Cellometer Auto T4 中文操作手冊

目錄主題

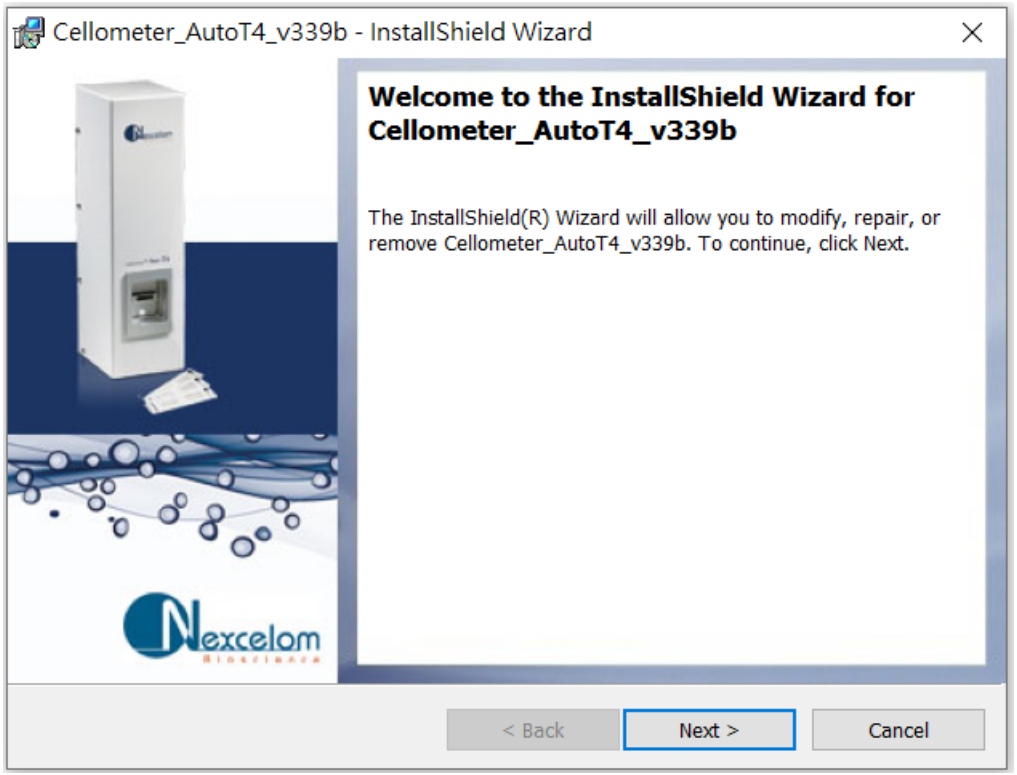
1. 儀器安裝
2. 背景值影像拍攝（第一次使用才需要）
3. 樣品上機實戰教學
4. 軟體功能介紹
5. 細胞影像精靈使用
6. Cell type參數介紹

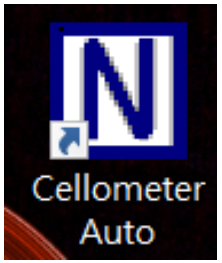
主題一：儀器安裝-確定儀器配件

1.Cellometer主機
2.電源變壓器
3.電源線
4.USB Cable

主題一: 儀器安裝-軟體安裝步驟

- 將USB插入電腦中，並按照指示操作





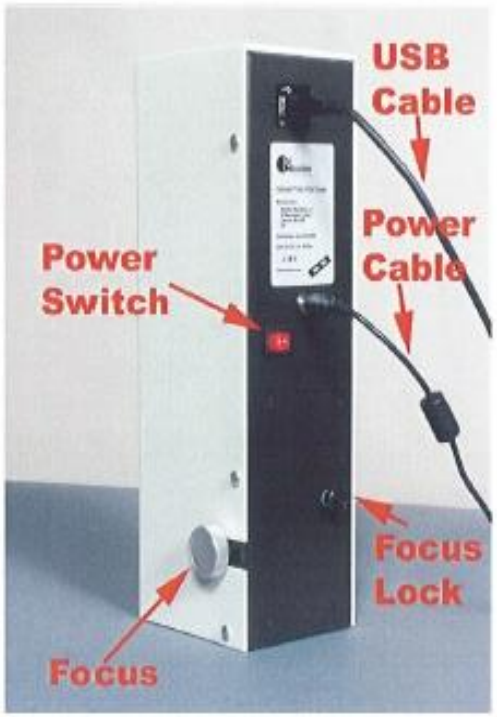
桌面上出現捷徑才算安裝完成

主題一：儀器安裝-硬體安裝步驟

1.將Cellometer電源線接上電源

2.打開Cellometer電源開關

3.將USB Cable連接線接上Cellometer與電腦

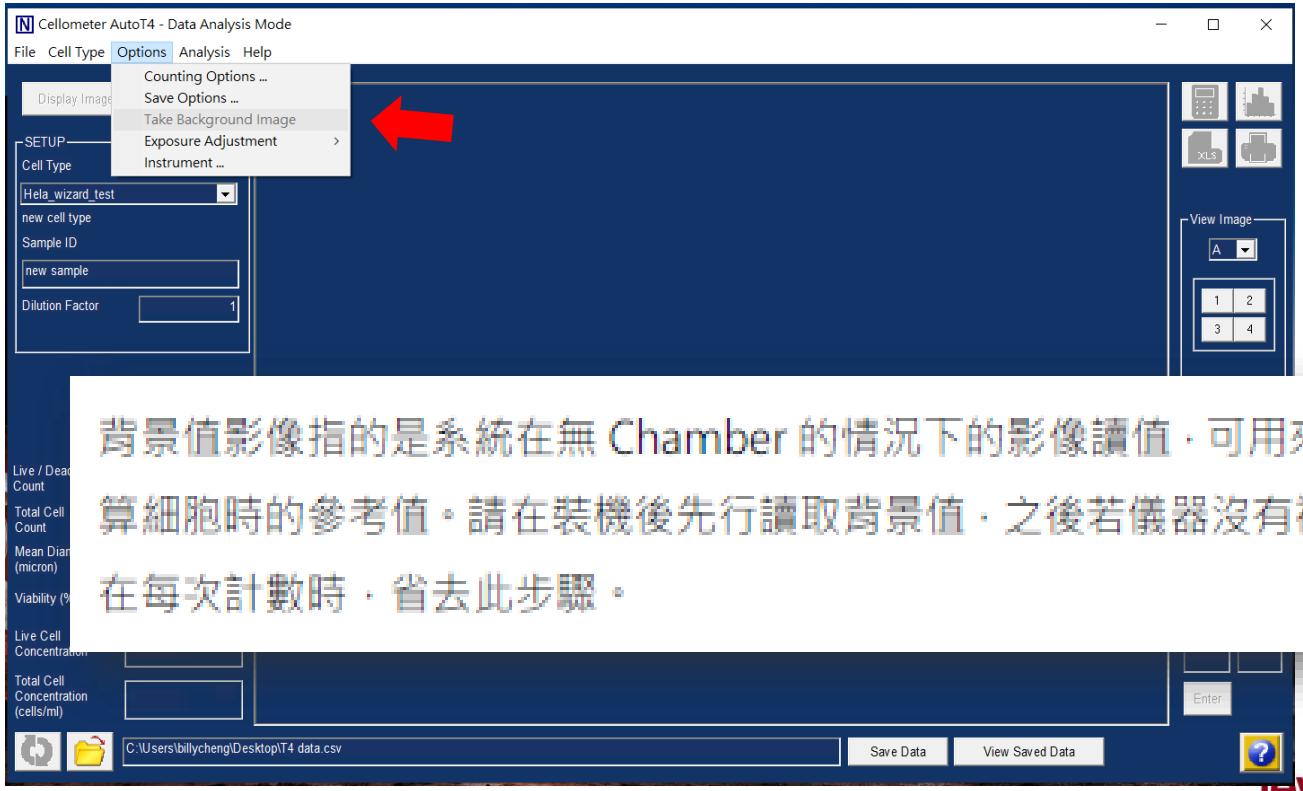


主題二: 背景值影像拍攝

- **背景值擷取:**

  請點選桌面捷徑 

  ，若第一次啟用，系統會自動要求讀取背景值，請參照指示。



背景值影像指的是系統在無 Chamber 的情況下的影像讀值，可用來當作系統計算細胞時的參考值。請在裝機後先行讀取背景值，之後若儀器沒有被移動過，可在每次計數時，省去此步驟。

