LUO

PERLS STAIN

PRODUCT INFORMATION: **PERFORMANCE CHARACTERISTICS:**

REF

SSP020 100ml Ready to use
SSP020 250ml Ready to use
SSP020 500ml Ready to use

Staining Interpretation:
Ferric Iron: Bright blue
Nuclei: Red
Cytoplasm: Pink

SUMMARY AND EXPLANATION

For *Laboratory* use only

The reagents in this kit are intended for Laboratory use only. Perls stain method is considered to be the first classical histochemical reaction to demonstrate iron especially in tissues such as bone marrow, spleen. This procedure is particularly helpful to evaluate pathological conditions that involve hemosiderin deposits. In addition to haemorrhage, this can occur in conditions such as haemochromatosis (where excessive amounts of iron may form in organs due to iron overload) and in some liver diseases.

PRINCIPLE OF THE PROCEDURE

Hemosiderin contains iron in the ferric form bound to a protein frame work. Hemosiderin is formed by partial degradation of aggregates of ferritin by lysosomes. It is present in reticuloendothelial cells of bone marrow, spleen and liver. Tissue sections when treated with Glacial acetic acid, denatures the protein binding to hemosiderin molecules, there by releasing Ferric (3+) ions. These Ferric ions combine with Potassium Ferrocyanide to form Ferric Ferrocyanide which is an insoluble bright blue pigment (Prussian blue)

Kit Contents	Product Code	Storage Conditions	Pack Sizes		
			100ml	250ml	500ml
1% Potassium Ferro cyanide aqueous (Reagent A)	IPS083	RT	100ml	250ml	500ml
5% Glacial acetic acid aqueous (Reagent B)	IPS084	RT	100ml	250ml	500ml
0.5% Nuclear Fast red (Reagent C)	IPS085	RT	100ml	250ml	500ml

STORAGE AND HANDLING

Storage Recommendations: Store at recommended temperatures. When stored at the appropriate conditions, the reagents are stable until expiry. **Do not use the reagents after expiration date provided on the vial.**

To ensure proper regent delivery and stability, replace the dispenser cap after every use and immediately place the vials at recommended temperatures away from sunlight in an upright position.

SPECIMEN PREPARATION

RECOMMENDED POSITIVE CONTROLS:

1. Tissues with Hemosiderin deposits

SAMPLE PREPARATION AND FIXATION:

- Formalin-fixed, Paraffin-embedded tissue sections of 3- 5 µm thickness on microscopic slides

PRECAUTIONS

1. Normal precautions exercised in handling laboratory reagents should be followed.
2. This product should be used by qualified and trained professional users only
3. It can cause serious eye and skin irritation. Refer to Material Safety Datasheet for any updated risk, hazard or safety information.
4. Dispose of waste observing all local, state, provincial or national regulations.
5. Do not use reagents after expiration date
6. Use protective clothing and gloves, while handling reagents
7. Avoid microbial contamination of reagents as it may lead to incorrect results

MATERIALS REQUIRED, BUT NOT PROVIDED

- Xylenes
- Graded alcohols (50%, 70%, 95%, absolute)
- DPX Mountant
- Microscopic slides (positively charged)
- Slide holder
- Jars
- Hot air oven
- Cover slips

REAGENT PREPARATION

Glacial acetic Acid-Potassium Ferrocyanide working Solution: Mix equal amounts of 1% Potassium Ferrocyanide aqueous (Reagent A) with 5% Glacial acetic Acid aqueous (Reagent B) for the working solution. Prepare just before use and discard after use.

STAINING PROCEDURE

1. Deparaffinize and hydrate slides to distilled water.
2. Place the slides in the Glacial acetic acid-potassium ferrocyanide working solution (Refer to the reagent preparation above) for 30 minutes at room temperature.
3. Rinse with five changes of distilled water.
4. Counter stain with Reagent C, Nuclear fast red solution for 3-5 minutes.
5. Rinse with three changes of distilled water.
6. Quickly dehydrate in graded alcohols.
7. Clear in xylene, three or four changes for 2 mins each.
8. Mount the slide with compatible medium

QUALITY CONTROL

The recommended positive tissue control for Perls stain is the tissue with hemosiderin deposits.

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PERFORMANCE CHARACTERISTICS

The Perl stain highlights the **Ferric Iron deposits** in the tissue in **Bright Blue** color, the **Cell Nuclei** in **Red** color and the **Cytoplasm** in **Pink** color

TROUBLESHOOTING

1. Follow the specific protocol recommendations according to data sheet provided
2. Tissue staining is dependent on the handling and processing of the tissue
   prior to staining. Improper fixation, tissue processing, freezing, thawing , washing, drying, heating, sectioning or contamination with other tissues or fluids may produce artifacts, reagent trapping or inaccurate results
3. Do not allow the section to dry out during the entire staining process
4. Excessive or incomplete counterstaining may compromise the interpretation of the results
5. If unusual results occur, contact PathnSitu Technical Support at +91-40-2701 5544 or E-mail: techsupport@pathnsitu.com

LIMITATIONS AND WARRANTY

1. Authorized and skilled/trained personnel only may use the product.
2. The clinical interpretation of any test results should be evaluated within the context of the patient's medical history and other diagnostic test results.
3. A qualified trained pathologist must perform the evaluation of the test results.
4. The product comes with no warranties beyond the provided description
5. Use appropriate volume/concentration to cover entire tissue sections and optimum conditions to avoid false positive and negative results.
6. Use appropriate/recommended buffer/instruments/all consumables with appropriate incubation timings to obtain optimal results.
7. Always recommend using known positive and negative controls to evaluate the test result.
8. Unexpected reactions may occur in untested tissues due to tissue component variability.
9. False positive results can arise from no stringent washing practices and other contributing factors.
10. In instances where localization differs from the specifications outlined in the datasheet, clinical coordination or prompt technical support is advised.
11. Maintain recommended storage conditions.
12. Refer entire data sheet to know any further limitations about the product.
13. No warranties whether expressed or implied, extend beyond the description.
14. PathnSitu is not liable for property damage, personal injury, time or effort or economic loss caused by this product.

BIBLIOGRAPHY

1. Determination of Tissue Iron and Ferritin in Liver Pathology Comparison of Histochemical and Biochemical Results. By C. Th. B. M. van Deursen Department of Internat Medicine
2. Role of Special Stains in Diagnostic Liver Pathology Murli Krishna, M.D.
3. Method of the histochemical stains & diagnostic application charles j. churukian, b.a., ht.htl (ascp)
4. Manual of Histologic and Special staining Techniques: Armed Forces Institute of Pathology

EXPLANATION OF SYMBOLS

LOT **Lot number / Batch number**

Expiry

LUO - Laboratory Use Only

Storage limitation

Date of manufacture

REF **Catalogue number**

Manufacturer address

RT-Room temperature

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