DDK Italia

IVD dispositivo medico-diagnostico in vitro

CE

Gordon & Sweets stain for reticular fibers technical information
Technical card code 14-141
Product code 14-141
Pack 1kit. Number of tests 100 or on request
Stability of product properly conserved at 4°C 12 months

Produce in Italy by
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in case of emergency UE number	☎	112
in case of emergency UK number	☎	999
en cas d'urgence Suisse	☎	145

General description

To demonstrate reticular fibers in paraffin sections. Useful in the differential diagnosis of certain type of tumors such as carcinomas, sarcomas and lymphosarcomas.

Intended use

Is intend to demonstrate reticular fibers. The main function of reticular fibers is to provide support. They are normally found throughout the body, particularly in liver, lymph node, spleen and kidney. Ammoniacal silver stains are the most commonly used methods for demonstration of reticular fibers. In the procedure of Gordon and Sweets, tissue sections are oxidized by potassium permanganate with oxalic acid removing the excess potassium permanganate. Ferric ammonium sulfate acts as the sensitizer. After the silver impregnation, formalin is used to reduce the silver to its visible metallic form. Gold chloride tones the sections and any unreduced silver is removed by sodium thiosulfate. A counterstain may be used, if desired.

Procedure

Quality control. Liver is a very good control tissue. Fixation. Neutral buffered formalin preferred. Sections. Paraffin 4 to 5 µm. Procedure. Use acid cleaned glassware. Deparafinize and hydratate to distilled water

1. Oxide in potassium permanganate solution for 5'
Wash in tap water for 2'
2. Bleach in oxalic acid for 2' or until sections are colourless
Wash in tap water for 2'
3. Sensitize sections in ferric ammonium sulphate for at least 15'
Rinse in 6 change of distilled water
4. Impregnate sections whit the ammoniacal silver solution for 2'
Rinse in distilled water
5. Reduce sections for 2' in formalin solution
Wash in tap water for 3"
6. Tone in gold solution for 10'
Wash in tap water for 2'
7. Place slides in sodium thiosulfate for 1'
Rinse in distilled water
Counterstain
If desired, whit nuclear fast red for 5'.
(Generally liver sections are not counterstained and all others sections are). Wash well in tap water.
Dehydrate and clear trough 95% ethyl alcohol, absolute ethyl alcohol, and xylene, 2 change each, 2' each.
Mount with DdMount

Results	Normal sections	Intensified sections
Reticulin	brown/black	black-purple
Nervous fibers	black	black
Elastic fibers	polish black	polish black
Nuclei	colourless	colourless
Collagen	yellowish	yellowish

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Reagent	
Solution 1. Potassium permanganate solution	30 ml
Solution 2. Oxalic acid solution	30 ml
Solution 3. Ferric ammonium sulphate solution	30 ml
Solution 4. Ammonium silver nitrate solution	30 ml
Solution 5. Formalin	30 ml
Solution 6. Gold chloride solution	30 ml
Solution 7. Sodium thiosulfate	30 ml
Solution 8. Nuclear fast red	30 ml

* Notes.
Distilled water or tap water can be used for rinsing and moisturizing.
Always check the pH of your tap water and chlorine levels before proceeding with any type of biological tissue and stain.

* 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.

* 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.

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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