



EQUIPMENTS PVT. LTD.



MEDICAL WASTE TREATMENT AT SOURCE

STERIPLUS™



HAZARDOUS BIO-MEDICAL WASTE TREATMENT  
THROUGH SHREDDING & STEAM AUTOCLAVING

INNOVATION MADE IN FRANCE





EQUIPMENTS PVT. LTD.

## MAIN APPLICATIONS

- Hospitals
- Clinics
- Analyses
- R&D
- Microbiology/Virology/  
Bacteriology
- Medical devices
- Vets
- Environment
- Industry
- Food Testing



# Tesalys

Making biomedical waste safe



## STATE-OF-THE ART ON-SITE BIOHAZARDOUS WASTE TREATMENT SOLUTIONS

The inactivation and disposal of infectious waste is not easy : it implies risks for the environment and people. Also, the costs for collection, transportation and incineration are very high (the producer is responsible for the disposal of their waste until its complete destruction). This process must conform to various procedures and regulations.

Faced with all these restrictions, Tesalys offers innovative solutions to process your infectious healthcare waste by changing its appearance, reducing its volume and weight and minimizing the associated risks and disposal costs.



## Process your infectious waste on-site

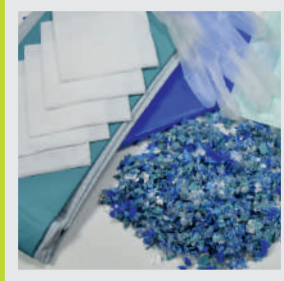


### INFECTIOUS BIOMEDICAL WASTE



- Plastic or glass consumables: Petri dishes, test tubes, collection tubes, pipettes, etc.
- Single-use material: surgical drapes, gauzes, compresses, bandages, etc.
- Personal protection equipment: gloves, gowns, tapes, coveralls, goggles, masks, caps, shoe covers, etc.
- Contaminated sharps: needles, syringes, scalpels, lancets, blades, slides, etc.
- Single-use care kits, small plastic or metal instruments.
- Single-use surgical instruments.
- Hemodialysis waste: hemodialysis filters, circuits, etc.
- Liquid biohazardous waste or waste containing fluids: blood bags, urine bags, culture media, etc.
- Waste from R&D on medical devices - Destruction of prototypes - Protection of intellectual property.
- Anatomical waste, animal carcasses and derived products (according to local regulations).

## YOUR INFECTIOUS BIOMEDICAL WASTE INACTIVATED AND SHREDDED IN 50 MINUTES



# Tesalys

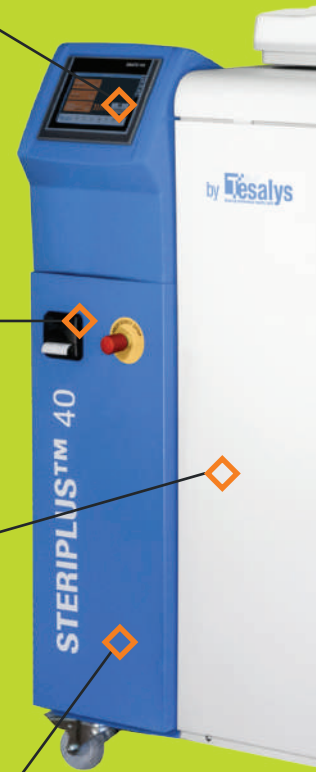
Making biomedical waste safe

**REDUCTION OF 8 LOG<sub>10</sub> OF CONTAMINATION**  
BY AN AUTOCLAVING CYCLE OF STEAM AT 135 °C/275 °F

**FULL TRACEABILITY**  
VIA AN INTEGRATED PRINTER AND USB PORT

**INTEGRATED WATER SOFTENER, WATER BOOSTER PUMP AND AIR COMPRESSOR**

**EXHAUST AIR FILTRATION AT 0.2 μM**



## THE MOST EFFICIENT SHREDDING/AUTOCLAVING SYSTEM FOR PROCESSING YOUR BIOHAZARDOUS WASTE

The **STERIPLUS™** systems from **Tesalys** are the ideal solution to inactivate your biohazardous waste on-site and safely.

Their integrated shredding system **TESASHRED™** not only reduces the volume and mass of waste but also ensures being fully processed.

In effect, the preliminary shredding phase increases the exposure of the micro-organisms to the sterilizing steam thus reducing the microbial load at the start, up to 8 log<sub>10</sub>. These equipments offer a simple, reliable and compact solution to all types of facilities producing biohazardous waste.



