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Microscopy

Immersion oil

for microscopy

For professional use only

IVD In Vitro Diagnostic Medical Device CE

Intended purpose

This ready-to-use "Immersion oil - for microscopy" possesses a defined refractive index and hence serves to optimize microscopic examinations of histological, cytological, hematological, and bacteriological specimen material of human origin; after they have been fixed, embedded (wherever necessary), stained, counterstained (wherever necessary), and mounted.

The areas of application for the immersion oil are described in the corresponding instructions for use for the staining solutions, solid dyes, and test kits from our portfolio offered for in vitro diagnostic methods.

Using the auxiliary reagents from our portfolio creates the conditions that enable authorized and qualified investigators to make a correct diagnosis at the end of the diagnostic process. In this regard, auxiliary IVD reagents serve inter alia to process human specimen material (e.g. fixing, decalcifying, dehydrating, clarifying, paraffin-embedding, mounting, microscoping, archiving). Used in conjunction with the corresponding staining solutions, these normally yield low-contrast images of cellular structures that can then be evaluated under the optical microscope. Further investigations may be necessary to arrive at a conclusive diagnosis.

Principle

Immersion oils are viscous, clear liquids with optimized refractive properties, specifically modified to approximate the refractive index (RI) of glass (n_e = 1.5) as closely as possible. They are applied dropwise to stained and mounted or non-mounted specimen material of human origin and form a clear film between the specimen and the microscope lens.
In this way it is possible to virtually completely eliminate the deflection of incident light and thus to substantially enhance the optical efficiency of the microscope lens.

Supplied in the practical 100-ml dropping bottle, the immersion oil can be easily and safely dropped onto the slide without smearing. The nozzle closure ensures that the oil retains its viscosity, meaning that the immersion oil is always ready for immediate use.

For many decades now this immersion oil has been in use in conjunction with oil-immersion objectives manufactured by Leica or Zeiss without any negative impact on the optical quality. An alteration of the material used to affix the front lens of the objective has never been reported.
In the light of this experience, it can be justifiably assumed that the immersion oil shall also have no negative effect on objectives made by other suppliers such as Nikon or Olympus.

Sample material

Fixed and stained, where necessary mounted histological specimens, e.g. formalin-fixed, paraffin-embedded, histologically stained tissue specimens

Fixed and stained cytological smears, e.g. sputum, fine needle aspiration biopsies (FNAB), rinses, imprints, effusions

Air-dried, heat-fixed, and stained smears of bacteriological specimen material, e.g. liquid and solid enrichment cultures of bacteria from body fluids, exsudates, pus

Hematologically processed and stained blood or bone-marrow smears

Reagent

Cat. No. 104699 Immersion oil for microscopy		100-ml dropping bottle, 100-ml glass bottle, 500-ml glass bottle, 23 l

Alternatively:

Cat. No. 103699	Immersion oil Type N acc. to ISO 8036 for microscopy	100-ml dropping bottle

Sample preparation

The sampling must be performed by qualified personnel.

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 their preparation. Follow the manufacturer's instructions for application / use.

The specimen material is processed, stained (and counterstained where applicable), and mounted according to the instructions for use of the in vitro diagnostic staining solutions, solid dyes, and test kits from our portfolio.
Aqueous specimen materials must be absolutely free from water before they can be microscoped with immersion oil, i. e. allow specimens to dry thoroughly or mount using a suitable mounting medium and a cover slip (according to the instructions for use for the in vitro diagnostic staining solutions, solid dyes, and test kits from our portfolio), since otherwise the microscopic image may become blurred by turbidity.

Reagent preparation

Immersion oil - for microscopy used for microscopic investigations is ready-to-use; dilution of the immersion oil is not necessary.

Procedure

First locate the aspect of the specimen to be investigated under the microscope. Swing the lens nosepiece slightly to one side.
Place one drop of immersion oil on the specimen at the point to be observed.
Revolve the immersion lens back into place so that the space between the specimen and lens is completely filled with immersion oil.

When the microscopy procedure has been completed, the front lens and the specimen should be cleaned (e.g. using a lint-free precision wipe and a few drops of absolute ethanol) to remove the immersion oil completely.

To enable histological, cytological, hematological, and bacteriological specimens to be stored over a period of several months, it is advisable to cover them with a mounting medium (e.g. Neo-Mount®, DPX new, Entellan® new, or Aquatex®) and a cover glass. When left unmounted, the most stain remain stable for about 3 days, covered with immersion oil only for a few hours.

The use of immersion oil is recommended for the analysis of stained slides with a microscopic magnification >40x.

Result

When the space between the specimen and lens is completely filled with Immersion oil - for microscopy, the lower deflection of the incident light substantially enhances the optical efficiency of the microscope lens.

