

# Scharlau



## Chemicals for Histology

Fixatives ■ Dehydration media ■ Clearing agents ■ Embedding Media ■ Mounting Media ■ Stains in solution



We offer the histotechnologist a broad range of quality products to do his work. Solvents, fixatives or embedding media, have been in our program for years. Now, we also offer stains in solution to complete our range.

## Fixatives

Formaldehyde is the most widely used fixing agent in pathoanatomy. To prevent excessive acidity due to hypoxia of tissues it is important that formaldehyde is buffered at neutral pH. We provide several products of different concentration and quality.

Description	Cat. no.
Formaldehyde 3,5-4%, buffered pH-7, stabilized	FO0013
Formaldehyde 10%, buffered pH-7, stabilized	FO0014
Formaldehyde 35%, synthesis grade	FO0009
Formaldehyde 37%, extra pure Ph Eur USP	FO0010
Formaldehyde 37%, r.g. ACS ISO	FO0011

Glutaraldehyde is recommended for fixation of tissues for electron microscopy. We provide two different concentrations.

Description	Cat. no.
Glutaraldehyde sol. 25%, extra pure	GL0170
Glutaraldehyde sol. 50%, extra pure	GL0168

## Dehydration media

Wet fixed tissues cannot be directly infiltrated in paraffin. First, the water from tissues must be removed by dehydration. This is usually done with a series of alcohols, for example 70% to 96% to 100%.

Description	Cat. no.
Ethanol 70%, synthesis grade	ET0001
Ethanol 96%, extra pure	ET0003
Ethanol absolute, extra-pure	ET0002

## Clearing agents

They must be ethanol and paraffin miscible. Their purpose is to remove the remains of ethanol and to produce hydrophobic conditions to allow the paraffin to easily penetrate the tissue. They are also subsequently used to remove the paraffin and to prepare the samples for staining. The most commonly used solvent for this purpose is xylene. Other solvents, such as toluene or trichloroethane are also used, but much less frequently. In accordance with the European Directive CE L398/19, Scharlau offers xylene and toluene for histology with a low benzene content.

As these solvents are toxic, their substitution by lesser toxic and equally effective agents would be of interest. However, to date,

commercially available xylene substitutes are not as effective or their cost is excessive.

Description	Cat. no.
Toluene, for histology	TO0086
Xylene, mixture of isomers, for histology	XI0052

## Embedding media

Once the tissue has been fixed, it must be processed into a form which can be made into thin microscopic sections. This is usually done with paraffin.

We provide different types of paraffins in pellets to be used as embedding media for histology or microscopy. Our plastic paraffin is a blend of paraffin wax and plastic polymers. It has been found that, when plastic polymers are added to the paraffin, the elasticity of the final block is greater as compared to paraffin alone. The mixture also offers improved tissue penetration.



Description	Cat. no.
Paraffin plastisized m.p. 56-58°C, pellets	PA0113
Paraffin plastisized m.p. 52-54°C, pellets	PA0114
Paraffin m.p.56-58 C, pellets	PA0112

## Mounting media

### DPX Mounting Medium

This colourless, synthetic resin is a rapid mounting medium for microscopy. Minimizing drying time is critical to successful slide presentation. A fast drying mounting medium prevents moisture from developing under the coverglass and, the consequent clouding of the specimen. Our DPX mounting medium is fast-drying. 5 minutes after its application, coverglass remains fixed. Because of its fast drying period it is not recommended for use with thick sections.

Description	Cat. no.
DPX Mounting Medium	DP0050

In most cases, *staining with appropriate dyes is needed to be able to view cellular organelles or the cells themselves.*

We do offer stains for *haematology, bacteriology and cytology.*



## Haematology

### May Grünwald Giemsa staining

Two stains are combined in this process: May-Grünwald and Giemsa. When mixed in a buffered aqueous solution, both stains selectively act in the following way: the May-Grünwald stains the acidophilic cells and the neutrophilic granulations of leucocytes; Giemsa stains the monocyte and lymphocyte cytoplasm and the nuclear chromatin.

Description	Cat. no.
Azur-eosin-methylene blue solution (in methanol), according to Giemsa, modified	AZ0391
Eosin methylene blue, solution according to May-Grünwald	EO0056
Buffer solution pH 7	SO1007



## Bacteriology

### Gram staining

Gram negative bacteria are distinguished from Gram positive ones by the nature of their cell wall and their permeability to alcohol. This difference is shown in Gram staining. In this staining procedure, complexes are formed between the iodine-dye and the bacterial wall. In Gram positive bacteria, this complex is not dissolved by decoloring agents and the cells remain violet, colored, whereas Gram negative bacteria are decolorised and re-stained using safranin or carbol fuchsin, staining them orange or pink. There are several Gram staining protocols. Gram Hücker uses crystal violet oxalate and safranin, whereas Gram Nicolle uses gentian violet carbol solution and carbol fuchsin solution.

### Gram Hücker

Description	Cat. no.
Crystal violet oxalate, solution according to Gram Hücker	VI0027
Lugol's solution, for microscopy	LU0010
Bleaching agent, solution according to Gram	DE0010
Safranin, solution according to Gram	SA0042

### Gram Nicolle

Description	Cat. no.
Gentian violet, carbol solution, for microscopy	VI0032
Lugol's solution, for microscopy	LU0010
Bleaching agent solution according to Gram	DE0010
Fuchsin basic, carbol solution, according to Ziehl Neelsen	FU0065



## Cytology

### Papanicolaou's staining

This is used throughout the world to detect cervical cancer in women. The protocol uses haematoxylin, which defines the cell nuclei and cytoplasmic stains OG 6 and EA50, which must produce subtly contrasted staining to enable the different cell types to be distinguished.

Description	Cat. no.
Haematoxylin according to Harris, solution for cytology	HE0060
Papanicolaou's solution EA 50	SO1050
Papanicolaou's solution OG 6	SO1051

### Mycobacteria staining

This procedure is based on the fact that some mycobacteria such as that of tuberculosis, do not release the stain on exposure to an acid. The protocol stains all the bacteria with carbol fuchsin and subsequently exposes them to acid, so that only the mycobacteria remain pink. For better colour contrast, the preparation is again stained with carbol methylene blue.

### Ziehl Neelsen

Description	Cat. no.
Carbol fuchsin, solution according to Ziehl Neelsen	FU0065
Decoloring, acid solution according to Gram	DE0011
Carbol methylene blue solution, for microscopy	AZ0206



We also provide *our traditional range of stains in solid form.*

CAT-HIST06

## Certificate of analysis

All our chemicals are shipped together with its certificate of analyses. Real analysis data from the batch and expiry date of the product are printed in every certificate.

## Quality



Scharlau chemicals are manufactured under ISO 9001: 2000 quality assurance system.

## Availability

More than 5.000 references are ready to be shipped in our new warehouse near Barcelona.

## www.scharlau.com

You can access to our catalogue on line, and get copies of COA and MSDS whenever you need.