

Injection meets Innovation

Eppendorf InjectMan[®] NI 2



Optimized according to your suggestions

Eppendorf[®] InjectMan NI 2

Our ultra-precise micromanipulator InjectMan NI 2 is your ideal partner for microinjection into adherent cells as well as for microinjection into early stage embryos and small organisms. It was designed in response to researchers' suggestions and application requirements. The unique ability to connect the InjectMan NI 2 with our microinjectors FemtoJet and FemtoJet express ensures a very efficient and reproducible processing. The user-friendly control board of the InjectMan NI 2 allows rapid access to the main functions and provides an easy-to-read display for the menu-controlled program options.

Features

- Axial mounting of the Z-module
- Maximum injection speed of up to 7,500 µm/sec.
- Integrated coarse and fine manipulator with a working range of 20 mm per axis; dynamic control via central joystick
- Can be used with FemtoJet for automated axial injection movement
- Automated Home function for rapid capillary exchange
- Expert installation, training, support and service
- Can be adapted to all common microscopes



Workstation for semi-automatic injection into adherent cells: Eppendorf InjectMan NI 2 and FemtoJet

Optimized to perfect your work

Applications



Semi-automatic injection movement

Semi-automatic injection into adherent cells

Connecting the InjectMan NI 2 to the FemtoJet microinjector provides a unique, semi-automated manipulation and injection process for microinjection into adherent cells. The injection parameters (injection pressure, injection time, and compensation pressure) are programmed via the Femto-Jet and the injection level (Z-limit) is set on the manipulator. Depress the joystick key to simultaneously trigger the patented axial injection movement of capillaries (A, B) and the programmed pressure of the FemtoJet. Once the preset injection time has elapsed, the pressure decreases in the capillary and is triggered simultaneously with the movement of the capillary back to its starting position (C). Thus, the tip of the capillary acts as a "pointer," determining the injection point in the cell. This exact axial injection movement ensures maximum survival rates.

Microinjection into early stage embryos and small organisms

Microinjection experiments into vertebrate embryos (e.g. fish) allow to generate transgenic animals by injection of DNA, to interfere with specific developmental processes by DNA, RNA or morpholino oligo injection, or to follow the fate of individual cells by the injection of fluorescent lineage tracer dyes.

For this kind of application, the InjectMan NI 2 and the FemtoJet express microinjector form a perfect team. By applying the axial movement of the InjectMan NI 2 the capillary can be brought easily into the target.

Due to the electronic linkage of the two devices, injections can be triggered directly with the joystick of the manipulator, which makes handling even more convenient.



Workstation for microinjection into early stage embryos: InjectMan NI2 with microinjector FemtoJet express

InjectMan NI 2

Technical data

via central joystick, dynamic kinetics
≈ 20 mm (each axis)
≈ 40 nm per microstep
epper motor
)° from the object table
um/s
ial interface
20.5 x 16.0

Ordering information

Description	Applications	Catalog No. International
Instruments/accessories		
InjectMan® NI 2, dynamic micromanipulator		5181 000.017
FemtoJet®, programmable micoinjector with integrated pressure supply	For semi-automatic injection into adherent cells	5247 000.013
FemtoJet® express, programmable micoinjector, needs to be connected to an external pressure supply	For microinjection of embryos in early developmental stages and small organisms	5248 000.017
Consumables		
Femtotip®, sterile glass capillaries, set of 20	For microinjection into adherent cell and for microinjection into ealy stage embryos and small organisms	5242 952.008
Femtotip® II,sterile glass capillaries, set of 20	For microinjection into adherent cell and for microinjection into ealy stage embryos and small organisms	5242 957.000
Microloader	For filling the capillaries	5242 956.003

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