BIOGNOST®

ACRIDINE ORANGE SOLUTION

IVD In vitro diagnostic medical device CE

Acridine Orange aqueous solution of wide range of application

INSTRUCTIONS FOR USE

REF Product code: AOA-OT-100 (100 mL) AOA-OT-500 (500 mL) AOA-OT-1L (1000 mL)

Introduction

Acridine Orange solution is used in various staining methods. It is used as fluorescent stain for differential DNA and RNA staining. Other uses include acid mucins staining and apoptosis detection. Acridine Orange solution is also used in cytogenetics for displaying DNA and DNA-rich structures during C-banding of chromosomes. Acridine Orange solution enables detection of microorganisms in blood smears.

Product description

- **ACRIDINE ORANGE SOLUTION** - Acridine Orange dye solution of wide range of application

Other slides and reagents that may be used in staining:

- Glass slides used in hematology, such as VitroGnost STANDARD GRADE or high quality glass slides used in histopathology and cytology, such as VitroGnost SUPER GRADE or one of more than 30 models of VitroGnost glass slides
- VitroGnost cover glass, dimensions range from 18x18 mm to 24x60 mm
- Fixatives, such as BioGnost's Histanol M
- Phosphate buffer pH 6.2

Preparation of solutions

Acridine Orange working solution

- Mix 10 ml of Acridine Orange solution with 90 ml of phosphate buffer pH 6.2 (if no phosphate buffer is available, mix with 90 ml of distilled/demineralized water).

Suggestion for blood smear staining

- Prepare a thicker blood smear on a glass slide.
  Note: a thinner blood smear may be prepared, but in that case it should be fixed in methanol (Histanol M) for 1 minute
- Dry the smear completely (let in dry in air for 20 minutes)
- Cover the dried smears with prepared working Acridine Orange solution and let it set for 3 minutes
- Rinse the preparations carefully with phosphate buffer pH 6.2 and let it dry in air.
  Note: excessive rinsing with phosphate buffer may cause reduced staining intensity
- **Do not use** glycerol, cover slip or immersion oil
- Examine the preparations under LED fluorescent microscope and by using 400x magnifying factor
- Examine the preparations in 10 minutes' time

Result

Bacterial or fungal DNA - fluorescent orange
Mammalian DNA - fluorescent green

Note

Time periods of staining processes are not entirely standardized in clinical and laboratory practical experience. Time periods specified in the instruction approximately correspond to a longtime work practice with optimal results. Intensity of staining depends on the period of immersion in the dye. Real staining protocol depends on personal requests and priorities.

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. Reagents 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 Acridine Orange solution in a tightly closed original package 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. Beck, R.C. (1938): *Laboratory Manual of Heamtological Technique,* Philadelphia, W.B. Saunders & Co.
2. Dacie, J. et Lewis S. (1995): *Practical haematology*, 4th ed., London, Churchill Livingstone.
3. Garcia, L. S. (2001): *Diagnostic Medical Parasitology*, 4th ed., Washington, D.C., ASM Press.
4. Giemsa, G. (1922): Das Wesen der Giemsa-Farbung, *Zentralb f Bakt*; p89. 99-106.
5. Kiernan, J.A. (2008): *Histological and histochemical methods: Theory and Practice,* 4th ed., Bloxham, Scion Publishing Ltd.
6. May, R. et Grünwald L. (1909): *Über die Farbung von Feutchpraparaten mit meiner Azur-Eosine methode,* Deutsche med Xschr, 35, str. 1751-1752.

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Refer to the supplied documentation	Storage temperature range	Number of tests in package	REF	Product code	CE	European Conformity	BIOGNOST Ltd. Medjugorska 59 10040 Zagreb CROATIA www.biognost.com	CE
Refer to supplied instructions	Keep away from heat and sunlight	Valid until	LOT	Lot number		Manufacturer		
IVD For *in vitro* diagnostic use only	Keep in dry place	Caution - fragile						