主題三：樣品上機實戰教學

1.打開Cellmeter Auto Counter 軟體

2..細胞濃度建議在5 x 10^5~10^7 cells/ml

3..計算存活率

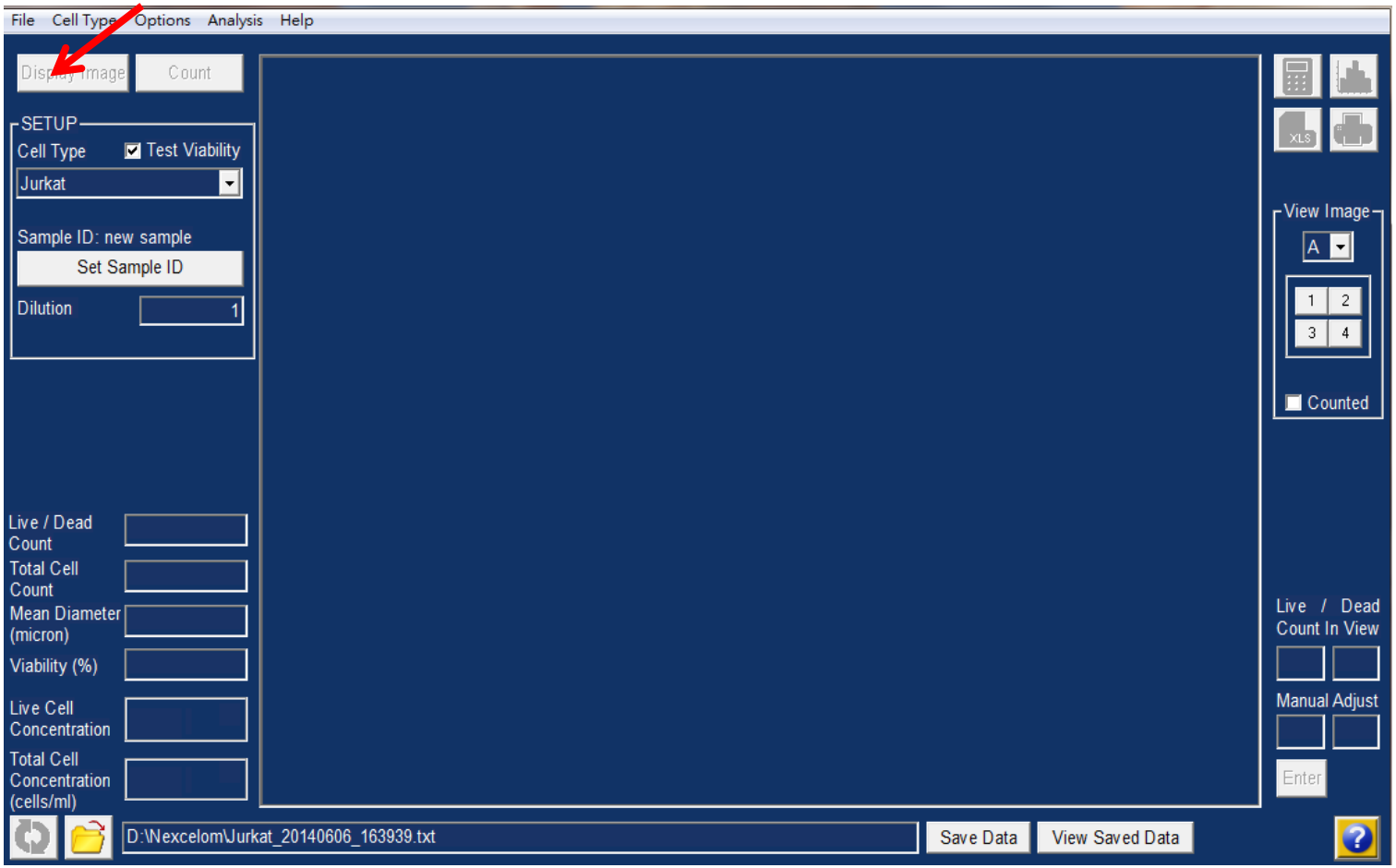
*請使用0.2%trepen blue與Sample 1:1混合

4.取樣20 ul的sample 注入chamber中

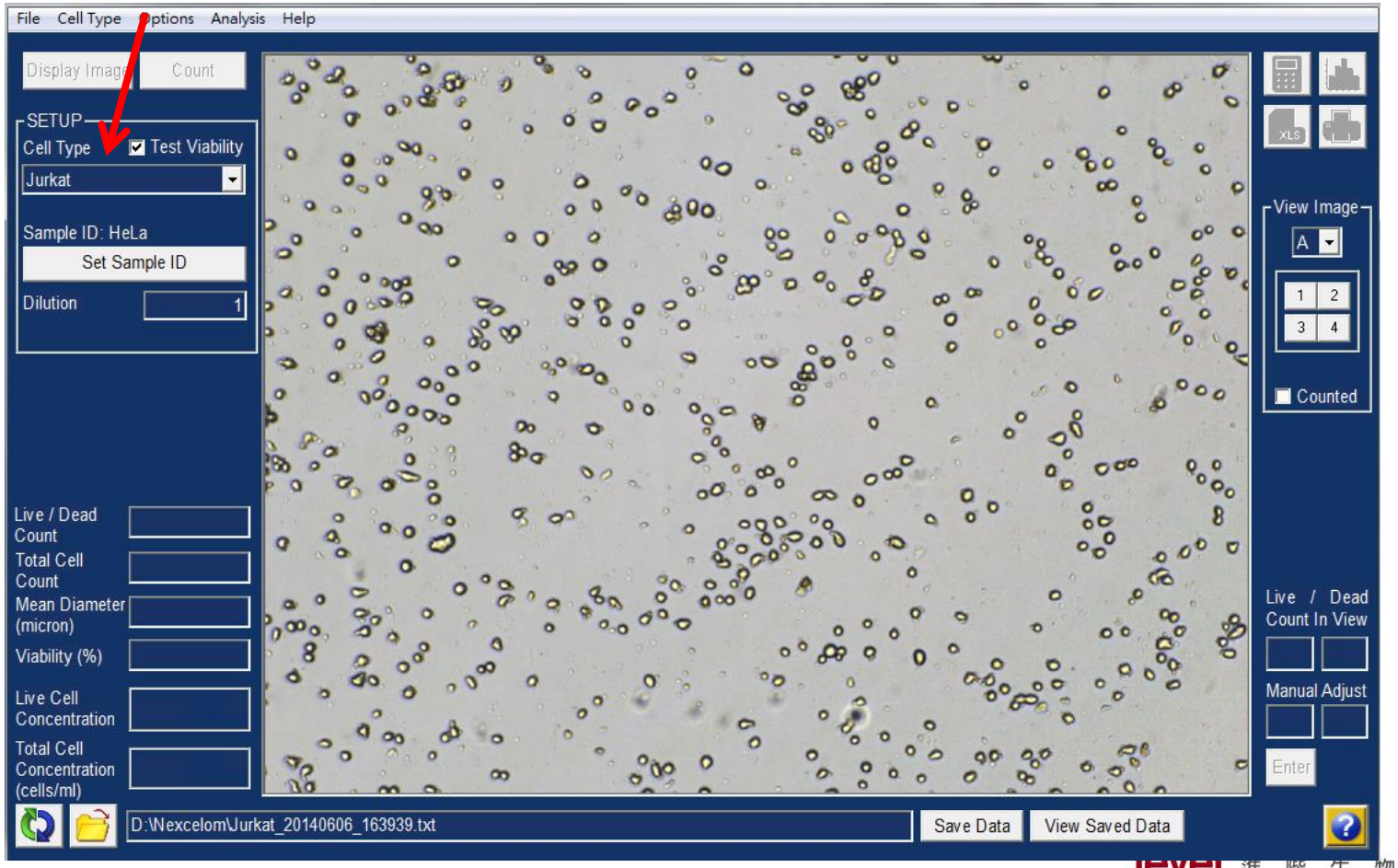
5. 放入玻片進入口

主題三：樣品上機實戰教學-軟體操作

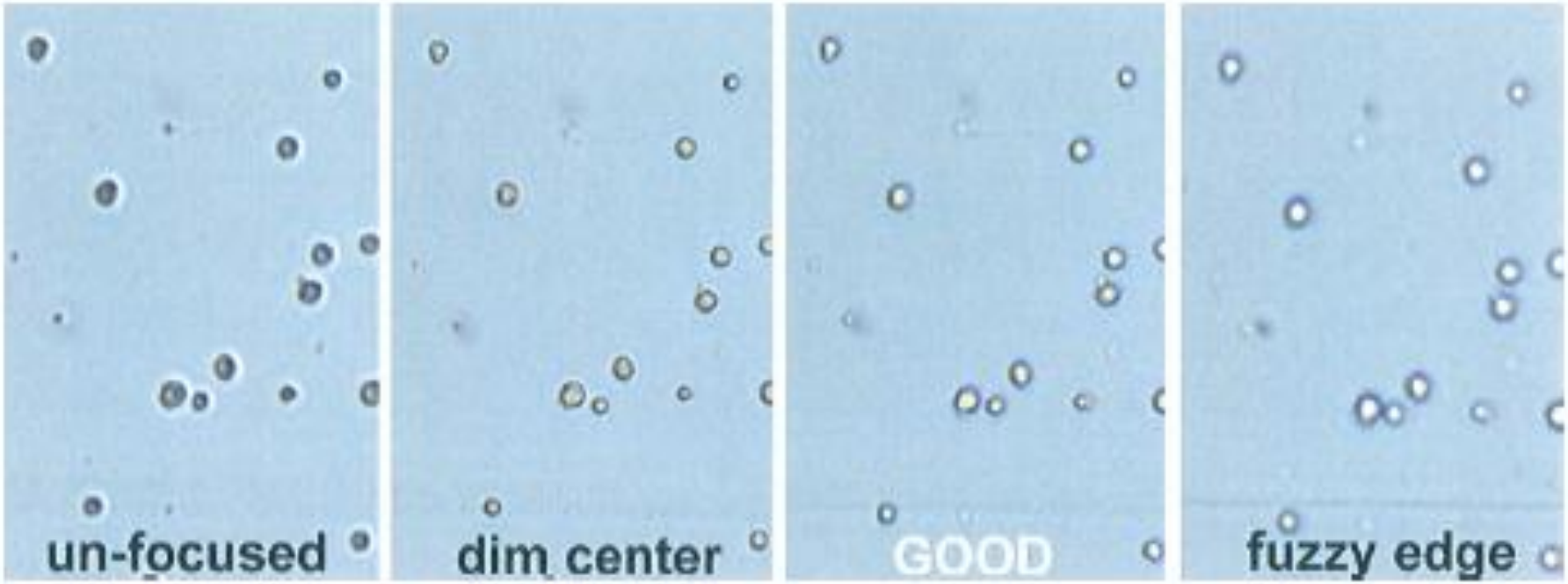
1.點選Display Image



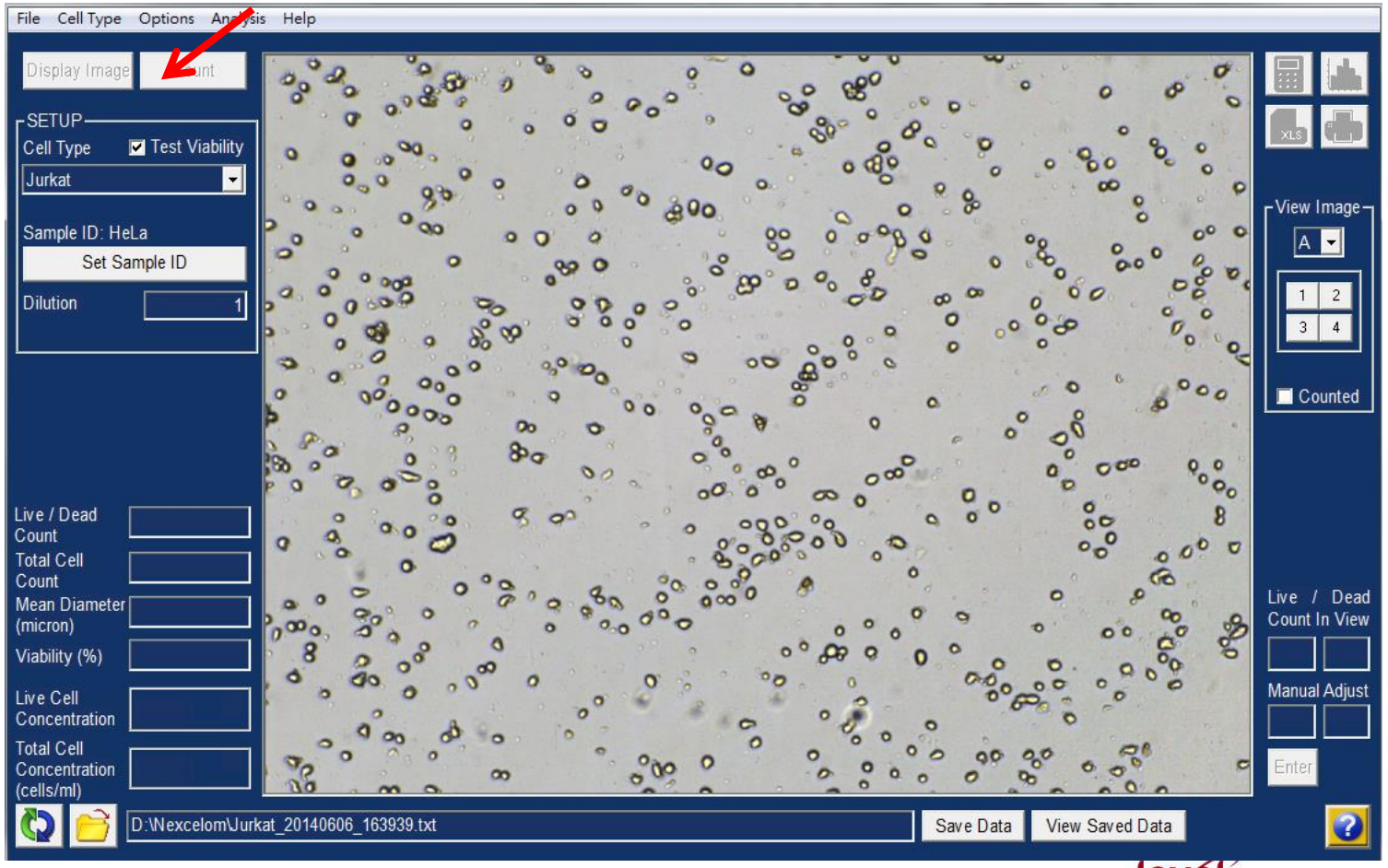
2.選擇Cell type



- 調整影像焦距

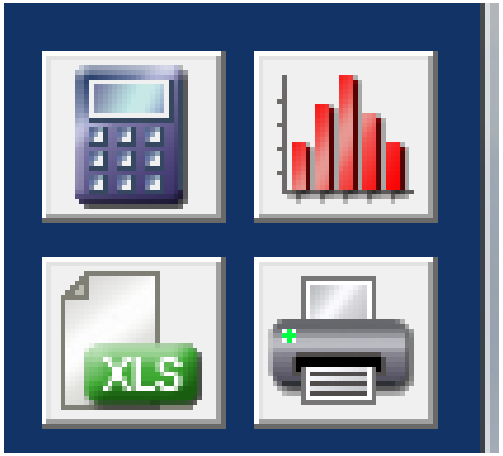


3.點選Count


File
Cell Type
Options
Analysis
Help
Display Image
SETUP
Cell Type
Test Viability
Jurkat
Sample ID: HeLa
Set Sample ID
Dilution
1
Live / Dead Count
Total Cell Count
Mean Diameter (micron)
Viability (%)
Live Cell Concentration
Total Cell Concentration (cells/ml)
D:\Nexcelom\Jurkat_20140606_163939.txt
Save Data
View Saved Data
XLS
View Image
A
1
2
3
4
Counted
Live / Dead Count In View
Manual Adjust
Enter


