CE

MGGQUICK

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 ºC) 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
Blood smears
Bone marrow aspirates

For in vitro diagnostic use (EU only)

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TECHNICAL PROTOCOL

MGGQUICK method is used preferably on air-dry samples, but can also be applied on direct wet-fixed 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.

It is recommended for both air-dried and wet-fixed cytologies

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

Nuclei: purple
Nucleoli 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 www.vitro.bio or can be requested at regulatory.md@vitro.bio.

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BIBLIOGRAPHY

1. **Bancroft J.D. & Stevens A, eds**. "Theory and practice of histological techniques", 4th ed., Churchill Livingstone, New York, 1996.
2. **García del Moral R**. "Manual de laboratorio de Anatomía Patológica". MacGrawHill eds., 1ª ed., Madrid, 1993.
3. **Clark G.** "Staining procedures", 4th ed.; Williams and Wilkins, Baltimore, 1981.
4. **Gurr E.** "The rational use of dyes in Biology" Leonard Hill, London, 1965.
5. **Boom M.E. & Drijver J.S**. "Routine Cytological Staining Techniques". MacMillan, London, 1986
6. **Horobin R.W.** "Histochemystry". Butterworths, London, 1982
7. **Lillie R.D.** "Conn's Biological Stains". Wiiliams & Wilkins, Baltimore, 1977

PRESENTATION

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

All reagents are ready to be used

MGGQUICK

3-steps
3-solutions
3-advantages:

"Cell detail, differential colours and quickness"

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