

## 雷射粒徑分析儀

### Laser Diffraction Particle Size Analyzer

#### 儀器設備說明：

儀器價格：1,837,775 元

儀器購置年月：1995 年 4 月

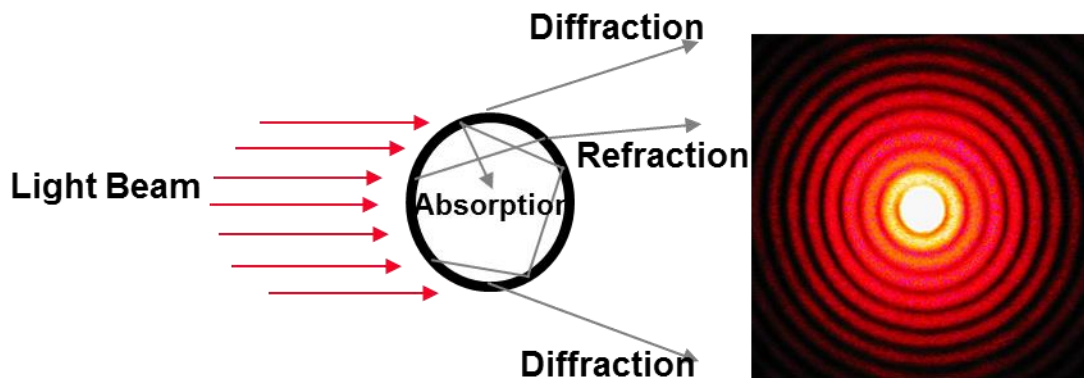
廠牌及型號：Coulter LS230

**重要規格：** 利用雷射光入射懸浮於分散相中之粒子，大粒子繞射角度小，小粒子繞射角度大之差異計算。

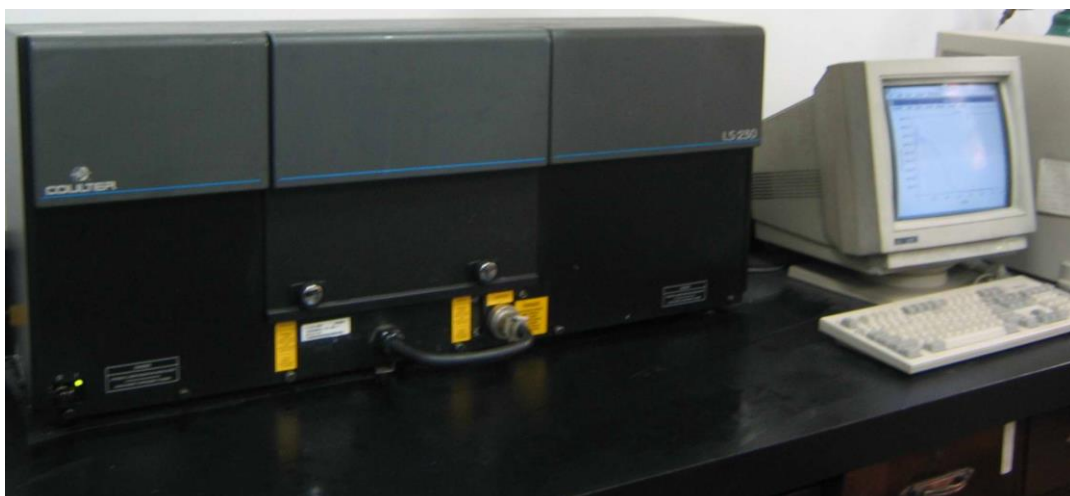
量測粒徑範圍: 0.04 $\mu\text{m}$ ~2000 $\mu\text{m}$  (含PIDS)

#### 儀器性能：

量測粉體顆粒直徑與粒徑分佈圖。光源為 732nm 紅光固體雷射，接收水平與垂直光散射強度差(PIDS 技術)並使用 Fraunhofer 以及 Mie 理論進行結果計算及分析後換算粉末粒徑大小。儀器之軟體可做統計學分析(10%、25%、50%、75%與 90%的顆粒體積分佈或數量分佈)。