File Cell Type Options Analysis Help
Display Image
Count
SETUP
Cell Type
Test Viability
Hela
Sample ID: HeLa
Set Sample ID
Dilution
1
Live / Dead Count
1088 / 2
Total Cell Count
1090
Mean Diameter (micron)
18.6
Viability (%)
99.8
Live Cell Concentration
3.20 x10 6
Total Cell Concentration (cells/ml)
3.21 x10 6
D:\Nexcelom\Jurkat_20140606_163939.txt
Save Data
View Saved Data
View Image
A
1 2
3 4
Counted
Live / Dead Count In View
544
1
Manual Adjust
Enter
一鍵Count，輕鬆
完成細胞計數

主題四：軟體功能介紹



1.專業報告格式輸出

2.完整數據記錄

3.即時的細胞大小監測

4.貼心計算機

報告書出格式
1.品質管理
2.快速輸出
3.不可變動性

Cellometer Simply Counted

06/09/2014 15:05:35

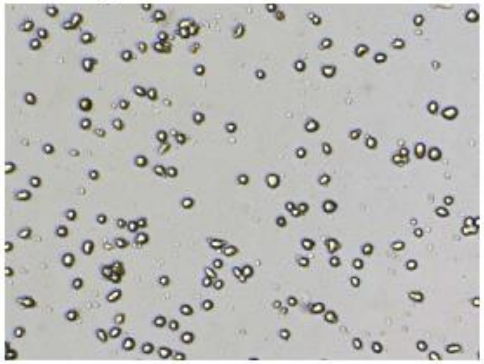
Sample: HeLa
Dilution: 1.00
Cell Type: Hela
Instrument Serial Number:
Chamber Type: d100
Operator Signature:

Results: Trypan Blue Viability

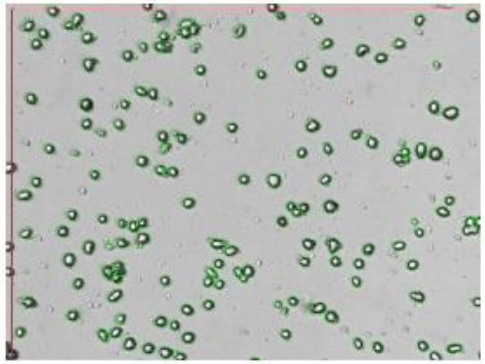
99.8 % Viability

Count	Concentration	Mean Diameter
Live: 1088	3.20x10^6 cells/mL	18.6 micron
Dead: 2	5.89x10^3 cells/mL	11.4 micron
Total: 1090	3.21x10^6 cells/mL	

Raw Image: 1 of 8



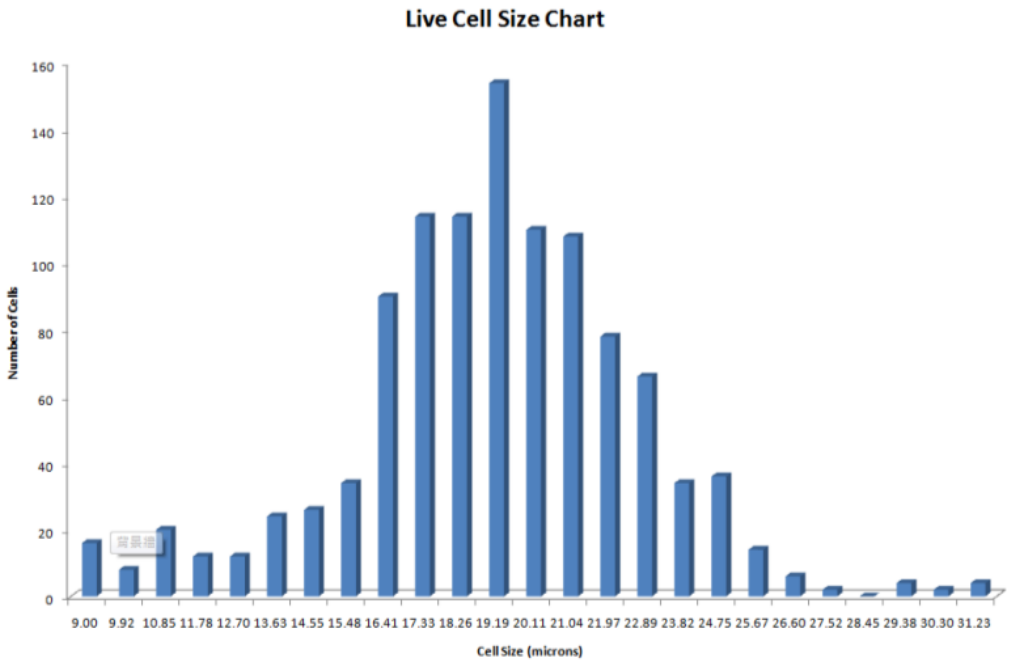
Analyzed Image: 1 of 8



數據輸出
1.程式設定參數
2.每一顆細胞大小
3.照片超連接
4.細胞大小分布圖.....等

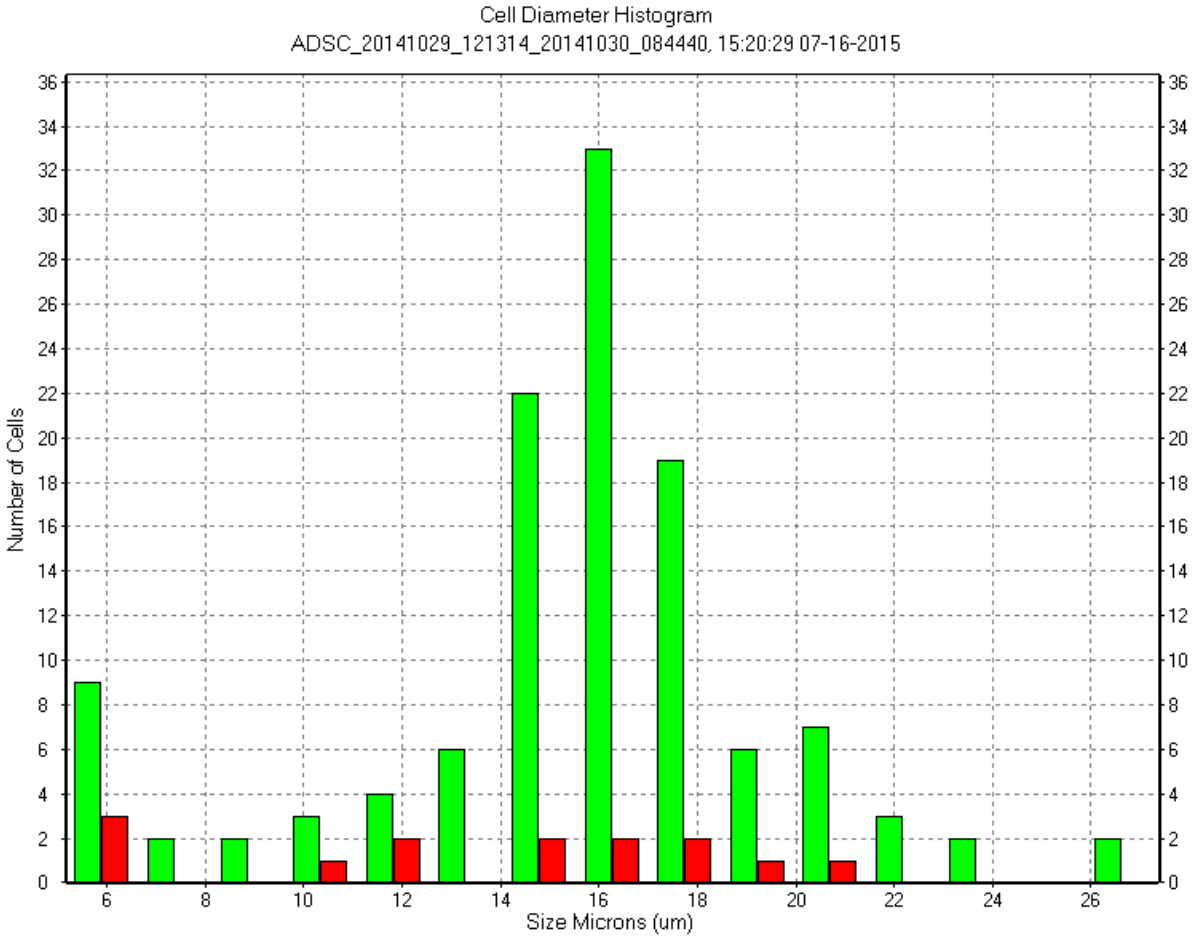
	Cell	Size (microns)
6	1	15.29
7	2	8.88
8	3	17.75
9	4	19.13
10	5	15.72
11	6	20.28
12	7	15.76
13	8	15.88
14	9	15.72
15	10	18.77
16	11	16.7
17	12	23.51
18	13	18.23
19	14	19.91
20	15	18.92
21	16	19.4
22	17	17.1
23	18	22.01
24	19	16.86
25	20	17.94
26	21	19.2
27	22	19.57
28	23	18.92

