

# PARTICLE SIZE ANALYZERS



# LABNICS PARTICLE SIZE ANALYZER

## Specification and General Description of all Models

Models	LPSA 10	LPSA 20 A	LPSA 20 B	LPSA 20 C	LPSA 30	LPSA 40 A	LPSA 40 B
Measuring Range ( $\mu\text{m}$ )	0.1 ~ 500	0.2 ~ 500	0.1 ~ 500	0.05 ~ 500	4.5 ~ 1500	0.5 ~ 300	1 ~ 1000
Sample	Wet dispersion					Dry & Wet	Wet
						dispersion	dispersion
Repeatability (%)	<3 (monodispersive particles)						
Measurement Duration (min)	2-3	1-2					2-3
No. of Detectors	54	32	39	53	32	40	
Light Source	He-Ne laser, 2 mW, 0.6328 $\mu\text{m}$						
Temperature ( $^{\circ}\text{C}$ )	5-35						
Humidity (%)	<85						
Reports	Particle size distribution table & graph, Average Diameter, Median Diameter, SSA, etc.						
Catalog No.	29290101	29290201	29290202	29290203	29290301	29290401	29290402

## Software Function

- Two distribution models: Rosin Ramler, Multiwave Crest.
- Two report models: General purpose, Statistics.
- Two accumulative directions: Small to large and large to small.
- Data input function.
- Reports can be exported as excel format or other text format files.
- Multiple reports can be opened at the same time, easy to compare among reports.
- Single step adjustment.
- Single step control of the sample feeder.
- Report items can be set / selected according to customer's requirement.
- Safety Password Function.

# LASER PARTICLE SIZE ANALYZER

All laser particle size analyzers utilize the light scattering principle to measure the particle size of powders, it covers a wide dynamic range measurements with simple and rapid operation.

## LPSA-10

It is suited for measuring particle size distribution of Powder and Latex.

### Features

- 1. Easy to operate:** After selecting "Start" the system leads the user through the measurement process from loading sample, beam alignment, background measurement, obscuration adjustment through measurement, reporting and finally system cleaning. The complete measurement process including reporting is fully automated. Self diagnostic function is standard.
- 2. Prior set-up of measurement modes:** Key parameters for measurement of particular samples such as refractive index, distribution mode, concentration, ultrasonic duration, circulating speed & sampling duration can be pre-set. Sample measurement is just a question of selecting the pre-set mode and loading the sample leading to highly repeatable results.
- 3. Range of easy-to-change sample feeders for different measurements:** Including standard, small volume and acid proof systems.



LPSA-10



LPSA-20 A

## LPSA-20 Series

LPSA 20 series of particle size analyzer of includes advanced technology level too.

### Features

- 1. Measure forward scattered light:** Adding of back scattered light detectors, extends the lower limit of measurement.
- 2. Full scale measurement:** No need to change lens. High performance price ratio.
- 3. Shockproof pinhole design and auto alignment of detectors:** With built-in ultrasonic in the circulating sample feeding system for Whole range measurement without changing the lens, convenient to use.

## LPSA-30

### Features

- 1. It is used to measure fog drops:** Its structure can be changed according to the requirements. A Fourier Lens with different focal length can be used to change the measuring range.



LPSA-30



LPSA-40 A



LPSA-40 B

## LPSA-40 Series

LPSA 40 Series uses compressed air to disperse sample powders, they are specially designed for powders that cant be dispersed in liquids.

### Features

- 1. Dry and wet dispersion methods:** Dry method dispersion avoids the physical and chemical change of samples that might appear in wet dispersion. Economic and environment friendly since no dispersing agent or medium is needed.
- 2. High accuracy with two patents adopted:** Whole range of measurement without changing the lens, convenient to use. With special parameters designed for Cement industry such as SSA, fineness, R-parameter and percentage of particles over a certain diameter.

