

Perls' Stain Kit

PRODUCT INFORMATION:

REF

SSP020 100ml
SSP020 250ml
SSP020 500ml

PERFORMANCE CHARACTERISTICS:

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

SUMMARY AND EXPLANATION

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 hemorrhage, this can occur in conditions such as haemochromatosis (where excessive amounts of iron may form in organs due to iron overload). This product is not intended for diagnostic or therapeutic use. The results are to be interpreted by qualified personnel in conjunction with other clinical and laboratory findings.

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, thereby 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
Potassium Ferrocyanide Solution (Reagent A)	IPS083	RT	100ml	250ml	500ml
Glacial Acetic Acid Solution - C (Reagent B)	IPS084	RT	100ml	250ml	500ml
Nuclear Fast Red Solution (Reagent C)	IPS085	RT	100ml	250ml	500ml

STORAGE AND HANDLING

Storage Recommendations: Store at Room temperature. 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 reagent performance 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.

During transport, short-term exposure to 2-8°C does not affect product performance.

SPECIMEN PREPARATION

Sample Preparation and Fixation: Formalin-fixed, Paraffin-embedded tissue sections of 3-5 µm thickness on microscopic slides

PRECAUTIONS

- Normal precautions exercised in handling laboratory reagents should be followed.
- This product should be used by qualified and trained professional users only.
- It can cause serious eye and skin irritation. Refer to Material Safety - Datasheet for any updated risk, hazard or safety information.
- Dispose of waste observing all local, state, provincial or national regulations.

DS-SSP020-C

Laboratory Use Only

- Do not use reagents after expiration date
- Use protective clothing and gloves, while handling reagents
- Avoid 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
- Cover slips

PREPARATION OF WORKING SOLUTION

Glacial acetic Acid-Potassium Ferrocyanide Working Solution:

Mix equal amounts of Reagent A, Potassium Ferrocyanide Solution with Reagent B, Glacial acetic Acid solution-C, for the working solution. Prepare just before use and discard after use.

STAINING PROCEDURE:

- Deparaffinize and hydrate to distilled water.
- Place the slides in the Glacial acetic acid-potassium ferrocyanide working solution (Refer to preparation of working solution above) for 30 minutes at room temperature.
- Rinse with five changes of distilled water.
- Counter stain with Reagent C, Nuclear Fast Red Solution for 3-5 minutes.
- Rinse with three changes of distilled water.
- Dehydrate in graded alcohols.
- Clear in xylene, three or four changes.
- Mount with compatible medium

QUALITY CONTROL

The recommended positive tissue controls for Perls' Stain Kit is Tissues with Hemosiderin deposits.

PERFORMANCE CHARACTERISTICS

Ferric Iron : Bright Blue
Nuclei : Red
Cytoplasm : Pink

TROUBLESHOOTING

- Follow the specific protocol recommendations according to data sheet provided.
- 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.
- Do not allow the section to dry out during the entire staining process.
- Gently mix all the reagents prior to use.
- Excessive or incomplete counterstaining may compromise the interpretation of the results.
- If unusual results occur, contact PathnSitu Technical Support at +91-40-2701 5544 or E-mail: techsupport@pathnsitu.com

LIMITATIONS AND WARRANTY

- This product is intended for use only by authorised, trained, and qualified personnel.
- A qualified and trained pathologist/personnel must interpret the results of the test.
- Interpretation of test results must be made in conjunction with relevant background information and additional laboratory findings.
- Always use the recommended volume and concentration of reagents to ensure complete coverage of the tissue section and to minimise the risk of false-positive or false-negative results.
- Use appropriate buffers, instruments, consumables, and incubation conditions as recommended to achieve optimal staining performance.
- It is strongly recommended to include known positive and negative controls

when performing the test to ensure the validity of results.

7. The product has been validated on formalin-fixed, paraffin-embedded (FFPE) tissues. The end user must establish performance on other tissue types.
8. Unexpected results may occur in untested tissues due to inherent variability in tissue components.
9. False-positive reactions may occur due to insufficient washing, inappropriate protocol conditions, or other contributing factors.
10. In instances where the staining pattern or localisation differs from the specifications outlined in this datasheet, please get in touch with technical support for guidance.
11. Maintain the product under the recommended storage conditions to preserve reagent stability and performance.
12. Do not use reagents that appear cloudy, discoloured, or show signs of contamination. Discard any components showing signs of deterioration.
13. This product is intended for single-use application only. Once applied to a tissue section, reagents should not be recovered or reused, as this may compromise test integrity and specificity.
14. PathnSitu makes no warranties beyond those expressly stated in the product description.
15. PathnSitu shall not be liable for property damage, personal injury, time or effort, or economic loss arising from the use of this product.
16. Please refer to the complete datasheet for all instructions, precautions, and additional product limitations.
17. For detailed information and specifications on individual components, please refer to Product Material Safety Data Sheet (MSDS)

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 Internal 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.html (ascp)
4. Manual of Histologic and Special staining Techniques: Armed Forces Institute of Pathology

EXPLANATION OF SYMBOLS

LOT

Lot number / Batch number



Expiry



Storage limitation

RT

Room Temperature



Date of manufacture

REF

Catalogue number



Manufacturer address