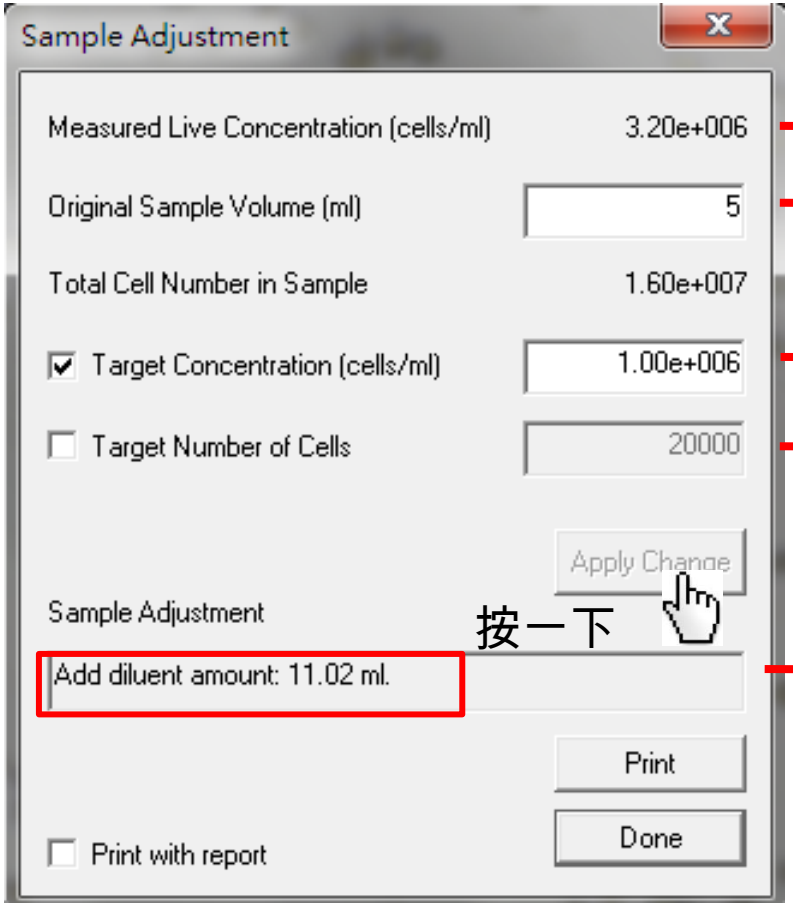
Results / Count Stats / Live Cell



3	**Cell Type: Hela**
4	
5	Description:
6	
7	
8	**Cell Parameters**
9	Min Cell Diameter: 8.0 microns
10	Max Cell Diameter: 37.0 microns
11	Roundness: 0.10
12	Contrast Enhancement: 0.40
13	
14	**Trypan Blue Viability Parameters**
15	Do not use a Default Viability Preference
16	Sensitivity: 1.0
17	Uniformity: 150
18	Very Dim Dead Cells Checked
19	Enhancement: 0.60
20	
21	**Decluster Parameters**
22	Decluster Edge Factor: 0.5
23	Decluster Th Factor: 1.0
24	Do not Decluster Clumps not Checked

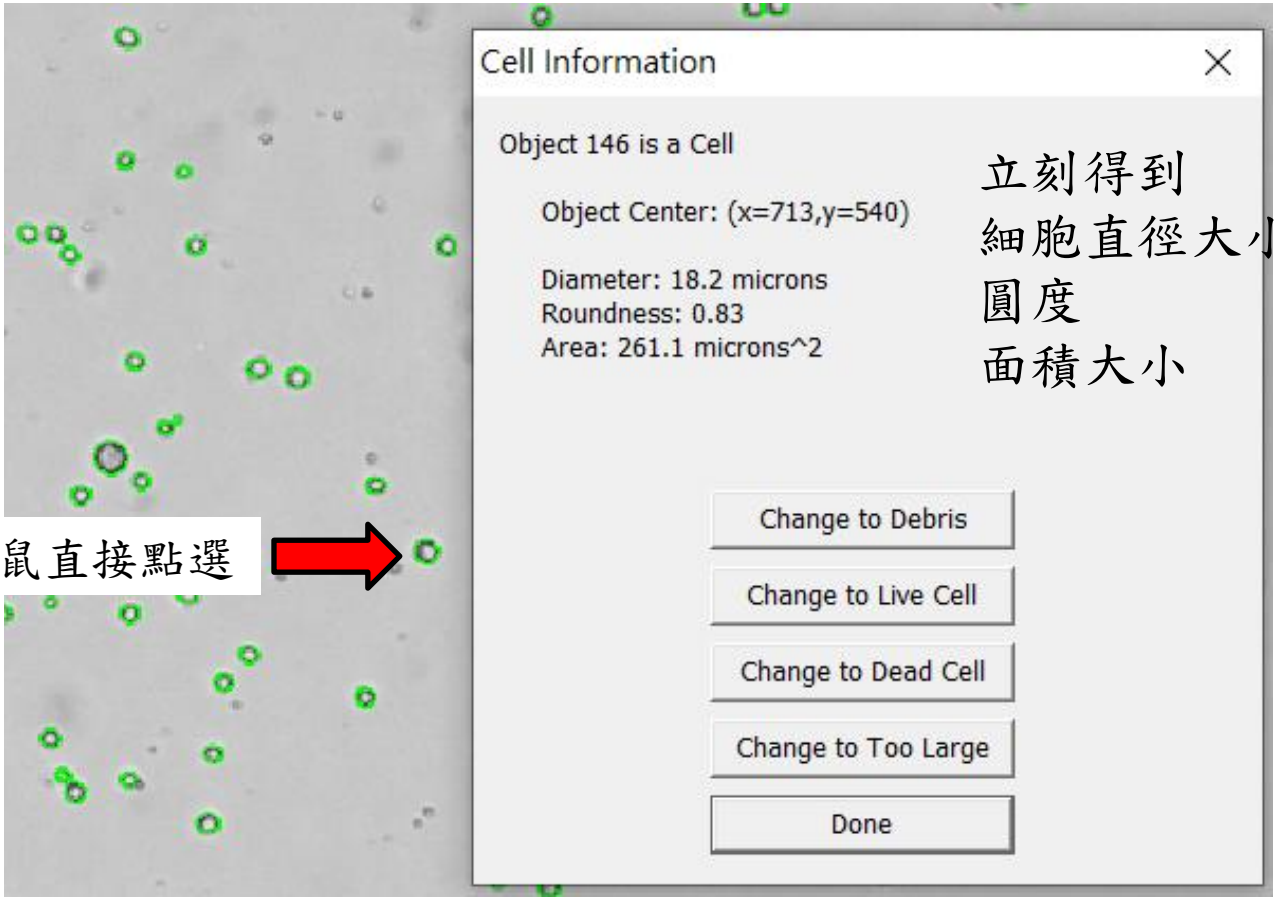
Show cell size distribution –即時查看細胞大小




Sample Adjustment
Measured Live Concentration (cells/ml)
3.20e+006
Original Sample Volume (ml)
5
Total Cell Number in Sample
1.60e+007
Target Concentration (cells/ml)
1.00e+006
Target Number of Cells
20000
Apply Change
Sample Adjustment
Add diluent amount: 11.02 ml.
Print
Done
Print with report
細胞濃度/mL
樣品總體積
想要的細胞濃度
想要的細胞顆數
按一下
換算結果

