



microman[®]

Ergonomic Pipetting for Problem Liquids!

POSITIVE DISPLACEMENT PIPETTE

HIGHEST PRECISION WITH PROBLEM LIQUIDS

USER-FRIENDLY

NO RISK OF CONTAMINATION

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HUBERLAB.
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ADVANCED ERGONOMIC DESIGN TO INCREASE PIPETTE PERFORMANCE

The MICROMAN® E delivers the highest performance to scientists who need to pipette problem liquids thanks to:

EASE OF USE:

- **Patented QuickSnap** feature automatically fixes the disposable Capillary Piston (CP), thus eliminating the need to fit the CP to the pipette before each use and minimizing possible errors due to additional pipetting moves
- **Volume control button** prevents accidental volume changes

IMPROVED ERGONOMIC DESIGN:



INTRODUCING THE MICROMAN® E, A NOVEL PIPETTE LINE FOR PROBLEM LIQUIDS

The MICROMAN® E is created specifically for scientists who work with viscous, volatile, corrosive, hot or cold problem liquids.

Delivering the highest ease-of-use and control through an **improved ergonomic design**, a **patented QuickSnap** feature and a **volume control button**, the MICROMAN® E helps you counter your common pipette problems that may affect accuracy and precision when working with problem liquids.

MICROMAN® E is available in **6 models** covering a volume range from **1 µL to 1000 µL** for many applications.

| MAIN APPLICATIONS | MAIN PROTOCOLS | PROBLEM LIQUIDS | |
|---|---|---|---|
| | | TYPES | EXAMPLES |
| Molecular biology | PCR/qPCR, cloning | Viscous, cold and contaminating | DNA fragments, buffers, enzyme solution, plasmids |
| Chemistry, petrochemistry | HPLC, LC-MS | Volatile, hazardous | Alcohol, solvents, glue, oil, organic solvents |
| Point of care diagnostic | Quantitative immunoassays | Viscous, cold and hazardous | Serum, whole blood, plasma |
| Forensic | Liquids search in post mortem blood, biological control | Volatile, viscous and contaminant liquids | DNA fragments, body fluids, solvents |
| Cosmetic and pharmaceutical formulation | Bacteriology control, cream transfers, takings and dilution of solvents and high viscosity finished product | Viscous, volatile | Creams, shampoo, drugs, gel |
| Environment, quality control | Microbiological control and other biological tests | Corrosive and volatile | Pesticides, waste waters |
| Food quality control | Microbiological control and other biological tests | High viscosity, hot | Syrup, milk, juices |



THE HIGHEST PRECISION WITH VISCOUS, VOLATILE, HOT OR COLD LIQUIDS

As a positive displacement pipette, the MICROMAN® E with its CPs solves common pipetting problems by isolating the aspirated sample from the inside part of the pipette, eliminating the air space between the piston and sample, to offer the highest precision for pipetting problem liquids.

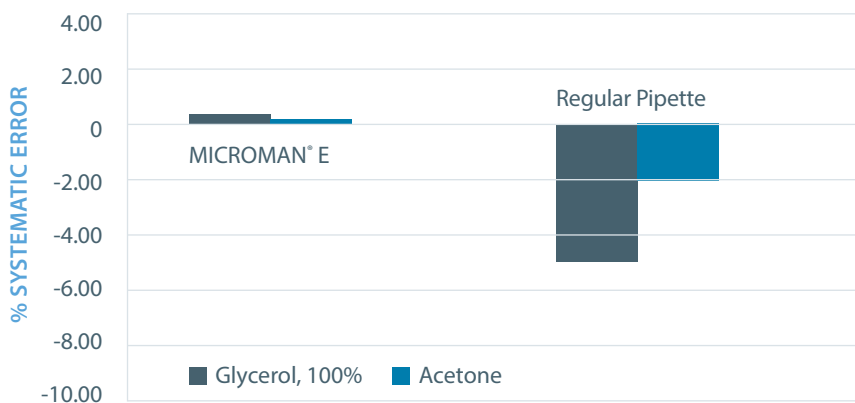
1. EXPERIENCE COMPLETE AND RAPID PIPETTING OF VISCOUS AND DENSE SAMPLES.

