



BUDGETARY PROPOSAL FOR 1 X ECODAS T300

Prepared by:
Mr Jeff SQUALLI
President & CEO



ASME



**THE
SUSTAINABLE,
& PROVEN
TREATMENT
SOLUTION**





1. ECODAS PRESENTATION

1.	<i>ECODAS presentation</i>	Page 3
2.	<i>Certifications:</i> - <i>Iso 9001 : 2015</i>	Page 4
	- <i>Iso 14001 : 2015</i>	Page 5
	- <i>EC</i>	Page 6
	- <i>ASME (USA)</i>	Page 7
	- <i>PLSE (China)</i>	Page 8
3.	<i>Description of the ECODAS treatment cycle</i>	Page 9
4.	<i>Budgetary quotation for an ECODAS T300 (unit price)</i>	Page 10
5.	<i>Available options</i>	Page 11
6.	<i>Warranty, payment, delivery terms & quotation summary</i>	Page 12
7.	<i>ECODAS T300 footprints</i>	Page 13
8.	<i>Work costs</i>	Page 14
9.	<i>Technical specifications</i>	Page 15
10.	<i>French Government T300 Approvals (translation)</i>	Page 17
11.	<i>Attestation of conformity</i>	Page 19
12.	<i>Pasteur Institute Certificate: reduction 8 log₁₀</i>	Page 20
13.	<i>Biorisk Expertise Certificate: reduction 8 log₁₀</i>	Page 21
14.	<i>Pasteur Institute Certificate : Bacillus stearothermophilis</i>	Page 22
15.	<i>Microbiological test result ECODAS T300</i>	Page 23
16.	<i>Rewards</i>	Page 24
17.	<i>References list</i>	Page 25

1. ECODAS PRESENTATION

- ECODAS designs, manufactures and supplies automated solutions for medical waste treatment worldwide. We have developed an innovative, fully enclosed and automated system to sterilize medical waste (solide/liquid and solid medical waste with prion inactivation), reduce its volume, and render its components unrecognisable. Our patented process combines shredding, direct heated steam, and high pressure to achieve complete sterilization of infectious materials. The final treated waste is harmless and safe to dispose of as ordinary municipal waste.
- For more than twenty years, the ECODAS team has developed a wide expertise in pressurized thermal machine manufacturing for the textile, food processing and medical waste industries, providing high value solutions based on advanced technologies.
- ECODAS is adopting a sustainable development strategy by creating robust systems while using recyclable components from the world's leader manufactures.
- ECODAS systems are designed and manufactured in accordance with the followings norms: : CE, ASME (USA), MLSE (CHINE) .The Quality assurance of ECODAS systems is executed following Qualité ISO 9001:2015 and ISO 14001:2015.
- In Europe, there are a variety of rules for handling medical waste. French rules are extremely demanding and the ECODAS System has been developed in accordance with those rules.
- The French Authorities have thoroughly tested the system and the PASTEUR INSTITUTE was appointed by the government to audit the results of specifically made bacterial cultures as well as actual clinical waste.



2. CERTIFICATION – ISO 9001 : 2015

Certificate

Standard **ISO 9001:2015**
 Certificate Registr. No. MS19 Q 11109
 ID N° 9105016092



Certificate Holder: **ECODAS**
 28, rue Sébastopol
 59100 ROUBAIX
 France

Scope: Design, manufacturing, installation, training, and maintenance of infectious waste treatment equipment (healthcare, life science, slaughterhouses, airport...). Shredding and sterilization process using saturated steam, sterilization of liquid waste, steam generators.

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Certification decision on: 2024-07-02
 The certificate is valid from 2024-07-07 until 2027-07-06.
 Expiry of previous certificate: 2024-07-06

2024-07-02

S. L. H.

TÜV Rhf. France S.A.S.
 20ter rue de Bezons
 92400 COURBEVOIE

© TÜV, TÜV and TÜV are registered trademarks. Utilization and application requires prior approval.

www.tuv.com





2. CERTIFICATION – ISO 14001 : 2015

Certificate

Standard **ISO 14001:2015**
 Certificate Registr. No. MS18 E 11072
 ID N° 9105016092



Certificate Holder: **ECODAS**
 28, rue Sébastopol
 59100 ROUBAIX
 France

Scope: Design, manufacturing, installation, training, and maintenance of infectious waste treatment equipment (healthcare, life science, slaughterhouses, airport...). Shredding and sterilization process using saturated steam, sterilization of liquid waste, steam generators.

Proof has been furnished by means of an audit that the requirements of ISO 14001:2015 are met.

Certification decision on: 2024-07-02
 The certificate is valid from 2024-08-08 until 2027-08-07.
 Expiry of previous certificate: 2024-08-07

2024-07-02

S. L. A.

TÜV Rhfd. France S.A.S.
 20ter rue de Bezons
 92400 COURBEVOIE

© TÜV, TÜV and TÜV are registered trademarks. Utilization and application requires prior approval.

www.tuv.com





2. CERTIFICATION – EC

Certificate

Quality Assurance System
acc. to Directive 2014/68/EU

Certificate no.: 01 202 F/Q-05 20176.00

Name and address of the
certificate holder: ECODAS
28, rue Sébastopol
59100 ROUBAIX
France

Herewith we certify that the above -mentioned manufacturer operates a quality system according to the European Directive 2014/68/EU. The manufacturer has the permission to affix the following CE marking to pressure equipment described and manufactured in accordance to the scope covered by this Quality-Assurance System:

CE 0035

Test basis: Directive 2014/68/EU: QA-System (Module H1)

Audit report no.: 01 202 F/Q-05 20176

Scope: Sterilization machines for infectious waste of type ECODAS T100-T150-T300-T700-T1000-T2000 Bidders VE40kW-VE80kW, see annex to certificate: 01 202 F/Q-05 20176, revision 4 from 12/04/2023

Manufacturing plant: see certificate holder

Validity: This certificate is valid until 2026-05-31.

Cologne, 2023-07-11

Dipl.-Ing. (FH) Vera Ruff



TÜV Rheinland Industrie Service GmbH
Notified Body for Pressure Equipment, E-No. 0035
Am Grennen 38a/b, D-51155 Cologne

MS-0037317 E-006-Rev01

© TÜV, RHEINLAND Industrie Service GmbH. Alle Rechte vorbehalten. Vervielfältigung, Verbreitung, auch auszugsweise, ist ohne schriftliche Genehmigung der TÜV Rheinland Group.

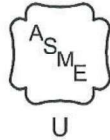
www.tuv.com

 **TÜVRheinland**[®]
Precisely Right.



2. CERTIFICATION – ASME (USA)

The American Society of Mechanical Engineers



CERTIFICATE OF AUTHORIZATION

The named company is authorized by The American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the ASME Single Certification Mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with the ASME Single Certification Mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

Ecodas
28 Rue Sebastopol
Roubaix 59100
France

SCOPE:

Manufacture of pressure vessels at the above location only

AUTHORIZED: December 17, 2023
EXPIRES: December 17, 2026
CERTIFICATE NUMBER: 59077

Board Chair, Conformity Assessment

Managing Director, Standards & Engineering Services





2. CERTIFICATION – PLSE (CHINA)

中华人民共和国 特种设备生产许可证

Production License of Special Equipment
People's Republic of China

编号/No.: TS2200D98-2026

单位名称/Company: ECODAS

住 所/Registered Address:

28,Rue Sébastopol 59100 ROUBAIX FRANCE

制造地址/Manufacture Address:

28,Rue Sébastopol 59100 ROUBAIX FRANCE

经审查，获准从事以下特种设备的生产活动：

Approved for the following production activities upon review and appraisal:

许可项目 Licensing Item	子项目 Sub-item	许可参数 Licensing Parameter	备 注 Remark
压力容器制造 Pressure Vessel Manufacture	中、低压容器 (D) Medium and/or Low Pressure Pressure Vessels (D)	—	限第一类压力容器 Limited to Category I Pressure Vessels

发证机关：国家市场监督管理总局

License Issue Authority:

State Administration for Market Regulation, P. R. China

有效期至：2026 年 4 月 24 日

Date of Expiration: April 24th, 2026

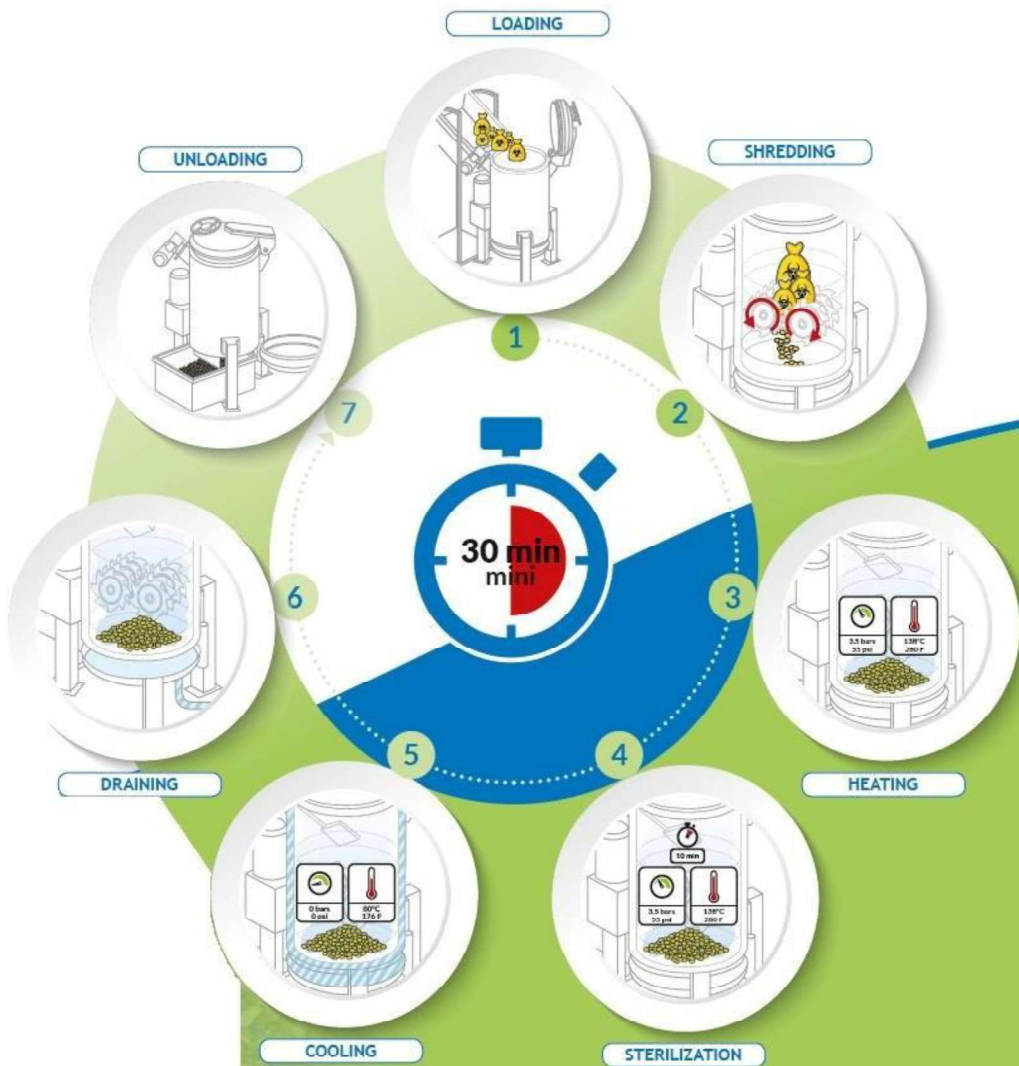
发证日期：2024 年 4 月 25 日

Date of Issue: April 25th, 2024





3. THE ECODAS TREATMENT CYCLE



1

The **automatic loading** of the waste is performed through the opening of the machine.

2

Shredding starts as soon as the cover is closed, sealed, and locked. The heavy-duty shredder features a regular automatic reverse rotation to prevent jamming, effectively shreds all kinds of waste.

3

The **heating** is achieved through saturated steam that raises the temperature to 138 °C (280 F) and the pressure to 3,5 bars (51 psi)

4

The **sterilization** is achieved by maintaining 138 °C (280 F) and 3,5 bars (51 psi) at the core of the waste for 10 minutes. The combination of these different factors achieves a microbial inactivation of 10⁸ reduction (8log10).

5

Decompression through the flash tank reduces temperature and pressure in preparation of the opening of the machine.

6

The condensates and the cooling water are discharged into the **sanitary drain**, and the recovered heat is used to preheat the boiler.

7

The **unloading** of the final sterilized waste is carried out by gravity discharge into a garbage bin placed directly under the machine.



4. BUDGETARY QUOTATION FOR SHREDDING AND STERILIZATION MACHINE

1. <u>ECODAS T300</u> (with additional elevation – 60 cm)	
<p>Specifications:</p> <ul style="list-style-type: none"> - Continuous operation capacity -Stainless steel 316L made treatment vessel: entirely insulated with 50 mm thick layer of rock-wool and protected by a stainless steel jacket to withstand pressure of up to 4,5 bars / 65 psi -The integrated shredder and its motor drive with a power of 10 KW, -The waste receiving system and waste sterilization system by steam at 138 °C, exposure time 10 minutes - Equipped with a loading door and an unloading door (discharge by gravity) -The paddle to tumble the waste and feed it to shredder, -The steam, cooling water, decompression, drain control valves, -The cooling water and steam condensation system, -The control system consisting of: a PLC control, multilingual touch sensitive screen, the necessary interfaces, the power relays, frequency inverter for shredder motor drive and a flash memory to record monitored treatment parameters and a printer to print batch records, -Staircase stool made of aluminum for easy loading access, -One unloading trolley (86,4 cm x 75 cm x 30,8 cm) -Odor control system, flash tank - Heat recovery system for pre-heating of the water of the steam generator from the exhaust step of the machine -Remote control of the machine via a SIM card - Programs for solid/liquid medical waste and solid medical waste with prion inactivation 	
2. <u>SITE IMPLEMENTATION</u>	
<p>Site implementation based on customer’s footprint : daily rate (on request)</p>	
3. <u>INSTALLATION – ASSEMBLING SUPPORT</u>	
<p>Installation support on the site - except handling means 1 technician – 1 day max : daily rate Traveling and accommodation costs at your expenses Electric and pneumatic connections support between PLC and machine, labour and parts, except cable in a limitation of 5 meters (see footprint page # 13) Water, steam and draining connections between network and machine are at your expenses (to prepare according to the initial specifications).</p>	
4. <u>COMMISSIONNING – TEST AND OPERATING TRAINING</u>	

1 technician – 2 days max

Traveling and accommodation costs at your expenses

The cost for extra training course is 850 € per day (without accommodation)



5. OPTIONS – **if not available locally*

<u>OPTION : ELECTRIC BOILER*</u>	
<u>1/ STAINLESS STEEL BOILER</u> <u>with water feed tank and heat recovery system</u> Electric power : 40 Kw Volume : 494 Liters Pressure: 10 Bar	
<u>OPTION : SPARE SHREDDER</u>	
New spare shredder	
<u>OPTION : SPARE PARTS SET</u>	
Spare parts set	
<u>OPTION : AUTOMATIC LOADING</u>	
For the automatic loading, a minimum height of 3.7 meters is required <i>Shipped with 1 x 240 L skip</i>	
<u>OPTION : LOADING SKIP*</u>	
Loading skip: 240 Liters <i>Only with automatic lift option</i>	
<u>OPTION : ADDITIONAL ELEVATION 60 CM</u>	
Elevated machine (60 cm) including 1 x unloading skip	
<u>OPTION : COMPRESSED AIR*</u>	
1 silent Compressor - 100 Liters - 50 Hz – without oil <i>(60 Hz on request)</i>	
<u>OPTION : WATER SOFTENER FOR THE BOILER*</u>	
Water Softener	
<u>OPTION : INCUBATOR FOR BIOLOGICAL TESTS</u>	
Incubator	
<u>OPTION : BIOLOGICAL TESTS</u>	
1 box of 100 biological tests	
<u>OPTION : SPECIFIC DOCUMENTARY REQUIREMENTS</u>	
Specific document – FAT – SAT – QI – QO – QP <i>Daily rate</i>	

