Celltac *ES*

Automated Hematology Analyzer

MEK-7300K

WBC 5-part diff. model
FOR EVERYONE

Fighting Disease with Electronics

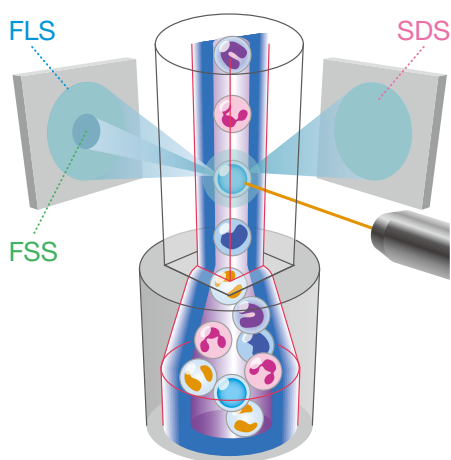# NIHON KOHDEN

MEK-7300

Methodology and Effectiveness

DynaScatter Laser

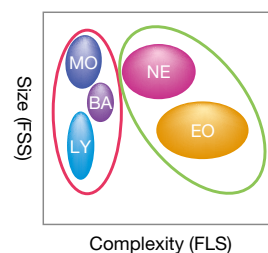WBC differentiation by low cost non-staining method

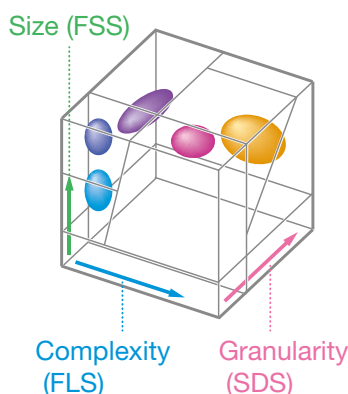## Flow cell

FLS
SDS
FSS

Flow cell with Fresnel lenses

WBC is differentiated based on the laser scattering technology

Three scattergrams

Size (FSS)

Complexity (FLS)
Granularity (SDS)

Size (FSS)

MO
NE
BA
LY
EO

Complexity (FLS)

1. MAIN scattergram

Differentiates lymphocytes/monocytes + basophils/neutrophils + eosinophils

Size (FSS)

NE
EO

Granularity (SDS)
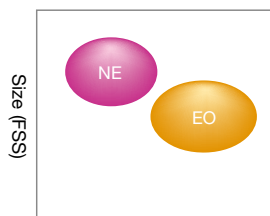
2. NE–EO scattergram

Differentiates neutrophils/ eosinophils

Size (FSS)

MO
BA
LY

Granularity (SDS)
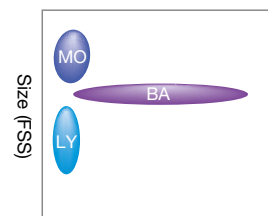
3. MO-BA scattergram

Differentiates monocytes/ basophils

Case of Thalassemia

We compared RBC-related blood cell counts and histograms for thaiassemia and iron-deficiency anemia.
Then we found difference in the RDW-SD of thatassemia and iron-deficiency anemia patients while RDW-CV and histograpms do not show such significant differences.
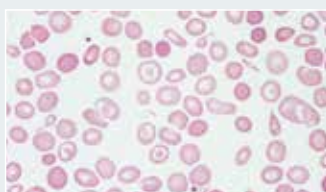
Iron-deficiency anemia:
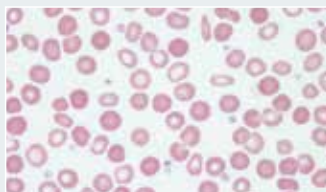
Peripheral blood smear

RBC (x10⁴/µL)	HGB (g/dL)	HCT (%)	MCV (fL)	RDW-CV (%)	RDW-SD (fL)
457	11.1	35.2	77.0	**21.5**	**66.2**
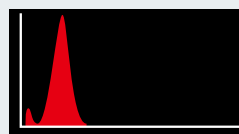
Reference Interval:
RDW-CV 11.6-14.0%
RDW-SD 39.0-46.0 fL

RBC Histogram

Thalassemia:

Peripheral blood smear

RBC (x10⁴/µL)	HGB (g/dL)	HCT (%)	MCV (fL)	RDW-CV (%)	RDW-SD (fL)
681	12.0	38.4	56.4	**23.6**	**53.2**
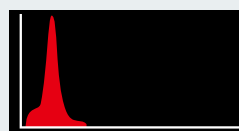
Reference Interval:
RDW-CV 11.6-14.0%
RDW-SD 39.0-46.0 fL

RBC Histogram

Reagent management

Reagent management system of Celltac Es provides easier reagent bottle management with a unique barcode label printed on each reagent box or bottle. With this feature, testing quality is maintained at a consistently high level.

Photo: MEK-9100

Standard accessory, barcode reader

Closed mode for safe operation

The built-in cap piercing mechanism protects healthcare professionals from the risk of infection.
It maintains a high standard of operating safety in the laboratory.