Problem avoided: With air displacement pipettes, viscous and dense liquids are difficult to aspirate and can also stick to the tip when dispensing.

2. NO LEAKS WHEN PIPETTING VOLATILE HIGH VAPOR PRESSURE LIQUIDS.

Problem avoided: When an organic solvent is used with an air-displacement pipette, leaks may occur due to the difference between the vapor pressure of the solvent and the pressure of the air cushion between the tip and the sample.

PIPETTING 100 μ L OF VISCOUS OR VOLATILE LIQUIDS

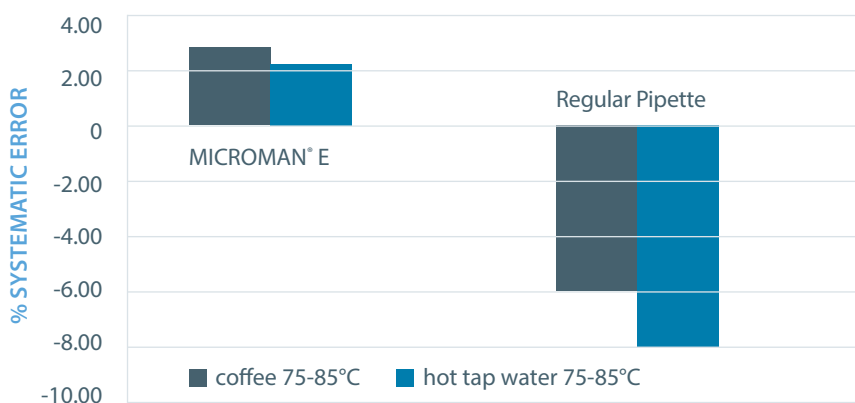


Average of 10 measurements, no pre-wetting

3. DELIVER THE RIGHT VOLUME USING ANY SAMPLE TEMPERATURE.

Problem avoided: Cold liquids tend to be delivered in excess quantity while a warm liquid tends to be under-delivered.

PIPETTING 100 μ L OF HOT LIQUIDS



Average of 10 measurements, no pre-wetting

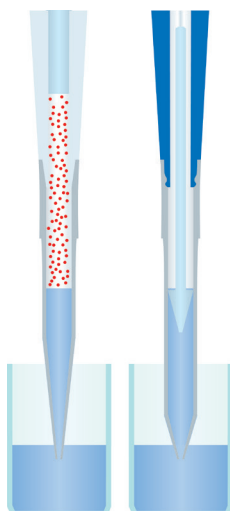
NO RISK OF CONTAMINATION

MICROMAN® E and CPs are the strongest barrier against residual sample carryover, aerosol contamination, and cross-contamination when pipetting liquids such as DNA fragments, PCR templates, enzyme solutions and buffers.

REGULAR AIR DISPLACEMENT PIPETTE

Unprotected air space:

- Vapor contamination
- Aerosol contamination



MICROMAN® E POSITIVE DISPLACEMENT PIPETTE

No air space

With the MICROMAN® E, you protect your pipette, your sample and yourself in three ways:

1. **User protection:** With a built-in ejector, there is no contact between the sample and the contaminated disposable capillary with the user's hand. This is especially important when dealing with infectious solutions and radiolabeled components.
2. **Sample protection:** Within molecular biology and forensic sciences, any trace of a previous sample can interfere with PCR or microbiological techniques and lead to erroneous results. Disposable capillaries and pistons provide absolute protection against cross-contamination.
3. **Pipette protection:** The pipette's shaft is never in contact with corrosive vapors or liquids, such as acids, bases, solvents and radiolabeled components.



TRUSTED RESULTS – GUARANTEED

MICROMAN® E's highest level of accuracy and precision is achieved by skillful engineering based on over 30 years of experience with positive displacement pipettes. Today MICROMAN® E has become the international gold standard in pipetting for viscous, volatile, hazardous, contaminating, hot or cold liquids.