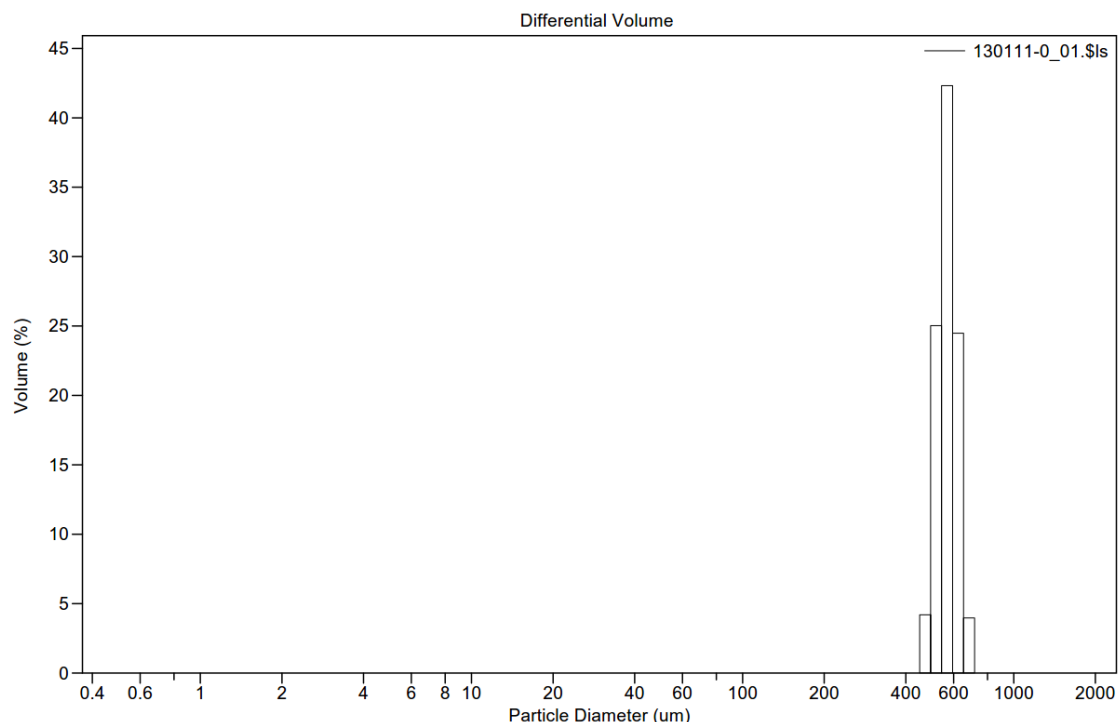


#### 機台圖片：



機台位置： 台灣大學 化學工程學系 粉粒體實驗室 連絡電話 (02) 3366-3010

數據範例：



Volume Statistics (Arithmetic) 130111-0\_01.\$ls

Calculations from 0.375 um to 2000 um

Volume:	100%	S.D.:	48.19 um
Mean:	569.3 um	C.V.:	8.47%
Median:	567.9 um	Skewness:	0.213 Right skewed
D(3,2):	565.2 um	Kurtosis:	-0.266 Platykurtic
Mode:	567.7 um		

<10%	<20%	<50%	<75%	<90%
504.8 um	524.1 um	567.9 um	603.1 um	638.7 um

圖一、粒徑檢測結果

D(p,q)	Standard Name (LS 13 320 Program Equivalent)
D(0,0)	Geometric mean diameter (Geometric mean size in Number % mode)
D(1,0)	Arithmetic mean diameter (Arithmetic mean size in Number % mode)
D(2,2)	Surface weighted geometric m.d. (Geometric mean size in Surface Area % mode)
D(3,2)	Surface weighted m.d. (Arithmetic mean size in Surface Area % mode)
D(3,3)	Volume-weighted geometric m.d. (Geometric mean size in Volume % mode)
D(4,3)	Volume weighted m.d. (Arithmetic mean size in Volume % mode)

Table 1