2C-163

Haematoxylin, acid Ehrlich

In-vitro diagnostic agent

Description

The product 2E-308 is a ready-to-use solution for professional users in histology and cytology. The product comes in 4 different pack sizes: 2C-163.00100 (100ml bottle), 2C- 163.00250 (250ml bottle), 2C-163.01000 (1l bottle), and 2C-163.10000 (10l canister).

Main components

Potash alum (CAS 7784-24-9)	10g/l
Haematoxylin (C.I. 75290)	10g/l
Potassium iodate (CAS 7758-05-6)	0.15g/l
Acetic acid (CAS 64-19-7)	10 ml/l

Purpose

The dye "haematoxylin, acid Ehrlich" is used for cell diagnostics for the examination of histological samples (e.g. histological sections). It is a ready-to-use solution for cell nucleus staining.

Sample material and sample preparation

Sampling may only be carried out by qualified personnel. All samples must be processed with state-of-the-art technology. All samples must be clearly labelled. Fresh samples should be properly fixed immediately after sampling. The type of fixation determines the intensity of the colouring result.

Sample material: Smear specimens, thin-layer specimens, frozen and paraffin sections.

Test principle

The basis of haematoxylin staining is the oxidation of haematoxylin to haematein. Subsequently, the positively charged aluminium-haematin complex combines with the negatively charged phosphatases of the nuclear deoxyribonucleic acid and stains it blue-purple.

Staining

If necessary, deparaffinise the tissue sample and rinse it before staining. Staining with haematoxylin, acidic according to Ehrlich can be progressive or regressive.

For progressive staining, excess colour is washed out by briefly rinsing the sample in distilled water. Rinsing it in tap water or Scott's solution converts the dye to a water-insoluble varnish ("blueing").

In regressive staining, differentiation is achieved by prolonged staining ("overstaining") and subsequent rinsing in hydrochloric acid solution. The haematoxylin solution should always be used first after deparaffinisation or after washing fresh samples.

Example of a progressive staining protocol:

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Komplementärin:
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Before staining, deparaffinise the sections and transfer them to distilled water via a descending ethanol series. The staining is done with haematoxylin solution for 2–15 minutes. The samples are then immersed in distilled aqua or in 0.1% hydrochloric acid (10-30 seconds). The samples are then rinsed under running water for 2–15 minutes and transferred to xylene via an ascending ethanol series.
Finally, the samples are covered for the subsequent examination under a microscope.

Example of a regressive staining protocol:

Before staining, deparaffinise the sections and transfer them to distilled water via a descending ethanol series. The staining is done with haematoxylin solution for 15–30 minutes. The samples are then rinsed under running water for 10–20 minutes. Afterwards, the desired counter-colouring takes place. Finally, the samples are transferred to xylene via an ascending ethanol series and covered.

Result

Chromatin of the cell nuclei	blue

Precautionary measures

When removing the product, care must be taken to avoid contamination of the storage vessel. Once the solution has been removed, it must not be returned to the canister. If turbidity or solids appear, discard the product. The product is intended for single use and must not be reused.

Storage and shelf life

Store the unopened containers in a dry place at 15 to 25 °C, avoiding direct sunlight.
The shelf life is 2 years. See also the best-before date (BBD) on the label. Once the containers have been opened, the shelf life corresponds to the best-before date, as long as the storage conditions are observed and the solution is handled properly.

Safety notice

If any serious incidents occur in connection with the product, please report them to the manufacturer and the national authority.

Literature

Romeis, Mikroskopische Technik, Editors: Maria Mulisch, Ulrich Welsch, 2010, Springer Spektrum, 18th edition

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