BIOGNOST®

WEIGERT-VAN GIESON KIT

CE IVD *In vitro* diagnostic medical device Classified acc. to Regulation (EU) 2017/746 - **Class A** device

Six-reagent kit for staining elastic fibers with prolonged incubation

INSTRUCTIONS FOR USE

BASIC UDI number	385889212HPC30708STARVF	
EMDN code	W01030708	
REF **Catalog number**	**Volume**	**UDI-DI number**
WVG-100T	100 tests	03858892125830
WVG-K-100	6x100 mL	03858892125847

Intended use and test principle

Weigert-Van Gieson kit is used for staining elastin, connective tissue and collagen. 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 reagent (known as resorcin-fuchsin dye) displays selective differentiation of tissue samples, even in early phase of disease. Prolonged incubation period causes excellent elastic fibers imaging selectivity. Hematoxylin, Weigert permanently stains nuclei dark and is resistant to acidic solutions. Resorcine fuchsin combined with acid selectively stains elastic fibers. Fuchsin Acid Van Gieson reagent is an acidic reagent that selectively stains collagen fibers red, and cytoplasm and muscle fibers yellow. The staining principle is based on different affinity of basic and acid stains towards specific tissue components, which allows clear histological distinction of structures.

Product description

- **WEIGERT-VAN GIESON KIT** – Kit for staining elastic fibers

The kit contains:	**100 tests(WVG-100T)**	**6 x 100 mL (WVG-K-100)**	**Storage temperature**
Periodic acid, 0,8% solution	30 mL (PK08-OT-30)	100 mL (PK08-OT-100)	15-25°C
Resorcine Fuchsin reagent	60 mL (RFR-OT-60)	100 mL (RFR-OT-100)	15-25°C
HCL reagent, Weigert-Van Gieson	30 mL (HCLW-OT-30)	100 mL (HCLW-OT-100)	15-25°C
Hematoxylin, Weigert A	30 mL (HEMA-OT-30)	100 mL (HEMA-OT-100)	15-25°C
Ferri reagent, Weigert B	30 mL (FR-OT-30)	100 mL (FR-OT-100)	15-25°C
Fuchsin Acid Van Gieson reagent	30 mL (FAG-OT-30)	100 mL (FAG-OT-100)	15-25°C

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

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

NOTE

Apply the reagent so it completely covers the section.

Histological sample staining procedure

a) using kit for 100 tests (WVG-100T)

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.	Apply Periodic acid, 0.8% solution (≥5 drops)	5 min
6.	Staining with Resorcine Fuchsin reagent: dip the slide in Resorcine Fuchsin reagent and cover it to prevent reagent evaporation. Leave at room temperature overnight or 60 min at +45°C in incubation tray. Reagent may be filtered and reused	
7.	Add HCL reagent, Weigert-Van Gieson (≥5 drops)	10 min
8.	Rinse in distilled/demineralized water	
9.	Apply 5 drops of Hematoxylin, Weigert A and 5 drops of Ferri reagent, Weigert B. Gently stir and let it react	8-10 min
10.	Rinse under tap water	10 min
11.	Stain using Fuchsin Acid Van Gieson reagent (≥5 drops) Note: longer exposure provides a more intense red staining	1-3 min
12.	Dehydrate in 70% alcohol (Histanol 70)	3 quick dips
13.	Dehydrate in 95% alcohol (Histanol 95)	3 quick dips
14.	Dehydrate in 100% alcohol (Histanol 100)	2 exchanges, 2 min each
15.	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.

*To avoid fading of the sample (loss of yellow) it is recommended to clear in xylene (BioClear) and mount the cover glass using BioMount DPX or BioMount DPX New covering/mounting medium.

b) using six – reagent kit, 100 mL (WVG-K-100)

Pour the reagents into glass staining jars (Coplin, Hellendahl or Schifferdecker), return to original bottles after staining. Close tightly. Filter the reagents if necessary.

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.	Immerse into Periodic acid, 0.8% solution	5 min
6.	Staining with Resorcine Fuchsin reagent: dip the section in Resorcine Fuchsin reagent and cover it to prevent reagent evaporation. Leave at room temperature overnight or 60 min at +45°C in incubation tray. Reagent may be filtered and reused	
7.	Immerse into HCL reagent, Weigert-Van Gieson	10 min
8.	Rinse in distilled/demineralized water	
9.	Prepare the Weigert hematoxylin working solution: mix equal volumes of Hematoxylin, Weigert A and Ferri reagent, Weigert B Note: working solution is stable for approximately 2 weeks. Prepare the working solution of volume adequate for staining test sections	
10.	Immerse into Weigert hematoxylin working solution and let it react	8-10 min
11.	Rinse under tap water	10 min
12.	Immerse into Fuchsin Acid Van Gieson reagent	1-3 min
13.	Dehydrate in 70% alcohol (Histanol 70)	3 quick dips
14.	Dehydrate in 95% alcohol (Histanol 95)	3 quick dips
15.	Dehydrate in 100% alcohol (Histanol 100)	2 exchanges, 2 min each
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. *To avoid fading of the sample (loss of yellow) it is recommended to clear in xylene (BioClear) and mount the cover glass using BioMount DPX or BioMount DPX New covering/mounting medium.

Result
Nuclei – black-brown
Collagen – hues of red-pink
Elastic fibers – dark blue to black
Connective tissue, erythrocytes and muscle fibers – yellow

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. To avoid an incorrect staining result, it is advised to use a positive and negative control.
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. Culling, C.F.A. (1974): Handbook of histopathological and histochemical techniques, 2 ed 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, 2nd ed., CV Mosby, St. Louis, (MO), pp 52, str. 14-167.
4. Van Gieson, I. (1889): Laboratory notes of technical methods for the nervous system, New York Med. J., 50: 57-60

Warnings and precautions regarding the materials contained in the product:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H225	Highly flammable liquid and vapor.
H330	Fatal if inhaled.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: wash with plenty of water.
P305+P351+P338 to P308+P313	IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and easy do. Continue rinsing. IF exposed or concerned: get medical advice/attention.

WVG-IFU_ENV8, 25.02.2026., IŠP

	Manufacturer	LOT	Batch code	°C	Temperature limit	IVD	*In vitro* diagnostic medical device	UDI	Unique device identifier
	Date of manufacture	REF	Catalogue number	i	Consult instructions for use	Σ	Contains sufficient for <n> tests		
	Use-by date		Fragile, handle with care		Caution	CE	European conformity		

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Version	Description / reason for change	Date
8	Revised acc. to Regulation (EU) 2017/746 - IVDR	25.02.2026.