



Celltac E

Automated Hematology Analyzer

MEK-7222J/K

22 parameters with WBC 5 part differential

User-friendly Operation
with a Compact Body



Shown with optional built-in printer

Fighting Disease with Electronics



The best choice for your lab

WBC 5 part differential with advanced laser technology provides reliable data at low cost

- ✓ **User friendly operation**
- ✓ **Compact**
- ✓ **High accuracy and reliability**
- ✓ **Low reagent consumption**
- ✓ **Optional network and Data management expandability**

22 parameters

- WBC
- NE%
- LY%
- MO%
- EO%
- BA%
- NE
- LY
- MO
- EO
- BA
- RBC
- HGB
- HCT
- MCV
- MCH
- MCHC
- RDW
- PLT
- PCT
- MPV
- PDW



✓ Simple operation and compact design

Only 3 steps to get a result

Step 1. Press the power key

Priming is automatic and it is ready for use within one minute.

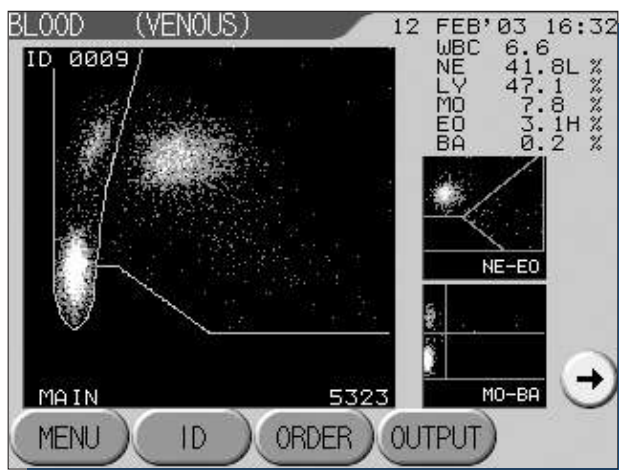
Step 2. Bring the sample to the nozzle

Bring a whole blood sample to the sampling nozzle.

Step 3. Press the count switch

Aspiration and counting start.

All numeric data, histograms and scattergrams are shown on a backlit LCD display. The display has touch screen operation for easy editing of measured data. Data is automatically printed on an optional built-in printer or external printer.



(Screen shown: Celltac E)

Standalone design

Celltac E provides complete WBC 5 part differential and CBC measurement without a PC. This contributes to easy operation for staff who are not frequent operators such as off-peak shift in the ER or ICU. Celltac E's compact size (only 380 mm width and 485 mm depth, not including reagent bottles) also saves desktop space.

Variety of measuring modes

CBC or CBC + WBC 5 part diff

You can select only the necessary measurement – CBC only, or CBC + WBC 5 part differential. This helps eliminate unnecessary reagent consumption.

Open and closed sample measurement

Celltac E has a unique design cap pierce unit (option). It can be used for closed as well as open sample measurement.



Open mode



Closed mode

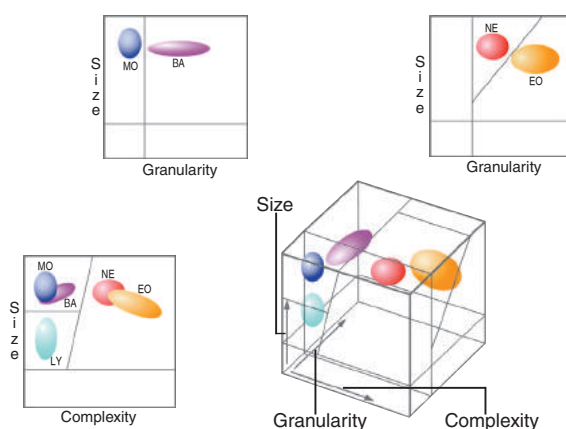
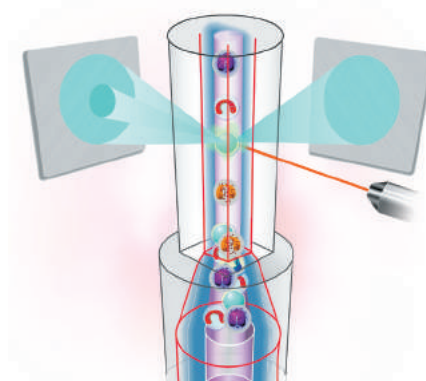
Celltac E & Celltac F

