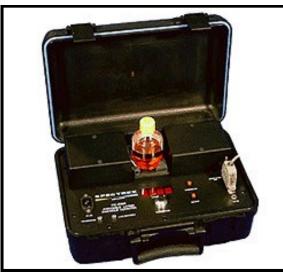


493 Seaport Court, Suite 105, Redwood City, California 94063 \* (650) 365-6597 Fax: (650) 365-5845 \* (800) 822-3940 Email: spectrex@spectrex.com

# PC-2300 LASER PARTICLE COUNTER



#### **Calibration:**

Spectrex provides three sealed calibration standards with each unit. Each standard contains a precise number of NIST traceable polystyrene spheres of known size in suspension and are sealed with inert Argon gas These standards have a proven stability of more than 2 years and provide efficient calibration within 10 minutes.

# **Applications:**

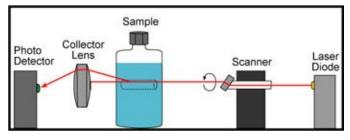
- Field Hydrology
- Water Treatment Plants
- Hydraulic Fluids and Oil QC
- Silts and Sediment Sizing
- University Laboratories
- Pharmaceutical Manufacturers
- Oil Refineries and On-site drilling
- Bottling & Beverage Operations
- Oceanographic Studies
- Liquid Chromatography Solvent QC
- Cooling Power and Waste Water Filter Efficiency
- Particle Agglomeration Studies
- Particle Settling Characteristics
- Corrosive Chemical and Solvent Sizing
- Vial and Ampule Inspection
- De-ionized Water and Acid Testing
- Cell Counting

#### Features:

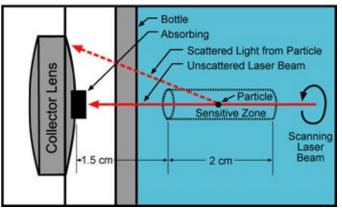
- Complete Portability. Use it Anywhere!
- Easy Do-It-Yourself Calibration (sealed standards provided)
- Compact and Rugged (floats)
- Quickly Counts & Sizes (16 seconds min.)
- Custom Easy-to-Use Software
- Eliminates Sample Flushing
- Built in magnetic stirrer

## **Operational Theory:**

Utilizing the principle of "near angle light scatter," a revolving laser beam passes through the walls of a glass container or a flow-thru cell. When it is directed through a central "sensitive zone" the PC-2300 not only counts the particles in suspension, but tabulates their size as well. The analog signals generated by the light pulses are routed to a computer and digitized.



