



BioDot DisPo™ Powder Dispensers

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DisPo™ Technology

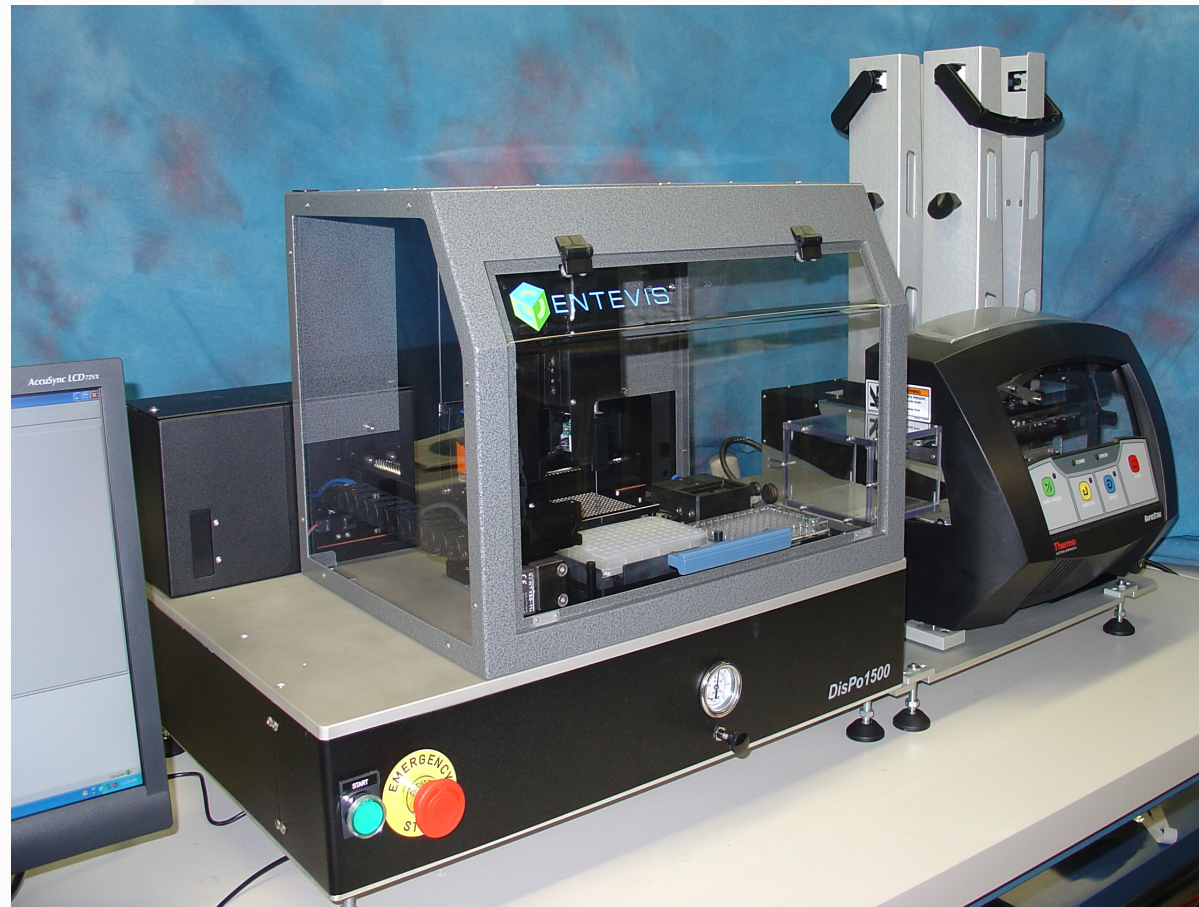
The BioDot DisPo powder dispensing system was designed as a sample preparation tool to assist researchers in the transfer of small masses of powders from source to destination. This technology works via a positive displacement approach and operates in a fashion similar to a biopsy tool. The probe is plunged into the powder bed and forms a “pellet” which is then transferred to the destination and dispensed via a plunger. The issue of transferring such small masses of material has been a problem that has plagued researchers and most resort to the cumbersome and time consuming method of using a spatula and a microbalance to literally “shake” the proper amount of material out onto the balance pan. This method typically leads to very high CV’s. Whereas the DisPo approach provides CV’s of less than 5% and in the 2% range for materials that compact particularly well. The advantages of the DisPo approach when dealing with materials that are valuable in the sense that they are rare or costly become apparent quite quickly when compared to CV’s of 20% to 30% with the spatula method. While there are other approaches available DisPo has advantages of being able to dispense these smaller masses in a system that requires no connection to vacuum pumps or mechanically operated auger devices.

DisPo Platforms

The DisPo comes in two versions

1. Automated DisPo – This system utilizes a robotic overhead Gantry system that is very similar to automated liquid dispensing platforms. The difference is that these fully automated units are designed with wash stations and ionization features that deal specifically with the unique requirements of powder dispensing. They also contain a fully integrated micro balance. They are ideal for high throughput applications like formatting a group of microplates.
2. The DisPo Hand held powder dispenser – These units are designed to work with a series of 4 removable probes with different bores to accommodate masses in the ranges of 500 μ g to 100mg. These units are very similar to a pipettor and are adjustable in regards to the height of the plunger which is the feature that allows the researcher to zero in on a particular mass via the volume aspirated. The removable probes provide for easy cleaning and the barrel comes in a foam fitted case (kit) with all 4 probes.

