**Diff-Quik®**

*Rapid Staining Set*

**Intended use and principle**

The Diff-Quik® Staining Set contains solutions for the rapid staining of blood smears, yielding results comparable to the Pappenheim technique (Giemsa-May-Grünwald). By consecutive brief immersions in the Diff-Quik® Solutions, the previously air-dried smears are fixed and stained in only 15 seconds.

By varying the number of dips in the appropriate staining Solution, different degrees of shading and intensity are easily obtained.

**Reagents**

**Diff-Quik I: Stain Solution I**
Contains Eosin Y (1.22 g/l) in phosphate buffer (pH 6.6) and 0.1% (w/v) sodium azide as preservative.

**Diff-Quik II: Stain Solution II**
Contains Thiazine Dye (1.1 g/l) in phosphate buffer (pH 6.6).

**Diff-Quik Fix: Fixative Solution**
Contains Fast Green (0.002 g/l) in Methanol.

**Warning**

1. Stain Solution I contains sodium azide. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. If discarded into sink, flush with a large amount of water to prevent azide build-up.
2. Fixative Solution contains Methanol >50%
   - Toxic by inhalation and if swallowed.
   - Keep container tightly closed.
   - Keep away from sources of ignition – No smoking.
   - Avoid contact with skin and eyes.
   - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Stability**

If stored appropriately at 15-30°C all 3 components of the staining set are stable after the first opening until the indicated expiration date. The stability is monitored throughout the dating period.

**Sample**

Capillary blood; freshly collected venous blood (EDTA).

**Procedure**

1. Dispense Diff-Quik® Solutions into staining jars with lid or any other dipstaining device.
2. Prepare the slides in the same way as for a Pappenheim technique (smear blood on a degreased slide and let air dry).
3. Dip slide 5 x 1 second in Fixative Solution. Allow excess to drain each dip.
4. Dip slide 5 x 1 second in Stain Solution I. Allow excess to drain after each dip.
5. Dip slide 5 x 1 second in Stain Solution II. Allow excess to drain after each dip.
6. Rinse slide with distilled water or Weise’s buffer Ph 7.2 (Merck).
7. Allow to air dry and proceed with differentiation.

**Remark**

The slides must be dipped several times in and out of the solutions. Continuous immersion during 5 seconds results in unsatisfactory staining.

**Limitations of procedure**

1. The intensity of the staining can be varied by increasing or decreasing the number of dips, but never go below 3 x 1 seconds.
2. To increase eosinophilic (red) staining, increase the number of dips in Stain Solution I. To increase basophilic (blue) staining, increase the number of dips in Stain solution II.
3. If the standard procedure results in a too intensive eosinophilic or basophilic staining, the pH of the distilled water should be checked. Normally best staining is obtained at an approximatively neutral pH. Weise’s buffer pH 7.2 (Merck) may be used.
4. Diff-Quik® Solutions usually need to be renewed only once a week. However the solution should also be renewed if staining differs from normal.

**Warranty**

This product is warranted to perform as described in its labeling and in the product literature, and Medion Diagnostics GmbH disclaims any implied warranty of merchantability or fitness for any other purpose, and in no event shall Medion Diagnostics GmbH be liable for any consequential damages arising out of aforesaid express warranty.

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