

PANOPTIC FAST STAIN FOR CYTOLOGY AND HEMATOLOGY

MGGQUICK is a Romanowsky-type panoptic fast stain. It is intended for cytopathology and hematology staining procedures.

The kit is a three-solution, three-step method that is both fast and practical, giving very good cell detail. Results are comparable to the May-Günwald-Giemsa and Wright stains, but it is much quicker and easier.

COMPOSITION

Reagent A (turquoise-green): Fixation and cellular conditioning (alcoholic solution) Reagent B (red-orange): Cytoplasmic stain (buffered solution of xhantene stabilized with methyl alcohol)

Reagent C (dark-blue): Nuclear and cytoplasmic differential stain (buffered solution of tiazins stabilized with methyl alcohol)

STORAGE AND HANDLING

Store all reagents at room temperature (15-25 °C) away from light. Do not use after the expiration date is reached. Handle all reagents following always the instructions indicated on MSDS. Solutions should be tightly covered when not in use and changed weekly or when discoloured or turbid. Reagent A can be refilled to replace wastes due to evaporation.

MATERIAL REQUIRED, BUT NOT SUPPLIED

Water Xylene or other clearing agent Permanent mounting medium

INTENDED USE

Cytopathology

FNAC **Body fluids** Intraoperative cytology Quick cytological screening

Hematology

master

Blood smears Bone marrow aspirates

For in vitro diagnostic use (EU only)

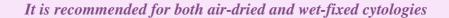


MASTER DIAGNÓSTICA

Avda. Conocimiento, 100, P.T. Ciencias de la Salud, 18016-Granada (España) master@vitroweb.com www.masterdiagnostica.com diagnóstica

TECHNICAL PROTOCOL

MGGQUICK method is used preferably on air-dry samples, but can also be applied on direct wetfixed cells as in the Papanicolaou method, or fixing the samples directly on **reagent A**. In these two last cases, the methacromatic reaction (Romanowsky effect) is also visible; however, the staining pattern is slightly different. The cells and the nuclei have a more "crisp" appearance, as in the Papanicolaou method, and the chromatin pattern somewhat resembles fixed Haematoxilyn-stained nuclei.



- **1**. Dip the smears for 10-15 seconds (6 slow dips) in each solution A,B, and C, in that order, without washes in between. Drain out the excess of reagent from the slides between solutions.
- 2. After the third solution, rinse the slides with tap water and allow them to dry or examine them wet after covering with a coverslip.
- 3. After complete drying, they may be made permanent by immersion in xylene or other clearing agents for several seconds and mounted with permanent mounting medium and a coverslip.

RESULTS INTERPRETATION

CYTOPATHOLOGY

Nucleoi: purple Nucleoii and RNA-rich cytoplasm: different ranges of blue Keratinized cytoplasms: bright sky-blue Melanin and biliar pigments: black Haemosiderin pigment: dark-blue Bacteria: dark-blue. Protozoo: dark-blue. Lymphoreticular and haematopoietic lesions: similar to bone marrow aspirates stained with conventional hematological stains.

This method also acts somewhat like a "general special stain" by producing a **methacromatic reaction** with a variety of diagnostically important entities (colloid, mucin, ground substance, young collagen and neurosecretory granules).



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HEMATOLOGY

Chromatin: purple. Nucleoli: dark-blue. Basophilic cytoplasm: blue. Cytoplasmic granules: Basophilic: purple-black; Eosinophilic: red-orange; Neutrophilic: pink-purple. Haemoglobinised erythrocytes: grey or light green Platelets: purple

TROUBLE-SHOOTING

PROBLEM	CAUSE	SOLUTION
- Cells look "watery" and are not suitable for diagnosis	- Specimens have not dried quickly enough and thus the cells contained too much fluid	- Do the smear as thinly as possible
- Everything stains blue (no Romanowsky effect)	- Fresh cells come into contact with formalin vapour	- Keep slides and solutions away from formalin vapour
- Cells are overstained	- Although it is relatively difficult to overstain, this could happen	- Solution A (1-2 dips) will remove excess of staining
- Cytoplasms and nuclei appear ill-defined an too pale	- Scanty or no contact cells/ solutions. //Solutions out of date or overutilized	-For deeper staining, increase the number of dips in solutions B and C.// Change solutions

SAFETY RECOMMENDATIONS

This product is intended for laboratory professional use only. The product is NOT intended to be used as a drug or for domestic purposes. The current version of the Safety Data Sheet for this product can be downloaded by searching the reference number at <u>www.vitro.bio</u> or can be requested at <u>regulatory.md@vitro.bio</u>.



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BIBLIOGRAPHY

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- Boom M.E. & Drijver J.S. "Routine Cytological Staining Techniques". MacMillan, London, 1986
 Horobin R.W. "Histochemystry". Butterworths, London, 1982
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PRESENTATION

PRODUCT	DESCRIPTION	VOLUME	REFERENCE
MGGQUICK	Fixation and cellular conditioning	500 cc	MAD-104.500
Reagent A		1000 cc	MAD-104.1000
		2500 cc	MAD-104.2500
MGGQUICK	Cytoplasmic stain	500 cc	MAD-105.500
Reagent B		1000 cc	MAD-105.1000
		2500 cc	MAD-105.2500
MGGQUICK	Nuclear and cytoplasmic differential stain	500 cc	MAD-106.500
Reagent C		1000 cc	MAD-106.1000
		2500 cc	MAD-106.2500

All reagents are ready to be used



3-steps **3**-solutions **3-**advantages:

"Cell detail, differential colours and quickness"



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