Example of DisPo Automated Unit with Stacker (DisPo 1500)



DisPo Auto Deck Configurations

➤ **DisPo 1500**

Room for 2 microplates on deck.

➤ **DisPo 3400**

Room for 10 microplates on deck

➤ **DisPo 6000**

Room for 20 microplates on deck.

Note: Deck configuration includes room for wash station and source containers. Microplates used for reference only. Most source and destination containers will work.

DisPo Auto Features

- ✓ Full Ionization Capabilities
- ✓ Wash Station using Reagent and Air Burst
- ✓ Optional Integral Micro Balance
- ✓ Ranges of Dispense from 500µg to 100mg
- ✓ Optional Plate Stackers
- ✓ Series of removable probes. (Probes can be used in Hand Held unit also.)
- ✓ Custom Mass Probes Available
- ✓ Longer probes for taller source and destination containers available.

BioDot DisPo Hand Held Dispensers

- ✓ Designed for Low Throughput Applications requiring multiple dispenses of compounds.
- ✓ Adjustable to allow for full range of 500µg to 100mg using a series of 4 probes.
- ✓ Removable probes allow for easy cleaning.
- ✓ Sold in kit with foam fitted case including handle and the series of 4 probes.
- ✓ Probes available separately.

DisPo MAR series Hand Held Powder Dispenser



Common DisPo Handle

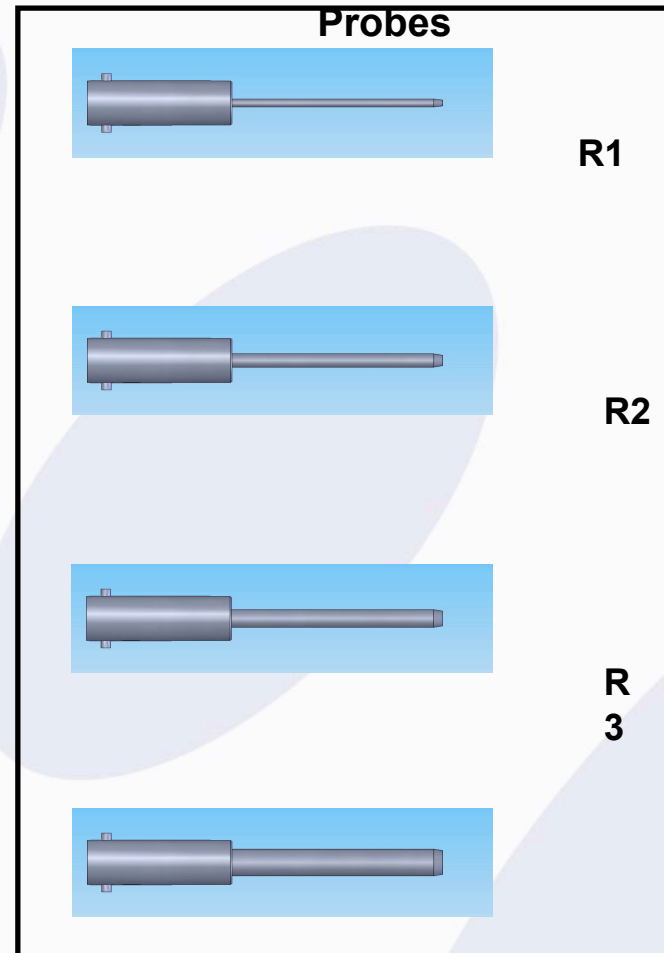
Hand held version of the DisPo Automated Powder Dispenser. With the 4 probes listed you have a dispensing range of from 500ug to 100mg. These units are adjustable and the range of probes offer flexibility and easy cleaning. The probes are made of surgical grade stainless steel.

- R1 Probe – 500ug to 2mg*
- R2 Probe – 1mg to 5mg*
- R3 Probe – 5mg to 10 mg*
- R5 Probe – 15mg to 100mg*

Available in a kit with Handle, all 4 probes, and carrying case. Probes Sold Separately.

Interchangeable

Probes



R1

R2

R3

R5

In Summary

My purpose in this brief presentation is to give you a basic appreciation for the capabilities of our new DisPo Powder Dispensing Technology. The DisPo has been adopted by various organizations working in pharmaceutical, agricultural, and diagnostic R&D. Some of these organizations include Merck, Bristol Meyers Squibb, BASF, Pioneer Hi Bred, Eli Lilly, Syngenta, Monsanto, Novartis, Roche, Abbott, Elan Pharmaceuticals, and Dow Agro Sciences. It is a sample preparation tool that provides an easy solution to the issue of transferring low masses of powders. We feel that it is simple and elegant in it's design.

I hope that we can schedule a time in the near future to meet with you personally to make a more complete presentation regarding the specifications, technical aspects, and performance data associated with this technology generally, and specifically as it relates to different applications.

Chuck Adams

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About BioDot

BioDot is a 16 year old privately held company located in Irvine, CA. We have branch offices in the UK and China and a global network of distributors. We manufacture and sell production and R&D equipment to manufacturers of diagnostic tests. These products include robotic dispensers, cutters, laminators, and packaging equipment. You can view our product offering at www.biodot.com.