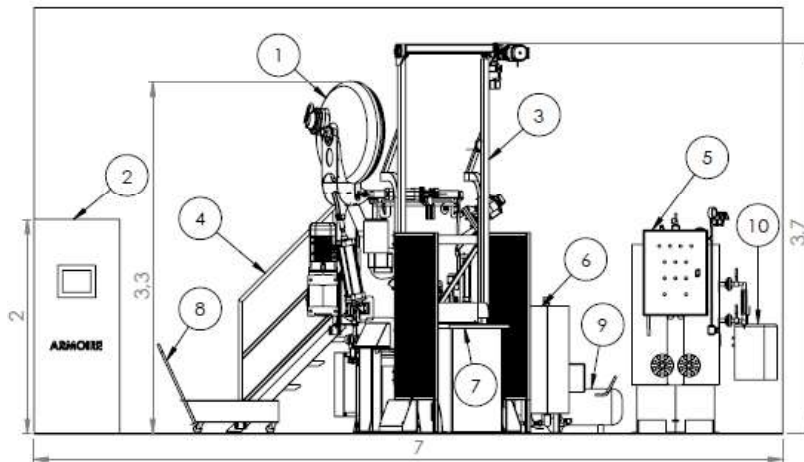


6. WARRANTY, PAYMENT, DELIVERY TERMS & QUOTATION SUMMARY

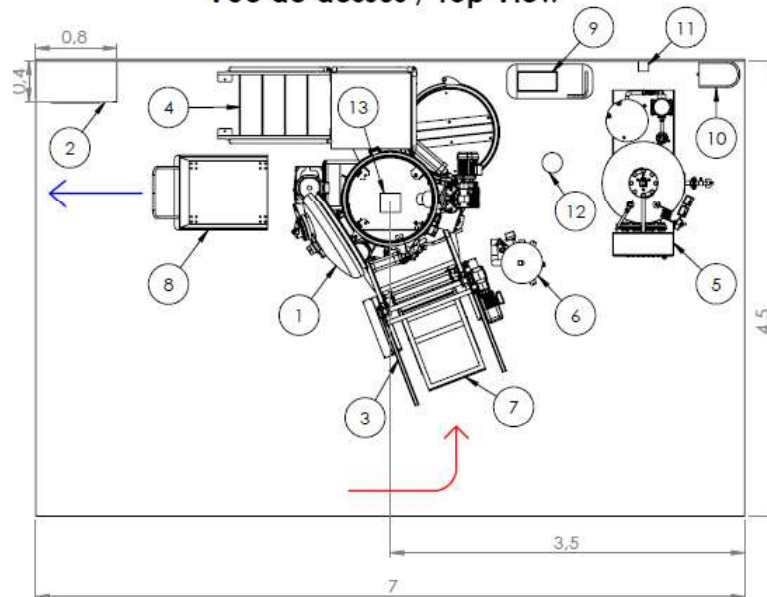
5. WARRANTY:

- For the machine => 2 years, spares (except wearing parts) upon receipt of the damaged parts in our premises.
- For the options (page #11) => 1 year, spares (except wearing parts) upon receipt of the damaged parts in our premises.
- In normal use and running conditions.
- On running basis of 8 hours a day
- Accommodation and traveling expenses to be paid by your firm

Vue de Face / Front View



Vue de dessus / Top View



Rep/TAG Number	Qté/Qty	Nom/Name
1	1	ECODAS T300
2	1	Armoire de commande / Control Panel
3	1	Elevateur / Bin Lifter
4	1	Passerelle / Platform
5	1	Chaudière/Boiler
6	1	Ballon de détente / Flash Tank
7	1	Benne de chargement / Loading Bin
8	1	Chariot de déchargement / Unloading trolley
9	1	Compresseur d'air / Air compressor
10	1	Adoucisseur d'eau / Water softener
11	1	Arrivée d'eau / Hard Water
12	1	Egout pour chaudière + ballon / Sewer for Boiler + Flash Tank
13	1	Siphon de sol / Floor drain



8. WORK COSTS OF THE ECODAS T300

TABLE N° 13

SIMULATIONS YEARLY WORKING COSTS FOR THE MACHINE
ECODAS T300, in EURO

ECODAS T.300

Without Investment and Labour

Simulations	A 40 hours / week	C 80 hours / week	E 120 hours / week
Major characteristics			
Waste density (Kg/l) :	0,10	0,10	0,10
Average Weight/cycle (Kg)	35,00	35,00	35,00
Average Time/cycle (in mn) :	30,00	30,00	30,00
Average weight / hour (kg)	70,00	70,00	70,00
Electricity/cycle (Kw) :	1,70	1,70	1,70
Water/cycle m ³ :	0,025	0,025	0,025
Steam/cycle (Kg) :	15,00	15,00	15,00
Maintenance (Basis 8000 Cycles)	7 622,00	7 622,00	7 622,00
Working parameters			
Nber hours/week :	40,00	80,00	120,00
Electricity cost in €/Kw	0,09	0,09	0,09
Water cost in €/m ³	2,50	2,50	2,50
Steam cost in €/Kg	0,02	0,02	0,02
Nber of hours / year :	2 080,00	4 160,00	6 240,00
Nber of cycles / day :	16,00	32,00	48,00
Nber of cycles / year :	4 160,00	8 320,00	12 480,00
Capacity in Tons / year :	145,60	291,20	436,80
Electr. Consumption €/year :	636,48	1 272,96	1 909,44
Water consumption €/year :	260,00	520,00	780,00
Steam consumption €/year :	1 248,00	2 496,00	3 744,00
Maintenance €/year :	3 963,44	7 926,88	11 890,32
Yearly total in E	6 107,92	12 215,84	18 323,76
Cost for a Ton in €	42	42	42