✓ High accuracy and reliability

Technologies for reliable data

Patented laser technology

An innovative 3 angle laser scatter detector provides better detection of scattered light from the WBC cell. From a small forward angle it obtains WBC size information, from a large forward angle it obtains information of cell structure and complexity of nucleo-chromatin particles, and from a side angle it obtains internal granularity and globularity information. This 3D graphic information is calculated by a special Nihon Kohden software algorithm and superior classification of WBC 5 part diff population is displayed on the screen.



No chemical processing of WBC

The patented leukocyte classification reagent selectively hemolyzes the red blood cells while leaving the white blood cells intact. The nucleus, granules and cellularity remain intact so Celltac E and Celltac F can get information from natural shaped WBC nuclei and granules and perform more accurate WBC 5 diff measurement.

Optimal flow channels

A consistent aspiration volume of diluted sample is maintained by a manometer for stable and accurate CBC measurement. The short fluid paths of Celltac E and Celltac F allow utilization of the entire sample without waste. A Nihon Kohden patented double mixing chamber, twin sample needle and sampling nozzle cleaning holder minimize contamination and allow high accuracy and high reproducibility measurement.



Useful flag messages

New flags and improved measurement

[LMI]

“Ly-Mo Interface” is displayed in the flag display area.

[NEI]

“Ne-Eo Interference” is displayed in the flag display area and “*” marks after a #NE, %NE, #EO, or %EO value indicate invalid data.

[PRI]

“PLT-RBC Interference” is displayed in the flag display area and “*” marks after a RBC or PLT value indicate invalid data.

[SNC]

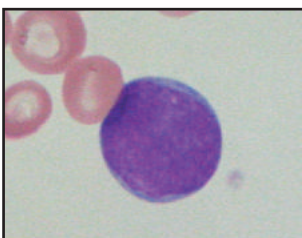
“Small Nucleated Cell” is displayed in the flag display area, and “*” marks after a WBC value indicate invalid data.

Flag messages

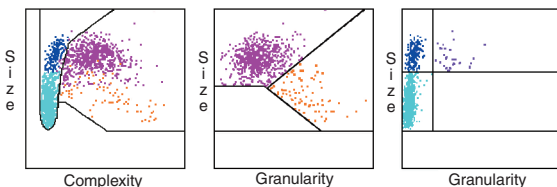
The following messages can be displayed or printed when the measurement result is out of range.

- * Leukocytosis
- * Leukopenia
- * Neutrophilia
- * Neutropenia
- * Lymphocytosis
- * Lymphopenic
- * Monocytosis
- * Eosinophilia
- * Basophilia
- * Blasts
- * Immature Gr
- * Left Shift
- * Atypical Lymphocytes
- * Small Nucleated Cell
- * Ly-Mo Interference
- * Ne-Mo Interference
- * Erythrocytosis
- * Anemia
- * Anisocytosis
- * Microcytosis
- * Macrocytosis
- * Hypochromia
- * Abnormal MCHC
- * Thrombocytosis
- * Thrombocytopenia
- * PLT Clumps
- * PLT RBC Interference
- * If “C” appears on the right width of the WBC or PLT data, the PLT may be coagulated.

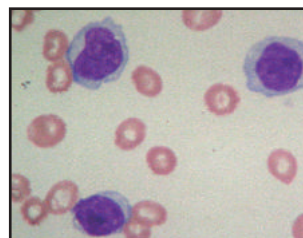
ALL: Acute Lymphoblastic Leukemia (L2)



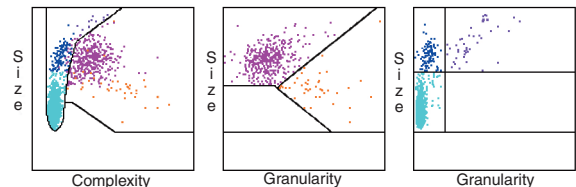
WBC	5.1 X 10 ³ /μL
LC%	64.4%
LC#	3284/μL
Flags	LMI
	SNC



