

CONGO RED powder dye, C.I. 22120

IVD In vitro diagnostic medical device

CE

Direct Red 28, Congorot, BSC certified powder dye
For staining amyloids according to Highman and Puchtler

INSTRUCTIONS FOR USE

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

Introduction

Histology, cytology and other related scientific disciplines study the microscopic anatomy of tissues and cells. In order to achieve a good tissue and cellular structure, the samples need to be stained in a correct manner. Congo Red dye is used in biochemistry and histology for identifying amyloids and staining microscopic sections, especially cytoplasm and erythrocytes. Amyloids are clusters of non-soluble, fibrous proteins. Accumulation of amyloids in organs and tissues may cause amyloidosis. It is also used in microbiological epidemiology for rapid detection of virulent *Shigella flexneri* serotype 2a. The dye binds to its bacterial lipopolysaccharide structure. Congo Red is also used as a pH indicator because of its capability of turning from blue to red at pH 3.0 - 5.2.

Product description

- **CONGO RED** - Biological Stain Commission (BSC) certified powder dye for preparing microscopic identification of amyloids

Other preparations and reagents used in preparing the dye solution:

- Denatured ethyl alcohol, such as BioGnost's Histanol 100
- Sodium chloride (NaCl)
- Potassium hydroxide (KOH)

Preparing the solutions for staining

Congo Red powder dye solution (for staining acc. to the Highman method):

1% solution of Congo Red powder dye:

- Dissolve 0.5 g of Congo Red dye in 50 ml of distilled/demi water. Add 50 mL of 100% ethanol. Filter before use.

Congo Red powder dye solution (for staining acc. to the Puchtler method):

Sodium chloride and alcohol solution:

- Dissolve 2.5 g of sodium chloride in 50 ml of distilled/demineralized water. Add 50 mL of 100% ethanol.

1% potassium hydroxide solution:

- Dissolve 1 g of potassium hydroxide in 50 ml of distilled/demineralized water.

0.2% solution of Congo Red powder dye:

- Dilute 0.1 g of Congo Red powder dye in 50 ml of solution of sodium chloride and alcohol. Add 0.5 ml of 1% potassium hydroxide. Filter before use.

Result of staining acc. to the Highman method

Amyloids - orange

Nuclei - blue

Background - colorless

Result of staining acc. to the Puchtler method

Amyloid - bright pink to red

Nuclei - blue

Background - colorless

Note

The mentioned formulation is only one of the ways of preparing the dye solution. Congo Red is the most commonly used dye in Highman and Puchtler methods. Depending on personal requests and standard laboratory operating procedures, the dye solution can be prepared 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 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. Both positive and negative controls are recommended before applying.

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 Congo Red powder dye in a tightly closed original package at temperature between 15°C and 25°C. Keep in dry places, do not freeze and avoid exposure to direct sunlight. Expiry date is stated on the product's label.

References

- 1. Conn, J. (1977): Biological Stains, 9th ed., Baltimore: Williams and Wilkins Co.
- 2. Gurr, E. (1971): Synthetic dyes in biology, medicine and chemistry, London: Academic Press

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