

Fine tuning

Manual Microinjectors CellTram Air/Oil/vario

eppendorf

Precise, versatile ...

CellTram Microinjector

CellTram Air, CellTram Oil and CellTram vario— manual microinjectors for pressure control, manual microinjection, and liquid dispensing—are designed with special emphasis on optimal ergonomics, operational comfort, and high precision. All models answering the needs for simple operation and trouble-free reliability.

Our three manual microinjectors suit all applications and personal working techniques, satisfying even the most demanding requirements:

All CellTram models offer the following advantages:

- High-precision pressure setting
- Maintenance-free piston/cylinder system
- Large, ergonomic dials
- Stable, nonslip base plate
- Universal capillary holder for mounting onto all common micromanipulators

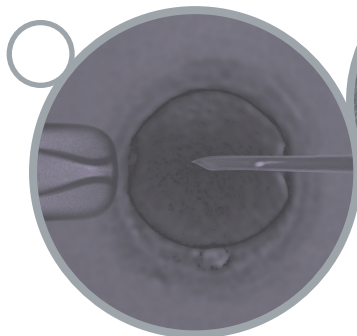
CellTram microinjectors are the ideal complement to your Eppendorf workstation, yet they also fit into all other common micromanipulator workstations.

- CellTram Air works with air, making it ideal for holding suspension cells. Its selectable operation point makes it perfect for microinjection of aqueous solutions.

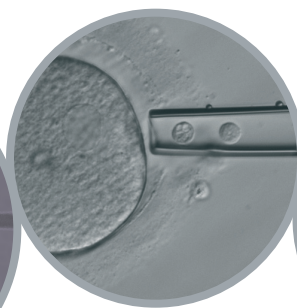
- CellTram Oil works with oil and can be used for a wide range of microtransfer techniques. It is also perfectly suited for manual microinjection, e.g., into plant cells.

- CellTram vario is also an oil-filled system that enables flawless performance of highly sophisticated applications, including ICSI, ES cell transfer into blastocysts, nuclear transfer, blastomere biopsy and polar body biopsy, as well as experiments in developmental biology.

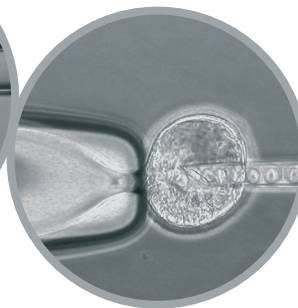
Examples for applications



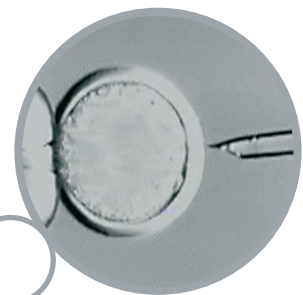
Intracytoplasmic sperm injection (ICSI)



Biopsy techniques including preimplantation genetic diagnostics (PGD) and polar body biopsy



ES cell transfer for the production of transgenic animals



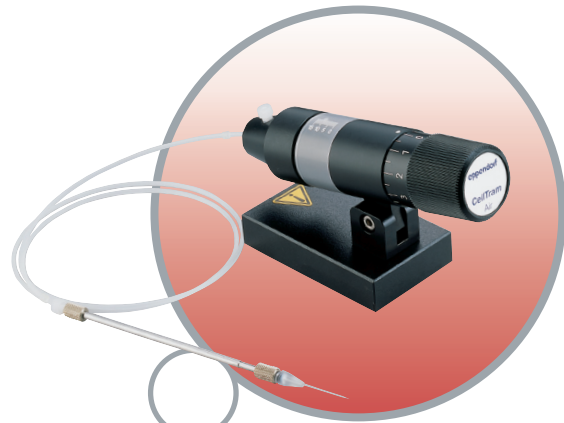
Nuclear transfer

... and easy to operate

Precision in detail

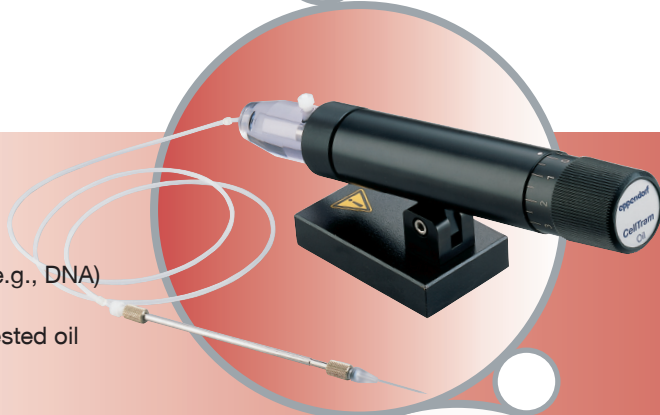
Additional product features of CellTram Air

- Optimized resolution for holding suspension cells
- Work point can be set easily via pressure-compensation valve
- Very easy to use



