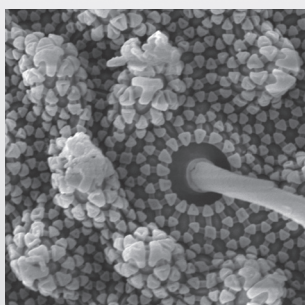
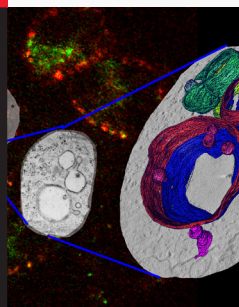


Living up to Life

Leica
MICROSYSTEMS

Material
Research



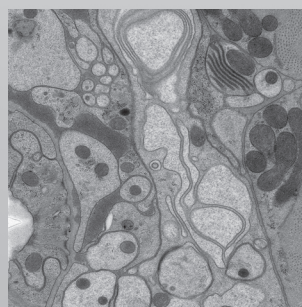
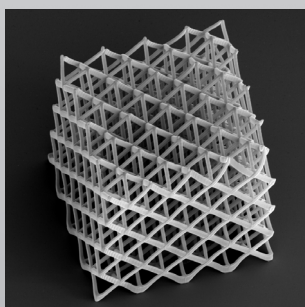
Life Science
Research

Application Note

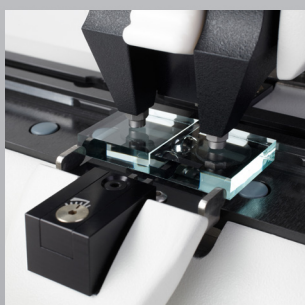
Human Blood Cells Protocol

related instrument Leica EM CPD300

Medical
Research



Industrial
Manufacturing



Natural
Resources



Human Blood Cells Protocol

INTRODUCTION:

Species: Human (*Homo sapiens*)

Critical point drying of human blood with subsequent platinum / palladium coating and SEM analysis

PROCEDURE:

Sample Holder:

Samples were inserted into the 12 mm cover slip holder

PREPARATION:

Place 12 mm dia cover slip poly-L-lysine coated in a 12-wells cell culture plate.

Add 1 ml 0.85% NaCl in each well to submerge each cover slip.

Pipette gently 50 µl blood on each glass cover slip leave for 5 min at 25°C.

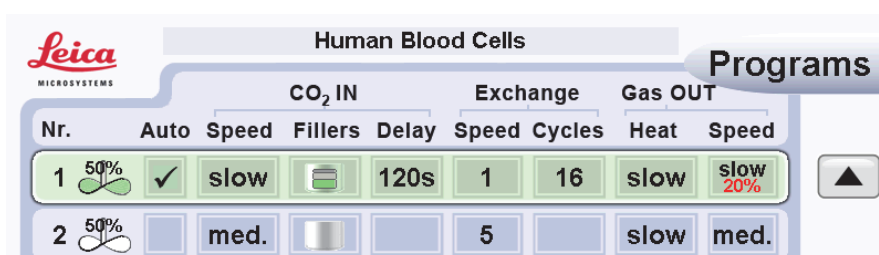
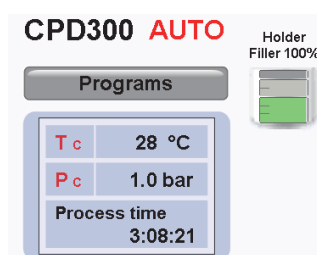
Add 200 µl 0.2 M CaCl₂ on top of the blood cells to activate the platelets and leave for 10 min.

FIXATION AND DEHYDRATION:

Add gently 1 ml of 4% Paraformaldehyde, 0.4% Glutaraldehyde in 0.2 M Sodium Cacodylate Buffer, pH 7.2, on top of the blood cells and leave at least for 10 min. at RT.

Distilled water	3x 10 min.
1% aqueous OsO ₄ , 4°C	16 h
Distilled water	3x 10 min.
Ethanol series: 30%, 50%, 70%, 80%, 90%, 96%, 100%	1x 10 min.
Acetone series: 30%, 50%, 100%	1x 10 min.

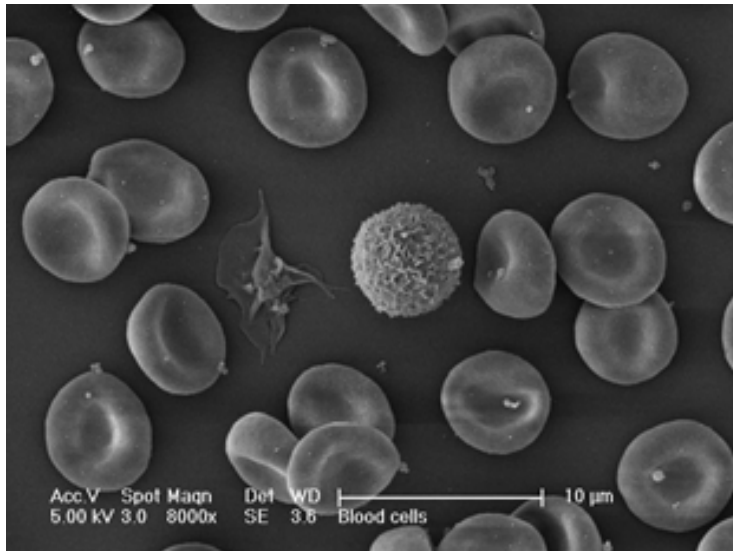
Leica EM CPD300 auto Program:



