PowderPro A1

AUTOMATIC MEASUREMENT

- Angle of Repose, Angle of Fall
- Bulk Density, Tapped Density
- Flowability, Floodability
- And More..

COMPLY WITH INTERNATIONAL STANDARDS

- ISO
- Ph. Eur.
- USP

MULTIPLE CONTROLS

- Tablet
- Computer
- Mobile Phone

Powder Characteristics

Measured by

Your 14-in-1 Powder Characteristics Tester

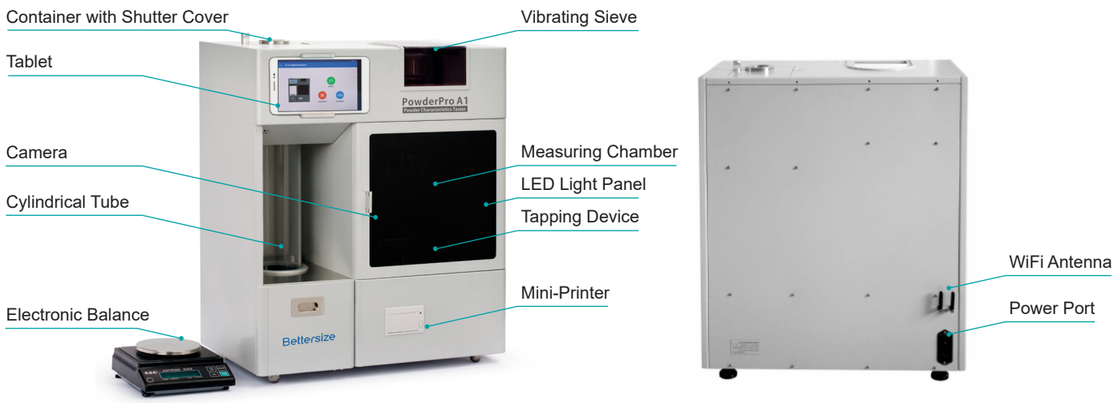
POWDER CHARACTERISTICS

Bettersize

BETTER PARTICLE SIZE SOLUTIONS

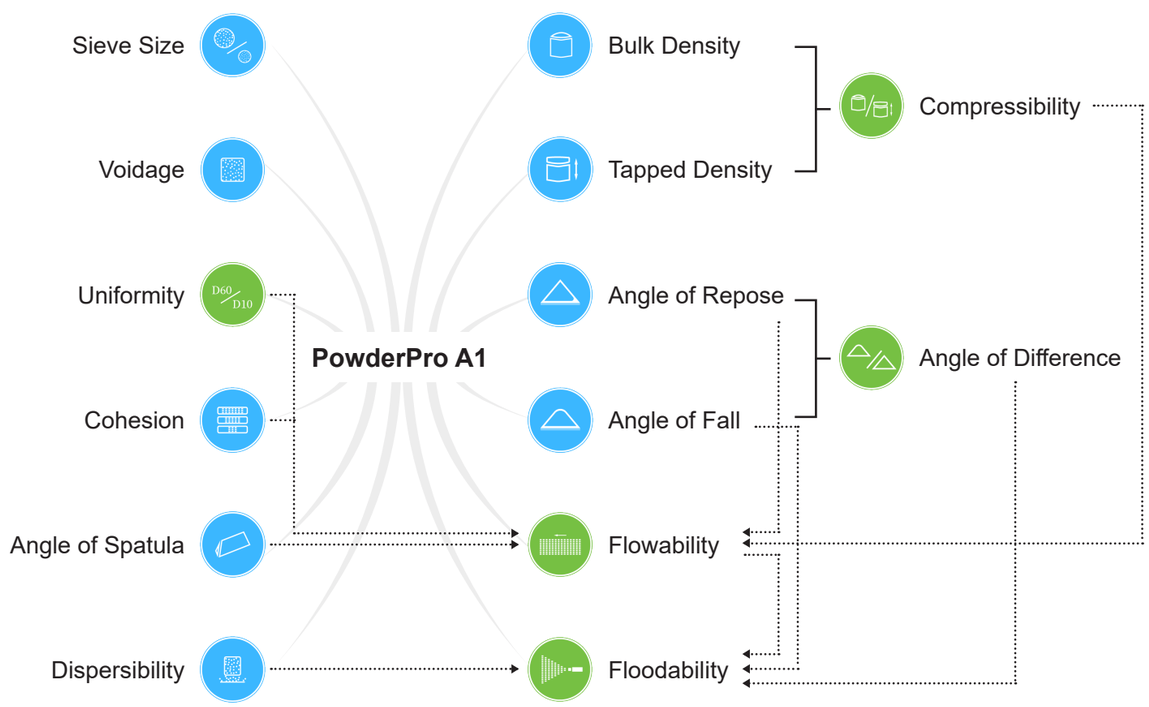
PowderPro A1

INTRODUCTION



The PowderPro A1 integrates many state-of-the-art technologies like the intelligent control via Wi-Fi connection, image processing technology, 3D electromagnetic vibration and rotating tapped density measurement technology. This new type of instrument is able to measure the physical properties of powders in a fast, simple, and accurate way. As a smart powder characteristics analyzer, it is an essential equipment to help you understand and research powder materials.

