

### Measurement of Ink Dispersions with the Partica LA-960

#### Introduction

Inks are a liquid dispersion of pigments for writing or printing. The product is a mixture of a number of components, the majority being the pigment particles in some liquid carrier. A number of additives are usually included to modify viscosity, drying, stability, or color characteristics. Particle size of the pigment particles can significantly affect the color strength, surface finish, and durability of the final product.

#### Analytical Test Method

RI (particle): Varies, depending on the composition of the pigment. Example data shows 1.50-0.10i.

Dispersant fluid: Varies, commonly dispersed in water, but many applications require an organic solvent, surfactant may be required.

Sonication: Not generally necessary as the ink is a well-dispersed and stable dispersion.

Circulation speed: 2

Agitation speed: 2, continuous

Note: Generally easy to run. Add sample directly to flow system at sufficient concentration to obtain proper light transmission values. Wait for mixing and start measurements.

#### Example data

Median Diameter (µm)				
Sample ID	Run #1	Run #2	Run #3	Average
Spray Ink	0.106	0.106	0.106	0.106

#### Results

With the stable dispersion, the repeatability was perfect, showing the stability of the LA-960's optical system. The small size measurement capability also can be demonstrated with these fine dispersions.