Advantages

- Fast liquid change
- Contactless dispensing
- Single droplet volumes from 20 pl to 180 pl *
- Variation of dispensed volume approx. 1% *
- Very small storage volume, depending on pipette type: 25 μl up to 37 μl
- Very small dead volume of 12 μl - 14 μl
- Droplet rate 1 ... 2000 Hz * (provided by a standard driver electronics)
- Droplet velocity approx. 2 m/s *
- It is possible to dispense fluids with a viscosity up to about 20 mPas *

Features

- The inner nozzle diameter of the Autodrop Pipettes strongly influences the droplet size.
- The relation between inner nozzle diameter, droplet size and droplet volume is:

<table>
<thead>
<tr>
<th>inner nozzle diameter</th>
<th>droplet size in flight *</th>
<th>droplet volume *</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 μm</td>
<td>35 μm</td>
<td>20 pl</td>
</tr>
<tr>
<td>50 μm</td>
<td>55 μm</td>
<td>90 pl</td>
</tr>
<tr>
<td>70 μm</td>
<td>70 μm</td>
<td>180 pl</td>
</tr>
</tbody>
</table>

* depending on the fluid used

- The spot size on the substrate depends on the wetting behaviour between the fluid and the surface material.

- microdrop Technologies GmbH are specialized in customized solutions. Please ask for application-optimized dispenser heads!

By using up to 8x pipettes on one of our Autodrop positioning systems it will be possible to aspirate liquids from microtiterplates of up to 9 mm depth due to the arrangement of the parallel holders and the long designed glass capillary. The nozzle tip diameter of 1mm even enables a dipping in 384-well plates.
Autodrop Pipettes

**AD-K-901**

**Autodrop Pipette, storage volume 37 μl**

- **Viscosity range:** 0.4 ... 20 mPas *
- **Standard inner nozzle diameter:** 30 μm, 50 μm, 70 μm
- **Droplet volume:** 20 ... 180 pl *
- **Variation of dispensed volume:** < 1% *
- **Droplet velocity:** 2 m/s *
- **Standard drop rate:** 1 ... 2000 Hz *
- **Life time:** > 100 billion cycles
- **Storage volume:** approx. 37 μl
- **Dead volume:** approx. 14 μl
- **Materials in contact with fluid:** glass (PEEK, FEP, ETFE, PTFE)**

**Dimensions:**
- Pipette AD-K-901: ø 8.5 mm / l 140 mm
- Holder with electrical contacts AD-H-901: w 20 mm / h 138 mm / d 31 mm
- Pipette with holder: w 20 mm / h 148 mm / d 31 mm

**AD-KH-501-L6**

**Autodrop Pipette, storage volume 25 μl**

- **Viscosity range:** 0.4 ... 20 mPas *
- **Standard inner nozzle diameter:** 30 μm, 50 μm, 70 μm
- **Droplet volume:** 20 ... 180 pl *
- **Variation of dispensed volume:** < 1% *
- **Droplet velocity:** 2 m/s *
- **Standard drop rate:** 1 ... 2000 Hz *
- **Life time:** > 100 billion cycles
- **Storage volume:** approx. 25 μl
- **Dead volume:** approx. 12 μl
- **Materials in contact with fluid:** glass

**Dimensions:**
- Pipette AD-KH-501-L6: ø 7 mm / l 71.9 mm
- Holder with electrical contacts AD-KH-501-L6: w 8.5 mm / h 45 mm / d 29 mm
- Pipette with holder: w 8.5 mm / h 97 mm / d 29 mm

**AD-KH-501**

**SPECIAL Autodrop Pipette as replacement tips for Perkin Elmer Piezorray™, storage volume 25 μl**

- **Viscosity range:** 0.4 ... 20 mPas *
- **Standard inner nozzle diameter:** 70 μm
- **Droplet volume:** 180 pl *
- **Variation of dispensed volume:** < 1% *
- **Droplet velocity:** 2 m/s *
- **Standard drop rate:** 1 ... 2000 Hz *
- **Life time:** > 100 billion cycles
- **Storage volume:** approx. 25 μl
- **Dead volume:** approx. 12 μl
- **Materials in contact with fluid:** glass

**Dimensions:**
- Pipette AD-KH-501: ø 7 mm / l 71.9 mm
- Holder with electrical contacts AD-KH-501: w 8.5 mm / h 45 mm / d 29 mm
- Pipette with holder: w 8.5 mm / h 97 mm / d 29 mm

* depending on the fluid used
** only by using the tube as reservoir or for filling