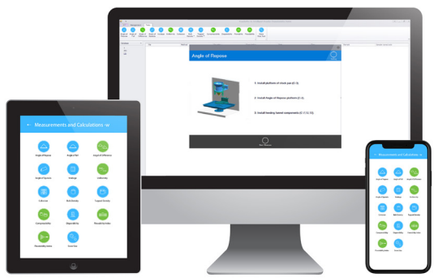
MEASURED & CALCULATED PARAMETERS



Measured Parameters

Calculated Parameters

ONE APP. MULTIPLE DEVICES



Powder Tester App, for smart phones and tablets, is the one and only App in the powder characteristic market. It is designed to offer you the most user-friendly way to measure up to 14 physical properties of your samples. The App is intuitive and easy to operate across different devices, you will find yourself need no user manual to start a measurement.

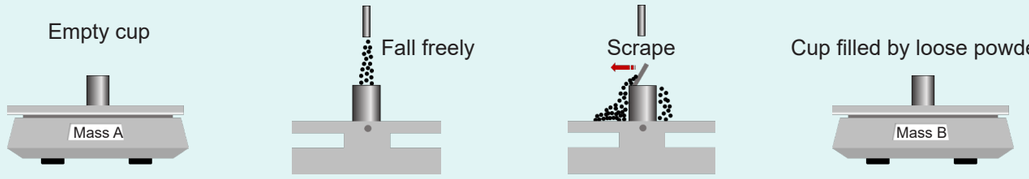
PowderPro software is also available for PC user, and it is as user-friendly as the Powder Tester App.

YOUR 14-IN-1 POWDER CHARACTERISTICS TESTER

PowderPro A1

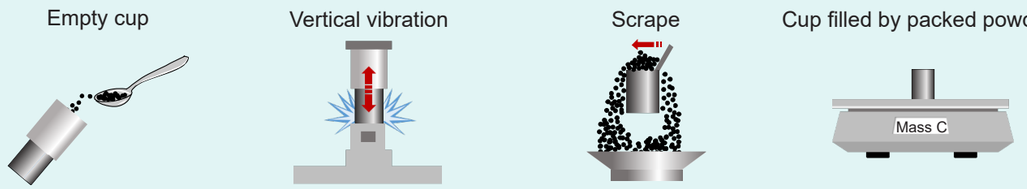
Measurement of Flowability

Bulk Density (ρ_B)



$$Bulk\ Density\ (\rho_B) = \frac{Mass\ B - Mass\ A}{Volume\ of\ the\ Cup}$$

Tapped Density (ρ_T)

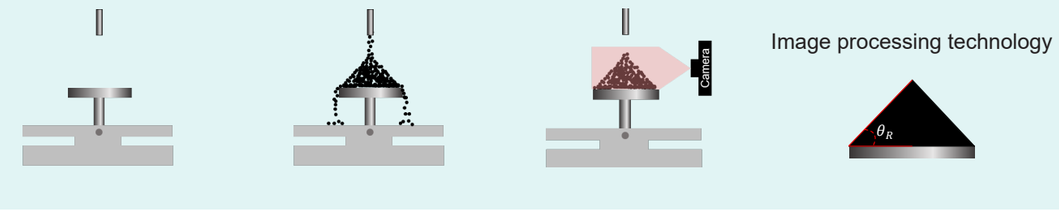


$$Tapped\ Density\ (\rho_T) = \frac{Mass\ C - Mass\ A}{Volume\ of\ the\ Cup}$$

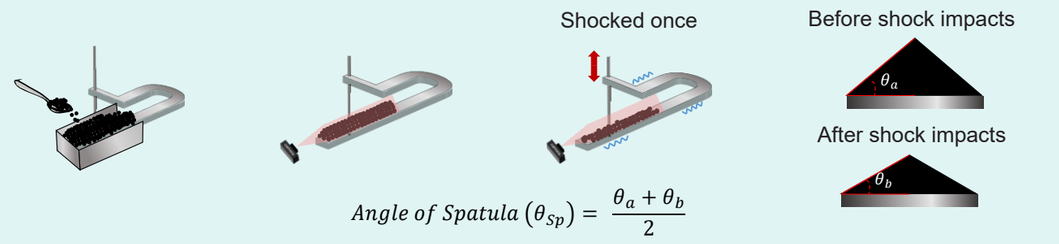
Compressibility (C_p)

$$Compressibility\ (C_p) = \frac{(\rho_T - \rho_B)}{\rho_T} \times 100\%$$

Angle of Repose (θ_R)