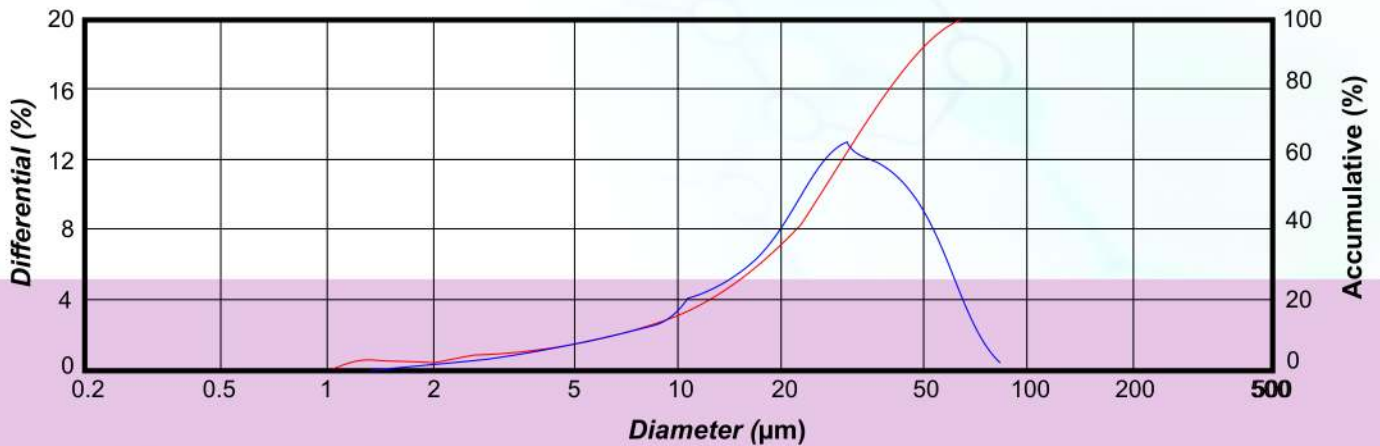
# Analysis Report

Sample ID: LPS	Code: M	Part. R.I. 2. 60	Date: 2007/02/05
Dispersant H <sub>2</sub> O	Ana. Model: polydis.	Disp. R.I.1.33	Time: 10:39:22
Beam Obs.: 8.0%	Disp. Agent	Residual: 0.02	U.S. Period: 2

## Characteristic Diameters

D (4, 3) : 27.26µm	D50 : 25.54µm	D(3,2) : 13.89µm	S.S.A : 0.43sq.m/cc
D10 : 7.36µm	D25 : 14.9µm	D75 : 37.31µm	D90 : 49.64µm

**Volume Distribution**



Dia.(µm)	Diff.(%)	Accum.(%)	Diam.(µm)	Diff.(%)	Accum.(%)	Dia.(µm)	Diff.(%)	Accum.(%)
0.20			2.89	0.77	2.82	41.8	11.35	81.37
0.24	0.00	0.00	3.50	0.95	3.77	50.6	9.33	90.7
0.29	0.00	0.00	4.24	1.16	4.93	61.3	6.61	97.31
0.35	0.00	0.00	5.13	1.46	6.39	74.2	2.16	99.47
0.43	0.00	0.00	6.21	1.77	8.16	89.8	0.51	99.98
0.52	0.00	0.00	7.51	2.12	10.29	108.6	0.02	100
0.63	0.00	0.00	9.09	2.65	12.94	131.5	0.00	100
0.76	0.00	0.00	11.00	3.91	16.85	159.1	0.00	100
0.92	0.11	0.11	13.31	4.81	21.66	192.6	0.00	100
1.11	0.29	0.40	16.11	5.85	27.51	233.1	0.00	100
1.35	0.53	0.93	19.50	7.39	34.90	282.1	0.00	100
1.63	0.32	1.25	23.60	9.80	44.70	341.4	0.00	100
1.97	0.31	1.56	28.56	12.77	57.47	413.1	0.00	100
2.39	0.50	2.06	34.57	12.55	70.02	500	0.00	100



**Labnics Equipment**  
 43040 Christy St., Fremont, CA 94538 USA  
 Toll Free : (877) 620 9992  
 Tel. : (925) 271 4322  
 Fax : (925) 886 0400  
 Email : info@labnics.com Website : www.labnics.com