Optical Schematic of the Laser Particle Counter



Detail of Laser Optics

-							
		A1	LTER RITE				
		SA	MPLE 24PW	TIME, 15.00			
	Interim	SF	ECTREX CO	DË \$1409	ex Lesor Particle	On other BOD Pro-	3040
# um %	Count	0 29 5		116 145 1	74 203 2	32 261	-3940 Vo.1. 290
	o		*****	+ + + + + • • • • • •	• • • • • • • • •	• • • • • •	Fißer
-1 - 1 - 262 -2 - 2 - 23.6 -3 - 3 - 177	5 196 197						0%
4-4-11.8 5-5-67	8 <u>9</u> /—						A-T
- <del>6-6-</del> 2.9	0-24-						0.5
-7-7 -8-8-2.2 -9-9-1.4	7 19 19	<b>F</b>					
-10-10-20 -11-11-14	7-17-	<b></b>					S-⊺ 160 s
-11-11-1.4 -12-12-05 -13-13-0.3	0						
-14-14-0.3	0	1					Dalutin 1.00.1
-16-16-0.1 -17-17-0.3	0	\$					
-18-22-0.1 -19-27-0.0	7	\$					Offsel 0.00V
		4					v
-23-47-0.0	Š č	-					Gain 5.55x
-24-52-0.0 -25-57-0.0 -26-62-0.0	0	-					
-27-67-0.0 -2872-0.0	0	1					Counte
21 - 37 - 00 -21 - 37 - 00 -22 - 42 - 00 -23 - 47 - 0.0 -24 - 52 - 0.0 -25 - 57 - 0.0 -26 - 52 - 0.0 -28 - 72 - 0.0 -28 - 77 - 0.0 -29 - 77 - 0.0 -30 - 52 - 0.0	ю—о—	1					827
-31-87-00 -32-92-0.0	ğ—ğ—	1					NEF
	o ŏ	+		<b>61</b>			Smap
NSF		Tota counts	Counts	Surface area	Volume	Mass/bin	
Bin	Size	/cc	percent	percent	percent	ppm	
	<	0.00	0.00%	0.00%	0.00%	0.0000	
1 2	1um 2um	217.32 195.60	26.28% 23.65%	1.30% 4.69%	0.25% 1 52%	0.0001	
2 3 4	3um 4um	147.02 96.60	17.78% 11.68%	7.93% 9.26%	3.49% 5.06%	0.0016	
5	5um	47.56	5.75%	7 12%	4.60%	0.0021	
6 7	6um 7um	24.01 20.81	2.90% 2.52%	5 18% 6.11%	3.84% 5.08%	0.0017 0.0023	
8	8um	t8.75	2.27%	7.19%	6.61%	0.0030	
9 10	9um 10um	12.12 17.15	1.47% 2.07%	5 \$8% 10.28%	5.91% 11.16%	0.0027	
11 12	11um 12um	11.55 4.12	1.40% 0.50%	8.37% 3.55%	9.77% 4.42%	0.0044	
13	13um	3.20	0.39%	3 24%	4 29%	0.0019	
14 15	14um 15um	2.52 2.86	0.30% 0.35%	2.95% 3.85%	4.13% 5.67%	0.0019	
16	16um	1.26	0.15%	1.93%	2.98%	0.0013	
17 18	17um 22um	2.45 1.52	0.30%	4.32% 4.42%	6.99% 8.68%	0.0032 0.0039	
19 20	27um 32um	0.55	0.07% 0.00%	2 42% 0.00%	5 54% 0.00%	0.0025	
21	37um	0.00	0.00%	0.00%	0.00%	0.0000	
22 23	42um 47um	0.00	0.00% 0.00%	0 00% 0 00%	0.00%	0.0000	
24 25	52um 57um	0.00 0.00	0.00%	0.00%	0.00%	0.0000 0.0000	
26	62um	0.00	0.00%	0.00%	0.00%	0.0000	
27 28	67um 72um	0.00	0.00%	0.00%	0.00%	0.0000	
29 30	77um 82um	0.00	0.00%	0.00%	0.00%	0.0000	
31	67um	0.00	0.00%	0.00%	0.00%	0 0000	
32	92um >	0.0C 0.0C	0.00%	0.00%	0.00%	0.0000	
	TOTALS	827.00	100.00%	100.00%	100.00%	0.0452	
	I VIALU	Total		Surface	100.0078	0.0402	
NSF Class	Size	counts /cc	Counts	ores perceni	Volume	Mass/bin ppm	
					·		
#1 #2	< 1 1-5	0.00 656.55	0.00% 79.39%	0.00% 23.18%	0.00% 10.33%	0.0000 0.0047	
#3	5-15 15-30	161.76	19.56%	59.88%	59.81%	0.0270	
#4 #5	30-50	8.69 0.00	1.05%	16.94% 0.00%	29.86% 0.00%	0 0135	
#6	50-100	0.00	0.00%	0.00%	0.00%	0.0000	
Total counts. 627.00/cc							
	suspended solids: 0.0	05ppm (mg/liter)					
Spec. Mean	gravity. 1.	00 19um					
		Sum Kum					

Sample Print-out

#### **Specifications:**

Size: 9.5" x 14.5" x 6"

**Typical Bottle Size:** 15-60 mm inside diameter **Detectable Particle Size:** From 0.5µm - 100µm.

## SuperCount® Software:

Developed by Spectrex, the custom interfacing electronics and proprietary software provide an easy means of analyzing and saving data generated by the PC-2300. SuperCount® provides instant sizing information and generates a printout with count information and a histogram of size distribution in addition to indicating:

- Absolute Counts
- Mean Size
- Mass Distribution
- Percentage Distribution
- Standard Deviation
- Total Suspended Solids

The dilution factor can be automatically computed to give absolute counts for liquids as dense as sludge! SuperCount ® also is loaded with a special bonus program for hydraulic fluids and Phi classifications.

\* NAS, SAE, and ISO classifications.

#### **Options:**

- **Opacity Meter** provides an instantaneous measurement of the sample's opacity to correlate with computer calculations.
- **Small Vial Attachment** follows for use of 5ml vials or ampoules.
- Flow-Thru-Cell Spectrex stocks various sizes of flow-thru-cells and can manufacture cells to customer specifications. Cells are also available for testing at high pressure and temperatures.
- **Datacom** a 21 CFR 11 compliant product for pharmaceutical and other applications that require secure liquid particle data logging. (See our website for more information)

#### Weight: 15 lbs

**Bottle Material:** Transparent, scratch-free glass **Power:** 115v 60Hz AC, 12v car jack or internal battery (battery runtime is 5 hours)

