

Measurement of Dry Fertilizer with the Partica LA-960 with PowderJet Dry Feeder

Introduction

Fertilizer comes in many forms depending on its composition and intended final use. These final forms can include dry powders, liquids, suspensions or emulsions. Dry powders or granules are commonly used because they are easy to transport and apply. Measurement of these dry powders can be difficult, as they can be soluble in a wide range of dispersant liquids. Measuring dry offers a range of advantages, besides correlating to the end use form. Accurate measurement is critical to control application rate and how well it sticks to the plants.

Analytical Test Method

RI (particle): 1.50-0.00i

Dispersion pressure: High

Note: This sample was not clumped, so there was no need for pre-treatment to break up clumps. The standard feeder chute was used with a brush to help even the sample flow rate. Feeder speed was set to automatic control to maintain optimum conditions.

Example data

| Median (µm) | | | | |
|-------------|-------|-------|-------|---------|
| C 249 NS | Run 1 | Run 2 | Run 3 | Average |
| Fish Powder | 34.8 | 34.4 | 34.3 | 34.5 |

Results

The high dispersion efficiency of the PowderJet Dry Feeder allowed this fine, sticky powder to be dispersed to primary particle size (verified by microscopy) with little operator involvement.