9. TECHNICAL SPECIFICATIONS

General Characteristics	
- Dimensions (L x l x H), cm	270x210x330
- Dimensions (L x W x H).ft	9,8x6,8x10,83
- Total volume. L	1111
- Shipping Weight. Kg	2000
- Max weight when filled with water For a special hydraulic test. Kg	3111
- Stress kg/cm ²	2
- Steam Pressure. Bar	8
- Max Steam Flow. Kg/h	170
- Compressed Air, oil-free. Bars	6
- Electricity 380 V / 3-Phase	14 kW
- Noise. dB	65
- Integrated centralized automatic lubrication system (bearings, chains, shredding assembly) for enhanced durability and minimal maintenance downtime	
Operating Characteristics	
- Treatment temperature. °C	130 - 177
- Average Cycle Time. Minutes	30
- Max Loading Volume Capacity. Liters	500
- Average Shredding Volume Capacity. Liters	350
- Average Waste Density. Kg/m ³	100-150
- Average Waste volume. Liters	350/batch
- Sterilization chamber. Liters	600
- Average Process Weight Capacity-kg/cycle	35-53
- Average Process Weight Capacity-lb/cycle	77-117
- Sterilization: Reduction of Geobacillus Stearothermophilus spores	10 ⁸
- Waste Volume Reduction	up to 80-95%
- Max Waste weight Reduction (<i>depending on the nature of the waste</i>)	up to 40%

- Continuous mixing system during sterilization for uniform treatment	✓
- Integrated steam generator for consistent performance	✓
Consumption / cycle	
- Steam. Kg	15
- Electricity. Kwh	1,7
- Water. Liters	25
Smart Safety & Control Systems	
- Emergency cycle ensures full sterilization before lid opening in case of failure	
- Automatic leak integrity check before each cycle (prevents unsafe start-up)	
- Power failure recovery: automatic resumption from last interruption point	
- Real-time electronic data logging with integrated printer (temperature, pressure, time, cycle number – recorded every minute)	
- Data storage via USB/SD and online transmission	
Flexible Operating Programs	
- Solid waste processing program	
- Liquid waste processing program	
- Dedicated prion sterilization program	
- Continuous sterilization via steam in all cycles	
- Automated waste discharge system	
- Integrated mixing for uniform treatment	



10. FRENCH GOVERNMENT APPROVAL FOR THE ECODAS T300

*Translated Copy
Refer to original*

FRENCH REPUBLIC

Ministry of Employment and
social services

General Direction of Health

1, Place de Fontenoy - 75350 PARIS
07 SP
Tél : 46.62.40.00

Ministry of Environment

Direction for Prevention
from pollution and risks

20 avenue de Ségur - 75302 PARIS
07 SP
Tél : 42.19.20.21

***MINISTRY OF EMPLOYMENT AND SOCIAL SERVICES
and
MINISTRY OF ENVIRONMENT
to***

Mrs and Messrs
the prefects of districts
Regional Direction of
Health and social services

To the districts health consultants
(for information)

Mrs and Messrs
the prefects of departments
Departmental Direction of
Health and Social Services

To the department consultants
(for execution)

Object : Circular n° 9609 relative to the implementation of the lajtos TDS 300 of disinfection process of the contaminated wastes issued from hospitals and comparable establishments.

KEY- WORDS : Process - Disinfection - Wastes from medical care acts - Lajtos TDS

REFERENCE TEXTS : Circular n° 53 of the 26, July 1991 relative to the implementation of the disinfection processes of contaminated wastes issued from hospitals and comparable establishments.

Circular n° 48 of the 15, July 1994 relative to the implementation of the Lajtos TDS disinfection process of contaminated wastes issued from hospitals and comparable establishments.

-
By the circular n° 53 of July 26, 1991 we informed you of our wish to extend the possibilities of treatment of the contaminated wastes issued from hospitals and comparable establishments to further processes other than only incineration required by the departmental health rules.

The Lajtos Ltd Company - 28 rue de Sébastopol , 59100 Roubaix had presented in 1993 its TDS 1000 process of which live load is 1 cubic meter. The equipment was subjected to an experimental procedure of evaluation of its capacity to decontaminate the wastes issued from medical care acts with an infectious risk. The French High Council of Public Health approved the use of the process on the 19, May 1994 and its characteristics were presented in the circular of July 15, 1994 quoted in reference. That circular held that any modification of the characteristics of the equipment had to be subjected to a new procedure, and if the case arises , a further opinion of the French High Council of Public Health.



So the Lajtos S.A Company presented a new equipment, the TDS 300 of which live load is 300 liters, which constitute the same equipment as the TDS 1000 with a reduction of capacity. In application of the circular of the July 15, 1994, we have the honour to announce you that the TDS 300 has just been subjected to an experimental procedure which aims at controlling that the functioning parameters are the same of those of the TDS 1000.