CLL: Chronic Lymphocytic Leukemia



WBC	16.5 X 10 ³ /μL
LC%	90.7%
LC#	14966/μL
Flags	SNC



Celltac E & Celltac F

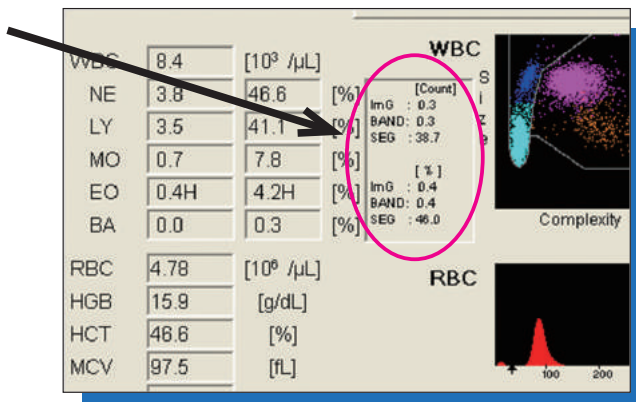
✓ Data Management Expandability



Data Management Software (DMS Pro, QP-822V) (option)

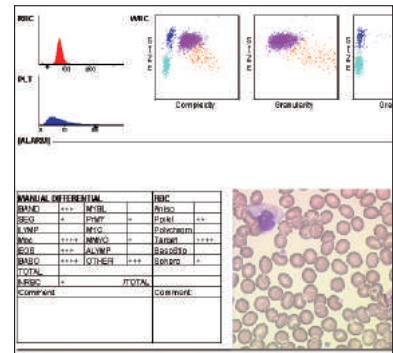
Additional research parameters

The DMS Pro software gives research parameters of ImG (Immature Granulocyte), ImG%, Band, Band%, SEG and SEG%.



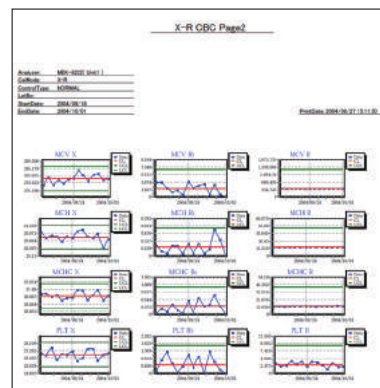
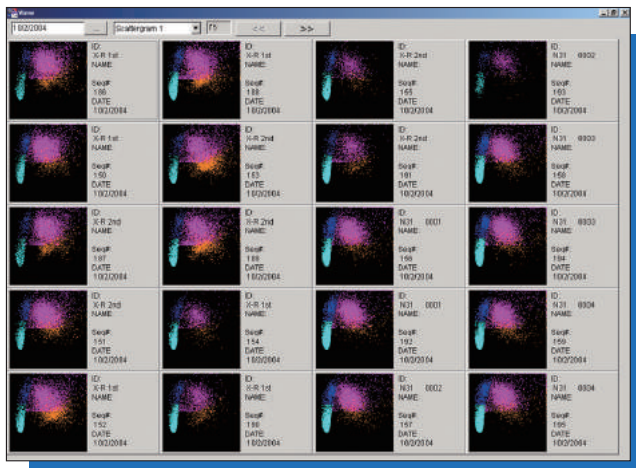
Customizable print format

You can enter input manual count data from the PC keyboard and add the column to the printed results. You can also add images from the PC.

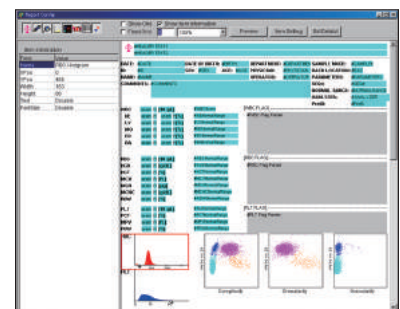


Data view function

You can compare and choose data with the thumbnail scattergram list.



QC management



You can easily edit the print layout with the mouse.