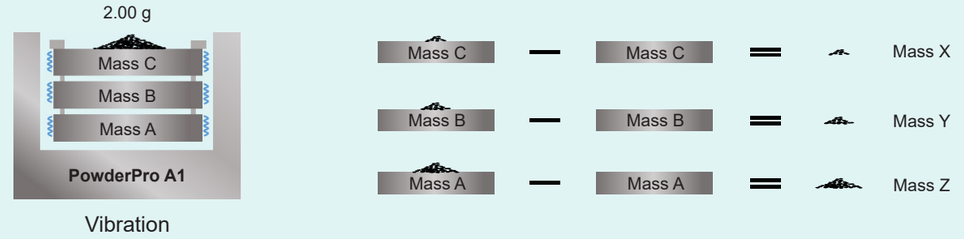


Angle of Spatula (θ_{Sp})



$$Angle\ of\ Spatula\ (\theta_{Sp}) = \frac{\theta_a + \theta_b}{2}$$

Cohesion (C_h)



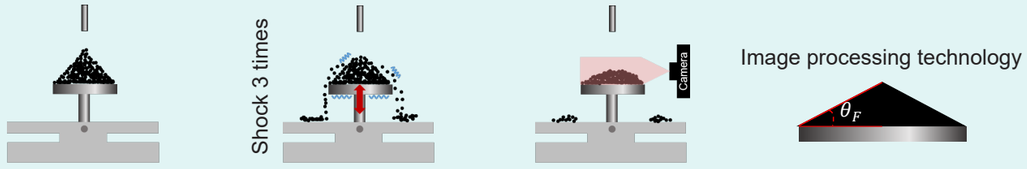
$$Cohesion\ (C_h) = (X \times 5\% + Y \times 3\% + Z \times 1\%) \div 0.1\ g \times 100\%$$

Uniformity (U_f)

$$Uniformity\ (U_f) = \frac{Particle\ size\ at\ the\ 60\ \%\ point\ of\ the\ cumulative,\ undersize\ PSD}{Particle\ size\ at\ the\ 10\ \%\ point\ of\ the\ cumulative,\ undersize\ PSD} = \frac{D60}{D10}$$

Measurement of Floodability

Angle of Fall (θ_F)



Angle of Difference ($\Delta\theta$)

$$Angle\ of\ Difference\ (\Delta\theta) = Angle\ of\ Repose\ (\theta_R) - Angle\ of\ Fall\ (\theta_F)$$

Dispersibility (D_S)

$$Dispersibility\ (D_S) = \frac{10.00\ g - (Mass\ D - Mass\ C)}{10.00\ g} \times 100\%$$

PowderPro A1

APPLICATIONS

FEATURES

Measuring angle with imaging technology

A picture of powder pile is taken by adopting the high-definition Charge Coupled Device (CCD) camera imaging technology. Parameters such as the angle of repose, angle of fall and angle of spatula etc. are obtained with high precision and good repeatability through the unique image processing technology.

Compact design

9 measured items including the angle of repose, angle of fall, angle of spatula, bulk density, tapped density, cohesion, dispersibility, voidage, sieve size and 5 calculated items including the angle of difference, compressibility, uniformity, flowability index, floodability index can be achieved in just one instrument - the PowderPro A1.

Automatic control technology

Fully automatic computer or mobile control ensures easy usage and fast operation. Accurate and reliable results can be obtained with the help of Standard Operating Procedure (SOP).

Data communication

An electronic balance is connected with the instrument and the weight data can be recorded by the control system for further data processing and calculation.

Unique data output

A mini-printer of the PowderPro A1 is convenient and efficient to print the measurement data timely.

SPECIFICATION

Powder	Type	Metallic Materials (Fe, Ni, alloy, etc.)
		Non-metallic Materials ($CaCO_3$, SiO_2, Polymer, etc.)
Parameters	Number	9 (Measured) + 5 (Calculated)
Measuring Angle	Method	Fully Automatic by CCD Camera
	Range	0-90°
Repeatabillty		≤ 3%
Tapping	Frequency	50-300 taps/min (Continuous Adjustment)
	Stroke Height	3 or 14 mm
	Display	Digital Display
Conformity	ISO	ISO 3953: 2011
	USP	USP 32 - NF 27 <616>
	Ph. Eur.	Ph. Eur. 7.0 07 / 2010: 20934E
Control Terminal	Tablet	Android System
	Phone	Android System
	PC	Windows System
Connection		Wi-Fi, LAN
Dimension		600 × 350 × 730 mm (L × W × H)
Weight		42 kg
Power Supply		AC 110/220 V, 50/60 Hz, 230 W

Bettersize

BETTER PARTICLE SIZE SOLUTIONS

www.bettersizeinstruments.com

info@bettersize.com

Bettersize Instruments Ltd.

Address: No. 9, Ganquan Road, Jinquan Industrial Park, Dandong, Liaoning, China

Postcode: 118009

Tel: +86-415-6163800

Fax: +86-415-6170645

Bettersize Inc.

Address: Suite K-2, 3188 Airway Ave, Costa Mesa, CA 92626, United States

Tel: +1 833-699-7493 (SIZE)

Visit Our PowderPro A1 Site:

Visit Our Official Youtube Channel: