

# Moxi<sup>Z</sup>



OS 4.0

The new Moxi Z OS 4.0 is the highest performing automated cell counter available.

- Measure in just 8 seconds
- Obtain cell counts AND size with >95% accuracy
- Assess cell health without the use of reagents
- Utilize Bluetooth or USB On-The-Go connectivity
- Count cells down to 3µm in diameter

## SPECIFICATIONS

|                       |  |
|-----------------------|--|
| Resolution:           | 1200 histogram bins                      |
| Weight:               | 1lb 7oz                                  |
| Dimensions:           | 7.5" L x 4.25" W x 2.75" H               |
| Battery:              | Lithium Ion 4500 mAh                     |
| Data storage:         | 500 samples                              |
| AC Power:             | 100-240V, 50/60 Hz, 0.2 Amps             |
| Connectivity:         | USB On-The-Go and Bluetooth (Mac/PC)     |
| MAC/PC data analysis: | MoxiChart (included) and/or Excel (etc.) |
| Data file format:     | csv                                      |

|  | Type M Cassette                         | Type S Cassette            |
|--|---|----------------------------|
| Dynamic range (µm):                            | 2 - 34                                  | 2 - 26                     |
| Cell Volume/Size:                              | 34 - 8180 fL (4 - 25 µm)                | 14 - 4200 fL (3 - 20 µm)   |
| Cell Health Assessment for mammalian cultures: | MPI Health Ratio                        | MPI Health Ratio           |
| Measurement time:                              | 8 seconds                               | 15 seconds                 |
| Concentration:                                 | 3,000 - 500,000 cells/ml                | 3,000 - 2,500,000 cells/ml |
| Resolution:                                    | 1200 histogram bins                     | 1200 histogram bins        |
| Cell Types:                                    |   |                            |
| Mamallian                                      | Yes                                     | Yes                        |
| Yeast  | Large only (i.e. <i>S. cerevisiae</i> ) | Most                       |
| Algae  | Large only                              | Some                       |
| Protazoa                                       | Large only                              | Some                       |

### Cassettes

Moxi Z Type M Cassette  
Moxi Z Type S Cassette

### Accessories

Cassette Dispenser  
USB Cable and Power Adapter  
Calibration Check Bead Kit  
Electronic Calibration Cassette  
Diluent



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# Revolutionary Cell Counting



OS 4.0



## The Moxi Z<sup>TM</sup> mini automated cell counter with new OS 4.0 gives you accurate results you can count on.

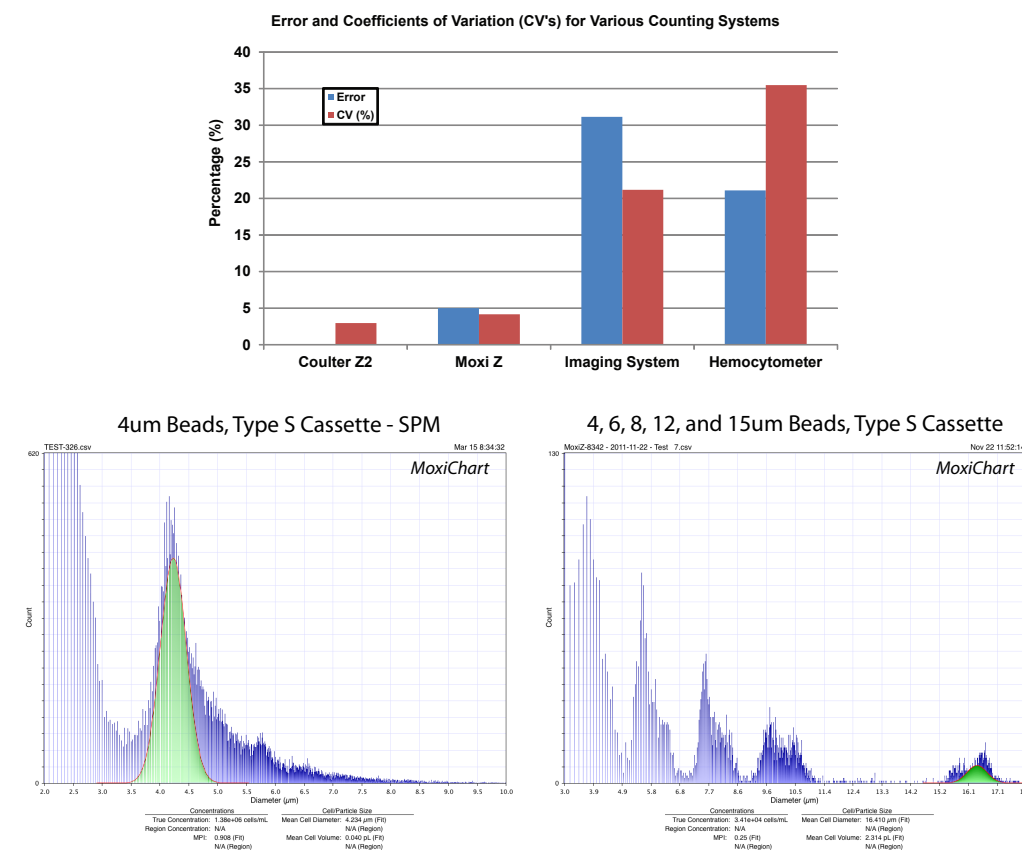
The Moxi Z OS 4.0 is the only automated cell counter that combines the gold standard Coulter Principle typically used in high-end cell counters with a patented thin-film sensor technology to allow for highly accurate and repeatable particle sizing and counting with a broad dynamic range (2 - 34 microns).