# STERIPLUS™

integrated system with preliminary shredding and steam sterilization of your biohazardous waste



**DECONTAMINATION :**  
**PROVEN INACTIVATION OF 8 LOG<sub>10</sub>**  
**OF BACTERIAL SPORES**



**STERIPLUS™**

## RESPECTING THE ENVIRONMENT



Treating biohazardous waste with **STERIPLUS™** technology is not only an excellent way to prevent biological risks for people and the environment, but it is also an environmentally friendly choice.

- Zero dioxin and furan emissions
- Low water and electricity consumption
- Reduction of "waste footprint"
- Decontaminated effluent discharges
- Clean ambient air by filtration at 0.2 µm
- Energy saving by integrated heat recovery
- Zero chemicals - 100% Water



# State-of-the-art technology, easy to use

AS SIMPLE AS 1, 2, 3...



**STEP 01**

## LOAD

the biohazardous waste in your  
**STERIOPLUS™**



**STEP 02**

## PRESS THE START BUTTON

(Fully automated cycle)

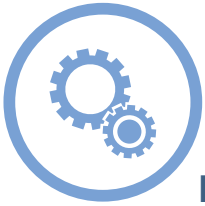
- Shreds into grain sized confetti  $\approx 1\text{cm}$
- Decontamination through saturated steam at  $135\text{ }^{\circ}\text{C}/275\text{ }^{\circ}\text{F}$
- Drainage of sterilized effluents



**STEP 03**

## UNLOAD

the shredded and sterilized  
solid waste for disposal.



## TESASHRED™ EFFECTIVE AND PATENTED SHREDDING

- Proven efficiency on sharp waste
- Reduction in volume by 80%
- Reduction in weight by 50%
- Automatic decontamination in each cycle
- High resistance



## STANDARDS & APPROVALS

- Approval by the Ministry of Health and of Ecology & Sustainable Development
- CE labelled
- In compliance with NFX 30 503 (FRANCE)
- In compliance with EN 554 and EN ISO 17665 1
- Production: ISO 9001



## QUALIFICATIONS

- Tested by an independent body
- Installation and Operational/ Performance Qualification
- Scientific tests: Quality of shredding/Microbiological efficacy /Operator environment



## INSTALLATION

- Simple and fast
- By certified personnel
- Across the world



## TRAINING GUARANTEED

- User training on-site at the client's facility
- Technical training in Toulouse
- Support, documentation & software provided
- Certification of personnel



## MAINTENANCE & TECHNICAL SUPPORT

- Original and consumable parts available
- Fast delivery across the world
- Local customer services

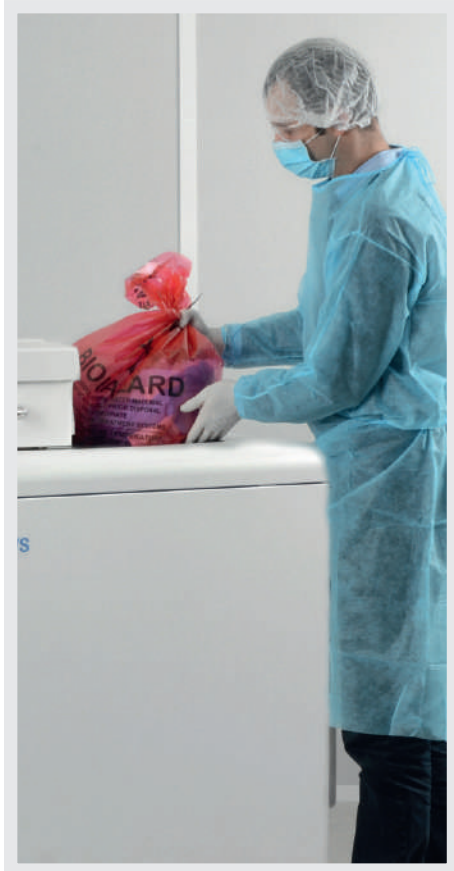


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# UNLOADING convenient and ergonomic



**MANUAL  
UNLOADING BASKET**



**STERIPLUS™  
FULL SYSTEM  
WITH PATENTED  
TURNING STATION**



**TESAXTRACT™  
PATENTED DRAWER AND  
TESANET BAG, SIMPLE  
AND ERGONOMIC**

## THREE WASTE UNLOADING SOLUTIONS

### MANUAL UNLOADING BASKET

The most economic option consists of unloading the waste after processing using a stainless steel unloading basket which can be removed from the machine via a handle.

### UNLOADING WITH THE STERIPLUS™ SYSTEM

The exclusive\* **STERIPLUS™** system contains a set of features that unload the shredded and decontaminated waste safely and conveniently for operators. It is composed of several independent elements, including an internal basket, multi-function handle, transport rocker, turning station, support for waste bags.