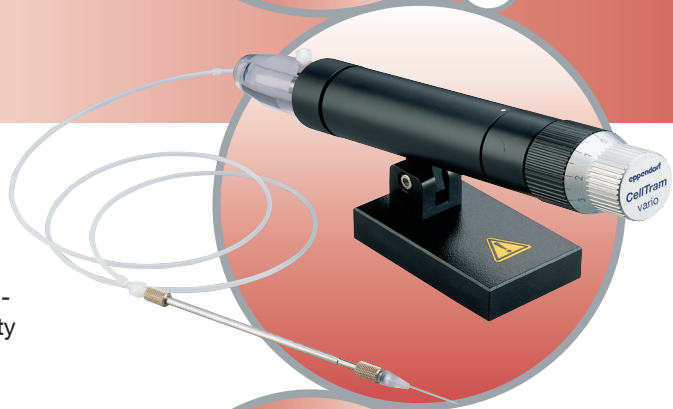
Additional product features of CellTram Oil

- Maximum pressure of 20,000 hPa
- Suitable for manual microinjection of liquids (e.g., DNA)
- QuickValve system for simple, rapid filling
- Biological compatibility ensured by embryo-tested oil



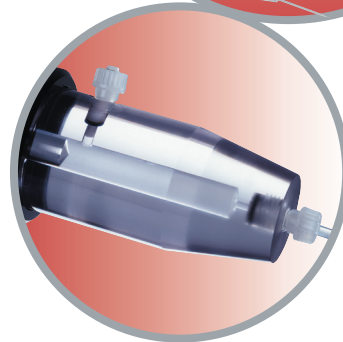
Additional product features of CellTram vario

- All the advantages of CellTram Oil
- Optimized piston/cylinder system with minimized friction
- Variable transmission ratio (1:1 and 1:10) for applications that demand high resolution and sensitivity



QuickValve system

With the QuickValve system, filling CellTram vario and CellTram Oil is quick and easy. A special valve screw allows the oil to be filled directly into the piston chamber. The optimized piston/cylinder system minimizes friction, providing the utmost reliability and ultrafine sensitivity.



CellTram

Technical data

Volume	CellTram Air	CellTram Oil	CellTram vario
Method of pressure generation	Cylinder/piston system air-filled, maintenance-free	Cylinder/piston system with Quick-Valve System, oil-filled, maintenance-free	Cylinder/piston system with gear and QuickValve System, oil-filled, maintenance-free
Diameter of dial	40 mm	40 mm	42 mm / 34 mm (coarse / fine)
Volume alteration per revolution	88 µl	9,8 µl	9,6 µl / 960 nl (coarse / fine)
Selectable total volume	2,640 µl	980 µl	960 µl
Total piston stroke	15 mm (corresponds to 30 revolutions)	50 mm (corresponds to 100 revolutions)	50 mm (corresponds to 100 revolutions)
Minimum adjustable volume	< 200 nl	< 20 nl	< 20 nl / < 2 nl (coarse / fine)
Maximum pressure	2,900 hPa	20,000 hPa	20,000 hPa
Pressure tube	Length: 1 m Diameter: 1 mm (inner) Material: polyethylene	Length: 1 m Diameter: 1 mm (inner) Material: polyethylene	Length: 1 m Diameter: 1 mm (inner) Material: polyethylene
Oil filling	Not applicable	Approx. 2 ml total volume Oil: Sigma M-8410, embryo-tested	Approx. 2 ml total volume Oil: Sigma M-8410, embryo-tested

Ordering information

Article	Description	Order No. intern
CellTram® Air	Pneumatic manual microinjector, complete with pressure tube and universal capillary holder with grip head for capillaries with an outer diameter of 1 mm	5176 000.017
CellTram® Oil	Hydraulic manual microinjector, complete with pressure tube, filling tube, oil and universal capillary holder with grip head for capillaries with an outer diameter of 1 mm	5176 000.025
CellTram® vario	Hydraulic manual microinjector with gear, complete with pressure tube, filling tube, syringe, oil and universal capillary holder with grip head for capillaries with an outer diameter of 1 mm	5176 000.033
Grip head 0	For capillaries with an outer diameter of 1.0–1.1 mm	5176 210.003
Grip head 1	For capillaries with an outer diameter of 1.2–1.3 mm	5176 212.006
Grip head 2	For capillaries with an outer diameter of 1.4–1.5 mm	5176 214.009
Grip head 3	For capillaries with an outer diameter of 0.7–0.9 mm	5176 207.002
VacuTip	Sterile microcapillaries for holding suspension cells; 35° angle; 15 µm inner diameter, 100 µm outer diameter (25 pcs.)	5175 108.000
TransferTip®-RP (ICSI)	Sterile microcapillaries for sperm injection with the ICSI technique; rigid parallel flange; 35° angle; 4 µm inner diameter, 7 µm outer diameter (25 pcs.)	5175 114.000
TransferTip®-F (ICSI)	Sterile microcapillaries for sperm injection with the ICSI technique; flexible flange; 35° angle; 4 µm inner diameter, 7 µm outer diameter (25 pcs.)	5175 106.008
TransferTip®-R (ICSI)	Sterile microcapillaries for sperm injection with the ICSI technique; rigid flange; 35° angle; 4 µm inner diameter, 7 µm outer diameter (25 pcs.)	5175 113.004
TransferTip® (ES)	Sterile microcapillaries for transferring ES cells into blastocysts; 20° angle; 15 µm inner diameter, 20 µm outer diameter (25 pcs.)	5175 107.004

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