

SCOTT'S SOLUTION



IVD *In vitro* diagnostic medical device

Classified acc. to Regulation (EU) 2017/746 - Class A device

Reagent for the conversion of red hematoxylin-stained nuclei to blue

INSTRUCTIONS FOR USE

BASIC UDI number	385889212HPC30799PROCYU		
EMDN code	W01030799		
REF	Catalog number	Volume	UDI-DI number
	SC-OT-1L	1000 mL	03858888820268
	SC-OT-2.5L	2500 mL	03858890007640



Intended use and test principle

Scott's solution is a histological reagent that substitutes tap water and enables fast and accurate bluing of nuclear chromatin and membranes of the cell nucleus. Because of its hardness and alkalinity, tap water changes the color of the nuclei previously red stained with hematoxylin to blue. Many hematoxylin modifications are used in histology and cytology for precise nuclear staining. By using BioGnost's Scott's solution, the tissue sample remains well adhered to the slide and does not lose quality, as is the case with other bluing reagents. It is also known as Scott's tap water substitute.

Product description

- **SCOTT'S SOLUTION** – Bluing solution that contains magnesium sulphate ($MgSO_4$) and sodium bicarbonate ($NaHCO_3$) in optimal proportions diluted in water.

An example of Scott's solution used during HE staining, regressive

Additional reagents and materials that can be used in this method

- Fixatives such as BioGnost's neutral buffered formaldehyde solutions: Formaldehyde NB 4%, Formaldehyde NB 10%
- Dehydrating/rehydrating agent, such as BioGnost's alcohol solutions: Histanol 70, Histanol 80, Histanol 95 and Histanol 100
- Clearing agent, such as BioClear xylene or its aliphatic hydrocarbon substitutes, such as BioClear New
- Infiltration and embedding agent, such as BioGnost's granulated paraffin BioWax Plus 56/58, BioWax 56/68, BioWax Blue
- Covering agents for microscopic sections and mounting cover glass, such as BioGnost's BioMount, BioMount High, BioMount M, BioMount New, BioMount DPX, BioMount DPX High, BioMount DPX Low, BioMount C, BioMount Aqua
- VitroGnost slides and coverslips for use in histopathology and cytology
- BioGnost's immersion oils, such as Immersion oil, Cedarwood oil, Immersion oils types A and C, FF, 37 or Tropical Grade
- Nuclear staining reagents such as BioGnost's hematoxylin solutions: Hematoxylin H or Hematoxylin G3
- Cytoplasm staining reagents such as BioGnost's eosin solutions
- Differentiating reagent such as BioGnost's Acid alcohol

Preparation of histological sections for staining

- Fix (Formaldehyde NB 4%, Formaldehyde NB 10%) and process the tissue sample
- Embed the tissue in a paraffin block (BioWax 52/54, BioWax 56/58, BioWax Plus 56/58, BioWax Blue)
- Cut the paraffin block into 4-6 μm thin slices and mount on a VitroGnost microscope slide

Hematoxylin and eosin (HE) manual staining procedure, regressive

1.	Deparaffinize in xylene (BioClear) or xylene substitute (BioClear New)	3 exchanges, 2 min each
2.	Rehydrate in 100% alcohol (Histanol 100)	2 exchanges, 5 and 3 min
3.	Rehydrate in 95% alcohol (Histanol 95)	2 min
4.	Rehydrate in distilled/demineralized water	2 min
5.	Stain using Hematoxylin H or Hematoxylin G3	4-8 min
	If sedimentation occurs or a metallic sheen forms in Hematoxylin H or Hematoxylin G3 reagent, filter the reagent before use	
6.	Immerse the slide in distilled/demineralized water until dye is no longer being released from the slide	
7.	Differentiate using Acid alcohol	3-10 dips
	Note: the purpose of this step is to remove excessive hematoxylin from nuclei and cytoplasm. If the sample is treated with the differentiating agent for too long, discoloration of the nuclei may occur	
8.	Rinse in distilled/demineralized water	
9.	Make nuclei turn blue using Scott's solution	1 min
	Note: Finish the process of bluing after the nuclei turn blue	
10.	Immerse in distilled/demineralized water	
11.	If using an alcoholic eosin solution, immerse the samples into 95% alcohol (Histanol 95). If an aqueous eosin solution is used, skip this step.	
12.	Stain using one of eosin contrast solutions until optimal staining is achieved	15 sec to 2 min
	Note: Staining the slides in eosin alcoholic solutions causes intensive eosinophil color to show much faster (in under 15 seconds' time). Recommended incubation time for eosin aqueous solutions is 90 seconds to 2 minutes	
13.	Rinse under tap water Note: if using an alcoholic eosin contrast solution, skip this step	
14.	Dehydrate in 95% alcohol (Histanol 95)	2 exchanges, 10-15 dips