### UNLOADING WITH TESAXTRACT™

This is the most simple and ergonomic patented unloading system. It includes:

- An extractable drawer-basket fixed to the inside of the chamber
- A disposable and biodegradable cotton cover for collecting the solid waste (TESANET)

**COMPATIBLE AUTOCLAVABLE BAGS AND CARDBOXES ARE AVAILABLE.**

\*Patent-pending



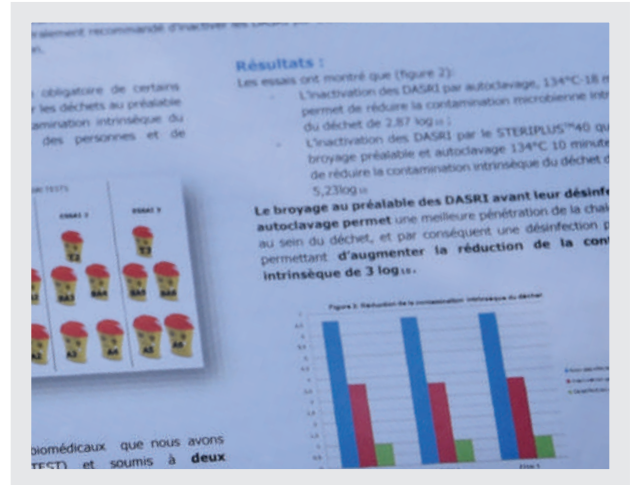
# EVERYTHING IS CONTROLLED

## SCIENTIFICALLY PROVEN EFFICIENCY

### SCIENTIFIC TESTS AND APPROVALS

The STERIPLUS™ systems were designed specially to respond to one of the strictest standards for waste decontamination equipment (French standard NFX 30-503) and to WHO recommendations.

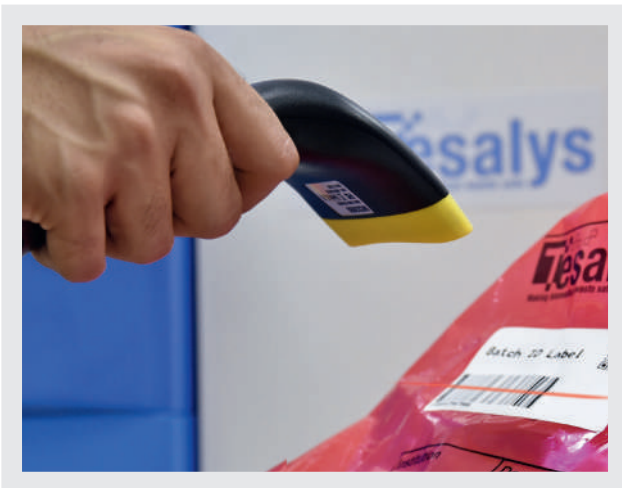
The sterilization cycle has been validated according to international standards NF EN 554 and EN ISO 17665-1.



The tests were carried out by Dr. Marie-Florence Gireaudot-Liepmann from the independent lab Biorisk Expertise, former head of department at the Pasteur Institute of Lille.

The technology used in **STERIPLUS™**, using a mixture of shredding and steam sterilization, allows a more efficient decontamination cycle. The reports for the tests performed are available on request.

## TRACEABILITY AND MAINTENANCE



### TRACEABILITY

Printing of a conformity report for every cycle.

As an option, it is also possible:

- to identify the operator and the batch number using a bar code reader
- to export the printouts in .pdf via USB



### REMOTE SURVEILLANCE AND REMOTE MAINTENANCE

These options are available for:

- Local wireless access (surveillance and control via smartphone, tablet and PC), wireless transmission of data in .pdf/.csv format
- Full remote access via the Internet for remote maintenance by authorized technical personnel



Designed and manufactured in France  
(in compliance with French standard NFX 30-503)



CE Conformity (European Directive 2006/42/EEC,  
harmonized standards for machinery safety)



In compliance with international standards (EN 554 and  
EN ISO 17665-1) and with the WHO recommendations

