

OSTEOSENS

IVD *In vitro* diagnostic medical device



Decalcification solution for sensitive calcified tissues in histology

INSTRUCTIONS FOR USE

REF Catalogue number: OS-OT-1L (1000 ml) OS-OT-2.5L (2500 mL)

Introduction

Hard tissue decalcification is necessary for microscopical analysis of the tested sample in standard histological methods. The sample is completely immersed in the decalcifying solution. The length of time needed for demineralization (decalcification) depends on the size and density of the treated sample. A reagent (based on chelated compound of ethylenediaminetetraacetic acid (EDTA) that binds calcium ions during decalcification of sensitive tissues. That makes tissues softer and ready for further processing.

Test samples are sensitive hard tissues such as the crest of the ilium (Latin *Crista iliaca*) and keratinized tissue such as blood vessels.

Product description

- **OSTEOSENS** - Decalcification solution for sensitive calcified tissues in histology. Contains ethylenediaminetetraacetic acid (EDTA).

Other sections and reagents that may be used in staining:

- Fixatives such as BioGnost's neutral buffered formaldehyde solutions: Formaldehyde NB 4%, Formaldehyde NB 10%
- Dehydrating/rehydrating agent, such as BioGnost's alcohol solutions: Histanol 70, Histanol 80, Histanol 95 and Histanol 100
- Clearing agents, such as BioClear xylene or a substitute, such as BioClear New agent on the aliphatic hydrocarbons basis
- Infiltration and fitting agent, such as BioGnost's granulated paraffin BioWax Plus 56/58, BioWax 52/54, BioWax 56/68, BioWax Blue, BioWax Micro.
- Covering agents for microscopic sections and mounting cover glass, such as BioGnost's BioMount, BioMount High, BioMount M, BioMount New, BioMount New Low, BioMount DPX, BioMount DPX High, BioMount DPX Low, BioMount DPX Low Eco, BioMount C, BioMount Aqua
- High-quality glass slides for use in histopathology and cytology, such as VitroGnost SUPER GRADE, VitroGnost COLOR or one of more than 30 models of BioGnost's VitroGnost glass slides
- VitroGnost cover glass, dimensions range from 18x18mm to 24x60mm
- BioGnost's immersion media, such as Immersion oil, Immersion oil, types A, C, FF, 37, or Immersion oil Tropical Grade
- BioGnost's staining reagents for use in histology

Preparing the sample for decalcification

- It is **necessary** that the tissue sample first be fixated.
- Immerse the tissue sample into OsteoSens and decalcify it completely.

Decalcification

The crest of the ilium (Latin *Crista iliaca*) and other hard tissues

The length of time needed for decalcification and amount of used OsteoSens depends on the size, type and density of the treated sample. A bone with dimensions of 15 x 9 x 3 mm separated from the crest of the ilium should be immersed in approximately 50 ml of OsteoSens for 18-24 hours.

Compact, calcified tissue

A compact, calcified piece of tissue (1.5 x 1 x 0.3 cm) takes 48-72 hours to decalcify.

Note: If the further procedure does not require conducting histological method of processing, decalcification can be sped up by using BioGnost's OsteoFast solution for fixation and decalcification of bones and hard tissues in histology.

The end of decalcification process

For example, during the crest of the ilium decalcification, the process is finished when the sample floats in the solution.

Result

Decalcified tissue is cartilaginous, similar to rubber. Further treatment is conducted with further histological procedures.

Note

Using OsteoSens leaves antigens of the tissue structures intact and it is possible to conduct further immunohistological methods.

Usability

Use a fresh amount of OsteoSens solution for each new tissue sample.

Preparing the sample and diagnostics

Use only appropriate instruments for collecting and preparing the samples. Process the samples with modern technology and mark them clearly. Follow the manufacturer's instructions for handling. In order to avoid mistakes, the staining procedure and diagnostics should only be conducted by authorized and qualified personnel. Use only microscope according to standards of the medical diagnostic laboratory.

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.

Storing, stability and expiry date

Keep OsteoSens in a tightly sealed original packaging at temperature of +15 to +25 °C. Do not keep in cold places, do not freeze and avoid exposing to direct sunlight. Date of manufacture and expiry date are printed on the product's label.

References

1. Carson, F. L., Hladik, C. (2009): Histotechnology: A Self-Instructional Text, 3rd ed., Chicago: ASCP Press.
2. Kiernan, J.A. (2008): Histological and histochemical methods: Theory and Practice, 4th ed., Bloxham, Scion Publishing Ltd.
3. Callis, G., Sterchi, D. (1998): Decalcification of bone: literature review and practical study of various decalcifying agents, methods and their effects on bone histology. J. Histotechnol. 21:49-58.

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	Refer to the supplied documentation		Storage temperature range		Number of tests in package		Product code		European Conformity
	Refer to supplied instructions		Keep away from heat and sunlight		Valid until		Lot number		Manufacturer
	For <i>in vitro</i> diagnostic use only		Keep in dry place		Caution - fragile				

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