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HemaDiff

Quick Stain Set
for Blood Smears, Microorganism, Sperm

Quick Stain Set for efficient and well staining of blood smears, micro organism and sperm.

Principle

HemaDiff is usable for blood smears, sperm and micro organisms. Staining procedure is fast (only about 30 seconds) and efficient. It is a clean work with ready to use reagents. Therefore there are no staining mistakes about reagent mixing etc.

The staining result harmonized with those of traditional dyeing methods.

DNA forms with the dyes Eosin Y and Azure B a color complex. The staining intensity and staining is dependent on the ratio of Eosin Y to Azure B and the duration of exposure. The result is also affected by fixation, and the pH-value. By the use of pH-buffered dyeing and rinsing solutions a high stability of the color and clean results is given.

Reagents

The reagents are original closed and after opening at room temperature (+15 ... +25 °C) stable up to the imprinted expiry date. After first use, the usability depends on the level of consumption and contamination.

They are ready for use exempt the buffer concentrate pH = 7.2.

The reagents are also available partial in single bottles (see ordering information).

Risks and Safety

Please observe the necessary precautions for use of laboratory reagents and body fluids; as well as possibly also of microbiological samples. Applications should be performed by expert personnel only. Follow the national and laboratory internal guidelines for work safety and infection control. Wear suitable protective clothing and disposable gloves while handling.

It is important to ensure effective protection against infection according to laboratory guidelines.

SDS ID International
www.sds-id.com

For additional and general safety information please see details on the label and the corresponding Safety Data Sheet (SDS).

Download by QR code or link:

www.sds-id.com/100043-3
www.sds-id.com/100044-2
www.sds-id.com/100045-1
www.sds-id.com/100046-0

Main Components

004101-... **(A)** **HemaDiff "A" Fixation Solution**
Cont. CH_3OH, Additive.

004102-... **(B)** **HemaDiff "B" Staining Solution red**
Cont. CI 45380 1.25 g/L, Phosphate > 60 mmol/L.

004103-... **(C)** **HemaDiff "C" Staining Solution blue**
Cont. CI 52015 + Azure > 1.2 g/L, Phosphate > 60 mmol/L.

004131-... **Hema Buffer Concentrate 100×**
Cont. Phosphat buffer concentrate pH = 7.2 (after dilution).

Reagent packs

004100-6001 **SET** **HemaDiff • 3× 100 mL • Ⓐ Ⓑ Ⓒ**
In screwable dye cuvettes. The set consists of:
004101-0100 (A) 1× 100 mL HemaDiff (A) • Fixing solution
004102-0100 (B) 1× 100 mL HemaDiff (B) • Staining solution red
004102-0100 (C) 1× 100 mL HemaDiff (C) • Staining solution blue
004131-0010 1× 10 mL Hema-Buffer Concentrate
für 1 L Buffer Solution acc. to Weise, pH = 7,2

004100-6002 **SET** **HemaDiff • 3× 500 mL • Ⓐ Ⓑ Ⓒ**
In lab bottles. The set consists of:
004101-0500 (A) 1× 500 mL HemaDiff (A) • Fixing solution
004102-0500 (B) 1× 500 mL HemaDiff (B) • Staining solution red
004102-0500 (C) 1× 500 mL HemaDiff (C) • Staining solution blue
004131-0010 2× 10 mL Hema-Buffer Concentrate
für 2× 1 L Buffer Solution acc. to Weise, pH = 7,2

Individual solutions

004101-0500 (A) 1× 500 mL HemaDiff (A) • Fixing solution
004101-1025 (A) 1× 2.5 l HemaDiff (A) • Fixing solution
004102-1025 (B) 1× 2.5 l HemaDiff (B) • Staining solution red
004103-1025 (C) 1× 2.5 l HemaDiff (C) • Staining solution blue
004131-0010 1× 10 mL Hema-Buffer Concentrate
for the preparation of ready-to-use Buffer Solution pH = 7,2 (acc. to Weise). Dilution: 10 mL Buffer Concentrate to 1 l distilled water.
004131-0250 1× 250 mL Hema-Buffer Concentrate pH = 7,2 (acc. to Weise)
for the preparation of ready-to-use Buffer Solution pH = 7,2 (acc. to Weise). Dilution: 10 mL Buffer Concentrate to 1 l distilled water.
004132-1025 (D) 1× 2.5 l Hema-Buffer Solution (acc. to Weise) pH = 7,2
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Additional required or recommended materials and equipment

005100-... * Aqua z. A. (different sizes available). *
004211-... * BioKitt Covering Media (different sizes available). *
Microscope with oil immersion
Immersion oil
Microscope slides
Staining cuvettes (not required for SET 3× 100 ml)
Marking pen for slides

* Available at Bioanalytic GmbH

Capacity

3x 100 ml are adequate for 50 ... 200 determinations.
3x 500 ml are adequate for 250 ... 1000 determinations.

Reagent preparation

The reagents (A), (B) and (C) are ready for use.