Operational guidance function

If the analyzer detects a problem, it displays an alarm message with a sound. When recovery key is pressed, the analyzer automatically removes the cause of the alarm.
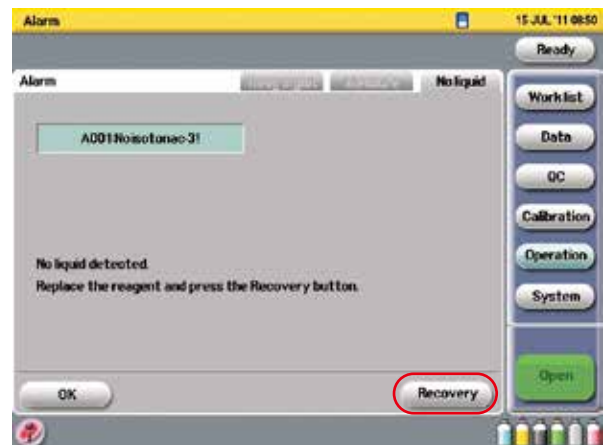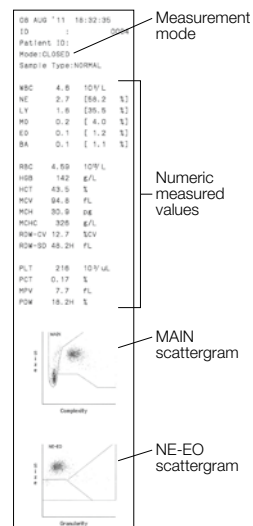

Large screen for easy viewing

The user can see all necessary information at a glance or focus on different areas like zooming into scattergrams, histograms, or the numeric values.
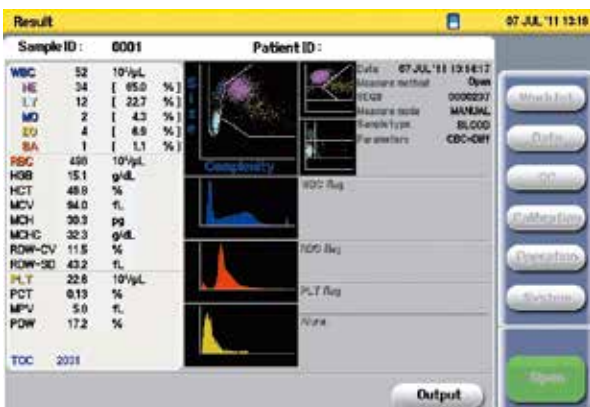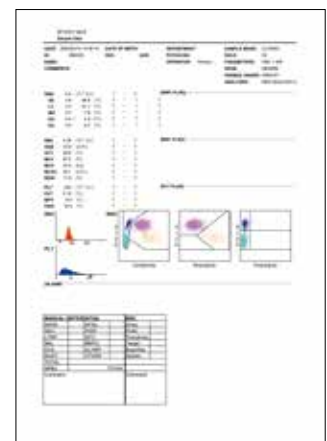

Example of printing

A built-in printer or a data management system installed on a PC can print out results.

Internal printer

External printer

Celltac ES MEK-7300K

Specifications

- **Dimensions and Weight:**
  Dimensions: 382 W x 465 D x 532 H (mm)
  Weight: 35 kg ±10%

- **Power Requirements:**
  Line voltage: AC 100 to 240 V
  Power input: max 250 VA

- **23 Reportable Parameters:**
  WBC, RBC, HGB, HCT, MCV, MCH, MCHC, RDW-CV, RDW-SD, PLT, PCT, MPV, PDW,NE, NE%, LY, LY%, MO, MO%, EO, EO%, BA, BA%

- **2 Research Parameters:**
  IG, IG%

- **Throughput:**
  Approx. 60 samples per hour (CBC + DIFF)

- **Patient Memory Capacity:**
  Up to 15,000 patient data (including MEK file, CSV, and histogram) in SD card as QM-002D

- **Sample volume:**
  - CBC: 30 μL
  - CBC + DIFF: 55 μL

- **Barcode Format**
  Acceptable formats with or without check digits:
  Industrial 2 of 5, ITF, JAN/EAN/UPC, NW-7, CODE39, CODE93, CODE128

- **Operating Environment**
  Temperature: 15 to 30°C (59 to 86°F)
  Humidity: 30 to 85% (non-condensing)
  Atmospheric pressure: 700 to 1060 hPa (altitude: < 3000 m)

Consumables and Accessories

Diluent

MEK-640 or MEK-641
Isotonac·3   Isotonac·4
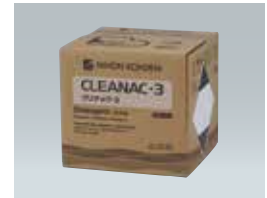
Hemolyzing reagent

MEK-680
Hemolynac·3N

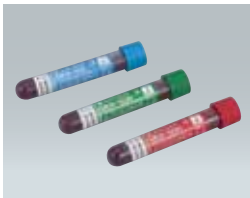MEK-910
Hemolynac·5

Detergent

MEK-520
Cleanac

MEK-620
Cleanac·3

Hematology control for 5 part DIFF

MEK-5DL/5DN/5DH

Hematology calibrator

MEK-CAL

Related products

YZ-0194
7μm Polymer Microsphere Suspensions

ZK-130W
Barcode reader

QP-822V
Data management software

SD is a trademark of SD-3C, LLC.

The screen is a composite image and does not show the actual data. The design may also not represent the latest actual product.

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