

Product Information Wright

Intended Use

Wright's stain is used in histopathology for staining of blood and bone marrow smears. It provides excellent stain quality. It is generally used for differential blood picture staining. It is based on eosin methylene blue.

Principle

The purple colour of cell nuclei, is due to molecular interaction between eosin Y and an azure B-DNA complex. The intensity of the staining depends on the azure B content and on the ratio azure B/eosin Y. The pH of the solutions and buffer solution, fixation and staining time can influence the staining result.

Composition

Wright is alcohol based and contains Giemsa's azure eosin methylene blue, Wright stain and methanol.

Stability and Storage

Wright staining solution is stable for five years. The bottles must be kept closed. The advised storage temperature is 18 - 30°C. Used solutions and solutions that are past their shelf-life must be disposed of, according to local disposal guidelines.

Procedure

A. Method using a concentrated Wright / Buffer solution

1. Prepare Sørensen buffer solution pH 7:
Dilute 100 ml of the concentrated Sørensen phosphate buffer with 1.9L de-ionized water.
Do not use tap water.
2. Prepare a cytospin slide or smear of sample
Blood smears may be pre-fixed with methanol for 30 seconds.
3. Prepare the Wright / Buffer solution:
Dilute 50 ml Wright solution with 250 ml Sørensen buffer solution pH 7.
Mix and allow to stand for 10 minutes.
4. Proceed according to the table below

Reagent sequence	Minutes
Undiluted Wright	3
Wright / Buffer solution	6
Buffer	2
Rinse in running tap water	2
Dry	

B. Method using a more diluted Wright / Buffer solution

1. Prepare Sørensen buffer solution pH 7:
Dilute 100 ml of the concentrated Sørensen phosphate buffer with 1.9L de-ionized water.
Do not use tap water.
2. Prepare a cytospin slide or smear of sample
Blood smears may be pre-fixed with methanol for 30 seconds.

3. Prepare the Wright / Buffer solution:

Dilute 1 ml Wright solution with 400 ml Sørensen buffer solution pH 7.

Mix and allow to stand for 10 minutes.

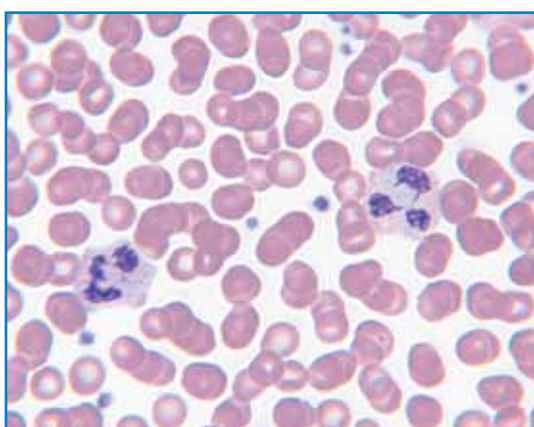
4. Proceed according the table below

Reagent sequence	Minutes
Undiluted Wright	5
Wright / Buffer solution	3
Rinse with Buffer	20 seconds
Dry	

Note: The times as listed in the tables are approximates and can be adjusted to suit personal preferences. Staining solutions will lose their staining power when heavily used and the staining times should be longer or fresh solutions should be used.

Performance Characteristics

Red blood cells	: red to pink
Neutrophils	: dark purple nuclei, pale pink cytoplasm, reddish-lilac small granules
Eosinophils	: blue nuclei, pale pink cytoplasm, red to orange-red large granules
Basophils	: purple to dark blue nucleus, dark purple, almost black large granules
Lymphocytes	: dark purple to deep bluish purple nuclei, sky blue cytoplasm
Platelets	: violet to purple granules



♦ Wright stained blood cells (100x)

Advantages Wright – Giemsa formulation upon traditional Wright:

A much more intense differential stain for blood smears, bone marrows, mast cells and FNA's.
Eosinates of polychrome methylene blue yield rich colour.
Better demonstration of microorganisms such as Microfilaria, Babesia, Haemobartonella, Giardia, Pneumocystis and Helicobacter.

Troubleshooting

Red cells are blue and nuclei are deeply stained

- Prolonged staining
- Inadequate washing
- Excessively alkaline stain or stain/buffer mixture
- pH of buffer too high

Excessive redness of red cells and poor staining of nuclei

- Inadequate staining
- Excessive washing
- Excessively acid stain or stain/buffer mixture
- pH of buffer too low

Colour intensity

Varying times may influence the colour intensity:

Step 1 Wright	Step 2 Wright / Buffer solution	Step 3 Sørensen buffer	Colour intensity nucleus	Colour intensity Cytoplasm
See procedure.				
> procedure times			++	++
< procedure times			--	--
	> procedure times		--	--
	< procedure times		++	++
		> procedure times	--	--
		< procedure times	++	++

Ordering Information

Product	Product Number	Packaging
Wright	3878.1000	1 liter
Wright	3878.2500	2.5 liter
Sørensen buffer concentrate	3716	10 x 100 ml



Phillipsburg, NJ 9001:2008 & 14001:2004
 Paris, KY 9001:2008
 Mexico City, Mexico 9001:2008
 Deventer, the Netherlands 9001:2008, 14001:2004 & 13485:2003

Gliwice, Poland 9001:2008 & 17025:2005
 Selangor, Malaysia 9001:2008
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