MAXIMUM PERMISSIBLE ERRORS

| MODEL (Reference) | VOLUME (μL) | | GILSON | | ISO 8655 | |
|----------------------------|-----------------------------|------|------------------------------------|--------------------------------|------------------------------------|--------------------------------|
| | | | Systematic error (μL) | Random error (μL) | Systematic error (μL) | Random error (μL) |
| M10E (FD10001) | Min. | 1 | ± 0.09 | ≤ 0.03 | ± 0.2 | ≤ 0.1 |
| | | 5 | ± 0.10 | ≤ 0.03 | ± 0.2 | ≤ 0.1 |
| | Max. | 10 | ± 0.15 | ≤ 0.06 | ± 0.2 | ≤ 0.1 |
| M25E (FD10002) | Min. | 3 | ± 0.25 | ≤ 0.08 | ± 0.7 | ≤ 0.3 |
| | | 10 | ± 0.27 | ≤ 0.08 | ± 0.7 | ≤ 0.3 |
| | Max. | 25 | ± 0.30 | ≤ 0.10 | ± 0.7 | ≤ 0.3 |
| M50E (FD10003) | Min. | 20 | ± 0.34 | ≤ 0.20 | ± 0.7 | ≤ 0.3 |
| | Max. | 50 | ± 0.70 | ≤ 0.30 | ± 0.7 | ≤ 0.3 |
| M100E (FD10004) | Min. | 10 | ± 0.50 | ≤ 0.20 | ± 1.5 | ≤ 0.6 |
| | | 50 | ± 0.75 | ≤ 0.30 | ± 1.5 | ≤ 0.6 |
| | Max. | 100 | ± 1.00 | ≤ 0.40 | ± 1.5 | ≤ 0.6 |
| M250E (FD10005) | Min. | 50 | ± 1.50 | ≤ 0.30 | ± 6 | ≤ 2.0 |
| | | 100 | ± 1.70 | ≤ 0.30 | ± 6 | ≤ 2.0 |
| | Max. | 250 | ± 2.50 | ≤ 0.50 | ± 6 | ≤ 2.0 |
| M1000E (FD10006) | Min. | 100 | ± 3.0 | ≤ 1.6 | ± 12 | ≤ 4.0 |
| | | 500 | ± 5.0 | ≤ 2.5 | ± 12 | ≤ 4.0 |
| | Max. | 1000 | ± 8.0 | ≤ 4.0 | ± 12 | ≤ 4.0 |

MICROMAN® CPs

- Large volume range from 1 μL to 1000 μL with six different models.
- No need for calibration when you change the CP.
- Disposable CP, capillaries made of pure polypropylene.
- Free of dyes, no risk or contamination from the CP's components.
- Slim CP fits in even the narrowest and deepest tubes.

| MICROMAN MODEL | RELATED CP | VOLUME RANGE (μL) | ORDERING REFERENCE | QUANTITY PER BOX | AVAILABLE IN TIPACK |
|----------------|------------|--------------------------------|--------------------|------------------|---------------------|
| M10E | CP10 | 1 - 10 | F148412 | 192 | ✓ |
| | CP10 | | F148312 | 960 | ✓ |
| | CP10ST* | | F148413 | 192 | ✓ |
| | CP10ST* | | F148313 | 960 | ✓ |
| M25E | CP25 | 3 - 25 | F148012 | 960 | ✓ |
| | CP25 | | F148112 | 200 | - |
| | CP25ST* | | F148712 | 576 | ✓ |
| M50E | CP50 | 20 - 50 | F148013 | 960 | ✓ |
| | CP50 | | F148113 | 200 | - |
| | CP50ST* | | F148713 | 576 | ✓ |
| M100E | CP100 | 10 - 100 | F148414 | 192 | ✓ |
| | CP100 | | F148314 | 960 | ✓ |
| | CP100ST* | | F148415 | 192 | ✓ |
| | CP100ST* | | F148315 | 960 | ✓ |
| M250E | CP250 | 50 - 250 | F148014 | 960 | ✓ |
| | CP250 | | F148114 | 200 | - |
| | CP250ST* | | F148714 | 576 | ✓ |
| M1000E | CP1000 | 100 - 1000 | F148560 | 182 | ✓ |
| | CP1000ST* | | F148180 | 182 | ✓ |

*ST=Sterilized