %
Density	1,09 (20°C)
pH	3,0 - 4,0 (20°C)
Fe (iron)	< 0,0005%

Application

Universal fixative for histological specimens.

Principle

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) Dilute 1:10 (1 part of product + 9 parts of deionized water)
2) Volume ratio specimen/fixative 1 : 50
3) Specimen thickness 1 cm max
4) Fixation time at room temperature: for specimens up to 5 mm 5 hours, for greater thickness 1-2 days

Components

Components	CAS	CE	Index
Formaldehyde	50-00-0	200-001-8	605-001-00-5

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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

Storage temperature : > 15 °C. At temperatures below 15°C polymerization process with formation of insoluble precipitate occurs. Keep the containers tightly closed.

Stability

After the first opening, the product is usable until the expiry date, if correctly stored. Validity: 1 year.

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 C.H., Johnson F.B., Whiting J. and Roller P.P.: Formaldehyde fixation. The Journal of Histochemistry and Cytochemistry vol. 33, N. 8, pp. 845-853, 1985.
- Le botlan D.J., Mechin B.G., and Martin G.J.: Proton and carbon-13 nuclear magnetic resonance spectrometry of formaldehyde in water. Anal. Chem. 1983, 55, 587-591.

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