自動換算細胞濃度

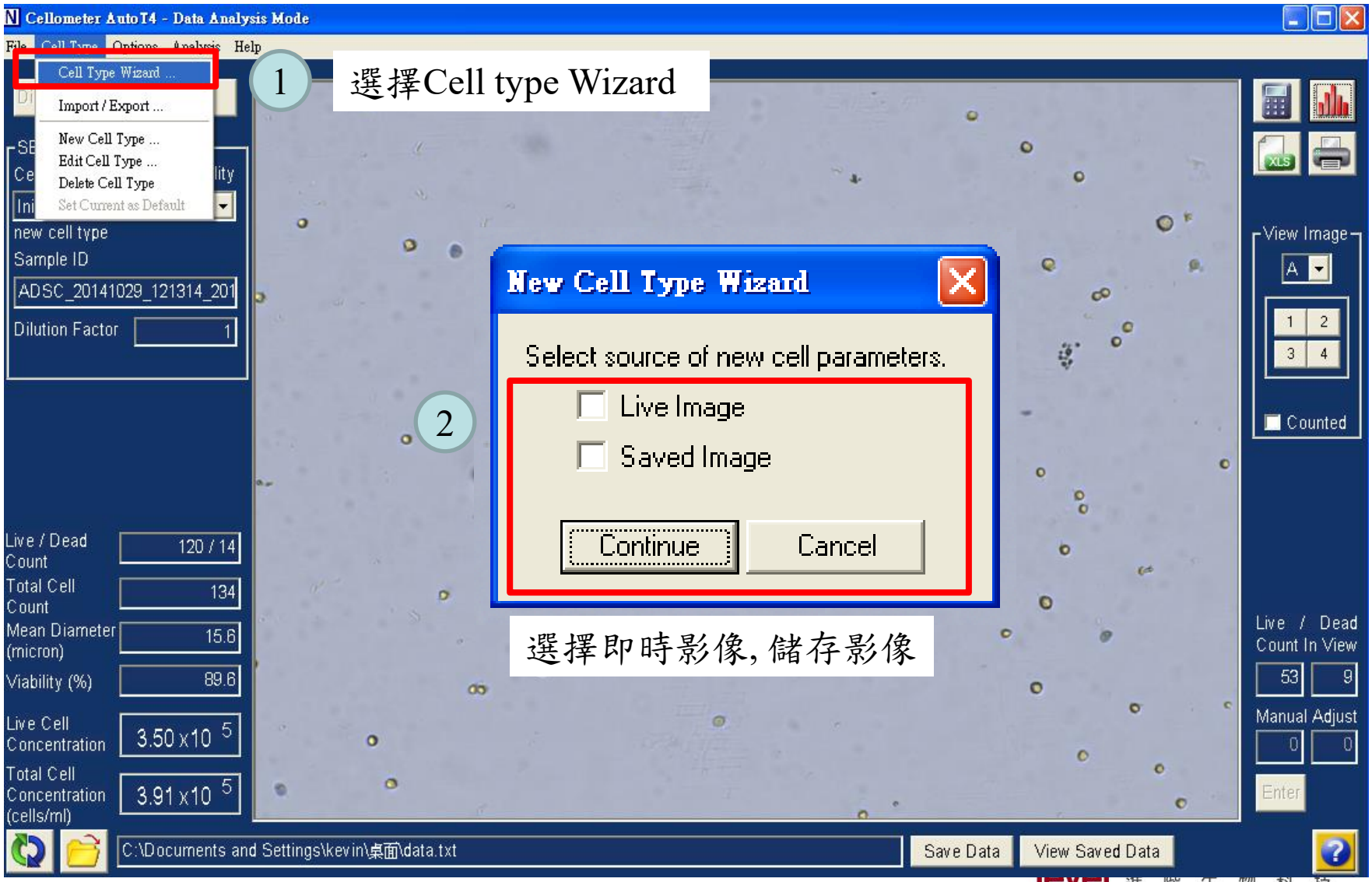
分析細胞面積大小



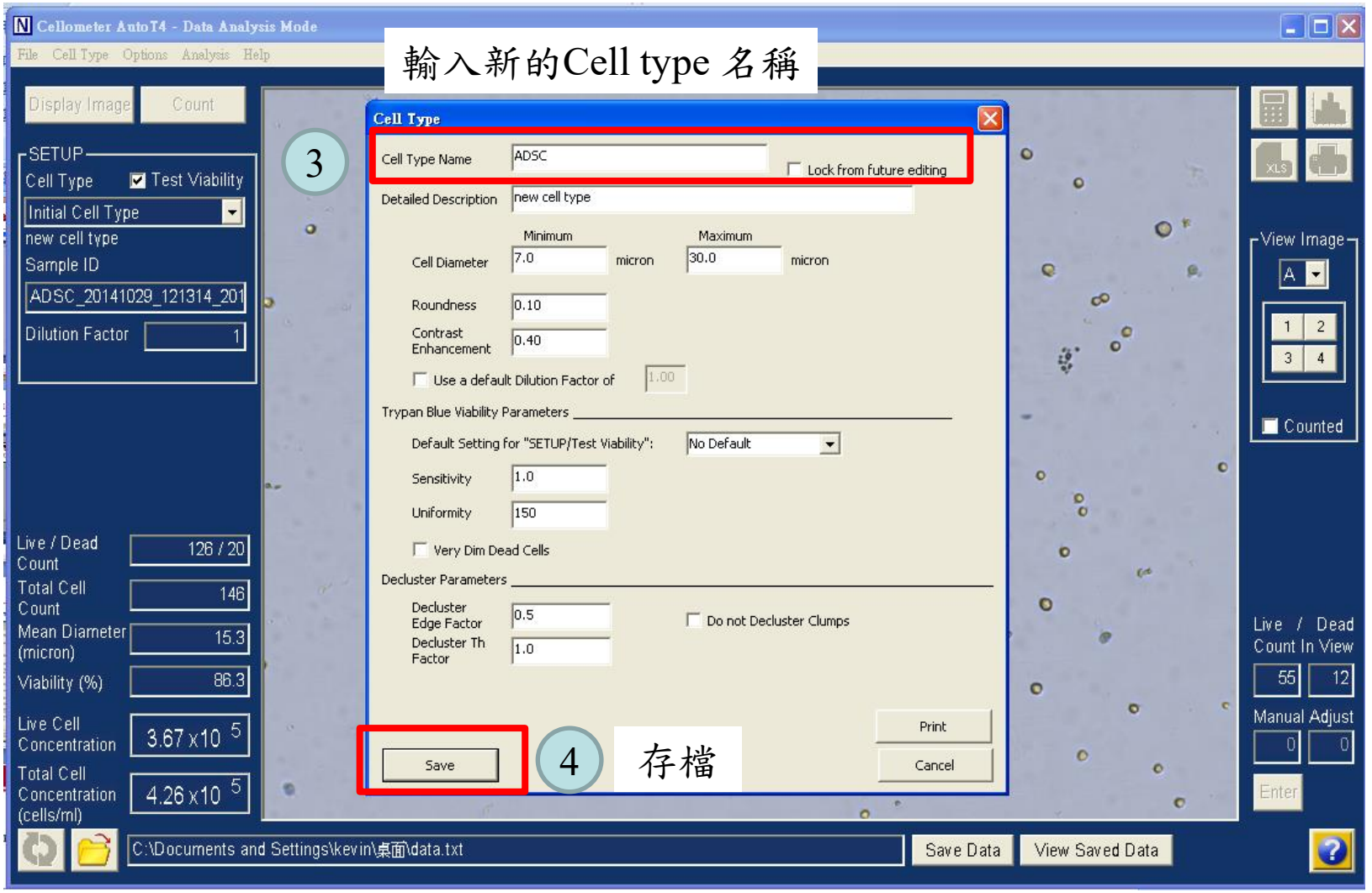
滑鼠直接點選

立刻得到
細胞直徑大小
圓度
面積大小

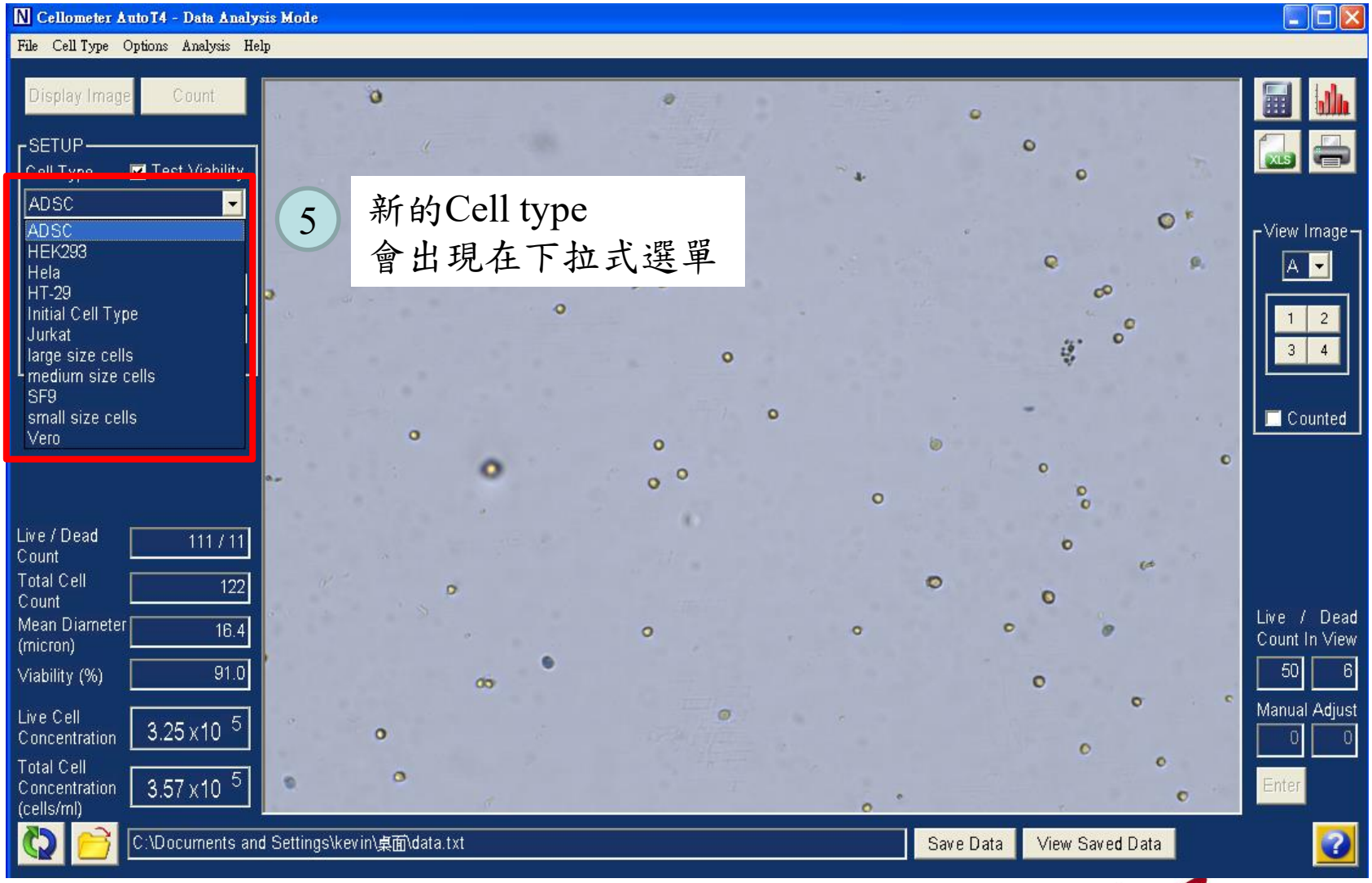
主題五. 細胞影像精靈


Cellometer AutoT4 - Data Analysis Mode
File Cell Type Options Analysis Help
Cell Type Wizard ...
Import / Export ...
New Cell Type ...
Edit Cell Type ...
Delete Cell Type
Set Current as Default
1
選擇Cell type Wizard
new cell type
Sample ID
ADSC_20141029_121314_201
Dilution Factor
1
New Cell Type Wizard
Select source of new cell parameters.
2
Live Image
Saved Image
Continue
Cancel
選擇即時影像, 儲存影像
View Image
A
1 2
3 4
Counted
Live / Dead Count
120 / 14
Total Cell Count
134
Mean Diameter (micron)
15.6
Viability (%)
89.6
Live Cell Concentration
3.50 x10 5
Total Cell Concentration (cells/ml)
3.91 x10 5
Live / Dead Count In View
53
9
Manual Adjust
0
0
Enter
C:\Documents and Settings\kevin\桌面\data.txt
Save Data
View Saved Data