On June 22, 1995 the French High Council of Public Health approved the use of this process for the pre-treatment of the wastes issued from medical care acts with an infectious risk, subject to the respect of certain modes; you will find enclosed that notice in annex. The purpose of this circular is to implement the content of this notice.

The French High Council of Public Health noticed that the functioning parameters of the TDS 300 are the same as those of the TDS 1000. The wastes issued from that equipment present, in a reliable way, a microbiological contamination degree inferior to that of household wastes. In this way, the pre treated wastes can be eliminated either by incineration or by burying in a technical burying center, according to the usual modes relative to the urban wastes, it will be advisable to exclude the marking techniques because of the physico- chemical and organic characteristics of these wastes.

In addition to the products already prohibited and mentioned in the circular of the July 26, 1991 quoted in reference, the volatile toxins can not be subjected to this process.

We remind you that it will be advisable to send us the dispensation decrees that you could be led to take and to follow with a particular care the functioning of such equipments, because of their innovative feature.

This is the reason why we ask you to send us in the next six months after such an installation, a report which shows its insertion in the waste elimination procedure.

Would you be so kind as to, let us informed about the difficulties that the implementation of this circular could meet.

For the Minister and by delegation
The General Director of Health,

Jean- François Girard

For the Minister and by delegation
the director of the prevention
for pollution or risks, delegated to major
risks.

Gustave Defrange.

ANNEX TO THE CIRCULAR

Notice relative the LAJTOS TDS 300 of disinfection of wastes issued from medical care acts.

Considering the elements of the file n° V9501 delivered by the petitioner and the following functioning parameters : temperature 138°C, duration 10 minutes, pressure 3,8 bars, of the new Lajtos TDS 300 equipment with a live load of 300 liters, functioning as the equipment Lajtos TDS 1000;

Considering the obligations to draw up a new file and if the case arises to obtain a further opinion of the French High Council of Public Health when a new disinfection process is subjected to a modification concerning its functioning parameters or its treating capacities,

Considering the trials made on the machine Lajtos TDS 1000 with a live load of 1 cubic meter having proved the anti-microbic efficiency of the process which provides a disinfection of the wastes issued from medical care acts in order to have a degree of contamination inferior to that of household wastes;

Considering the circular of the Ministers of Health and Environment n° 48 of the 15, July 1994, instituted after the consent of the French High Council of Public Health on May 19, 1994, relative to the implementation of the Lajtos TDS 1000 disinfection process of contaminated wastes issued from hospitals and comparable establishments;

Considering that the results of the trials made from the 15 to the 16, June 1995 at the private hospital Val de Lys of Tourcoing (North) proved that the disinfection parameters of the Lajtos TDS 300 process are the same as those of the Lajtos TDS 1000 process, consequently its anti-microbial efficiency is ensured;

the Council after hearing of the industrialist and debate,

1- gives its consent to the use of the LAJTOS TDS 300 process of which the file has been presented by the LAJTOS Ltd Company - 28 rue Sébastopol, 59100 Roubaix - for the disinfection of the wastes issued from medical care acts with an infectious risk (in the meaning of the regulations in force and particularly the circular n°53 of July 26, 1991);

2- requires that

- any modification concerning the functioning parameters or the treatment capacities must be subjected to a new study and if the case arises the opinion of the Council;

- the cleaning of the lower chamber of the machine must be done once a day;

- the recordings of the functioning parameters must be kept in order to be consulted by the authorities concerned;

3- underlines that :

- the site of implantation and the exploitation conditions must conform to the regulations in force relative to the health and safety rules;

- the use of this equipment needs a physical separation between the upper levels of loading of the wastes issued from medical care acts with an infectious risk and the lower levels of the unloading of contaminated wastes;

- the introduction of the wastes into the machine being manual, consequently it requires precautions in matter of work safety(notably buy using packages for the wastes issued from medical care acts with an infectious risk and a volume inferior or equal to 50 liters permitting their introduction in the machine without manual packing down) and disinfection of the loading zone.



11. ATTESTATION OF CONFORMITY

ORGANISME AGREE PAR
LE MINISTERE DES AFFAIRES
SOCIALES ET DE LA SANTE



ATTESTATION DE CONFORMITE ATTESTATION OF CONFORMITY

N° 34819 - 2

APPAREILS DE PRETRAITEMENT PAR DESINFECTION DISINFECTION PRETREATMENT APPLIANCES

Documents de référence / Reference document

Textes réglementaires / Regulations :

Article R.1335-8 et suivants du code de la santé publique

Arrêté du 20 avril 2017 relatif au prétraitement par désinfection des DASRIA (NOR: AFSP1618294A)

Arrêté du 28 avril 2017 portant agrément du LNE (NOR: AFSP1712530A)

Normes / Standard : NF X 30-503-1 : Février 2016

Référentiel / Framework : Référentiel LNE - Revue n°1 - Janvier 2020

Titulaire de l'attestation / Attestation holder :

ECODAS

28 RUE DE SEBASTOPOL

FRANCE - 59100 - ROUBAIX

Appareil fabriqué par / Appliance manufactured by :

ECODAS

28 rue de SEBASTOPOL

FRA - ROUBAIX - 59100

Référence commerciale de l'appareil / Commercial reference of the appliance : ECODAS T300

Technologie pour la modification de l'apparence / Technology for the appearance modification :

Broyage / Grinding

Technologie pour la désinfection / Technology for the disinfection :

Traitement thermique - Stérilisation à la vapeur d'eau saturée / Heat treatment - Steam sterilization

Référence du dossier technique / Technical file reference : ANNEXE 3 T300 Rev 1

Référence du rapport d'évaluation / Evaluation file reference : P171722/3

Le LNE atteste que l'appareil décrit dans le dossier technique et le rapport d'évaluation susvisés répond aux prescriptions réglementaires et normatives définies dans les documents de référence.