The Moxi Z OS 4.0 also provides a reagent-less assessment of cell health and condition for monodisperse mammalian cultures using a proprietary algorithm to report a Moxi Population Index (MPI).

This revolutionary ultra-small instrument offers characterization of particulates in a wide variety of common applications, including mammalian cells, RBC, WBC, yeast and more. It is the ONLY automated system that is also able to reliably measure particles with an average diameter as small as 3 microns.

Designed to overcome the tedium associated with hemocytometers, the lack of repeatability with image-based counting systems, and the high complexity and expense of Coulter counters and flow cytometers, the Moxi Z OS 4.0 is truly an automated cell counter in a class of its own.

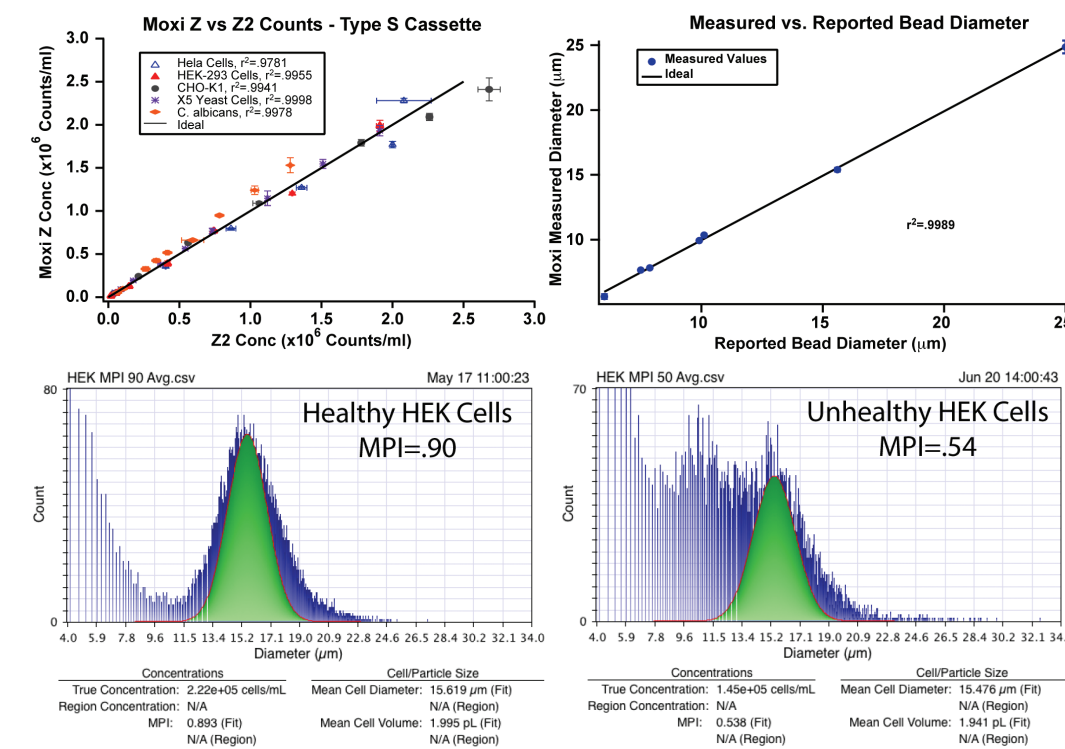
## Accurate Counts and Size (>95%)



