ORFLO® Personal Cell Analysis

TECH NOTE | 1/2012

Moxi Z Cassettes

Higher Performance & Simplicity.

Moxi Z's unique, patent-protected thin-film cassettes provide highly accurate, repeatable cell counts and cell size analysis in under 8 seconds (15 seconds for Type S cassette). Based on the gold-standard Coulter Principle used in high-end counting systems worldwide, the Moxi cassette flows thousands of cells per test through a cell sensing zone to accurately capture the impedance-based volumetric measurement of each individual cell in the sample. Impedance-based cell counting of individual cells is proven to be over 95% accurate versus 75% accuracy with image-based cell counting methods.

No system contamination and integrated pre-filter for clogging prevention.

Moxi cassettes are designed with a unique "cell sieve" to minimize cell clumping and clogging. In addition, Moxi cassettes contain 100% of your sample within the cassette body, eliminating the possibility for system contamination and sterilization. Cassettes are simply and easily discarded when testing is finished.

Used cassette indicators.

Each Moxi cassette offers two individual tests with an easy-to-read visual indicator marking "used" tests. Moxi Z will also alert the user if a used cassette is mistakenly inserted in the unit.

Multiple cassette options.

Users can choose from Moxi Type M or Moxi Type S cassettes depending on cell specifications. Since the technology is based on a volumetric measurement, non-spherical particles within the volume specifications can also be measured accurately.

	Type M Cassette	Type S Cassette *NEW!*
Description	Ideal for accurately measuring mammalian cells, or other particles 4-25 microns in average diameter.	Ideal for accurately measuring mammalian cells (up to 20 microns average diameter), most yeast (including wine yeast), or other particles as small as 3 microns and up to 20 microns in average diameter. This includes some algae and protozoa.
Dynamic Range	2 - 34 microns	2 - 26 microns
Average cell diameter	4 - 25 microns	3 - 20 microns
Average Volume (non-spherical cells)	34 - 8180 fL	14 - 4200 fL
Sample Concentration	3,000 - 500,000 cells/mL	3,000 - 2,500,000 cells/mL
Measurement time	8 seconds	15 seconds

Cell Line Name	Measured Average Size (µm)	Adherent / Suspension	Origin	Source
HEK293	14 - 16	adherent	Human Kidney	ATCC ca# CRL-1573
HeLa	17 - 20	adherent	Human cervical cancer	ATCC cat# CCL-2
PC12	10 - 13	suspension	Rat adrenal gland	ATCC cat# 1721
CD3+ T	7.5	suspension	Human	
CHO-K1	15	adherent	Chinese hamster ovary	
Cos-7	15	adherent	Monkey kidney cells	
HepG2	15	adherent	Hepatocytes	
HUVEC	12 - 14	adherent	Human endothelial	
Hybridoma	13 - 14	suspension	Hybridoma (Irs1 pS522.17.5.2)	
Jurkat Cells	10	suspension	T lymphocytes	
K562 Cells	15	suspension	Human bone marrow	
MCF7	15 - 17	adherent	Human breast adenocarcinoma	
Mesenchymal SC	15 - 16	adherent	Human bone marrow mesenchymal stem cells	
Monocyte	10	suspension	Human	
Mouse ESC	13	adherent	Mouse embryonic stem cells	
NIH 3T3 Cells	15	adherent	Mouse fibroblasts	
PBMC (Cultured)	12.5	suspension	Human	
RNSC	11 - 13	adherent	Rat neural stem cells	
SF9 Cells	13	mix adh / susp	Insect ovary (baculovirus expression)	
U266	12	suspension	B lymphocytes	