Display and printing acquired data on a PC

Transferred data can be displayed on a spreadsheet in the PC. All displayed data included color scattergrams and histograms can be printed on a color printer.

Bar code label printing

Bar code labels for the work list can be printed on the optional thermal printer.

Connection to LIS and HIS network

The PC can be used as a gateway to a Laboratory Information System or Hospital Information System.

Large data storage

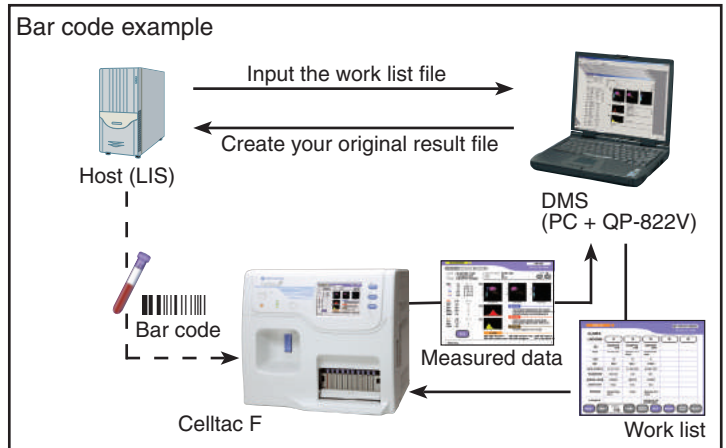
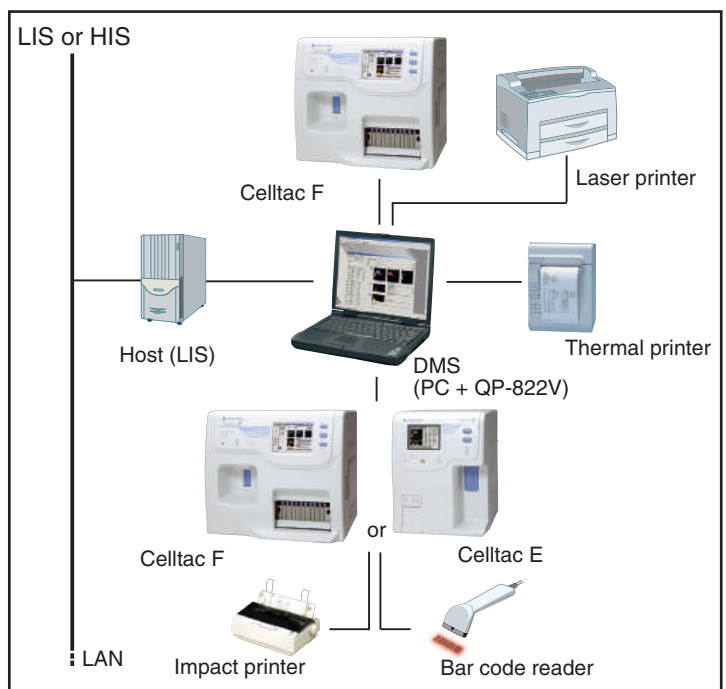
Numerical data, scattergrams and histograms for each measurement can be saved on a PC and read anytime. Data can be saved on CD-R or other media for virtually unlimited storage.

160 sample throughput and low cost backup

A DPC-Celltac (Dual Process Controlled Celltac) system can control dual Celltac F analyzers. This increases throughput to 160 samples per hour and can be used as a low cost backup system for your lab.

Network expandability

Celltac E and Celltac F can be used alone or with a PC. If you connect it to a PC with optional Data Management Software, data can be stored on a server. Celltac F can also be connected to an LIS and HIS network system in your laboratory.



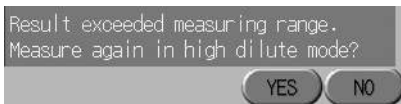
Celltac E & Celltac F

✓ Effective total cost management

Useful functions for reliability

WBC high dilution measurement

When WBC is high, noisy or has poor hemolization, you can remeasure it by automatically changing the dilution ratio.