15.	Dehydrate in 100% alcohol (Histanol 100)	3 exchanges, 10-15 dips
16.	Clear in xylene (BioClear) or xylene substitute (BioClear New)	2 exchanges, 2 min each

Immediately after clearing apply an appropriate BioMount medium for covering/mounting on the section. If BioClear xylene was used, use one of BioGnost's mounting xylene-based media (BioMount, BioMount High, BioMount M, BioMount DPX, BioMount C, or universal BioMount New). If BioClear New xylene substitute was used, the appropriate covering agent is BioMount New. Cover the section with VitroGnost cover glass.

Result

Nucleus – blue
 Cytoplasm, collagen, muscle fibers, erythrocytes – hues of pink

Limitations

This product is intended for professional laboratory use for diagnostic purposes only. Deviations from the staining procedure described in this Instruction for use may cause differences in staining results.

Sample preparation and diagnostics

Use only appropriate instruments for collecting and preparing the samples. Process the samples using modern technology and mark them clearly. Be sure to follow the manufacturer's handling instructions. To avoid errors, staining and diagnosis can only be carried out by qualified personnel. Use a microscope equipped according to medical diagnostic laboratory standards.

If a serious incident occurs during use of this product or as a result of its use, please report it to the manufacturer or authorized representative and competent authority.

Safety at work and environmental protection

Handle the product in accordance with occupational health and environmental protection guidelines. Used and expired solutions must be disposed of as special waste following national guidelines. Reagents used in this procedure can pose a danger to human health. The examined tissue samples are potentially infectious, and it is necessary to take the measures needed to protect human health in accordance with the guidelines of good laboratory practice. It is mandatory to read and act according to the information and warning signs printed on the product label and in the Safety Data Sheet, which is available on request.

Storage, stability, and shelf life

Upon receipt, store the product in a dry place and well-closed original packaging at a temperature of +15 °C to +25 °C. Do not freeze or expose to direct sunlight. After first opening, the product can be used until the specified expiry date, if stored properly. The expiration date is printed on the product label.

References

1. Scott, S. G. (1912) On successive double staining for histological purposes Journal of Pathology and Bacteriology, v. 16, p. 390-398.
2. Sheehan, D.C. i Hrapchak, B.B. (1980): Theory and Practice of Histotechnology, 2nd ed St. Louise: CV Mosby Co.
3. Kiernan J. A. (2008) Histological and histochemical methods, 4th ed. Bloxham: Scion Publishing Ltd.

Warnings and precautions regarding the materials contained in the product:

Not a hazardous substance or mixture acc. to Regulation (EZ) br. 1272/2008.

SC-IFU, ENV5, 23.02.2026., IŠP

 Manufacturer	 Batch code	 Consult instructions for use	 European conformity  Unique device Identifier
 Date of manufacture	 Catalogue number	 Caution	
 Use-by date	 Temperature limit	 <i>In vitro</i> diagnostic medical device	

 **BioGnost Ltd.**
 Medjugorska 59, 10040 Zagreb, Croatia, EU, www.biognost.com

Version	Description/ reason for change	Date
8	Revised acc. to Regulation (EU) 2017/746 - IVDR	23.02.2026.