DDK Italia

**IVD** dispositivo medico-diagnostico in vitro

CE

Myeloperoxidase Kaplow method (benzidine) technical information
Technical card code 12-115
Product code 12-115
Pack 1kit
Stability of product properly conserved at 15-20°C 24 months
CND code W01030799

Produce in Italy by
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For emergency contact your nearest anti-poison unit.

Methods
1) Fix smears of bone marrow or peripheral blood in vapours formalin for five minutes.
2) Rinse under running water for a few minutes and dry.
3) Put in the reagent, for oxidising and incubate for twenty minutes at a temperature of 4 ° C.
4) Rinse and dry.
5) Counterstain in Giemsa for ten minutes.

Reactiv peroxidase
Solution of benzidine in ethanol 60 ml
Add 40 ml $dH_2O$ (not included)
Add 0.2 ml of $H_2O_2$ (included)

The myeloperoxidase is located in azurophilic granules (primary) and neutrophilic monocytes , an enzyme lisosomic hematopoietic acting as oxidative; consists of a protein linked to a group prostate, formed by a complex of porfirinic iron that form granules localized or spread throughout the cytoplasm.
Functionally is an enzyme that, in the presence of hydrogen peroxide, catalyzes the oxidation of different and specific substrates such as phenols, several amino acids and some aromatic with a reaction like this:

AH2 to H2O2 + + · 2H2O

In this reaction two electrons are transferred from the substrate (AH2) to peroxide formation of H with water and oxidized substrate (A), the latter shall deposit sites reaction.

Reagent

| | |
|---|---|
| Benzidine | 60 ml |
| H2O2 | 2x30 ml |

Benzidine reconstitution. To a 60 ml of benzidine add 40 ml of $dH_2O$ and 0,2ml of $H_2O_2$

* Technical's note: staining time vary according to age, types of solutions, thickness of sections, et. When Gill (code 09-178) modified solution is used, get the best result, staining time (maximum 1-5 minutes), for best change in color, wash quickly in tap water, and then in Scott acidulated solution, (code 00-136). For sections fixed in Bouin, we recommend the use of haematoxylin modified acid AB (code 09-183). Please note the alcoholic loses eosin stain with the use, of the days are stretched over time colouring. If you are using purified eosin, check the time, and possibly diluted in ethyl alcohol 96°C, if the cytoplasmic staining was too strong. Before use, filter the following solutions; alcoholic eosin, eosin phloxine; Harris haematoxylin, Gill's haematoxylin. The acidified aqueous solution of eosin is prepared by slowly adding glacial acetic acid. Follow normal precautions for laboratory reagents. Dispose of waste according to regulations at the local, regional or national level. Refer to Data Sheet Material Safety Data for updated information on risks, hazards and safety associated with the use of these products.

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* Risk and Safety Statements outside the EU.
The eosin solution in alcohol is flammable and harmful. Harmful by inhalation, in contact with skin or if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with the skin or by ingestion. Irritating to eyes, respiratory system and skin. Keep away from sources of ignition - No smoking. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical attention immediately (show the label where possible). Target organs: eyes and nerves. Eosin in aqueous solution. Caution: substance not yet fully tested. Avoid contact and inhalation of the solution of Harris haematoxylin. Organs: heart and nerves. Solutions based hemallum are harmful. Harmful if swallowed. Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention. Wear suitable protective clothing. Organs affected: liver and kidneys.
In case of accident or if you feel unwell, seek medical attention immediately (show the label where possible).

* Risk and Safety Statements (U.E.)
The eosin solution in alcohol is highly flammable and harmful. Highly flammable. Harmful by inhalation, in contact with skin or if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with the skin or by ingestion. Keep away from sources of ignition - No smoking. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical attention immediately (show the label where possible).
Eosin in aqueous solution. Caution: Substance not yet fully tested. Solution of hemallum. Do not breathe vapors. Avoid contact with skin and eyes. Gill haematoxylin Solutions are harmful. Harmful if swallowed. Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention. Wear suitable protective clothing.

Endnotes
1 The timing suggested in the leaflet are approximate and may vary according to your specific needs. If they are used intensively, for staining solutions may lose their dyes, so it is necessary to extend the time of staining solutions, or replace with new products.
2. Include positive control slides in each session.
3. Some hydraulic systems deliver acidic water, unsuitable for use for the part of the procedure for the blue coloration. If tap water is acidic, instead using a dilute alkaline solution, for example, water buffered by Scott.
4. The presence of purple or red-brown nuclei a blue color indicates unsatisfactory.
5. If you over-eosin staining, nuclear staining may be masked. If done correctly, with eosin staining shows a three-tone effect. To increase the differentiation of eosin, extend the time of immersion in alcohol, or use a first alcohol with a higher water content. You can adjust the times of immersion in alcohol to obtain an adequate eosin staining.
6. We do not recommend the addition of stock solution in the working solutions of haematoxylin and eosin.
7. Avoid excessive drag (carryover) of water solutions in alcoholic eosin.
8. The data generated by this procedure are to be used only to support the diagnosis and should be evaluated in conjunction with other tests and diagnostic data

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