Brilliant Cresyl Blue Solution

S066

Intended Use:

Brilliant cresyl blue solution is used in hematology as staining solution to examine reticulocytes in blood film.

Composition**

Ingredients	
Brilliant cresyl blue	1.00 gm
Sodium choride	0.85 gm
Distilled water	100.00 ml

**Formula adjusted, standardized to suit performance parameters

Directions

1) Add 2-3 drops of Brilliant cresyl blue solution in to 75-X10-mm plastic tube by plastic Pasteur pipette.
2) Add 2-4 volume of patient's EDTA-anticogulated blood to Brilliant cresyl blue solution and mix it properly.
3) Keep the mixture at 37°C for 15-20 min.
4) Resuspend the red cells by gentle mixing,and make films on glass slides in usual way.
5) Allow to air dry, and the films are examined without being fixed or counterstained.

Principle And Interpretation

Reticulocytes are juvenile red cells, which contain remnants of the ribosomal ribonucleicacid (RNA)that was present in larger amounts in the cytoplasmof the nucleated precursors from which they were derived.Ribosomes have the property of reacting with certain basic dyes such as of Brilliant cresyl blue to form a blue or purple precipitate of granules or filaments. This reaction takes place only in vitally stained unfixed preparations. Stages of maturation can be identified by their morphological features.The most immature reticulocytes have the largest amount of precitable material. In the least immature only a few dots or short strands are seen. The regenerative capacity of erythrocytes can be monitored with ratio of reticulocytes.(5)

Type of specimen

Clinical samples: Blood sample

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines(1,2).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1) If blood films is allow to dry and is afterwards fixed with methanol, reticulocytes appear as polychromatic red cells staining diffusely basophilic if the film is stained with one of the basic dyes.
2) Staining ability of Brilliant cresyl blue varies from sample to sample .
3) A larger proportion of anaemic blood and smaller proportion of polycythaemic blood should be added in Brilliant cresyl blue solution than of normal blood.
4) Count of reticulocytes will tend to decrease after 6-8 hours unless the blood is kept at 4°C.(5)

Performance and Evaluation

Performace of the stain is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Intense blue solution.

Clarity
Clear without any particles.

Results
When stained with brilliant cresyl blue the reticulocytes stain individually and display dark blue network and dark blue dots. The reticulocyte count is expressed in relation to 1000 counted erythrocytes (i.e. as °/00).

Storage and Shelf Life

Store between 10 - 30^{0}C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

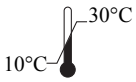
Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
3. Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Shanhooltzer,C.J.,P. Schaper ,and L.R. Peterson.1982.Concentrated Gram stain smear prepared with a cytospin centrifuge. J.clin. Microbiol.16:1052-1056
5.Dacie and Lewis Practical Haematology;Tenth edition;S.M.Lewis,B.J.Bain,I.Bates.

Revision : 00 / 2019

IVD	In vitro diagnostic medical device
CE	CE Marking
	Storage temperature
	Do not use if package is damaged
	HiMedia Laboratories Pvt. Limited, 23 Vadhani Industrial Estate, LBS Marg,Mumbai-86,MS,India
EC REP	CE Partner 4U ,Esdoornlaan 13, 3951 DB Maarn The Netherlands, www.cepartner 4u.eu

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory,diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.