Ensure the best downstream experimental results possible. By using the gold-standard Coulter method of volumetric cell counting, the Moxi Z OS 4.0 will ensure that your cell counts are better than 95% accurate the first time. With precision rivaling significantly more expensive Coulter systems (Moxi Z CV: 4% and Z2 CV: 3%), the Moxi Z OS 4.0 out-performs all other low cost systems and provides the accurate data you need, every time.

Not only is the Moxi Z OS 4.0 counting accuracy superior to any other automated cell counter on the market today, it also is the only cell counter with the resolution required to accurately measure particles down to 3µm in diameter. Imaging systems are typically limited to 5-6µm particles. In fact, the Moxi Z OS 4.0 can easily distinguish particles having diameters that differ by only 2µm, and the histogram signature can be a valuable tool for monitoring changes in cell population.

## Reliable Counts, Size, and Cell Health (R<sup>2</sup>>.95)

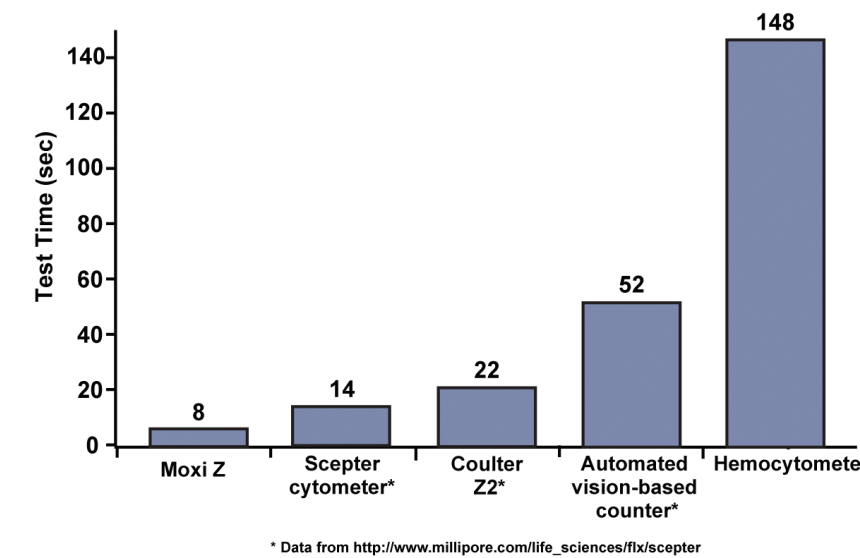


We have tested dozens of mammalian cells, yeast, protozoa, algae, and more to validate the precision and operating range of the Moxi Z mini automated cell counter. In addition, we have run adherent, differentiated, suspension, and progenitor cells to ensure reliable performance using both the Moxi Z Type M and Type S cassettes by optimizing each cassette's integrated anti-clogging "sieve".

In a comparison with Coulter counting methods, Moxi Z OS 4.0 is shown to have equivalent results to the gold standard for both count accuracy and particle size accuracy. As the data demonstrates, Moxi Z achieves this performance over a broad range of concentrations and particle sizes.

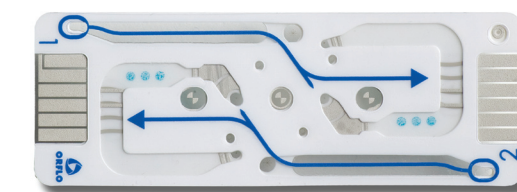
The Moxi Z is also able to provide a rapid, reagent-free cell health assessment. This is uniquely possible with the Moxi Z OS 4.0 because the system creates extremely high-resolution histograms and has superior small particle detection capabilities. The Moxi Population Index (MPI) produces a ratio of intact cells to dying/dead cells (and debris) which provide a snapshot of the general health of your cell culture.