The LNE attests that the appliance referenced in the technical file and in the evaluation file aforementioned meets the regulatory and normative requirements defined in the reference documents.

Date de première délivrance : 27 septembre 2018

First issue date

Date de début de validité : 27 septembre 2023

Effective date

Valable jusqu'au : 26 septembre 2028

Valid until

Délivré à Paris,

Pour le Directeur Général



Pascal PRUDHON

Signature numérique

de PASCAL

PRUDHON ID

Date : 2023.02.21
10:06:02 +01'00'

Renouvelle le certificat 34819-1

Responsable du Pôle Certification Environnement,

Laboratoire national de métrologie et d'essais • Etablissement public à caractère industriel et commercial

Siège social : 1, rue Gaston Boissier - 75724 Paris Cedex 15 • Tél. : 01 40 43 37 00 - Fax : 01 40 43 37 37

info@lne.fr • lne.fr • RCS Paris 313 320 244 - NAF : 7120B - TVA : FR 92 313 320 244



12. PASTEUR INSTITUTE CERTIFICATE : reduction 8 log₁₀



Providing Expertise in Hospital Hygiene

*TRANSLATED COPY
Refer to ORIGINAL*

Experimentation conducted from November 12 to December 17, 1993

The LAJTOS TDS equipment uses the principle of sterilization with steam to make sterile the high-risk hospital waste. It allows to obtain by the method of the germ carrier a reduction of the number of living cells by 10⁸ for :

Staphylococcus aureus CNCM 53154
Enterococcus hirae CNCM 5855
Escherichia coli CNCM 54127
Pseudomonas aeruginosa CNCM A 22
Mycobacterium smegmatis CNCM 9326
Aspergillus niger CNCM 1431-83
Bacillus subtilis CNCM 7718
Enterovirus Polio 1
Orthopoxvirus de la vaccine

Made in Villeneuve d'Ascq, on October 17th 1997

Laboratory Technician
F. MARSY

Dept. Manager
Docteur C. KREMBEL

Fondation reconnue
D'utilité publique

1, rue du Professeur Calmette
BP 245 – 59019 LILLE cedex
France
Tél. 03 20 87 78 00
Fax. 03 20 87 79 06

3615 Pasteur Lille
Internet :
<http://www.pasteur-lille.fr>
SIRET 783 696 834 00010

Domaine du Cerila
369, rue Jules Guesde –
BP 39
59651 Villeneuve d'Ascq
cedex
Tél. 03 20 43 89 29



13. BIORISK EXPERTISE: Microbial inactivation : 10^8



CERTIFICATE

We, BioRisk Expertise, hereby state having tested the microbiological and technical effectiveness of biomedical waste treatment system ECODAS (T2000 / T1000 / T700 / T300 / T150 / T100), according to the methodology of the NFX 30-503 standard with the following results:

1. The microbiologic test results during a cycle (shredding and autoclaving at 138 °C during 10 minutes under a mean pressure of 3.5 bars) showed:
 - *A microbial inactivation of Bacillus atropheus spores at least 8log10,*
 - *No microbiological revival after 28 days at 20 °C in the final residues.*
2. The effectiveness results of technical tests showed:
 - *No contamination of the air around the machine,*
 - *No contamination of liquid discharge,*
 - *The shredded waste is in average less than 30 mm.*

According to these results, we hereby state that:

Biomedical waste treatment system ECODAS complies with the acceptability criteria of the standard NFX 30-503 and render biomedical infectious waste unrecognizable and comparable to household wastes.

Made in Saint-André-lez-Lille (France), on september 27, 2018

Dr. Marie-Florence GIREAUDOT, PhD
Microbiologist



14. PASTEUR INSTITUTE CERTIFICATE : Bacillus stearothermophilis

Pasteur

*Institute
Of Lille*



Providing Expertise in Hospital Hygiene

Lille October 21, 2002

Mr. Jeff Squalli

ECODAS

28 Rue Sebastopol

Roubaix, 59100 France

Phone: +33 03 20 87 72 61

-- TRANSLATED COPY --

Refer to ORIGINAL

A Controlled Study of Waste Decontamination: ECODAS T1000

Study Date 02/10/2002

Machine type: ECODAS – T1000

Cycle number: 2662

Sterilization time: 10 minutes

Cycle duration: 35 minutes

Principle

Spore strips of containing Bacillus Stearothermophilis spores kept in test tubes and capped with water impregnated cotton were placed in the apparatus.

Results

ECODAS - T 1000 Machine

Day 0	Test 1 =	<10	
	Test 2 =	< 10	
	Biological Indicator 1:		3.5*10 ⁶
	Biological Indicator 2:		4.0*10 ⁶
Day 14	Test 3 =	< 10	
	Test 4 =	< 10	
	Biological Indicator 3:		10.0*10 ⁶
	Biological Indicator 4:		7.0*10 ⁶

Conclusion

Satisfactory results with a 10⁶ reduction in Bacillus Stearothermophilis following decontamination with ECODAS T-1000 at 138 degrees C.