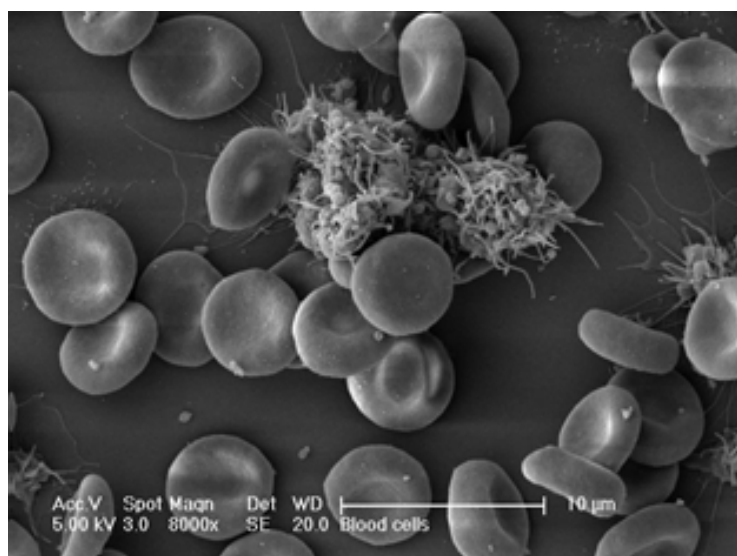
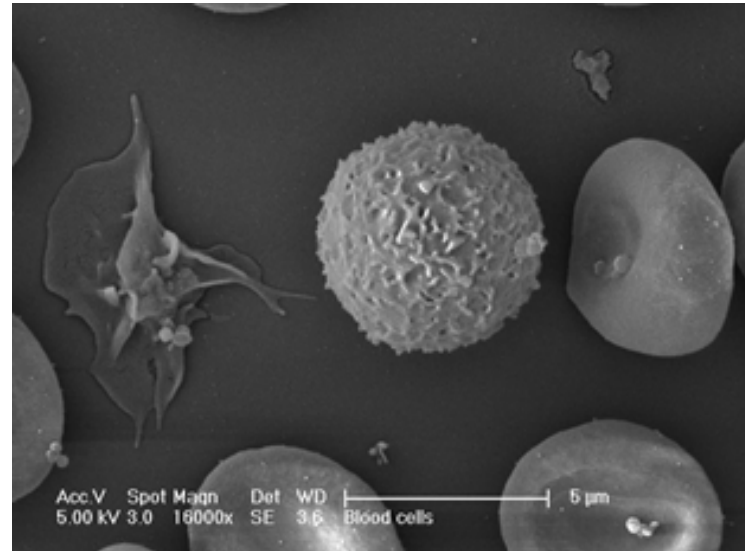
Coating:

Mount the dried samples on stubs containing carbon adhesives

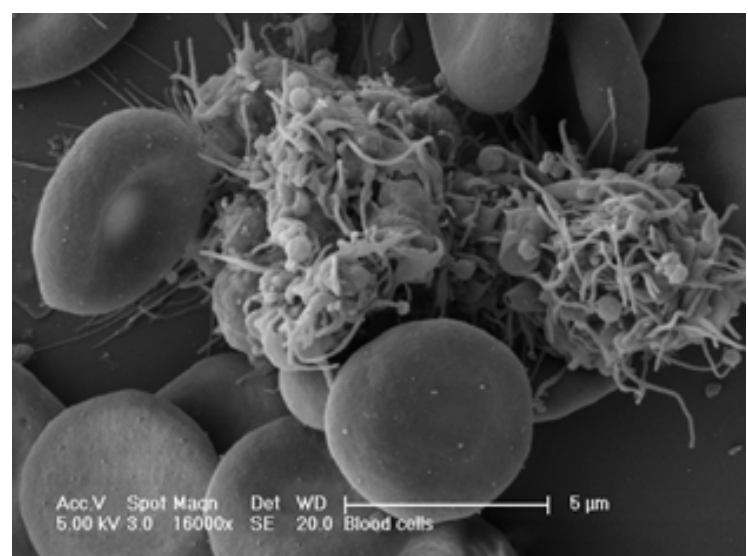
Platinum / Palladium coating: 6 nm

RESULTS:

Human Erythrocytes and Lymphocytes



Human Erythrocytes and Thrombocytes



Courtesy of Dr. W. Müller, University of Utrecht, Netherlands

RELATED PRODUCTS



Leica EM CPD300

The statement by Ernst Leitz in 1907, “*With the User, For the User,*” describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: *Living up to Life.*

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