



Knowledge-driven Solutions for Dairy & Food Industries

Food Analysis Explained

Particle Sizing

To assess nutritional powders and beverages



The demand for infant formula and other specialty nutritional powders in Asian export markets is forecast to increase steadily” says OzScientific’s Managing Director and product development specialist Dr Ranjan Sharma. “Another big trend in the food industry is the increased consumer interest in plant proteins”.

Particle Sizing is one of the key methods to determine the quality and product characteristics of a nutritional powder. Determining the range of particle size helps the manufacturer to assess their product, for example

- Product consistency from batch to batch
- Solubility and wettability of the product
- Optimising packing density: Particle size distribution determines how much powder can be packed in a bag.
- Comparison with competitor products: Sometimes it is useful to compare the food product with the market leader.

Particle Sizing can also be applied to beverages to understand the droplet size in emulsions such as milk, flavoured milks, plant based milks and other products where phase separation may occur.

How we work

- Commercial
- Confidential
- Agreed project scope
- Client oriented
- Understand timelines

Our facilities

- Pilot plant for small scale concept products
- Product development lab
- Food analysis lab
- Meeting room
- Cold rooms and incubators

Our clients

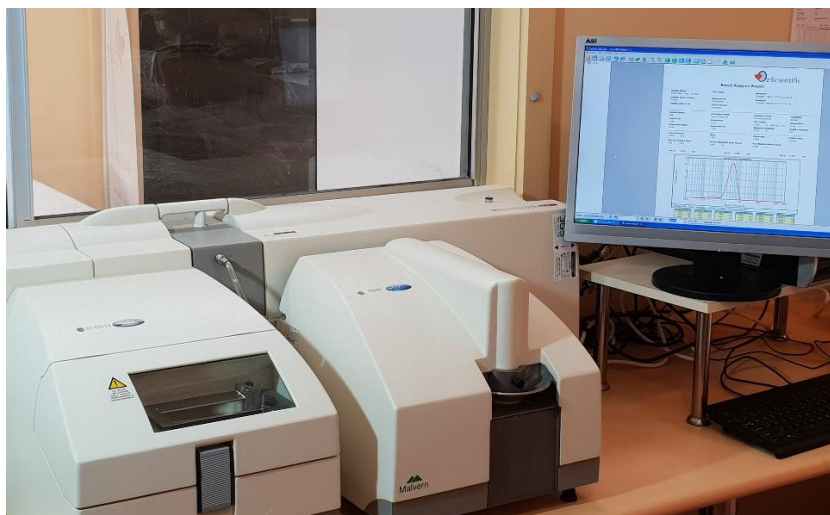
- Dairy companies
- Artisan food manufacturers and start ups
- Beverage companies with novel product or technology ideas
- Nutraceutical manufacturers
- Manufacturers of baked goods and breads
- Processors of proteins from dairy and plants

Contact Us

www.ozscientific.com

+61 (0) 448 996 004

sales@ozscientific.com

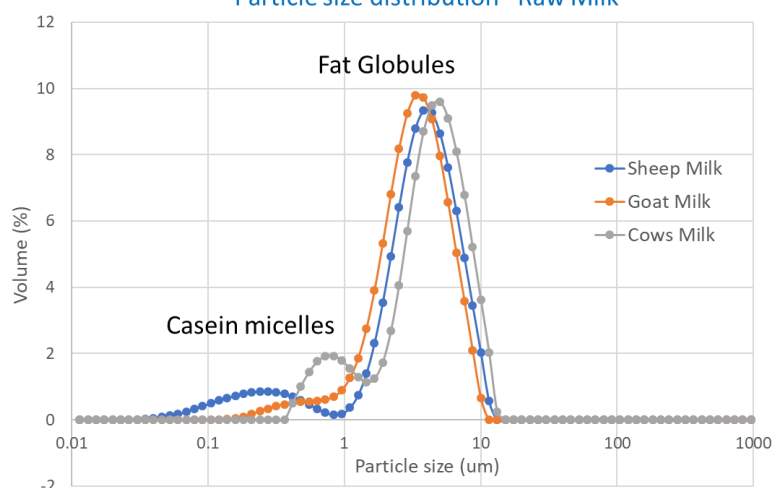


Malvern Mastersizer

Our particle size is used routinely to understand the properties of nutritional powders and beverages. For example to

- Assess powder consistency after an equipment upgrade.
- Asses the stability of beverages, when sedimentation of particles during storage is undesirable.
- Predict the mouthfeel of a beverage.

Particle size distribution - Raw Milk

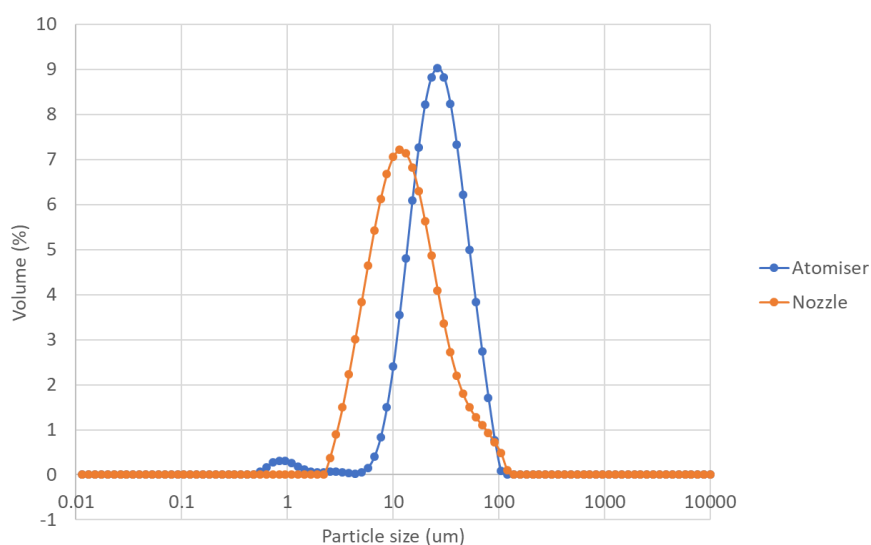


Application Note

Sensory and texture profile

Both texture and mouthfeel are affected by the size of particles in a beverage. For example, fat globule size distribution in dairy and non-dairy emulsions is related to the creaminess of the product. At OzScientific we can help to achieve the right formulations and consistent product properties.

Plant protein powder - effect of type of spray dryer



Application Note

Process optimisation

Different drying technologies influence the particle size range in your powdered product. This in turn influences the solubility and functionality in food processing applications and the behaviour of the protein powders when they are blended in different recipes.