



ADAM rWBC

New standard of automatic residual leukocyte counting

3 minutes you can count on!
No more manual counting!

New standard of residual leukocyte counting

ADAM-rWBC is an analytical device for counting the number of residual white blood cells (rWBCs) in leukoreduced blood products. The device ensures the number of rWBCs meets the standards used to minimize complications associated with the transfusions performed in hospitals. ADAM-rWBC uses propidium iodide (PI) staining. The automatic XY stage of ADAM-rWBC captures over 200 images and maximizes the accuracy of analytic. By averaging results, ADAM-rWBC produces accurate counting results in the analysis of low concentration of leukoreduced blood products.

In combination with a disposable microfluidic slide, the operation of ADAM-rWBC is extremely simple and cost-effective. Warm-up time and messy cleaning is no longer necessary. The disposable slide also greatly reduces the risk of the exposure to hazardous blood samples or virus-infected cells.



New Technology behind the Accuracy of ADAM-rWBC

ADAM-rWBC is a precise, automated optical system capable of fluorescent image analysis. After samples are stained with propidium iodide (PI) which intercalates the DNA to stain the nucleus of the target cells, fluorescent images are automatically taken. ADAM-rWBC takes 203 images by the movement of the automatic X-Y stage. The obtained images are processed by image analysis software. All procedures are automated once the sample loaded slide is inserted into the device.

- LED light source
- Automatic focusing
- Automatic image analysis
- Precision automatic stage
- Sensitive CCD detection
- Microfluidic r-Slide

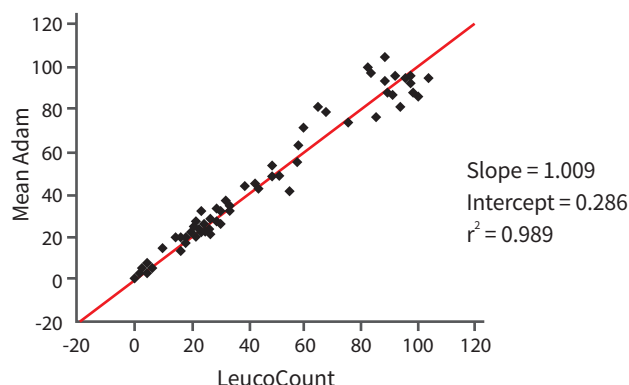
r-Slide

Unlike conventional cell counters, ADAM-rWBC doesn't require routine cleaning and maintenance. Each r-Slide is designed for single use. Pumping, cleansing and waste bottles are not necessary for the ADAM-rWBC. Also, the risk of exposure to the potential hazardous blood samples is greatly reduced with the use of the disposable r-slide. Each r-Slide is manufactured and validated in a state-of-the-art manufacturing facility for accuracy and precision.

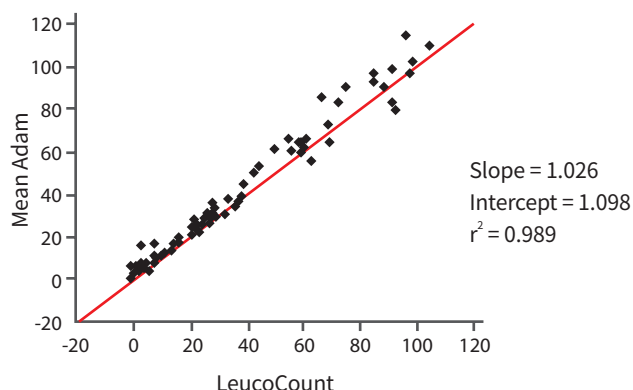
Comparison to Flow Cytometry

Refer to the following comparison of residual blood cell enumeration methods between flow cytometry (FACS, LeucoCOUNT) and ADAM-rWBC in using different amounts of white blood cells aliquots. This comparison was performed using both RBC and platelet samples at the blood bank sites in US.

RBC products



Platelet products



Precision test

Stain-to-Stain Precision - RBCs							
WBC / μ L target	Site#	Mean	SD	Total CV%	Mean	SD	Total CV%
		Unit 01			Unit 02		
0-1	1	<1	0.43	NA	1	0.47	44.15
	2	<1	0.62	NA	1	0.96	69.91
	3	<1	0.19	NA	<1	0.60	NA
5-10	1	6	1.05	17.20	8	0.89	10.84
	2	6	1.85	28.97	10	1.32	13.49
	3	7	0.62	9.39	6	0.98	17.57
20-30	1	26	2.11	7.98	27	2.34	8.53
	2	20	0.89	4.38	24	2.33	9.70
	3	25	2.15	8.49	27	3.60	13.59
50-60	1	49	2.77	5.64	54	3.26	6.07
	2	47	3.47	7.42	64	4.59	7.21
	3	54	2.39	4.41	55	3.67	6.71
80-100	1	82	1.91	2.33	90	7.37	8.19
	2	73	6.35	8.69	84	5.14	6.09
	3	91	4.27	4.68	89	4.66	5.24

Stain-to-Stain Precision - RBCs							
WBC / μ L target	Site#	Mean	SD	Total CV%	Mean	SD	Total CV%
		Unit 01			Unit 02		
0-1	1	1	0.81	60.05	<1	NA	NA
	2	<1	0.22	NA	<1	0.42	NA
	3	<1	0.31	NA	<1	0.44	NA
5-10	1	8	0.85	10.77	8	0.83	11.02
	2	5	1.08	20.66	9	0.87	9.54
	3	6	0.92	14.84	6	1.17	18.37
20-30	1	26	1.79	7.00	25	2.49	10.07
	2	15	2.08	13.89	26	1.64	6.34
	3	28	2.65	9.47	29	2.02	6.88
50-60	1	52	2.84	5.48	55	2.74	4.96
	2	32	2.57	7.94	49	1.68	3.42
	3	61	3.07	5.04	614	3.99	6.58
80-100	1	92	5.89	6.39	90	3.93	4.38
	2	53	2.27	4.30	84	3.03	3.61
	3	98	3.39	3.45	100	3.69	3.67

Specifications

ADAM-rWBC (Cat No. ADAM-rWBC)

Voltage	AC100~240 V, 50~60 Hz
Current	Max. 1.8A, Max 100W
Fuse	F3. 15AL250V
Object lens	4X
LED	4W Green LED, IEC 62471:2006
CCD Camera	B/W CCD
Filter	Excitation filter, Dichroic filter, Emission filter
Weight	9 Kg
Size	220 x 375 x 250 mm (WxLxH)
Degree of protection	IPX0

r-Slide

Measuring range	1~100 cells/ μ L
Analysis time	2.5~3min/test
Loading sample vol.	100 μ L/test
Measuring vol.	About 57 μ L/r-Slide

ADAM-rWBC Kit

ADAM-rWBC Kit (Cat No. AD1K-050) [r-Slide, r-Solution and Standard Bead (50 Tests)]



r-Solution
Vol. 25 mL
(Cat No. RDR-50)

standard bead
Vol. 7 mL
(Cat No. ADST-001)

r-Slide
(Cat No. RDS-50)