

CUY21EDIT

In vivo electroporator



Target sample

- **In vivo**
Rat • Mouse : Liver • Pancreas • Kidney • Brain • Thigh • Retina
Articular tissue • Testis • Ovary • Vagina • Skin etc.
Zebrafish : Fin • Retina
Others : Hatched chick' s brain • Honey bee' s brain
Cricket' s embryo • Xenopus embryo • Medaka' s embryo
- **In utero**
Rat • Mouse : Ventricle • Inner ear • Spinal cord
- **Ex vivo**
Hippocampus • Mouse embryo (whole culture embryo)
Blood vessel • Chick embryo' s guts
- **In ovo**
Ectoderm • Endoderm • Mesoderm • Neural tube
- **In vitro**
Human corneal keratocyte cells • Dental pulp cells • NC65 • BCEC

Features

Resistance measurement

The resistance measurement function is built in CUY21EDIT and enables one to measure the resistance value of a biological sample prior to electroporation. The most important value in in-vivo electroporation is current. As long as current value is in the optimal range, DNA, siRNA and other molecules are introduced into a cell. As physical conditions such as a gap between electrodes, location of electrodes and volume of a sample vary, resistance value also changes considerably every experiment. According to Ohm's law, current and resistance value are interrelated and affect one another. It is necessary to adjust resistance value in order to put current value in the optimal range. With a resistance measurement function, before an electroporation program is run, resistance value can be measured and adjusted to put current value in the optimal range. High reproducibility will be achieved.

Actual current measurement

Actual current value can be measured and displayed immediately after an electroporation is completed. There is the optimal current value for each application. It is possible to verify the electroporation process electrically by checking the actual current value. Even though a result of an electroporation turns out to be failure, as the electroporation process is already verified electrically, the cause of a failure can be identified easily.

Wide touch-panel display

A wide touch-panel display enables one to execute the resistance measurement and set electroporation parameters by touching a display. It is possible to check all parameters at a glance as they are displayed on the wide screen.

High voltage accuracy

The accuracy of the voltage below 100V is very high as CUY21EDIT is calibrated to the voltage range where in vivo electroporation is usually carried out. While the fluctuation in voltage affects an electroporation result greatly, with CUY21EDIT, such an influence can be ignored.

Safety limit function

A safety limit function is built in CUY21EDIT. There is risk of getting injured by accident during during electroporation as a conductive part of an electrode for in vivo electroporation is exposed and it is grabbed in hand in in vivo electroporation. A safety limit function is useful to prevent such an incident as the function stops the running program immediately after the actual current gets beyond the limit.

Specifications

DC waveform	Square wave	Maximum current *	Voltage setting	Max. current
Resistance measurement range	Max18Kohms		1 ~ 125V	5.0A
	1 ~ 500V (1V increment)	Current measurement range	125 ~ 250V	2.2A
Pulse length	0.1 ~ 999.9msec (0.1msec increment)	Voltage measurement range	250 ~ 500V	1.0A
Pulse interval	0.1 ~ 999.9msec (0.1msec increment)	Power	Single phase 100V 5A 50/60Hz	
No of pulses	1 ~ 99	Dimensions	W390mm x D450mm x H250mm	
	2 programs	Weight	15.4Kg	

*When actual current exceeds the maximum current, the safety limit function stops the running program immediately.

* Product specifications are subject to change without notice