

## AEROSPRAY HEMATOLOGY PRO SETTINGS FOR LEISHMAN STAINING

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### Introduction

Leishman's stain, a variation of Romanowsky staining, was developed by William Boog Leishman in 1901. It is commonly used to identify blood parasites and is widely used in regions where malaria and trypanosomiasis are prevalent. In these same regions, Leishman staining of hematology samples may be preferred over Giemsa and Wright staining due to its distinct coloration and contrast.

### Purpose

The purpose of this bulletin is to provide Leishman stain settings that can be programmed into the Aerospray® Hematology Pro Model 7152 to simulate Leishman stain coloration.

### Background

Leishman staining of hematology samples typically provides a deeper pink-red coloration of red blood cells and a more vivid violet-purple coloration of white blood cells than either Giemsa or Wright staining. This coloration produces a strong contrast between host cells and blood parasites (e.g. *Plasmodium* and *Trypanosoma*) which appear blue due to their nucleic acid rich cellular components. This enhanced contrast improves diagnostic accuracy by making parasites and cellular abnormalities more readily visible, reducing the time and effort required for identification.

### Affected Product

Model 7152 Aerospray® Hematology Pro Slide Stainer/Cytocentrifuge

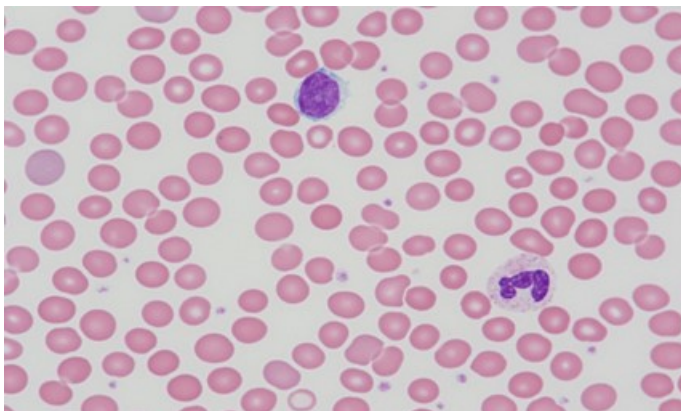
### Program Settings

Three custom Leishman stain programs, along with representative images of slides stained using each program, are shown below. These stain settings are intended as a starting point to simulate Leishman stain coloration. Users may need to adjust program settings to achieve their preferred coloration, as staining outcomes may vary due to differences in blood smears, stainers, and reagent lots.

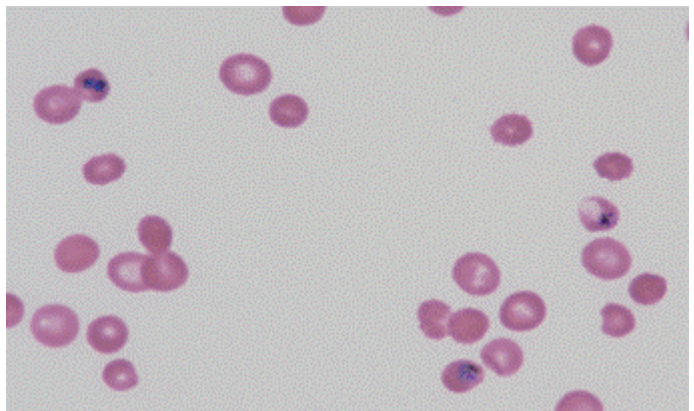
For instructions on how to create or edit stain programs, refer to Section 3 of the Applications Manual. Application Manuals can be found online at <https://www.elitechgroup.com/documentation>.

<b>Program Setting</b>	<b>Leishman A</b>	<b>Leishman B</b>	<b>Leishman C</b>
Fixation:	5	5	5
Concentrate Intensity:	5	5	5
Concentrate Red/Blue Ratio:	70/30	75/25	75/25
Concentrate Spin:	16	16	25
Mid Rinse	5	5	5
Dilute Stain Intensity:	6	6	5
Dilute Red/Blue Ratio:	60/40	65/35	65/35
Dilute Stain/Buffer Ratio:	30/70	30/70	30/70
Dilute Spin:	40	40	40
End Rinse:	5	5	5
Dry Time:	4	4	4

**Images of Stained Slides with Leishman Programs**



*Figure 1: Blood smear stained with the Leishman A program at 1000X magnification, featuring erythrocytes, neutrophils, lymphocytes, and thrombocytes.*



*Figure 2: Malaria control slide stained with the Leishman A program at 1000X magnification (cropped), featuring erythrocytes and Plasmodium Falciparum.*