Laboratory Technician
R. Polyn

Technical supervisor
F. Marsy

Dept. Manager
Dr. C. Krembel



15. MICROBIOLOGICAL TEST RESULT ECODAS T₃₀₀



Providing Expertise in Hospital Hygiene

Lille, on November 12th 2007

Amended on November 15th 2007

Controlled study date: **October 23rd 2007**

Record Number: **EH/1231/07**

Translated COPY
Refer to ORIGINAL

Clinique du Val de Lys

M. BACKER

167 rue Nationale

59200 TOURCOING

A controlled study of waste decontamination machine

Customer: **Clinique du Val de Lys – TOURCOING**

Test place: **idem**

Installed machine: **ECODAS**

Machine Type: **T300**

Serial number: **1**

Cycle number: **2547**

Cycle duration: **12 H 05 – 12 H 45**

Sterilization time: **12 H 26 – 12 H 36**

Principle:

Place in the apparatus spore strips containing *Bacillus subtilis* spores, gauze and blood kept in test tubes capped with water-impregnated cotton.

Results:

ECODAS T300 # 1 machine

Day 0

Test 1 = < 10 UFC / ml

Test 2 = < 10 UFC / ml

Laboratory Biological indicator 1: $9 \cdot 10^6$ UFC / ml

Site biological indicator 1: $11 \cdot 10^6$ UFC / ml

Day 14

Test 3 = < 10 UFC / ml

Test 4 = < 10 UFC / ml

Laboratory Biological indicator 2: $7 \cdot 10^6$ UFC / ml

Site biological indicator 2: $4 \cdot 10^6$ UFC / ml

Conclusion:

Satisfactory results with reduction in *Bacillus* following decontamination with the apparatus at 138 °C during 10 minutes.

J. CAIGNET

Laboratory Technician

M.J. GHORIS

Technical Supervisor

F. POLYN

Dept Manager



16. REWARDS

OUR REWARDS

- 2022 : *Industry Trophies: International Awards* given by the *Industrial Society of Northern France*.
- 2017 : *Trophy Leadexport: Prize CONQUERANT B TO B* (Conqueror B to B) given by the International Chamber of Commerce and the World Trade Center.
- 2013 : ECODAS has been rewarded with the "*Jean-Claude OPPENEAU*" trophy - Jury's favourite Greentech Export Trophy during the Export Greentech Awards 2013 which took place in POLLUTEC - PARIS on December 2013.
- 2011 : *Performance Prize – Category Best Exporter* – North region – LES ECHOS
- 2009 : *International Prize – Ambition Award* – North East Region – LA TRIBUNE
- 2009 : *Sustainable Development Special Prize – Ambition Award* – North East Region – LA TRIBUNE
- 2008 : *Best Exportating Company 2007* prize - 1st Mondissimo convention of International trade & International Mobility
- 2008 : *Grand Prix Ecodas* was honored by the Industrial Society of Northern France and was awarded the Grand Prix of the Chamber of Commerce Grand Lille
- 2006 : *Performance Prize – Category Innovation* - North East Region, – LES ECHOS
- 2006 : *Citizen action prize* – Alliance Network
- 2005 : *Trophy GAZELLE 2005* given by the Ministry for the Small and Medium-sized companies, the Commerce, the Craft Industry and the liberal professions. Price rewarding the 2000 French companies having known the strongest growth in 2003-2004
- 2004 : *Trophy Biology Health 2004* - Price Innovation and Development with International given by the Club Eurasanté Developers
- 2002 : *Trophy International promotion Future Export* given by UBIFRANCE



17. OUR REFERENCES

More than 670 machines installed worldwide!!!

NORTH AMERICA	
	Canada
	Mexico
	St Pierre Miquelon
	USA
CENTRAL AMERICA & CARIBBEAN	
	Costa Rica
	Guadeloupe
	Honduras
	Jamaica
	Martinique
	Nicaragua
	Panama
	Saint Lucia
SOUTH AMERICA	
	Argentina
	Brazil
	Ecuador
	French Guiana
	Paraguay
	Peru
	Uruguay
	Venezuela

EUROPE	
	Albania
	Bosnia
	Bulgaria
	Cyprus
	Denmark
	England
	Estonia
	Finland
	France
	Greece
	Hungary
	Italy
	Kosovo
	Latvia
	Lithuania
	Macedonia
	The Netherlands
	Poland
	Rep Tchek
	Romania
	Slovakia
	Spain
	Switzerland
	Ukraine

ASIA	
	Bangladesh
	China
	Hong Kong
	India
	Indonesia
	Japan
	Laos
	Nepal
	Philippines
	Russia
	Singapore
	South Korea
	Thailand
	Turkmenistan
	Vietnam
MIDDLE EAST	
	Azerbaijan
	Bahrain
	Iran
	Iraq
	Jordan
	KSA
	Kurdistan
	Kuwait
	Lebanon
	Palestine
	Sult Oman
	Syria
	Turkey
	UAE

AFRICA	
	Algeria
	Angola
	Benin
	Burkina faso
	Cameroon
	Egypt
	Gabon
	Ghana
	Guinea Konakry
	Ivory Coast
	Libya
	Maldives
	Mauritania
	Mauritius
	Mayotte
	Morocco
	Mozambique
	Nigeria
	Reunion Island
	Senegal
	Sudan
	Togo
	Tunisia
	Uganda
	Zanzibar

AUSTRALIA & OCEANIA	
	French Polynesia
	New Caledonia