



## Pharmaceutical Sciences

### FACTSHEET



## Automated Robotic Powder Dispensing System

### Potential and Opportunity

At our GMP manufacturing facilities in Kansas City, MO, our AutoDose's Powdernium™ can significantly improve your drug development timelines and decision-making process by accelerating your drug to First-in-Man studies. The system offers great flexibility by dispensing drug substance directly into capsules, vials or bottles. It also minimizes early formulation development, drastically decreases the amount of drug substance needed to get to First-in-Man, and reduces analytical development costs. Aptuit customers can access this technology within the security of Aptuit's GMP facility located in Kansas City, Missouri.

### The Technology

The AutoDose's Powdernium™ MTM Unit is a precision computer controlled robot for weighing powders. It has a typical dispensing range of 2 mg to 250 mgs into capsules (size 4 – 00), 2 mg to 5 gms for scintillation vials or bottles. The combination of robotics with software automatically controls the weighing of a variety of powders ensuring accuracy up to 0.1 mg.

### Autodose Dispensing Data

Ingredient	Target Dispensing Weight	Acceptable Tolerance Setting*	Mean	Range	SD	RSD
Colloidal Silicon Dioxide	10mg	± 1%	9.9mg	9.9 – 10.0mg	0.03mg	0.34%
Magnesium Stearate	25mg	± 2.5%	25.0mg	24.4 – 25.5mg	0.38mg	1.5%
Microcrystalline Cellulose	100mg	± 5%	97.9mg	95.2 – 102.8mg	2.4mg	2.5%

This technology expedites deliverables and provides reduced costs for repetitive and tedious hand-filling and weighing of powders.

\*Note: Tolerance limits were set at those listed in the table; however, different tolerance limits can be utilized.

### The Benefits

- Accelerates timelines and evaluation of NCEs for First-in-Man studies
- Minimizes drug substance needed for First-in-Man studies
- Provides consistent and reliable weighing results
- Minimizes formulation development and cost
- Provides for additional dose strengths with minimal additional cost
- Minimizes analytical development and cost
- May eliminate the need to develop and transfer an analytical cleaning method
- Reduces stability timelines and cost

### Additional Aptuit Capabilities

Aptuit offers a comprehensive suite of drug development services that range from candidate selection through to market, including consultancy services, API development and manufacture, preclinical and clinical technologies, pharmaceutical services, large and small scale manufacturing, IVRS, and clinical packaging and logistics, across a wide range of compounds, dosage forms and delivery systems.

For information about Aptuit's services, please call or email:

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**Engineering a better drug development process.**