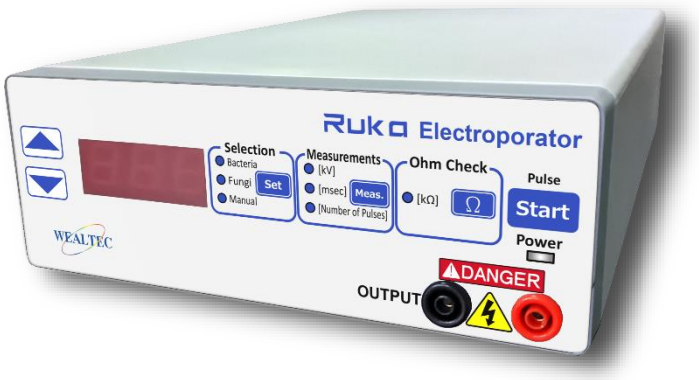
WEALTEC

RUKA Electroporator



Features

Ohm Check before pulsing
Arcing protecting
Preset programs
Program Save/Recall
Voltage down to 100 V
High voltage safety

Applications

E. coli
Bacterial cells
Yeasts
Fungi
Mammalian cells

Transfection is known as the way of introducing foreign DNA into bacterial and/or mammalian cells through chemical, biological, or physical methods. There, electroporation is a simple, rapid, and stable transfection of all cell types such as bacteria, yeast, as well as other microorganisms. To achieve highly repeatable results, an electroporator creates and delivers an electric pulse at the same voltage and current with the same resistance to the formation of temporary pores in the plasma membrane and transfers nucleic acids or other molecules into cells.

Sample cuvette 1/2/4 mm gap → **Voltage set / No of pulsing** → **Impedance check / Display** → **High voltage setting / Pulsing**

Ohm check for controlling electroporation

The resistance of the sample has a direct impact on the transfection result during electroporation. Low-resistance ohmmeters can lead to arcing and sample damage, and also instrument damage. The **RUKA Electroporator** has an **Ohm Check** function that can measure the electric impedance (which is roughly equal to resistance) of the sample between the electrodes using a trickle charge to avoid inconstant electroporation, review electroporation results, and perform expected electroporation to achieve desired transfection results.

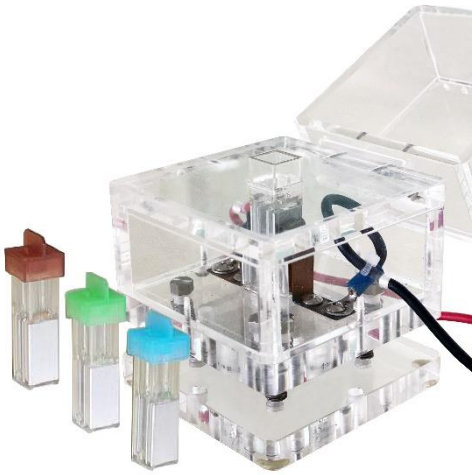
Extra functions for more convenience

Simply select from common setting parameters for **Bacteria** or **Fungi** for quick access. Users, on the other hand, can specify their own parameters by selecting "**Manual**". As your expected conditions, you can manually set a voltage value, time, and number of pulses.

Users may save up to 99 programs and quickly recall them with **Save/Recall**. It helps in saving time when running batch experiments under similar settings.

Wide pulse ranges

The RUKA Electroporator system can produce voltages ranging from 100 to 3000V. While the lower range (less than 300V) is useful for transfection of many typical cell lines, the upper range (greater than 1000V) is ideal for organisms with a cell wall, such as bacteria, yeast, and other fungi.

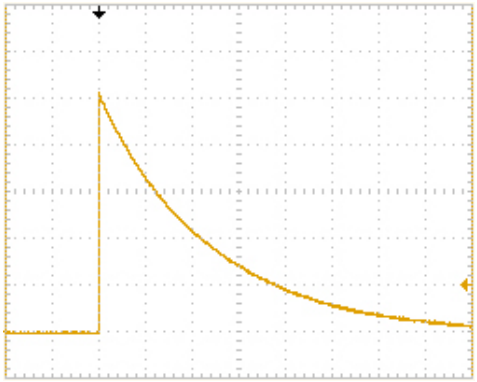


Cuvette and cuvette chamber

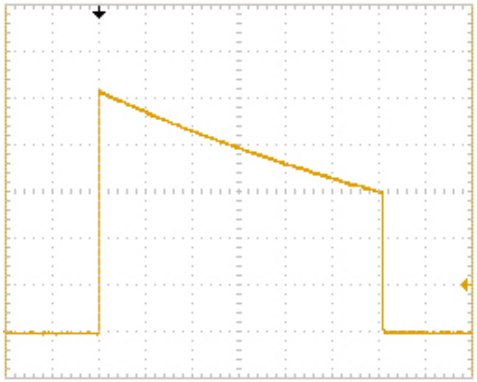
A complete system consists of a porator, a cuvette chamber, and multiple-choice cuvettes with varying gap widths and volumes to facilitate the appropriate field strength for a variety of cells.

Porator exponential decay wave pulse

Pulse length setting: none



Pulse length setting: 1.0-5.0 msec



⊡ Measurements of output pulses

Voltage	100-3,000 V (1 V resolution)
Time constant	None setting: Measured value is displayed 1.0-5.0 msec setting: Set pulse length value is displayed
Number of pulses	1 or 2

⊡ Others

Impedance measurement	15–9,999 Ω (1 Ω resolution) 10,000–50,000 Ω (10 Ω resolution)
Save	99 programs
Dimensions (W x D x H)	335 x 205 x 85 mm
Weight	3.2 kg

Specification

Voltage	100–500 V (5 V resolution) 500–3,000 V (100 V resolution)
Pulse length	None setting or 1.0-5.0 msec (0.5msec resolution)
Number of pulses	1 or 2

*The specification is subject to change without prior notice

Ordering Information

Catalog No.	Description
1076001	Ruka Electroporator with impedance check function covers 30-30,000 Ohms range, output voltage 100-3,000V, input power 100-240V, 50-60Hz with cuvette holder
2166221	Cuvette 1 mm gap, 20-70 µL, 25/pack
2166222	Cuvette 2 mm gap, 40-400 µL, 25/pack
2166223	Cuvette 4 mm gap, 80-900 µL, 25/pack

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