Technical notes

The microscope used should meet the requirements of a medical diagnostic laboratory.
Remove surplus immersion oil before filing.

For the chemical/physical parameters please refer to the specifications under the above catalogue numbers.

Diagnostics

Diagnoses are to be made only by authorized and qualified personnel.
Valid nomenclatures must be used.
Suitable controls should be conducted with each application in order to avoid an incorrect result.

Storage

Store the Immersion oil - for microscopy at +15 °C to +25 °C.

Shelf-life

The Immersion oil - for microscopy can be used until the stated expiry date.

After first opening of the bottle, the contents can be used up to the stated expiry date when stored at +15 °C to +25 °C.

The bottles must be kept tightly closed at all times.

Capacity

approx. 2500 applications / 100 ml

Additional instructions

For professional use only.
In order to avoid errors, the application must be carried out by qualified personnel only.
National guidelines for work safety and quality assurance must be followed.
Microscopes equipped according to the standard must be used.

Protection against infection

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

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Instructions for disposal

The package must be disposed of in accordance with the current disposal guidelines.
Used solutions and solutions that are past their shelf-life must be disposed of as special waste in accordance with local guidelines. Information on disposal can be obtained under the Quick Link "Hints for Disposal of Microscopy Products" at www.microscopy-products.com. Within the EU the currently applicable REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 applies.

Auxiliary reagents

Cat. No.	100579	DPX new non-aqueous mounting medium for microscopy	500 ml
Cat. No.	100869	Entellan® new for cover slipper for microscopy	500 ml
Cat. No.	100974	Ethanol denatured with about 1 % methyl ethyl ketone for analysis EMSURE®	1 l, 2.5 l
Cat. No.	103699	Immersion oil Type N acc. to ISO 8036 for microscopy	100-ml dropping bottle
Cat. No.	107961	Entellan® new rapid mounting medium for microscopy	100 ml, 500 ml, 1 l
Cat. No.	108562	Aquatex® (aqueous mounting agent) for microscopy	50-ml dropping bottle
Cat. No.	108298	Xylene (isomeric mixture) for histology	4 l
Cat. No.	109016	Neo-Mount® anhydrous mounting medium for microscopy	100-ml dropping bottle, 500 ml
Cat. No.	109843	Neo-Clear® (xylene substitute) for microscopy	5 l

Hazard classification

Cat. No. 104699

Please observe the hazard classification printed on the label and the information given in the safety data sheet.
The safety data sheet is available on the website and on request.

Main components of the product

Cat. No. 104699

$C_{14}H_{12}O_2$	~ 455 g/l

Other IVD products

Cat. No.	100496	Formaldehyde solution 4%, buffered, pH 6.9 (approx. 10% Formalin solution) for histology	350 ml and 700 ml (in bottle with wide neck), 5 l, 10 l, 10 l Titripac®
Cat. No.	100497	AFB-Color modified Staining kit for the detection of acid-fast bacteria (AFB) by hot staining method	1 unit
Cat. No.	101603	Gram-Color modified (phenol-free) staining kit for Gram staining method on bacteriological smears	1 set
Cat. No.	108000	Sputofluol® for microbiology and microscopy	1 l
Cat. No.	109218	Gram's crystal violet solution for the Gram staining method	500 ml, 2.5 l
Cat. No.	111661	Hemacolor® Rapid staining of blood smear staining set for microscopy	1 set
Cat. No.	111885	Gram-Color stain set for the Gram staining method	1 set
Cat. No.	115161	Histosec® pastilles (without DMSO) solidification point 56-58°C embedding agent for histology	10 kg (4x 2.5 kg), 25 kg
Cat. No.	116450	AFB-Color staining kit for the microscopic investigation of acid-fast bacteria (AFB) (cold staining)	1 set

General remark

If during the use of this device or as a result of its use, a serious incident has occurred, please report it to the manufacturer and/or its authorised representative and to your national authority.

Literature

1. Romeis - Mikroskopische Technik, Editors: Mulisch, Maria, Welsch, Ulrich, 2015, Springer-Verlag Berlin Heidelberg, 19. Auflage
2. Theory and Practice of Histological Techniques, John D Bancroft and Marilyn Gamble, 6th Edition
3. Histotechnik, Gudrun Lang, 2013 Springer Verlag, 2. Auflage
4. Atlas der klinischen Hämatologie, H. Begemann, Rastetter, 1978, Springer Verlag 3. Auflage
5. Basiswissen Histologie und Zytologie, Karl Heinz Stein, Lehr- und Arbeitsbuch, Hoppenstedt , 3. Auflage, 2004

DOWNLOAD DUTSCHER SAS


Consult instructions for use


Manufacturer



Catalog number



Batch code


Caution, consult accompanying documents


Use by YYYY-MM-DD


Temperature limitation

Status: 2020-Aug-31

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