# for perfect Integration into your premises



## TECHNICAL DATA

### STERIPLUS™ 40

<b>LOAD CAPACITY (VOLUME)</b>	40 liters of waste per cycle*
<b>LOAD CAPACITY (CONTAINERS)</b>	1 container TESABOX 40 or 2 containers TESABOX 20
<b>AVERAGE LOAD CAPACITY (WEIGHT)</b>	4 to 5 kg of waste per cycle* (8-11 lbs.) 8 to 10 kg of waste per hour (17-22 lbs.)
<b>MAXIMUM LOAD CAPACITY (WEIGHT)</b>	8 kg (18 lbs.) of waste per cycle 16 kg (36 lbs.) of waste per hour Maximum permitted weight using TESABOX containers
<b>LOADING CHAMBER USEFUL DIMENSIONS</b>	320 x 247 mm (width x depth) (12.5" x 9.7"), useful height = 480 mm (18.8")
<b>TOTAL CYCLE TIME</b>	50-55 minutes
<b>PRODUCTION</b>	Up to 10 kg/h (average) (22 lbs./h) Up to 20 kg/h (maximum) (44 lbs./h)
<b>EXTERNAL DIMENSIONS (H x W x D)</b>	1,405 mm x 1,205 mm x 885 mm (H x W x D) (55.3" x 47.4" x 34.8")
<b>NET WEIGHT</b>	560 kg (1234 lbs.)
<b>LOADING CHAMBER</b>	Stainless steel with PTFE coating
<b>TREATMENT CHAMBER</b>	AISI 304L stainless steel
<b>STEAM GENERATOR</b>	AISI 304L stainless steel (chamber), highly corrosion-resistant Hastelloy
<b>WATER SOFTENER</b>	Integrated
<b>WATER BOOSTER PUMP AND AIR COMPRESSOR</b>	Integrated
<b>WASTE SHREDDER</b>	AISI 304L stainless steel (structure), high-strength steel (blades)
<b>PIPING</b>	Stainless steel/PTFE flexible hosing
<b>CHASSIS</b>	Painted steel
<b>BODYWORK</b>	Composite material/Painted steel
<b>CYCLE TRACEABILITY</b> Through printout	Integrated
<b>USB PORT</b>	Included

## SUPPLY/REQUIREMENTS

<b>WATER</b>	
Needs	Drinking quality water
Consumption	Approx. 10 liters/cycle
<b>ELECTRICITY</b>	
Needs	380-400 V III N, 50 Hz/60 Hz, 15 kW
Consumption	4 to 5 kWh/cycle
<b>DRAIN</b>	32 mm Ø internal (heat-resistant) (1.2")
<b>STEAM/COMPRESSED AIR</b>	Produced by the integrated generator and compressor; no external connection required



## STERIPLUS™ 80

80 liters of waste per cycle\*

1 container TESABOX 80 or 2 containers TESABOX 40  
or 4 containers TESABOX 20

8 to 10 kg of waste per cycle\* (17-22 lbs.)  
16 to 20 kg of waste per hour (35-44 lbs.)

16 kg (36 lbs.) of waste per cycle  
32 kg (72 lbs.) of waste per hour

Maximum permitted weight using TESABOX containers

370 x 360 mm (width x depth) (14.5" x 14.1"),  
useful height = 630 mm (24.8")

50-55 minutes

Up to 20 kg/h (average) (44 lbs./h)

Up to 40 kg/h (maximum) (88 lbs./h)

Height adjustable 1,850 to 1,970mm x 1,550mm  
x 1,150mm (H x W x D) (72.8" to 77.5" x 61" x 45.2")

900 kg (1984 lbs.)

Stainless steel with PTFE coating

AISI 304L stainless steel

AISI 304L stainless steel (chamber), highly corrosion-resistant Hastelloy

Integrated

Integrated

AISI 304L stainless steel (structure), high-strength steel (blades)

Stainless steel/PTFE flexible hosing

Painted steel

Composite material/Painted steel

Integrated

Included

Drinking quality water  
Approx. 15 liters/cycle

380-400 V III N, 50Hz/60Hz, 20 kW  
8 kWh/cycle

32 mm Ø internal (heat-resistant) (1.2")

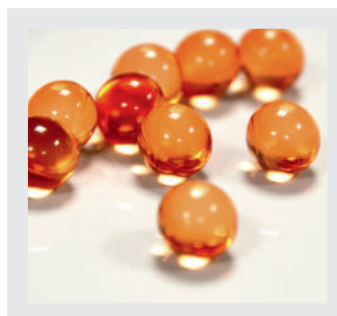
\* For a density of 0.1/0.12 kg/l

## CONFIGURATION OPTIONS

- Manual/automatic doors
- Cooling of effluents
- Full traceability solution
  - Identify the operator and the batch number using a bar code reader
  - Exportable printout via USB port
- Local wireless access
  - Surveillance and control via smartphone, tablet and PC
  - Wireless data transmission (.pdf/.csv)
- Full remote access
  - Local wireless access
  - Remote maintenance via the Internet by author

## ACCESSORIES AND CONSUMABLES

- Start-up kit
- Annual maintenance kits/emergency spare parts
- **STERIPLUS™** unloading system
- **TESAXTRACT™** unloading system
- "Biohazard" autoclave bags
- Cardboard containers for biohazardous waste
- Deodorizing capsules and spray
- Spare parts
- Special packaging





**Tesalys**  
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Exclusively Marketed & Distributed in India by:



EQUIPMENTS PVT. LTD.

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