To prepare the ready-to-use buffer solution, add 10 mL of buffer concentrate to 950 ... 1000 mL Aqua z. A. or freshly distilled water and mix thoroughly. The working solution is also available ready for use.

Do not use prepared buffer solution with precipitates or turbidity.

Buffer concentrate from foil bag

Hold the bag by the side edge and cut off completely with clean scissors underneath the upper sealing lines (do not press the bag). Rinse the contents of the foil bag with Aqua z. A. and fill up to approx. 1 litre. Mix well.

Buffer Concentrate from 250 mL bottle.

Add 10 ml of buffer concentrate to approx. 1.0 L of Aqua z. A. Mix well.

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Samples

Slides with air dried, fresh and native smears made from blood, bone marrow, vaginal samples, Spermatozoa, Urine sediment, sputum, FNAB (fine needle aspiration biopsies), imprints, rinse solutions etc.

The use of EDTA and other anticoagulants significantly reduces the peroxidase reaction. Therefore it is not recommended to add any anticoagulant substances.

Sample pretreatment

Use only thin, air-dried smears or cytological material, that have not stored longer than 2 ... 3 days. The smears must be dried on air for at least 30 minutes and should be fixed before staining according to the relevant instructions.

Samples must be treated using state-of-the-art technology and all samples must be clearly labeled. Suitable instruments must be used for preanalytics and their preparation. Follow the manufacturer's instructions for application / use.

Procedure

Fill the solutions for use into closeable glass staining cells (available on request). The 3× 100 mL staining set contains screwable glass staining cells.

The dyeing time is relevant for the color intensity and color shift red and blue.

s = second

Procedure for blood smears

1.	Dip slide 5× 1 s into HemaDiff "A" Fixing Solution.
2.	Dip slide 3× 1 s into HemaDiff "B" Staining Solution.
3.	Dip slide 6× 1 s into HemaDiff "C" Staining Solution.
4.	Dip slide 2× 10 s into ready buffer solution pH = 7.2 or tap (drinking) water *1).
5.	Dry slide on the air and cover if applicable *2).

Procedure for vaginal smears

1.	Dip slide 5× 1 s into HemaDiff "A" Fixing Solution.
2.	Dip slide 10× 1 s into HemaDiff "B" Staining Solution.
3.	Dip slide 10× 1 s into HemaDiff "C" Staining Solution.
4.	Dip slide 2× 10 s into ready buffer solution pH = 7.2 or tap (drinking) water *1).
5.	Dry slide on the air and cover if applicable *2).

*Procedure for automatic staining (for blood smears) ***

For this please refer also to the instructions of the instrument manufacturer.

** for other specimen correctures are necessary.

s = seconds; min = minutes

Reagenz	Zeit	Station	DIP
HemaDiff A	**30 s**	**1**	**on**
HemaDiff B	**6 s**	**2**	**on**
HemaDiff C	**4 s**	**3**	**on**
Buffer Solution pH = 7.2	**10 s**	**4**	**on**
Buffer Solution pH = 7.2	**10 s**	**5**	**on**
Air dry	**3 min**	**6**	**-**
Mount *2) or microscope.			

Results

The staining should give typically the following results.

Cell nuclei:	red to violet
Lymphocytes:	plasma light grey azurophilic granulates magenta
Monocytes:	Plasma mainly dove-blue
Neutrophilic granulocytes:	granules light violet
Eosinophilic granulocytes:	granules brick-red to red-brown
Basophilic granulocytes:	granules dark violet to black
Thrombocytes:	violet
Erythrocytes:	reddish

Diagnostics

Diagnoses are to be made only by authorized and trained personnel. Valid nomenclatures must be used.

Further tests must be selected and implemented according to recognized methods. Suitable controls should be conducted with each application in order to avoid an incorrect result.

Notes

Renew the staining solutions if there is any precipitation, crystallisation or turbidity in the solutions or if there are differences in usual color tones. If the essentially volume is exhausted, don't fill up but rinse the coplin jars with distilled water, dry and refill complete with new reagent.

Instruction for Use

For professional use only.

To avoid errors, the use of qualified personnel is carried out. National guidelines for work safety and quality assurance must be followed.

The used equipment must comply with the state of technology and the laboratory requirements.

Protection against infection

It is important to ensure effective protection against infection according to laboratory guidelines.

Support / Infoservice

For methodological and technical support, please contact us by E-Mail at support@bioanalytic.de or by fax (german, english).

Periodically check for updates of this product information on our website.

Waste Management

Please observe your national laws and regulations.

Used and expired solutions must be disposed of in accordance with your local regulations.

Inside the EU, national regulations apply that are based on the current, amended version of Council directive 67/548/EEG on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

Decontaminated packaging can disposed of as household waste or recycled, unless otherwise specified.

Literature & Footnotes

Legends for the graphic symbols and tags used follow relevant norms or are available on our internet pages.

*1) The use of tap (drinking) water is possible, if this has no changes in color due to pH shift caused by the tap water.

*2) Cover glass sealing e. g. with Biokitt quick mounting medium (Bioanalytic GmbH) - Liquid cover glass for microscopy. Recommended to be stored over a period of several months.