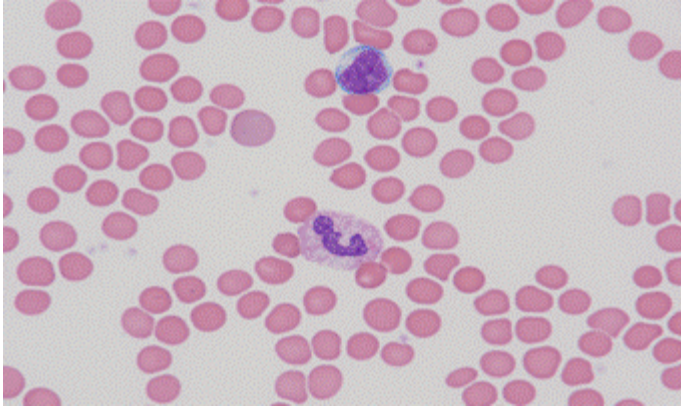


Figure 3: Blood smear stained with the Leishman B program at 1000X magnification, featuring erythrocytes, neutrophils, lymphocytes, and thrombocytes

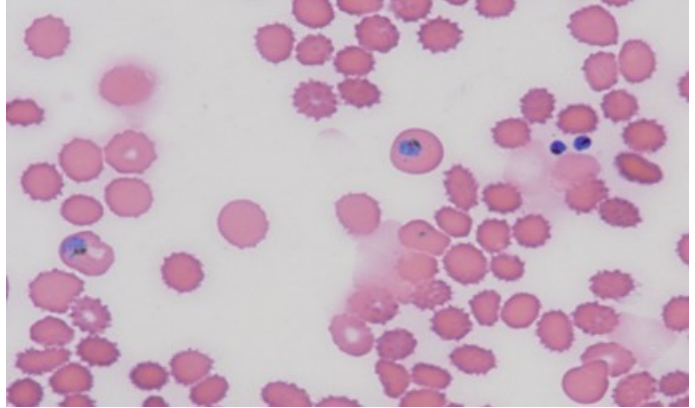


Figure 4: Malaria control slide stained with the Leishman B program at 1000X magnification (cropped), featuring erythrocytes and Plasmodium Falciparum.

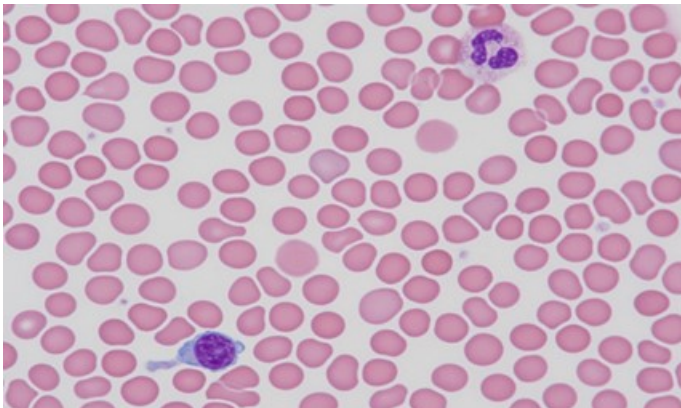


Figure 5: Blood smear stained with the Leishman C program at 1000X magnification, featuring erythrocytes, neutrophils, lymphocytes, and thrombocytes

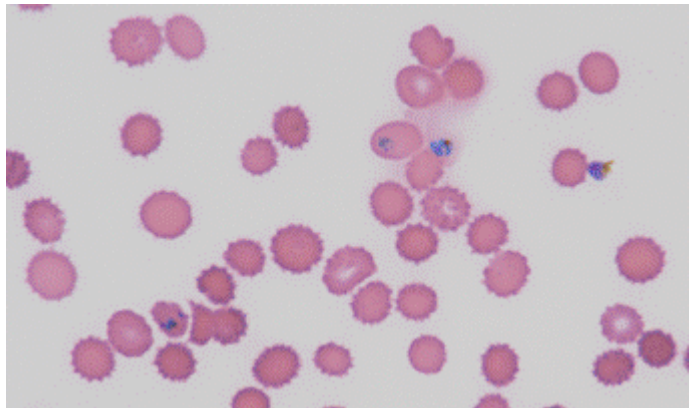


Figure 6: Malaria control slide stained with the Leishman C program at 1000X magnification (cropped), featuring erythrocytes and Plasmodium Falciparum.

Note: The images above are representative of slides rinsed with pH 6.8 buffer (item reference SS-071A). Slides rinsed with pH 7.2 buffer (item reference SS-072A) may show differences in coloration due to pH-dependent staining behavior.

### Contact Information

For further assistance on instructions provided in this bulletin or to provide feedback, please contact our Technical Support team at:  
[service\\_egi@elitechgroup.com](mailto:service_egi@elitechgroup.com)