

## UltraDx<sup>®</sup> iCytal Series

Model	S1	S2	S3
Chip Consumables	Consumables free		
Sample Volume	10μL		
Sample Concentration	1x10 <sup>4</sup> ~ 1x10 <sup>7</sup> cells/mL	1x10 <sup>4</sup> ~ 2x10 <sup>7</sup> cells/mL, max.@ 4x10 <sup>7</sup> cells/mL	
Particle Size	3 ~ 30μm		
Detection Time	20 ~ 30s, Depends on cells concentration		
Image Module	/	Yes	
Image Magnification	/	5X	
Dye Used	/	Trypan-blue	Trypan-blue
Automatic Dyeing Module	/	/	Yes
Automatic Cleaning	Yes		
District Diameter	Yes		
Dilution Calculator	Yes		
Data Input & Output	USB 2.0, Built-in printer, Ethernet interface		
Coefficient of Variation	≤5%		
Application	PBMC, mouse cells, nerve cells, tumor cells, yeast cells and other cells		

\*Ultrassay BioTech Co., Ltd. reserves the right of final interpretation of different application.

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## UltraDx<sup>®</sup> iCytal Flow Cytometer /Cell Counter

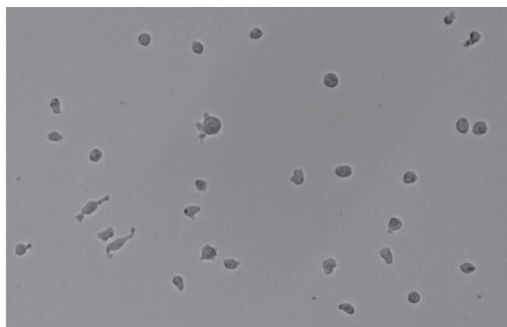
Complete counting & accurate viability detection  
Automatic washing process  
Chip-free Low cost  
Revolutionary Coulter+Image



ULTRASSAY BIOTECH CO., LTD.

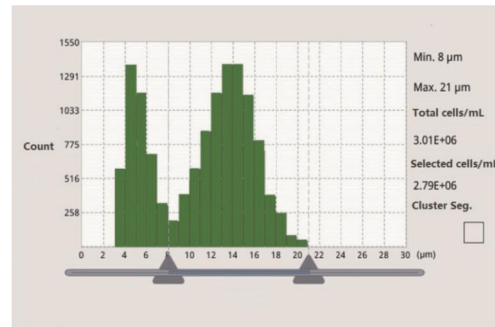


◆ The count is not affected by the shape



Picture 1. Different morphology of the cells after digestion

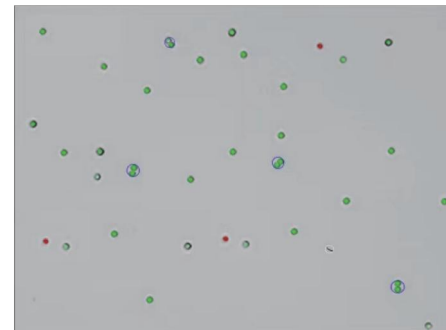
◆ Precisely distinguish cells from debris



Picture 2. Histogram of over detached cell samples, showing both debris and cells

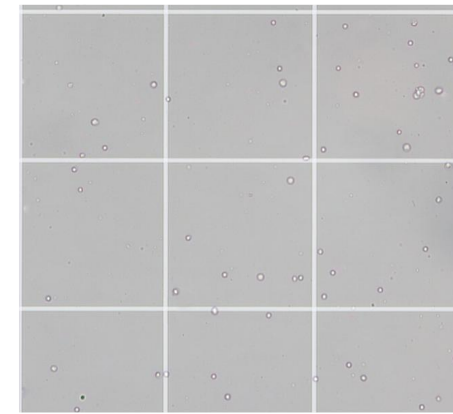
◆ Take 50 pictures, provide viability and cluster rate, give accurate results by advanced image algorithm

- Monitor the size, viability and concentration of the cells
- Take pictures during the cells flow through the microfluidic channel
- Distinguish cells from debris, get the real cell concentration

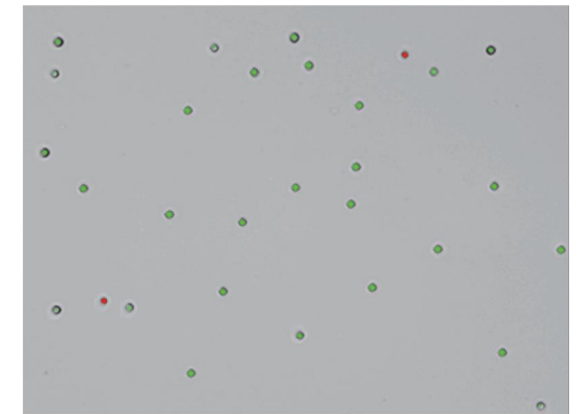


Picture 3. Cell labeling picture (Green for living cells, red for dead cells, white for impurities, blue for clumped cells)

◆ Solved the out-of-focusing problem caused by multi distribution layer in mouse spleen cells, PBMC and other small cells

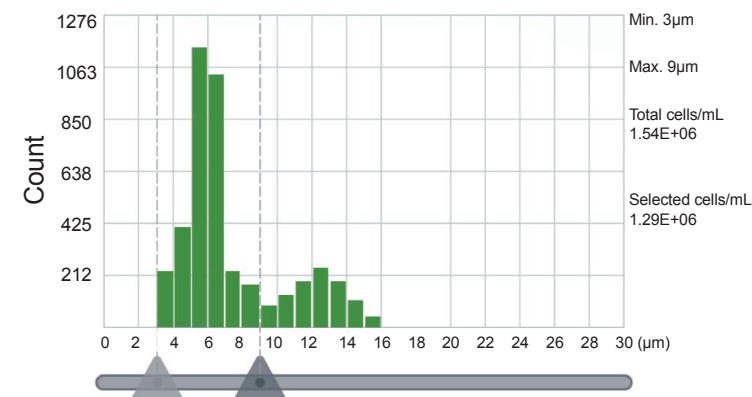


Picture 4. The results of PBMC sample were examined by microscope (Serious stratification, contour is not cleaned)



Picture 5. PBMC testing result by UltraDx iCytal S2/S3

◆ According to cells size, different type of cells can be separately counted



Picture 6. Histograms of mixed samples of tumor cells and immune cells



Error comparison between manual counting and UltraDx iCytal S3 automatic counting		
	Manual	UltraDx iCytal S3
Sample Volume	2%	2%
Sample Dilution	5%	0%
Trypan-blue Blend	2%	0.5%
Timing of staining & incubation	5%	0.5%
Counter Board Assembled	3%	0%
Add the sample	2%	2%
Counting process error	39%	5%
Differences between Operators/Instruments	>10%	<5%
Counting Volume Ratio	1%	100%
<b>Total Error</b>	<b>68%</b>	<b>10%</b>