

Bench-Top PEF R&D Sterilization System SBS-PEF-SA

Pulsed Electric Fields R&D Systems for Juice sanitation and/or PEF assisted juice extraction
with one or all three PEF chambers in custom enclosures per systems purpose:



- coaxial chamber for deactivating bacteria by el. fields stretching,
- co-linear chamber for el. volume discharges to de-activate all micro-organisms,
- a flat PEF chamber for PEF assisted extraction of juices from hard to break vegetative cells. It can be used also for jell/creams sanitation.

Very broad pulse parameters:

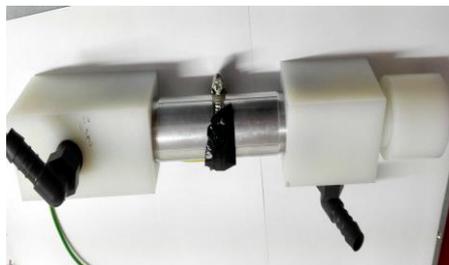
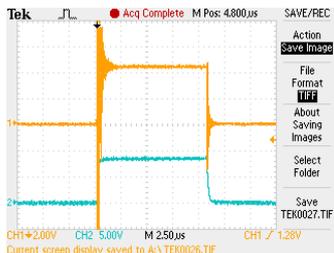
- **10 kV** power supply provides electrical fields from **5 to 25 kV/cm**,
- Rep. Rates, Hz: 3 fixed plus gradual by a rotary knob from **2 μ s to 30 μ s** as per your request from 1 to 500Hz or gradual any value from **1Hz to 500Hz** depending on the system purpose;
- Durations in μ s: 3 fixed as per your request from 1 to 50 μ s plus gradual by a rotary knob from **2 μ s to 30 μ s**;
- Max pulse current to media (Q/s), 0.1-10 A depending on applied **V** and media **R** which has to be min of ca.3-10kOhm);
- Shape: positive rectangular, fronts 1 μ s.
- Flatness: 2% at 5 μ s: 10% at 20 μ s.

Control panel (one of 3 possible):

- 2 knobs with LED's rows for 3 fixed pulse parameters μ s & Hz,
- 2 knobs for gradual change of pulse parameters μ s & Hz,
- Timer in the panel centre,
- Pulsed HV & current outputs,



- full 2 traces scope;
- HV power supply: **0.4-1kW**.
- Selectable pulsing time: **1s-1h**;



Advantages of our Basic semi-automatic bench-top PEF system:

- **a coaxial chamber** active length is 180 mm long, gap 4 mm, for disinfection of juices, milk, etc. with regulated 1-5 l/min direct flow or through the 1.5 l batch volume,
- **a round cell with parallel electrodes for**
 - sanitation of jells, jams, D80mm, gap 5-15 mm,
 - breaking hard cells of grass, roots etc. for further juice extraction.

- Changing from one chamber to another is 2m.
- Flow meter,
T°C, pH and conductivity meters,
preheating on request.

Size LxHxB):
100x46x46cm/

Weight 12-40 kg.

El.: 220-230VAC,
4-10A, 50-60 Hz.

Practical inexpensive & versatile PEF R&D systems.

