# BIOCLEAR

IVD In vitro diagnostic medical device

CE

# Xylene for histology INSTRUCTIONS FOR USE

REF Catalogue number: BC–1L (1000 ml) BC–5L (5000 mL)

BC-10L (10000 mL)

# Introduction

Xylene is the most commonly used agent for clearing the microscopic samples. It is done as a part of the sample processing procedure and slide staining procedure. Clearing agents are used as an intermedium for mixing alcohol with the paraffin wax/embedding wax (BioWax) and resin alcohol/covering gel. They should be soluble in dehydrating and infiltrating medium. BioGnost's BioClear enables high quality and effective sample/slide clearing and it provides superior results. Adequately dehydrated and cleared tissue sample becomes transparent and appropriate for microscopic analysis of the slide.

# Product description

• BIOCLEAR - Xylene for clearing, easily mixed with alcohol solutions, paraffin and synthetic covering/mounting media.

# **Product use**

- BioClear is a clearing agent and it is used as an intermedium for mixing alcohol with the paraffin embedding wax and alcohol with resins/covering gels.
- · BioClear is used in sample processing procedure and staining slides, microscope sections, cytologic and histopathologic smears.
- As a part of sample processing procedure, BioClear is used to remove alcohol from the sample and infiltrate/immerse the sample with paraffin (BioWax PLUS 56/58).

Note: the sample is treated with BioClear mixed with alcohol and it is gradually being removed from the sample, while BioClear remains in it. The sample is then treated with paraffin. It gradually removes BioClear in a similar way and infiltrates/immerses the sample.

- After clearing (as a part of the sample processing and paraffin infiltration), the sample is ready for microtome sectioning, followed by slide staining.
- As a part of the slide staining procedure, BioClear is used for removing the paraffin from the slide and infiltration/immersion of the slide using alcohol (Histanol 70, Histanol 80, Histanol 95, Histanol 100).
  Note: the sample is treated with BioClear mixed with paraffin and it is gradually being removed from the sample, while BioClear remains in it. The slide is then treated using alcohol (series of ascending concentrations) that removes BioClear from the slide in the same way and dehydrates the slide.
- After clearing as a part of the slide staining procedure and dehydration, the sample then undergoes the covering procedure.

# Result

The result of sample clearing (part of the sample processing procedure) is a simplified, high quality and complete infiltration/immersing the sample with paraffin, enabling easy and high quality cutting the sample using microtome and cutting it into strips.

The result of slide clearing (part of the sample staining) is a simplified and high quality sample dehydration using series of alcohols of ascending concentrations, enabling high quality sample covering and preparing the slide for analysis.

#### Note

Depending on personal preferences and standard operating laboratory procedures, period of clearing using BioClear may vary. BioClear may cause sample/slide damage if the exposure lasts for too long. Cover/mount the samples treated with BioClear with xylene-based media, such as BioMount, BioMount High, BioMount DPX, BioMount DPX High, BioMount DPX Low, BioMount DPX New, BioMount C, Canada Balsam or a universal mounting medium, such as BioClear New and BioClear New Low.

#### Preparing the sample and diagnostics

Use only appropriate instruments for collecting and preparing the samples. All the samples must be processed with the most modern technology and be visibly marked. Follow the manufacturer's instructions for handling. In order to avoid mistakes, staining must be conducted by a trained professional. Only trained medical personnel may make a diagnosis. Use only microscope according to standards of the medical diagnostic laboratory. In order to avoid an erroneous result, a positive and negative check is advised before application.

#### Safety at work and environmental protection

Handle the product in accordance with safety at work and environmental protection guidelines. Used solutions and out of date solutions should be disposed of as special waste in accordance with national guidelines. Chemicals used in this procedure could pose danger to human health. Tested tissue specimens are potentially infectious. Necessary safety measures for protecting human health should be taken in accordance with good laboratory practice. Act in accordance with signs and warnings notices printed on the product's label, as well as in BioGnost's material safety data sheet which is available on demand.

#### Storing, stability and expiry date

Keep BioClear at temperature of 15 °C and 25°C. After opening, it must be used until the date of expiry if stored at temperature between 15°C and 25°C. Expiry date is stated on the product's label.

#### References

- 1. Carson, F. L. (2007), Histotechnology, 2<sup>nd</sup> ed. Singapore
- 2. Cook, D. J. (2006): Cellular pathology, 2<sup>nd</sup> ed. Banbury: Scion Publishing Ltd.
- 3. Kiernan, J. A. (2008) Histological and histochemical methods, 4th ed. Bloxham: Scion Publishing Ltd.

#### BC-X, V11-EN8, 1 February 2017, AK/VR

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