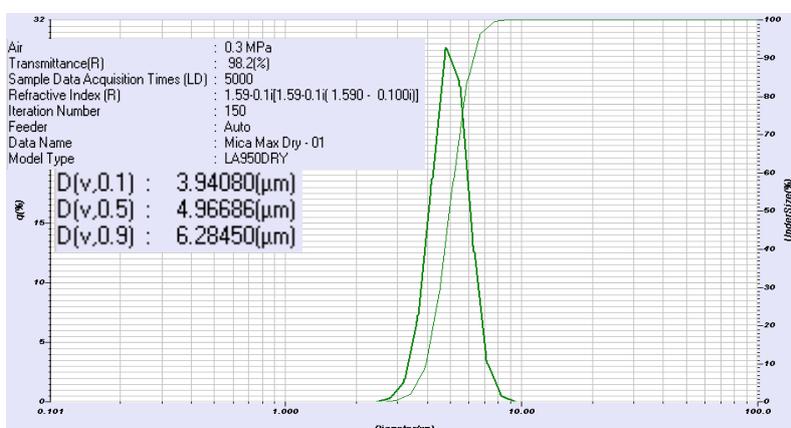


A recently published document by an NGO has suggested that it would be safer for the public if no cosmetic products contained particles below 100nm! This is one of the side where Particle Size Analysis takes place to improve product safety.

Facial Powders



Face powders may include talc, kaolin, iron oxide, zinc oxide, titanium dioxide. In addition to appearance enhancement, face powders can also provide sunscreen protection with the inclusion of strong light scattering components such as zinc oxide. The particle size distribution of these components affects appearance, stability, and sunscreen protection. Foundation provides full coverage while finishing powders can help set the foundation and provide additional specific appearances by reflecting light in flattering colors or diffusing light evenly over the surface of the skin.



The figure shows particle size distribution results for mica, also analyzed as a dry powder using the LA-950 PowderJet feeder. Mica powder is created from the crushed, purified mineral. It is available in a variety of different colors and can add opalescence, sparkle or a matte finish to cosmetic powders. Some mica powders have a shimmer effect that makes them also known as glitter.

Lipstick



The selection of pigments used for lipstick plays an important role in the final appearance. Many pigments used in lipstick are particulate including effect pigments that add silk or pearlescent attributes. Smaller particles create satin and silky effects while larger particle sizes create high luster effects such as sparkle. Pearlescent pigments also add a shine to the appearance of the lipstick.

Horiba LA-960 Capability

A complete measurement of the particle size distribution down to much finer sizes can allow optimization of the paint formulation and of the manufacturing process. The capabilities of current laser diffraction instruments (HORIBA LA-960) extend into the nanometer sizes, allowing characterization of even the finest size components in a product. The same analyzer used for this study is also perfectly suitable for sub-micron pigments such as TiO₂ and carbon black.

Advantages of this technique include speed, ease of use, a wide dynamic range, and the ability to measure both powders and dispersions. The data collected for this study was analyzed on the HORIBA LA-960 Partica laser diffraction particle size analyzer, capable of measuring particle size from 0.01 – 5000 microns.

