

Biological Waste Treatment in Vaccine Production

Celitron offers integrated solutions to treat infectious plastic cell culture roller bottles.

The system minimizes the risk of cross-contamination, shortens waste handling process and reduces associated costs.

No need for a designated storage area for the contaminated disposables, due to direct connections to clean rooms through airlock system.

Fully automatic treatment, converting biological infectious disposables to non-hazardous, that is ready for recycling.

■ Easy to Operate

No need for special technician qualification - operation by laboratory staff.

■ Environmentally Sound

Using only steam as sterilizing agent, while shredding the waste within a pressurized vessel. The treated waste is reduced to as little as 1/10 its original volume, giving further opportunity for immediate recycling.

■ Cost-effective

Inexpensive operation and maintenance.

■ No risk of cross-contamination

Fully automatic closed system, complying with life science laboratory standards (B Class).

■ Tailor made

Customized and automatic systems with compulsory parameters for Biomanufacturing.





How the System Works - Introducing the Integrated Sterilizer and Shredder (ISS)

The ISS is a steam sterilizer with an integrated shredder, designed for on-site conversion of biohazard waste in hospitals, clinics, laboratories and dialysis centers, complying with the EU and WHO recommendations.

Treatment of:

- Vaccines
- Human Insulin
- Serums
- Plasma Fractions
- Bacteria and Cell Cultures

- Sterility assurance level (SAL): up to $8 \log_{10}$.
- Capacity: 25 - 1200 liters.
- Sterilization cycles and parameters can be tailored to the specific waste generated at customer's site.



Infectious Disposables in Vaccine Production

There are strict rules and regulations related to handling biohazardous waste. This requires not only proper attention from the employees in the vaccine production, but a complete system, which gives effective, immediate, and prompt solution for the biohazardous waste disposal.

Improper way of handling hazardous waste generates risk for health and safety. In institutions and manufacturing sites, where they work with a large amount of live viruses and bacteria, this risk is even higher.

Waste types:

- Cell culture bottles
- Petri dishes
- Specimen containers
- Cryoware and labware
- Outdated vaccines



Tailor-made units according to customer requirements

Celitron offers tailor-made solution for biological infectious waste disposal in vaccine production with completely automated process cycles.

The system includes:

1. Airtight connection to the clean room(s) – *airlock*
2. Automatic waste transportation through sliding system – *pipeline transport*
3. Compactor – *for volume reduction*
4. Treatment with the ISS – *sterilizing and shredding within a single pressure vessel*
5. Automatic unloading into municipal waste container – *conveyor belt*

System cleaning – *sterilizing the whole system by steam (SIP - Sterilization in Place)*