Specifications

Hardware

- Power: AC100 ~ 240V, 50 ~ 60 Hz
- Objective lens: 4 x
- Light source: Green LED
- CCD camera: B/W CCD
- Filter: Exitation filter, Dichroic filter, Emission filter

Experiment

- Measuring range: 5 x 10^4 ~ 4 x 10^6 cells/ml
- Analysis time: 15 sec ~ 2 min/test
- Loading sample vol.: 20 µL (minimum)/test
- Measuring vol.: 8 µL/test

Physical property

- Weight : 9Kg
- Size (WxLxH) : 220 x 375 x 250 mm

Accessory

- Key pad
- External video monitor (optional)

Contents & Accessories

Devices

ADAM-MC	Main device with Starter Kit

Accessories

ADM-001	External video monitor (optional)

Disposables

AD2K-200	**Accuchip 2x Kit** 2 channel Accuchip with Accustain solution (Max. 400 tests/kit)
AD4K-200	**Accuchip 4x Kit** 4 channel Accuchip with Accustain solution (Max. 800 tests/kit)
ADR-1000	**AccuStain** Stain solution (1,000 tests/set)

Digital Bio

12F, Ace High-end Tower, 235-2
Guro-3dong, Guro-gu, Seoul, 152-711, Korea
Tel : +82-2-6220-7911 Fax : +82-2-6220-7721
www.digital-bio.com | Sales@digital-bio.com

ADAM

A New Standard of Automatic Cell Counter

Digital Bio

New standard of automatic cell counting

The Digital Bio ADAM series automatic cell counter measures total cell numbers and cell viabilities through cutting-edge detection technologies. Instead of tryphan blue staining which can lead an inaccurate data, ADAM utilizes sensitive fluorescence dye staining, led optics and CCD detection technologies to make the cell analysis more accurate and reliable.

Combined with a disposable microchip, the operation of Automatic Cell Counter is now extremely simple, easy and cost-effective. The need for routine calibration of the device is completely eliminated. Cleaning and warm-up time is no longer necessary with ADAM. The disposable chip greatly reduces the risk of the exposure to hazardous samples, such as patients' blood samples, virus infected cells, etc.

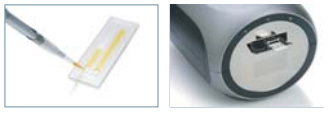
New Technology behind the Accuracy of ADAM

ADAM automatic cell counter is a precision microscope integrated with fluorescence optic and image analysis software. After the samples are stained with fluorescent dye, propium iodide, which intercalates DNA to stain the nucleus of target cells, fluorescent images are taken automatically. The system takes the 22 ~ 60 images by the movement of automatic X-Y stage. The obtained images are processed by image analysis software integrated inside the system. All procedures are automatic once the stained sample has been dropped to the disposable chip.

- LED excitation
- Precision automatic stage
- Automatic focusing
- Sensitive CCD detection
- Automatic image analysis
- Large counting volume guarantees accurate results

Disposable Microchips

Conventional automatic cell counters utilize flow cell or counting chamber, which is permanently integrated inside the device. During or after cell counting, tubings or counting chambers are easily clogged by cell debris. For this reason, for the conventional automatic cell counter routine maintenance with a cleansing process is necessary.
ADAM automatic cell counter utilizes a precision disposable microchip to eliminate the problem of a permanent counting chamber. Each microchip is designed for single use. Pumping, cleansing, and waste bottle are not necessary for the ADAM cell counter. Also, the risk of exposure to the potential hazardous materials, such as patients' blood samples, is completely eliminated with the disposable chips. Each microchip is produced by state-of-the-art manufacturing facility and validated for accuracy.



Disposable chip & regents

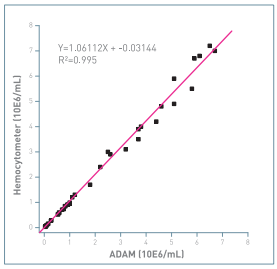
The Design You Must Have !

- Ergonomic design
- Small and compact
- Plug and play technology
- Easy to operate
- External monitor to view the cell images

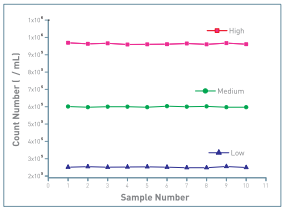
The Data You Can Trust

Accuracy & Repeatability

Correlation of total cell counting between hemocytometer and ADAM using CHO cells.



Samples with low, medium and high concentrations of cells were counted with ADAM



	Low Sample	Mediume Sample	High Sample
	n=10	n=10	n=10
MEAN	2.51 X10^5	5.99X10^5	9.63X10^5
SD	0.24 X10^5	0.23X10^5	0.35X10^5
CV	0.95 %	0.38 %	0.36 %

Comparison with flow cytometry

Comparison of the cell viabilities between ADAM and flow cytometry.

SK-OV, HeLa and NCI-H23 cells were treated with 100, 300 μM H_2O_2 for 3 hours, then analyzed by ADAM and flow cytometry.

Values are given as means ± SD of three experiments.