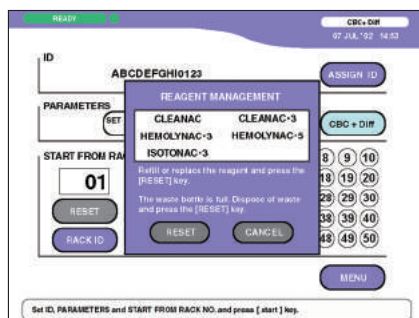


WBC expanded measuring range

WBC high and higher dilution modes allow expansion of the measuring range, Celltac E and Celltac F can measure WBC to $599 \times 10^3 \mu\text{L}$.

Reagent management system

When a reagent reaches the warning volume, a warning window is displayed.



Work list function

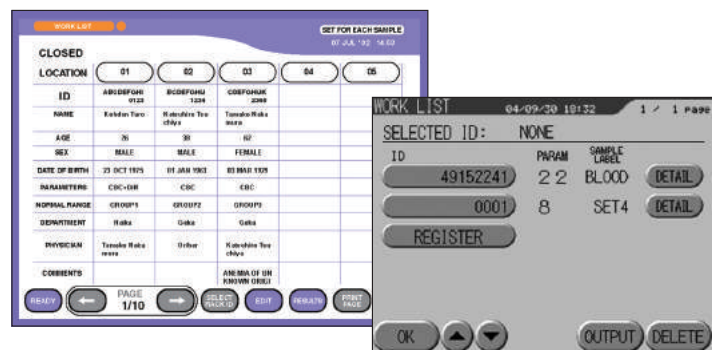
You can preset patient information such as ID, physician name, measuring parameters, and comments for samples.

If you connect a PC with Data Management Software (QP-822V), you can enter the patient information on the PC and send it to a Celltac E and Celltac F. After measurement the data can be sent back to the PC.

Celltac E: Up to 50 work list data can be entered.

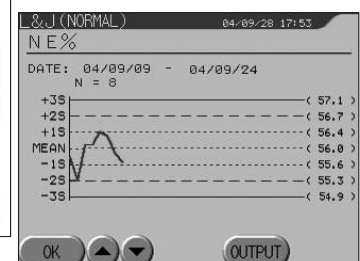
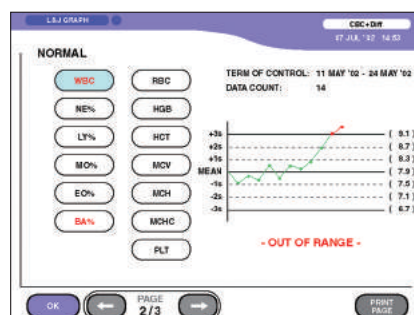
Celltac F: Up to 500 work list data can be entered.

You can choose work list mode with or without bar code.



Useful QC management programs

Celltac E and Celltac F provide 4 QC programs: X bar-R, Levey & Jennings, X bar Batch and X bar Day CV for quality control. These programs automatically calculate the plotting data from the sample data.

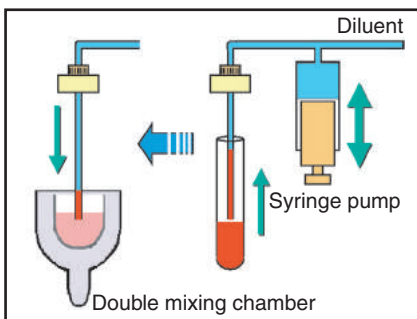


Time and cost saving

Low reagent consumption

A Nihon Kohden original syringe pump precisely aspirates the low sample volume of 28 μL for CBC or 55 μL for CBC + WBC 5 part diff. The sample remains in the sampling needle so it does not need to be sent to the syringe pump. This allows a short fluid path for the blood sample. Also, unlike shared valve method instruments, the syringe does not need to be rinsed after every dispensing. These features contribute to the small blood sample and low reagent

consumption of Nihon Kohden Celltac series hematology analyzers.



Unique and compact blood mixing system

Nihon Kohden's patented blood mixing system contributes to the compact size of Celltac F. The sample is effectively mixed in a small space by rotating the tube instead of tipping it end over end.