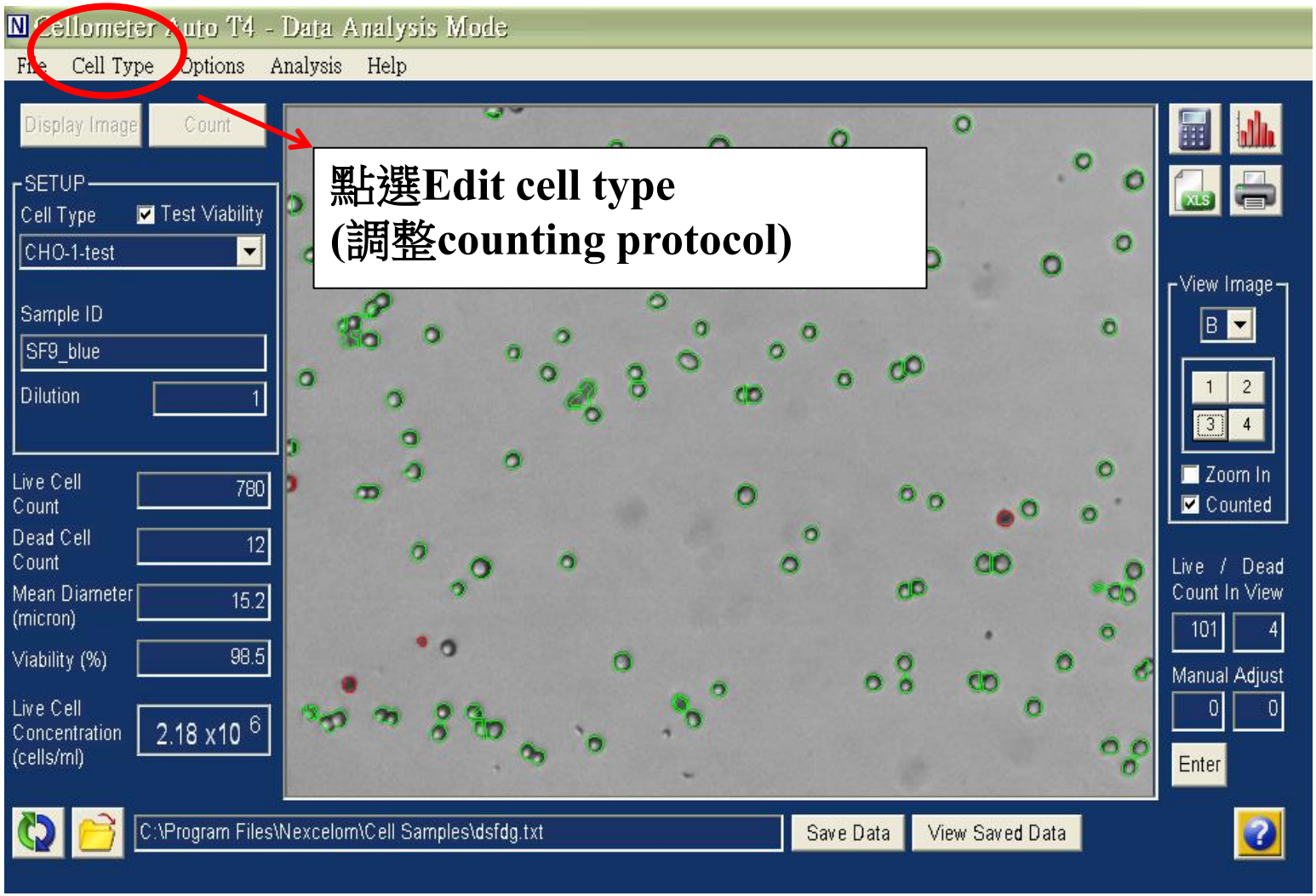
主題五. 細胞影像精靈


Cellometer AutoT4 - Data Analysis Mode
File Cell Type Options Analysis Help
輸入新的Cell type 名稱
Display Image
Count
SETUP
Cell Type
Test Viability
Initial Cell Type
new cell type
Sample ID
ADSC_20141029_121314_201
Dilution Factor
1
3
Cell Type
Cell Type Name
ADSC
Lock from future editing
Detailed Description
new cell type
Minimum
Maximum
Cell Diameter
7.0
micron
30.0
micron
Roundness
0.10
Contrast Enhancement
0.40
Use a default Dilution Factor of
1.00
Trypan Blue Viability Parameters
Default Setting for "SETUP/Test Viability":
No Default
Sensitivity
1.0
Uniformity
150
Very Dim Dead Cells
Decluster Parameters
Decluster Edge Factor
0.5
Decluster Th Factor
1.0
Do not Decluster Clumps
Print
Save
4
存檔
Cancel
View Image
A
1
2
3
4
Counted
Live / Dead Count
126 / 20
Total Cell Count
146
Mean Diameter (micron)
15.3
Viability (%)
86.3
Live Cell Concentration
3.67 x10 5
Total Cell Concentration (cells/ml)
4.26 x10 5
Live / Dead Count In View
55
12
Manual Adjust
0
0
Enter
C:\Documents and Settings\kevin\桌面\data.txt
Save Data
View Saved Data

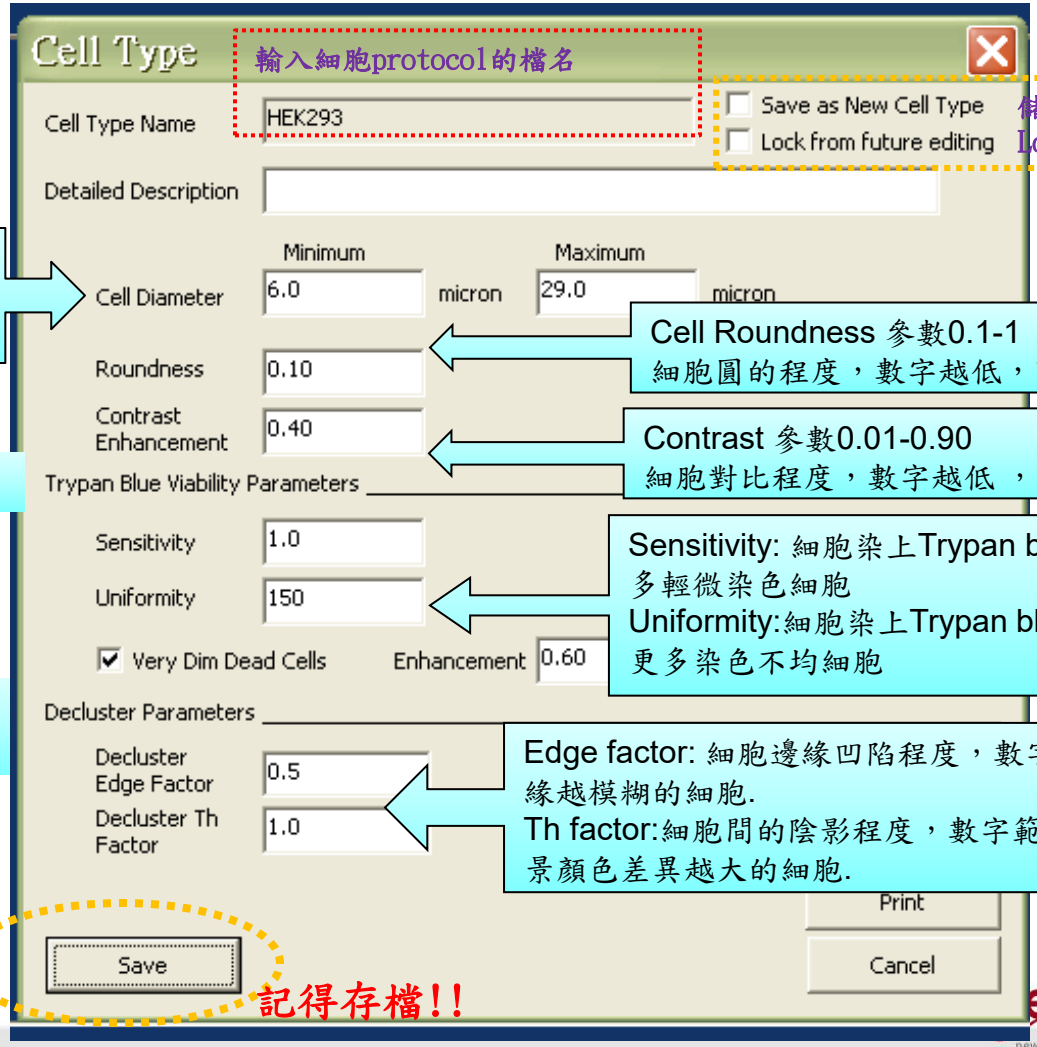
主題五. 細胞影像精靈


Cellometer AutoT4 - Data Analysis Mode
File Cell Type Options Analysis Help
Display Image
Count
SETUP
Test Viability
ADSC
ADSC
HEK293
Hela
HT-29
Initial Cell Type
Jurkat
large size cells
medium size cells
SF9
small size cells
Vero
5
新的Cell type
會出現在下拉式選單
View Image
A
1 2
3 4
Counted
Live / Dead Count
111 / 11
Total Cell Count
122
Mean Diameter (micron)
16.4
Viability (%)
91.0
Live Cell Concentration
3.25 x10 5
Total Cell Concentration (cells/ml)
3.57 x10 5
Live / Dead Count In View
50
6
Manual Adjust
0
0
Enter
C:\Documents and Settings\kevin\桌面\data.txt
Save Data
View Saved Data

主題六:細胞設定參數介紹



Principle of Cellometer is the image-based analysis



Cell Size
調整細胞直徑大小範圍
5-50 μM

Cell Roundness 參數0.1-1
細胞圓的程度，數字越低，可計算不規則細胞

Contrast 參數0.01-0.90
細胞對比程度，數字越低 ，可計算更多細胞

Dead cell analysis

Sensitivity: 細胞染上Trypan blue的程度，數字越高，可計算更多輕微染色細胞
Uniformity:細胞染上Trypan blue的均勻度 ，數字越高，可計算更多染色不均細胞

Decluster
計算成團的細胞數

Edge factor: 細胞邊緣凹陷程度，數字範圍(0-1.0)，數字越高可計算邊緣越模糊的細胞.
Th factor:細胞間的陰影程度，數字範圍(0-1.0), 數字越高可計算與背景顏色差異越大的細胞.

若有任何問題
歡迎與我們聯繫

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