

POWDEREX™

(PATENTED)

ACCELERATED SEGREGATION TESTING, PARTICLE SIZE
DISTRIBUTION, AND FLOW RATE



MAIN APPARATUS



OPTIONAL ACCESSORIES

ACCELERATED SEGREGATION TESTING

of a powder or a powder blend is determined by subjecting the powder to agitation and/or vibration or gravity and taking unit-dose samples at predetermined intervals for chemical content uniformity analysis or particle size analysis.

The unit-dose samples can be compacted into tablets in the sampling die itself by using a patented technique in order to reduce the sampling error, which is critical for obtaining reliable results from this apparatus. The sample tablets can be submitted to the laboratory for content uniformity analysis. The results can be displayed as a table or a graph of relative standard deviation (or coefficient of variation, %) versus time. This test can be repeated at different agitation and vibration intensities.

FLOW RATE

of a powder or a powder blend can be determined by letting the powder flow from the hopper at a pre-set gate opening. The scale records the weights and transmits the data to the PLC. The results will be plotted as amount flown versus time. The effect of agitation and/ or vibration on powder flow consistency may also be studied using this apparatus. Flow Index may be calculated as a ratio of flow rate of the test material and that of a standard.

PARTICLE SIZE DISTRIBUTION

can be determined by using sonic sifter screens which are readily available from the market. The screens are stacked in a screen stack clamp and attached to the vibration device saddle. This clamp replaces the hopper when this test is done. Vibration is used to shake the screens for a pre-determined period of time. After the test is done, the screen stack is simply put on the scale and one screen is removed at a time and "ENTER" is pressed on the touch screen. PLC automatically determines the weight of the material in each screen from the data of the weights of the blank screens previously entered. The cumulative % retained on each screen is plotted against the average mesh size as a frequency curve, histogram, and log-probability graph. The median particle size will also be calculated and displayed.

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GlobePharma POWDEREX™

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Main Apparatus Consists of

- Variable speed agitator
- Variable amplitude and variable frequency electro-magnetic vibration device
- Electronically adjustable gate for the hopper
- Digital scale
- Medium size hopper (up to 2 kg of powder) with agitator blade
- Stainless steel console with PLC and touch screen display
- All the necessary electronic hardware and software
- Stainless steel funnel
- Aluminum screen stack clamp for sonic sifter screens
- One stainless steel split sample die for collecting ten unit-dose samples at each time point along with a tablet ejection cup. Customer to specify the sample size. Dies of additional sample sizes are optional.
- Stainless steel powder collecting tray.
- This apparatus can act as a stand alone unit and also comes with an Ethernet connection to transport the data to a PC and data can be managed using MS Office.

Optional Accessories

- Manual Tablet Compaction Machine (MTCM-I or MTCM-II) for compacting powder samples into tablets in the sampling die itself in order to reduce the sampling error.
- Large Stainless steel hopper to hold up to 12 kg of powder and an agitator blade to study segregation for longer times.

Specifications:

Dimensions- Main Apparatus: 17.0" W x 30.0" D x 44.0" H, Console: 12.5" W x 12.5" D x 9.0" H, Cart: 30.0" W x 27.0" D x 24.0" H **Net weight-** Main Apparatus: 200 lb (94 kg), Console: 15 lb (7 kg), Cart: 120 lb (54 kg) **Electrical:** 110 V / 60 Hz or 220 V / 50 Hz, 1 Phase

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