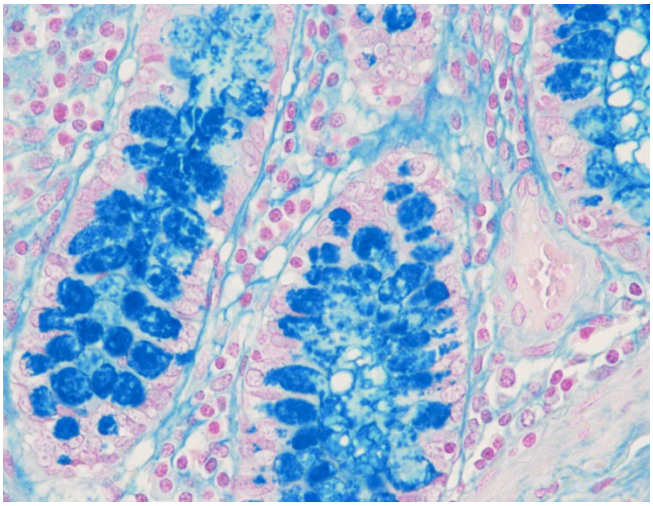
Bio - Optica
Improving Pathology

Data Sheet

CE

COLLOIDAL IRON



Intestine

CODE	DESCRIPTION	TESTS NUMBER
04-180809	Colloidal iron	100 test

IVD

In Vitro Diagnostic – medical device
IVD in **Class A**, Reg. UE 2017/746
UDI-DI: 08033976231392
Basic UDI: 080339762W01030799Y5

Manufacturer: Bio-Optica Milano S.p.A.

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Product for the preparation of cyto-histological samples for optical microscopy.
For demonstration of the acid mucins.
Specificity: the reaction shows the acid mucins (sialo and sulphured mucins) which form a stable complex with trivalent iron thanks to the presence of their acid groups in anionic form.

PRINCIPLE

This method is based on the bond that take place in acid environment between colloidal iron and acid groups of the mucopolysaccharides. At these conditions, the iron forms a compound of chelation that is demonstrated by method of Bleu of Prussia: the potassium ferrocyanide reacts with ferric ions of compound of chelation in acid environment and it forms a coloured salt: Prussian blue. Reaction takes place, in ionic form as follow: $4\ Fe^{++++}\ 3K_4Fe(CN)_6 = Fe_4Fe(CN_6)_3 + 12\ K^+$

WARNING

False positive reactions are due to three main causes:
- Solution is too old (ferrocyanide-hydrochloric acid solution should be prepared just before use),
- Ferric ions contaminate glassware or the flotation bath's water (rust). To avoid this, never touch solution with metallic objects.
- Asbestosis: asbestos can be present in pathologic tissues and ferric salts on its fibres can react positively

METHOD

1) Bring section to distilled water.
2) Put on the section 10 drops of reagent A: leave to act 2 minutes.
3) Prepare the incubation box: put on the bottom of the incubation box 1 ml of distilled water; introduce the slide and put on the section 5 drops of reagent B and 5 drops of reagent C. Close the incubation box and incubate 1 hour.
4) Drain the slide without washing and put on the section 10 drops of reagent D: leave to act 1 minute. Drain and repeat the passage.
5) Drain the slide without washing and put on the section 10 drops of reagent E: leave to act 1 minute. Drain and repeat the passage.
6) Wash with distilled water.
7) Put on the section 10 drops of reagent F and 10 drops of reagent G: leave to act 20 minutes.
8) Wash well in distilled water.
9) Put on the section 10 drops of reagent H: leave to act 5 minutes.
10) Wash in distilled water.
11) Dehydrate through ascending alcohols, clear in xylene and mount.

The picture is for illustrative purposes only

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Technical details

Method specifications	Procedure time	1 hour and 45 minutes	
	Complementary equipment	Not necessary	
	Results	Acid mucins:	Blue
		Nuclei:	Red
Components	A) Acetic acid solution	30 ml	
	B) Acid buffer	18 ml	
	C) Colloidal iron solution	18 ml	
	D) Acetic acid solution	30 ml	
	E) Acetic acid solution	30 ml	
	F) Potassium ferrocyanide solution	30 ml	
	G) Hydrochloric acid 0.5M solution	30 ml	
	H) Nuclear fast red solution	30 ml	
Storage	Storage	Store the preparation at 15 - 25°C. Keep the containers tightly closed.	
	Storage temperature	15 - 25°C	
	Stability	After the first opening, the product is reusable until the expiry date, if correctly stored.	
	Validity	1 year	
Warning	Product classification	The product is intended for professional laboratory use for healthcare professionals. Carefully read the information on the label (danger symbols, risk and safety phrases) and always consult the safety data sheet. Do not use if the primary container is damaged. In the event of a serious accident, we recommended that you immediately inform Bio-Optica Milano S.p.A and the competent authorities.	
	Disposal	Hazardous preparation: observe all state and local environmental regulations regarding waste disposal.	

REVISION N°	REASON	REVISION DATE
001	Regulation adjustment UE 2017/746 - IVDR	16/05/2022

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