

Thermo Scientific  
Shandon  
Rapid-Chrome  
Kwif-Diff Stain Kit

**Instructions  
For Use**

# Rapid-Chrome™ Kwik-Diff Staining System

This special staining kit simplifies the routine staining for quick differential stains. Its compact size makes it ideal for FNA carts. With the Thermo Scientific Shandon Rapid-Chrome Kwik-Diff Kit, all the necessary reagents and accessories are packaged in one convenient carrying tray. The 120 ml/ea. reagents jars are sequentially arranged to simplify staining. Die cut slots in the tray base accommodate their respective jar lids and minimize the potential for cross-contamination.

This kit can stain approximately 100 slides, although the actual number may vary depending on specimen type and staining technique. Nearly all the kit components may be purchased individually (see back cover).

## Kit Components

1. Reagent 1 (Methanol) – 120 ml
2. Reagent 2 (Eosin) – 120 ml
3. Reagent 3 (Methylene Blue) – 120 ml
4. DI Water Rinse – 120 ml x 2
5. Spill-Free Slide Jar – 1 Jar (holds 10 slides)
6. Coverglass – 2 packs (24 x 50, #1s)
7. Resin Mountant – 1 bottle (45 ml)
8. Thermo Scientific Secureline Marker – 1 each
9. Thermo Scientific Superfrost Slides – 1 box (144/gross)
10. Plastic Slide Grip – 1 each (holds 5 slides)
11. Cardboard Slide Folder – 1 each (holds 20 slides)

## Storage Instructions

Keep away from direct sunlight. Store at room temperature. Do not handle or store near heat, sparks, flames or strong oxidants.

Lot number and expiration date are printed on the reagent jars.

## Instructions for Use

All reagents required are provided in the tray and supplied ready-to-use.

After staining and rinsing, slides may be air dried or examined wet. Specimen slides may be made permanent by immersing completely dried specimens in xylene for several seconds then mounting with resin mounting medium and a coverslip.

## Specimens

Either capillary or venous blood is acceptable for making blood films. If no anticoagulant is employed, the blood film must be made immediately. Should an anticoagulant be required, EDTA, ethylenediaminetetraacetic acid, is currently preferred.

## Staining Procedure for Blood Smears and Bone Marrow

1. Prepare a film of blood or bone marrow on a microscope slide and allow to dry.
2. Prepare three containers (e.g. coplin jars, or staining dishes). Fill one container with Kwik-Diff Reagent #1 (Fixative), the second with Kwik-Diff Reagent #2, and a third container with Kwik-Diff Reagent #3. Pour adequate amounts of each solution into the coplin jars or staining dishes.
3. Dip slide or rack of slides five times (1 second per dip) into Reagent #1. Allow excess to drain into jar or dish and blot edge on absorbent paper.
4. Dip slide or rack of slides five times (1 second per dip) into Reagent #2. Allow excess to drain into jar or dish and blot edge on absorbent paper.

5. Dip slide or rack of slides five times (1 second per dip) into Reagent #3. Allow excess to drain into jar or dish and blot edge on absorbent paper.
6. Rinse slide or rack of slides by dipping or swishing in distilled or deionized water.
7. Air dry slide(s) or use warm air blower before mounting with oil and reading.

**Note:** Tone and depth of color may be adjusted as follows:

1. Too blue – Decrease 1 dip in Reagent #3.
2. Too red – Decrease 1 dip in Reagent #2.
3. Too dark – Decrease by 1 or 2 dips in Reagents #2 and #3.
4. Too light – Increase by 1 or 2 dips in both Reagents #2 and #3. ▲

A minimum of 3 dips of 1 second each in Reagent #2 and #3 is required. Always dip slide in Reagent #1 a minimum of 5, 1 second dips.

**Note:** For bone marrow smears, double the above times. ▲

## Specimen Storage

If smears cannot be stained within 4-6 hours of preparation, they should be fixed with Kwik-Diff Reagent #1 and then stained as convenient.

## Expected Results

1. Erythrocytes: Pink tan with degrees of chromasia.
2. WBCs: Nuclei with bright, bluish-purple chromatin, light blue nucleoli.
3. Lymphocytes: Clear blue cytoplasm, red-purple granules may be present.
4. Monocytes: Mosaic of pink and blue cytoplasm, azure granules usually present.
5. Neutrophils: Light purplish-pinkish or lavender granules in cytoplasm.
6. Eosinophils: Bright red or reddish-orange granules in cytoplasm.
7. Basophils: Deep purple and violet-black granules in cytoplasm.
8. Platelets: Clearly demarcated red-purple granules in light blue cytoplasm.

The reaction of cytoplasm to staining is subject to a great many variables. Since the majority of staining occurs during the buffering stage, the variable of greatest magnitude is the resultant pH of the stain/buffer mixture at the cellular surfaces. The overall color of the red blood cells is a guide to stain quality and should be used in adjusting staining times for desired results.

## Limitations of Procedure

A truly representative blood smear is a diagnostic tool of inestimable value to the clinician. The course of a disease is often monitored by the routine "differential." Therefore, it is to be stressed that the information gathered from the blood smear is only as accurate as the preparation of the film, from specimen collection and spreading, to drying and final staining of the resultant smear.

## Warnings and Precautions

For in vitro diagnostic use only.

Reasonable care should be taken when using all laboratory reagents. Use with adequate ventilation. Keep away from direct sunlight.

See Kwik-Diff Stain Kit Material Safety Data Sheets for active ingredients, warnings and precautions as well as R & S code definitions.

## Order Information

Product	Unit	REF
Rapid-Chrome Kwik-Diff Staining System	1 Kit	999072

## Replacement Components

Product	Unit	REF
Kwik-Diff Staining Kit (Reagents 1, 2, & 3)	599 ml/each	9990700
Kwik-Diff Reagent #1	4 L	9990705
Kwik-Diff Reagent #2	4 L	9990706
Kwik-Diff Reagent #3	4 L	9990707
Spill-free Slide Jar	12 jars	1001363
Coverglass (24 x 50, #1s)	1 case	122450
Resin Mounting Medium	45 ml bottle	484970
Secureline® Marker (black)	1 marker	1451
Superfrost® White-End Slides	144/gross	147019
Slide Grip (plastic)	1 grip	1975
Slide Folder (holds 20 slides)	1 each	1605

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## Anatomical Pathology



### Richard-Allan Scientific

Subsidiary of Thermo Fisher Scientific  
4481 Campus Drive, Kalamazoo, MI 49008  
Phone: 1 (800) 522-7270  
Phone: + 1 (269) 544-5600  
[www.thermo.com/pathology](http://www.thermo.com/pathology)



### Thermo Shandon Limited

Subsidiary of Thermo Fisher Scientific  
93/96 Chadwick Road  
Astmoor, Runcorn Cheshire WA7 1PR  
Phone: 0800 018 9396  
Phone: + 44 (0) 1928 562501



IS8100 R3/08

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