

PowderPro A1



COMPLY WITH INTERNATIONAL STANDARDS

Testing procedures for determination of powder characteristics in accordance to ASTM, ISO and European Pharmacopoeia

AUTOMATIC MEASUREMENT

Images are captured with CCD and are processed to obtain the Angle of Repose, Angle of Collapse, Flat Plate Angle and other parameters of powder properties.

MULTIPLE CONTROL

Users can control the instrument with a computer or through the mobile phone and tablet computer application connected via Wi-Fi.

POWDER CHARACTERISTICS BY FULLY AUTOMATIC ANALYSIS OF PHYSICAL PROPERTIES

POWDER CHARACTERISTICS



Characterization of
particles • powders • pores

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AUTOMATIC ANALYSIS OF POWDER CHARACTERISTICS

Powder physical properties are the basic characteristics of powder material and their study has an important practical significance for powder production, processing, packaging, transportation, storage and applications. For example, Angle of Repose and Angle of Collapse should be considered while designing a conical degree of storage silo, Tap and Bulk Densities should be taken into account while designing packing bags and barrels or during the production of tablets out of powder raw materials. The Flowability and Floodability Indices are important when delivering powder with gas in pipelines. In order to obtain scientific, simple, fast and accurate testing results for the powder physical properties the PowderPro A1 was developed. This new type of physical testing instrument integrates many state-of-the-art technologies like computer or mobile control via Wi-Fi connection, image processing technology, 3D electromagnetic material preparation or rotating tap density technology.

PowderPro A1 is a smart powder characteristics tester to measure the physical properties of powders in accordance with various international standards in a scientific, intelligent and accurate way. Therefore PowderPro A1 is an essential tool to understand and research powder materials.



MEASURED & CALCULATED ITEMS

The PowderPro A1 measures fully automatic:

- Angles of Repose and Collapse
- Flat Plate Angle (Angle of Spatula)
- Bulk and Tap Densities
- Dispersibility
- Uniformity and Cohesion

The PowderPro A1 calculates:

- Angle of Difference
- Compressibility
- Voidage
- Flowability and Floodability Indices

- COMPLY WITH ASTM, ISO AND EUROPEAN PHARMACOPUEIA
- PATENTED ROTARY VIBRATION TECHNOLOGY
- FULLY AUTOMATIC MEASUREMENT

KEY BENEFITS

MEASURING ANGLES WITH IMAGE METHOD

A picture of powder pile is taken by adopting the high definition CCD imaging technology. Parameters like Angle of Repose, Angle of Collapse, Flat Plate Angle etc. are obtained in a fast and easy way with high precision and good repeatability through the unique image recognition and processing technology.

AUTOMATIC CONTROL TECHNOLOGY

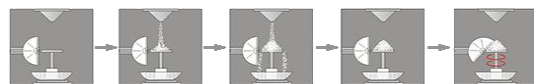
Fully automatic computer or mobile control ensure easy usage and operation. Accurate and reliable test results are obtained by introduction of SOP operation mode for standardised testing process.

DATA COMMUNICATION

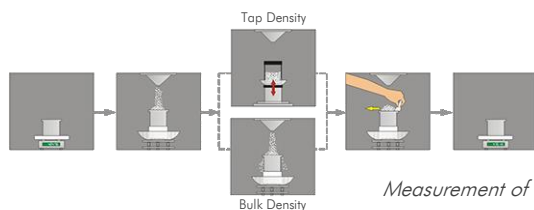
Connect electronic scale with instrument and weighting data can be transmitted automatically to the system for data processing and results calculation.

ADVANCED TECHNOLOGY OF TAP DENSITY

By adopting the perfect combination of variable frequency and rotating vibration technique, Tap Density is obtained. Vibration frequency of 50 to 300 times per minute can be adjusted continuously, vibration amplitude of 3 to 14 mm is selectable. In the process of vibration, measuring cylinder is in state of uniform rotation, which guarantees a flat and level powder surface, improving the accuracy of reading.



Measurement of Angle of Repose



Measurement of Bulk and Tap Densities

APPLICATIONS

Metals & polymers



Glas & Ceramics



Building materials



Graphite & Carbon blacks



Pharmaceutics



Soils & Sediments



SPECIFICATION

Measurement	Fully automatic by CCD camera
Parameters	8 (measured) + 5 (calculated)
Powders	Metallic and non-metallic
Conformity ASTM	ASTM D6393-08/D6393-14
Conformity ISO	ISO 3953: 1993
Conformity USP	USP32-NF27 <616>
Conformity EP	EP7.0 07/2010: 20934E
Repeatability	≤ 3 %
Drop height	3 or 14 mm
Vibration frequency	50 – 300 times per minute (continuous adjustment)
Control terminal	Tablet computer (included), mobile phone or PC
Connection	Wi-Fi
Dimension	600 x 350 x 730 mm (L x W x H)
Weight	42 kg
Power supply	AC 220 V, 50/60 Hz, 230 W