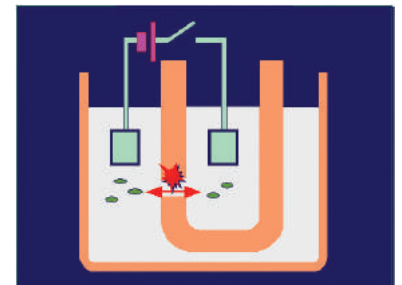
Computer controlled direction and rotation speed provides more effective blood mixing. The unique blood mixing method creates horizontal and vertical whirlpools of blood by alternating normal rotation and reverse rotation. Also, the rotation speed is quickly changed so that blood samples are evenly mixed with no cell damage.

Twin needle system

Celltac E and Celltac F have twin sampling needles for two baths for different dilutions of WBC and HGB, and RBC and PLT. This prevents counting errors from cross contamination of dilutions.

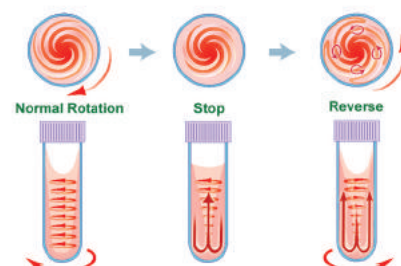
Automatic electric clog removal

To preventing clogging, Celltac E and Celltac F remove blood protein and dust particles from the aperture by a high voltage clog shattering electrical pulse after each measurement. If a clog occurs, the Celltac E and Celltac F automatically remove the clog and recount the sample.



Fully automatic operation

When the power is turned on, the fluid path is automatically primed and Celltac E and Celltac F are ready to use in minutes. When the power is turned off, the fluid path is automatically cleaned.



The best choice for your lab

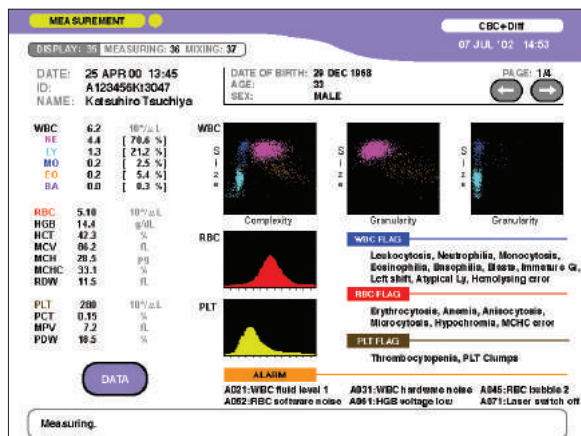
Simple and intuitive interface

One touch operation for getting a result

Large and colored switches for routine operation allow easy operation even in emergencies. This is useful when hematology specialists are not available, such as the ER at night.

Clear display with touch screen

Celltac F shows clear classification of WBC 5 part diff on a high resolution color TFT LCD. Measurement condition settings, scattergrams display, data editing and other operation is done by intuitive touch screen operation.



High speed processing

80 samples/hour throughput

In just 45 seconds, Celltac F can measure CBC or CBC + WBC 5 part diff for one sample. Its high speed measurement of 80 samples per hour with auto-sampler supports easy and efficient hematology testing in your lab. On the work list 8 or 22 parameter measurement can be set for individual samples in the rack.

STAT measurement

Celltac F can interrupt routine sample processing to immediately measure emergency samples. You can load emergency samples in the STAT position on the sample rack and push the Emergency key or you can measure and emergency sample with the manual mode-nozzle while routine samples are being measured in auto mode.

Automatic recount

Celltac F automatically recounts the measured sample when any of the following occurs:

- Any value outside the user defined range
- Alarm message
- WBC outside the measurable range

Dilution level for recounting can be set to HIGH or HIGHER.

The Celltac F hematology analyzer with auto-sampler features high speed processing—80 samples per hour throughput—to support your effective lab operation

- ✓ High speed processing with auto sampler
- ✓ Automatic recount
- ✓ High accuracy and reliability
- ✓ Effective total cost management
- ✓ Optional network and Data management expandability

22 parameters

- WBC
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- PDW





Celltac F

Automated Hematology Analyzer

MEK-8222J/K

22 parameters with WBC 5 part differential

Reliable, Cost-saving,
and User-friendly



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