

LUGOL'S C SOLUTION

IVD *In vitro* diagnostic medical device



Enhanced formulation of aqueous solution of iodine and potassium iodide

Synonym: Schiller's test

INSTRUCTIONS FOR USE

REF Product code: LUGC-OT-100 (100 mL) LUGC-OT-250 (250 mL) LUGC-OT-500 (500 mL)

Introduction

Lugol's solution, named after French physician J. G. A. Lugol, is widely used in the field of medicine. It is most commonly known as an antiseptic, disinfectant and starch indicator. Lugol's solution affects the carbohydrate molecules in the following way: iodine binds to complex carbohydrates (starch in plant organisms, glycogen in animals), staining them in the process. Lugol's solution is an aqueous solution of iodine and potassium iodide. Lugol's solution is used in cytology for detecting abnormal squamous cells of the vaginal epithelium and cervix epithelium by using the Schiller's test (used during colposcopy). Normal, healthy epithelial cells produce glycogen. Cells that carry the risk of neoplasia and developing tissue tumors do not produce glycogen and staining does not occur (CIN cells). Apart from gynecology, Lugol's solution is used in parasitology for staining parasites in stool samples. It is also used in zoology for staining protozoic organisms in order to enhance the contrast of internal structures (nuclei and glycogen vacuoles) and for preserving the protozoa, and in microbiological testing Lugol's solution is one of the components of Gram staining.

Product description

- **LUGOL'S C SOLUTION** - Aqueous solution of iodine and potassium iodide.

Contents:

70 g/L of iodine
140 g/L of potassium iodide

Usage of Lugol's solution:

- Gynecology (colposcopy)
- Parasitology (staining parasites in stool samples)
- Microbiology (Gram staining)
- Zoology (staining and preserving protozoic organisms)
- Cytology (staining cellular nuclei)

Note:

Staining procedures are not standardized and they depend on standard operating procedures of individual laboratories and the experience of the personnel conducting the staining procedure. Intensity of staining depends on the period of immersion in the dye. Depending on personal requests and standard laboratory operating procedures, sample processing and staining can be carried out according to other protocols.

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 use. 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. In order to avoid an erroneous result, a positive and negative check is advised before application.

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 which is available on demand.

Storing, stability and expiry date

Keep Lugol's C solution in a tightly sealed original packaging at temperature between 15°C and 25°C. Do not keep in cold places, do not freeze and avoid exposing to direct sunlight. Date of manufacture and expiry date are printed on the product's label.

References

1. Higdon, J. (2003): Micronutrient Information Center: Iodine, Linus Pauling Institute/Oregon State University.
2. Carson, F. L., Hladik, C. (2009): *Histotechnology: A Self-Instructional Text*, 3rd ed., Chicago: ASCP Press
3. Schiller, W. (1933): Early diagnosis of carcinoma of a cervix. *Surgery, Gynaecology and Obstetrics*, Chicago, 56: pp 210-222.
4. Sankaranarayanan, R. et al. (2003): Test characteristics of visual inspection with 4% acetic acid (via) and Lugol's iodine (vili) in cervical cancer screening in Kerala, India, *Int. J. Cancer*, 106, pp 404-408.
5. Sargent, D. L. (1936): An improvement in staining technic for Protozoa, *Biotechnic and Histochemistry*, 11, pp 49-52.

LUGC-OT-X, V3-EN3, 14 February 2017, AK/VR

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

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