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Microscopy

Histosec® Histosec® without DMSO Paraffin

Histosec® pastilles with/without DMSO and paraffin pastilles,
solidification point 56-58°C

Embedding media for histology

 In Vitro Diagnostic Medical Device



Principle

Embedding of fixed and dehydrated specimens for light microscopy

Histosec® is a paraffin enriched with polymers, with or without the addition of DMSO (dimethyl sulfoxide). DMSO increases the rate of penetration of paraffin and provides additional preservation. The addition of polymers prevents sprinkling, air-filled slits between the paraffin crystals that can adversely affect the sectioning procedure.

Sample material

Histological specimens for embedding and sectioning with an average thickness of approx. 3 – 5 µm

Reagents

Cat. No. 111609 Histosec®	10 kg (4 x 2.5 kg), 25 kg
Cat. No. 115161 Histosec® without DMSO	10 kg (4 x 2.5 kg), 25 kg
Cat. No. 107164 Paraffin	10 kg (4 x 2.5 kg)

Sample preparation

Fix the specimens in 4% or 10% formalin solution for approx. 8 h, depending on the size and nature of the specimens, rinse thoroughly in tap water.

Procedure

Histoprocessing

Carefully dehydrate the samples and remove the alcohol by treating with intermedia that are miscible with alcohol and paraffin. This ensures total tissue penetration with paraffin and hence easier sectioning after blocking.

Solution	Time
Ethanol 50%	1 h
Ethanol 70%	1 h
Ethanol 70%	1 h
Ethanol 80%	1 h
Ethanol 90%	1 h
Ethanol 100% (denat.)	1 h
Ethanol 100% (denat.)	1 h
Ethanol 100% (denat.)	1 h
Xylene or Neo-Clear®	1 h
Xylene or Neo-Clear®	1 h
Histosec® or paraffin (60°C)	2 h
Histosec® or paraffin (60°C)	3 h

Paraffin-treated specimens are blocked and embedded in suitable forms. The paraffin-embedded specimens (paraffin blocks) are stored cool before sectioning to improve cutting. Sectioning is further improved by warming the knife.

Result

So-called paraffin sections (in the µm range) are prepared with the microtome from the samples treated in this way.

The paraffin sections are deparaffinated, rehydrated, and stained according to standard histological staining protocols. After staining the sections are dehydrated in alcohol and cleared in Neo-Clear® or xylene.

Technical note

The microscope used for diagnosis should meet the requirements and standards of a medical diagnostic laboratory.

Observe the instruction manual of the histoprocessor and the laboratory-internal SOPs for each exchange of the paraffin bath.

Observe the instructions for use of the instruments as well as the service instructions.

Always check the paraffin baths, change the paraffin regularly, closely check the optimal working temperature of the paraffin baths (4°C above solidification point). Maintain minimum quality of the solvents.

Do not overload the paraffin cassettes with specimen, fill with a sufficient quantity of paraffin. Follow the microtome manufacturer's instructions for use. Change or sharpen the microtome knife from time to time.

Sample preparation

All samples must be treated using state-of-the-art technology.

All samples must be clearly labeled.

Suitable instruments must be used for taking samples and for their preparation. Follow the manufacturer's instructions for application/use.

Diagnostics

Diagnoses must only be made by authorized and trained persons.

Valid nomenclatures must be used. Suitable controls should be conducted with each application in order to avoid an incorrect result.

Further tests must be selected and performed according to recognized methods.

Storage

Store the products at +15°C to +25°C. After first opening, the pack can be used up to the expiry date when stored at +15°C to +25°C.

Shelf-life

The products must be used by the expiry date stated.

The pack must be kept tightly closed at all times.

Instructions for use

For professional use only

The specimens must be taken by authorized and qualified personnel.

The specimens must be taken using state-of-the-art technology.

National guidelines for work safety and quality assurance must be followed.

Laboratory-internal SOPs for the reagents used must be followed.

Protection against infection

Effective measures must be taken to protect against infection in line with laboratory guidelines.

Attention must be paid to the safety data sheet.

Instructions for disposal

Used solutions and solutions that are past their shelf-life must be disposed of as special waste in accordance with local guidelines. If you have more detailed questions regarding disposal, these can be forwarded by e-mail: retrologistik@merck.de. Within the EU the currently applicable regulations on the basis of Directive 67/548/EEC of the Council for harmonization of the legal and administrative regulations apply for the classification, packaging, and labelling of hazardous substances.

Auxiliaries

Cat. No. 109843	Neo-Clear®	5 l
Cat. No. 103999	Formaldehyde solution min. 37%	1 l
Cat. No. 100974	Ethanol denatured with 1% methyl ethyl ketone for analysis EMSURE®	1 l, 2.5 l
Cat. No. 100983	Ethanol absolute for analysis EMSURE® ACS, ISO, Reag. Ph Eur	1 l, 2.5 l
Cat. No. 108681	Xylene for analysis EMSURE® ACS, ISO, Reag. Ph Eur	1 l, 2.5 l

Hazard classification

Cat. No. 111609, 115161, 107164

Please observe the hazard classification on the label and the information given in the safety data sheet.

The Merck safety data sheet is available on the Internet and on request.

Main product components

Cat. No. 111609		
Paraffin		99.97%
DMSO		0.025%
Cat. No. 115161		
Paraffin		100%
Cat. No. 107164		
Paraffin wax		100%

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