

# RESORCINOL powder dye, C.I. 76505

IVD In vitro diagnostic medical device

CE

## Resorcin, Benzene-1,3-diol

### INSTRUCTIONS FOR USE

REF Catalogue number: RES-P-25 (25 g)

#### Introduction

Resorcinol is aromatic alcohol in form of white crystals. It is primarily used as an antiseptic, but it is most commonly used in diagnostics. It is an important component of Seliwanoff's test for differentiation between aldoses and ketoses. The test is conducted after the tested sample is mixed with Seliwanoff's reagent (resorcinol in hydrochloric acid solution) and heated until boiling point in water bath. By changing the color of the reagent during heating it is possible to determine the presence of a particular sugar in the sample. Except for that method, resorcinol is also commonly used for histology staining for detecting elastic fibers in Weigert-Van Gieson methods. Elastic fibers consist of elastin polymers and elastic microfibrils that make up a 3D network in an extracellular matrix inside connective tissue (skin, elastic cartilage, vascular walls, lung tissue and in vocal cords). Unlike standard histology stains, Weigert van Gieson (known as resorcin-fuchsin dye) displays selective differentiation of tissue samples, even in early phase of disease.

#### Product description

- **RESORCINOL powder dye** – crystals for preparing staining reagents.

**Example of Resorcinol use (as a component of Resorcin Fuchsin reagent) as a component of Weigert-Van Gieson kit, rapid method (product code WVGB-100T, WVGB-K-100)**

#### Other slides and reagents that may be used in staining:

- 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 fitting agent, such as BioGnost's granulated paraffin BioWax Plus 56/58, BioWax 56/68, BioWax Blue, BioWax Micro.
- Glass slides used in histology, pathology and cytology, such as VitroGnost SUPER GRADE or VitroGnost COLOR, or one of 30 (and more) BioGnost's glass slides
- 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, Canada Balsam or MountQuick Tube medium
- VitroGnost cover glass, dimensions range from 18x18 mm to 24x60 mm
- BioGnost's immersion oils, such as Immersion oil, Cedarwood oil, Immersion oils types A and B

#### NOTE

Apply the reagent so it completely covers the section.  
In order to avoid reagent evaporation from the section, we recommend using incubation chamber/plate.

#### Preparing the histological sections for staining

- Fixate the sample (Formaldehyde NB 4%, Formaldehyde NB 10%), rinse with water and dehydrate through series of ascending alcohol solutions (Histanol 70, Histanol 80, Histanol 95 and Histanol 100).
- Clear the sample with intermedium; in xylene (BioClear) or in a xylene substitute (BioClear New).
- Infiltrate and fit the sample in paraffin (BioWax Plus 56/58, BioWax 56/58, BioWax Blue, BioWax Micro).
- Cut the paraffin block to 4-6 µm slices and place them on a VitroGnost glass slide.

#### Histological sections staining procedure

1.	Deparaffinize the section in xylene (BioClear) or in a xylene substitute (BioClear New)	3 exchanges, 10 min each
2.	Rehydrate using 100% alcohol (Histanol 100)	2 exchanges, 5 and 3 min
3.	Rehydrate using 95% alcohol (Histanol 95)	2 min
4.	Rehydrate in distilled (demi) water	2 min
5.	Staining with Resorcin Fuchsin reagent: dip the section in Resorcin Fuchsin reagent and cover it to prevent reagent evaporation. Reagent may be filtered and reused.	30 min
6.	Rinse under tap water	1 min
7.	Apply 5 drops of Hematoxylin, Weigert A and 5 drops of Ferri reagent, Weigert B. Gently stir and let it react.	5 min
8.	Rinse under tap water	1 min
9.	Drip Fuchsin Acid Van Gieson reagent (≥5 drops)	5-10 minutes
10.	Rinse quickly in distilled (demi) water	
11.	Quickly dehydrate through 96% and 100% alcohol (Histanol 96 and Histanol 100) Note: the amount of yellow dye rinsed rises the longer the sections stays immersed	
12.	Clear the section in xylene (BioClear) or in a xylene substitute (BioClear New)	2 exchanges, 5 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 a VitroGnost cover glass.

## Note

Time periods of staining processes are not entirely standardized and they approximately correspond to clinical and laboratory practical experience. Intensity of staining depends on the period of immersion in the dye. Real staining protocol depends on personal requests and priorities.

## Results

Black-blue - nuclei  
Hues of red-pink - collagen  
Dark purple-black - elastic fibers  
Yellow - connective tissue, erythrocytes and muscle tissues

## Preparing the sample and diagnostics

Use only appropriate instruments for collecting and preparing the samples. Process the samples with modern technology and mark them clearly. Follow the manufacturer's instructions for handling. In order to avoid mistakes, the staining procedure and diagnostics should only be conducted by authorized and qualified personnel. Use only microscope according to standards of the medical diagnostic laboratory.

## Safety at work and environmental protection

Handle the product in accordance with safety at work and environmental protection guidelines. Used solutions and out of date solutions should be disposed of as special waste in accordance with national guidelines. Chemicals used in this procedure could pose danger to human health. Tested tissue specimens are potentially infectious. Necessary safety measures for protecting human health should be taken in accordance with good laboratory practice. Act in accordance with signs and warnings notices printed on the product's label, as well as in BioGnost's material safety data sheet.














## Storing, stability and expiry date

Keep Weigert-Van Gieson kit in a tightly closed original package at temperature between 15°C and 25°C. Do not freeze and avoid exposing to direct sunlight. Date of manufacture and expiry date are printed on the product's label.

## References

1. Culling, C.F.A. (1974): Handbook of histopathological and histochemical techniques, 2<sup>nd</sup> ed., Butterworth, London, UK.
2. Lillie, R.D. (1945): Studies on selective staining of collagen with acid aniline dyes, J. Technical Methods, 25:1
3. Sheehan D.C. et Hrapchak, B.B. (1980): Theory and Practice Histotechnology, 2<sup>nd</sup> ed., CV Mosby, St. Louis, (MO), pp 52, p 14-167.
4. Van Gieson, I. (1889): Laboratory notes of technical methods for the nervous system, New York Med. J., 50: 57-60

RES-P-25, V1-EN1, 25 March 2016, IŠP/VR

 Refer to the supplied documentation	 Storage temperature range	 Number of tests in package	 Product code
 Refer to supplied instructions	 Keep away from heat and sunlight	 Valid until	 Lot number
 For <i>in vitro</i> diagnostic use only	 Keep in dry place	 Caution - fragile	 European Conformity
			 Manufacturer

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