

Application-specific Dispenser Heads

Microdrop dispenser heads with a storage volume of e.g. 4ml enlarge the field of application if a bigger storage volume is needed like coating of bigger sized areas or large-scale production. These head types are designed for a wide viscosity range. Referring to the inner nozzle diameter of the dispenser head single droplets between 30pl and 380pl will be generated. Aqueous solutions (e.g. proteins, DNS, cells) as well as polymers dissolved in different solvents (e.g. THF, Toluene, Xylol) can be handled by these inkjet based dispenser heads.



For dispensing volumes up to nl-range

Dispensing of volumes from nl to μ l-range at viscosities of 1 to 2000mPa are covered by the Nanojet Piezovalve. This makes the device very useful for production of glucose test strips or other purposes.

Microdrop Services

In addition to the comprehensive product range microdrop Technologies provides several services as lab tests, customized development and small-series production. The competences of the microdrop team provide an effective solution in a short time frame.



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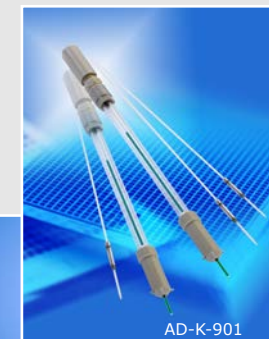
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Microdispensing in Life-Science Applications by AUTODROP PIPETTES

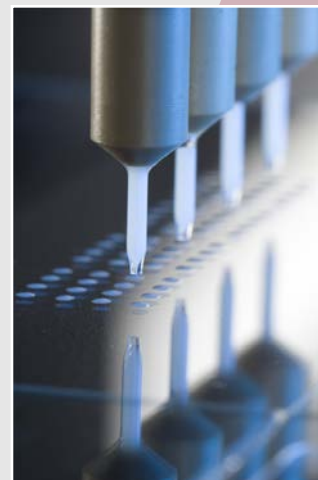
YOUR ADVANTAGES

- + Dosing volume: 20-300pl
- + Dosing accuracy: < 1%
- + Liquid reservoir min. 25 μ l, max. 37 μ l
- + Dead volume max. 14 μ l
- + Filling level visible
- + Easy refilling and cleaning
- + No disposable parts
- + Contactless dispensing
- + Chemical resistance



APPLICATION EXAMPLES

- High Throughput Screening & ADME/Tox
- Biochip Production (Micro Arrays)
- Biosensor & Point of Care (POC) Medical Devices Manufacturing
- Coating of Implants
- LOC Integration & Packing
- Systems-in-Package & Systems-in-Foil
- Material Research



Autodrop Pipettes



AD-K-501

Aspiration of liquid and deposition of small amounts in the range of picoliter is possible by use of the Autodrop Pipettes. The Drop on Demand pipettes are used in applications like high throughput screening or biochip production where different liquid samples need to be handled. The design of the pipettes guarantees the operation with very small dead volumes of max. 14µl. The pipettes made of glass allow automated cleaning avoiding cross contamination. Even the possibility of working with multiple pipettes simultaneously is given.

MATERIALS

The Autodrop pipettes are designed to handle aqueous solutions, organic solvents (e.g. DMSO, Glycol, DMF) as well as solved polymers (e.g. Toluene, Xylol).

Autodrop Compact System

The Printing System Autodrop Compact is a versatile tool for inkjet printing and material deposition. In combination with microdrop dispenser heads or pipettes the Autodrop Compact enables an easy start for using the inkjet technology in numerous fields. Free designed pattern like curves and lines are possible. Additionally dxf-format are importable.

ADVANTAGES

- Contactless dispensing in picoliter range
- Large viscosity range
- Tabletop unit
- Software controlled 3-axis system
- High flexibility
- Material resistance
- Easy refilling and cleaning
- No disposable parts
- No follow on costs



Application examples



Life Science

- drugs, DNA, proteins, enzymes, cells, coating, conductive tracks



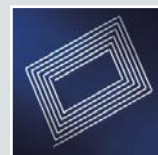
Medical Engeneering

- coating of implants, tissue engineering, high-throughput screening



Polymer Research

- functional (block co) polymers, coatings, suspensions, dispersions, photonic crystals, combinatorial experimentation



Printed Electronics

- nano particles (Ag, Au, ITO, etc.), conductive adhesives, conducting polymers, RFID tags