## Fast (8 seconds)



Moxi Z OS 4.0 counts your cells faster than other automated cell counters and provides results 15-50 times faster than via manual hemocytometry. In fact, Moxi Z OS 4.0 is over 6 times faster than image based systems WITH higher accuracy and precision. With Moxi Z OS 4.0, you will transform your least favorite and least accurate laboratory task into an easy 8 second precision routine.

With an average measurement time of 8 seconds (Type M cassette), the Moxi Z OS 4.0 yields the fastest cell counts of any available technique. Test times for the new, high-resolution Type S cassettes are just 15 seconds.



### New! Type S Cassettes.

Measure smaller particles than any other automated cell counter.

## You can count on the Moxi Z

The Moxi Z OS 4.0 has been validated with the following cells and more...

| Cell Line  | Type M | Type S | Diameter (µm) | Origin                                   | Source             |
|--|--------|--------|---------------|--|--------------------|
| <b>Mammalian Cells</b>                               |        |        |               |  |                    |
| HEK-293  | •      | •      | 14-16         | Human kidney                             | ATCC cat# CRL-1573 |
| HeLa   | •      | •      | 17-20         | Human cervical cancer                    | ATCC cat# CCL-2    |
| PC12   | •      | •      | 10-13         | Rat adrenal gland                        | ATCC cat# 1721     |
| CD3+ T   | •      | •      | 7.5           | Human                                    | ATCC cat# CCL-61   |
| CHO-K1   | •      | •      | 15            | Chinese hamster ovary                    |                    |
| Cos-7  | •      | •      | 15            | Monkey kidney cells                      |                    |
| HepG2  | •      | •      | 15            | Hepatocytes                              |                    |
| HUVEC  | •      | •      | 12-14         | Human endothelial                        |                    |
| Hybridoma  | •      | •      | 13-14         | Hybridoma                                |                    |
| Jurkat E6-1 Cells                                    | •      | •      | 10            | T lymphocytes                            | TIB-152            |
| K562 Cells   | •      | •      | 15            | Human bone marrow                        |                    |
| MCF7   | •      | •      | 15-17         | Human breast adenocarcinoma              |                    |
| Mesenchymal SC                                       | •      | •      | 15-16         | Human bone marrow mesenchymal stem cells |                    |
| Monocyte   | •      | •      | 10            | Human                                    |                    |
| Mouse ESC  | •      | •      | 13            | Mouse embryonic stem cells               |                    |
| NIH 3T3 Cells  | •      | •      | 15            | Mouse fibroblasts                        |                    |
| PBMC (Cultured)                                      | •      | •      | 12.5          | Human                                    |                    |
| RNSC   | •      | •      | 11-13         | Rat neural stem cells                    |                    |
| SF9 Cells  | •      | •      | 13            | Insect ovary (baculovirus expression)    |                    |
| U266   | •      | •      | 12            | B lymphocytes                            |                    |
| WBC Counts (Lyse - nuclei count method)              | •      | •      | 5-6           | "Human whole blood dilute and lyse"      |                    |
| PBMC (isolated)                                      | •      | •      | 6-14          | Human - gradient centrifugation          |                    |
| Red Blood Cells                                      | •      | •      | 5-6           | Human                                    |                    |
| L5178y   | •      | •      | 13            | Mouse lymphoma                           | CRL-1722           |
| <b>Yeast</b>   |        |        |               |  |                    |
| C. albicans  | •      | •      | 3-5           |  |                    |
| S. cerevisiae (Vin 13)                               | •      | •      | 5-6           | Wine yeast                               | Scott Laboratories |
| S. cerevisiae (X5)                                   | •      | •      | 5-6           | Wine yeast                               | Scott Laboratories |
| Wine Yeast (natural fermentation)                    | •      | •      | 3-4           | Wine yeast                               |                    |
| S. cerevisiae - Fleischmann's baker's Safale - US-05 | •      | •      | 4-5           | Baker's Yeast                            |                    |
|  | •      | •      | 3.5-4.5       | Brewer's yeast                           |                    |