UNIVERSITÀ DEGLI STUDI DI PALERMO	**Standard Operating Procedure (SOP)**	**Document Code: POS-01** **Revision №: 0** **Page 1 of 6** **Annexes: 4**

Title: SANITIZATION OF AIR, FLOORS AND SURFACES OF WORK IN THE CORRIDOR OF THE ANIMAL HOUSE IN THE DEPARTMENT OF BIOPATHOLOGY AND MEDICAL AND FORENSIVE BIOTECHNOLOGIES

Changes to previous versions:		
Date	**Ref. Point**	**Reason for the change**
Changes are highlighted **underlined in the procedure**		

Rev.	**Issuing Date**	**Preparation**	**Technical Verification** **(RBA)**	**RQ Verification**	**Approval** **Director of the Dept**
0	**15/04/2014**	**Guido Sireci**			
1					
2					
3					
4					
5					

SANITIZING OF AREA (ANIMAL HOUSE)

This document is owned by the University of Palermo

1. Purpose and Scope of Application

The purpose of this procedure is to provide general guidelines for sanitizing air, rooms and work surfaces of the corridor of the animal house located in the Section of General Pathology, owned by the University of Palermo. The present procedure arises from the need to guarantee the lowest possible concentration of surface and airborne contaminants in the environments where the animal interventions, in particular with reference to those immunecompromised, are carried out. Air is heterogeneous and therefore represent a potential source of contamination; it can contaminate as a result of contact with different surfaces, and consequently transport of contaminants within an environment are very effective. The nature of air contaminants is very diverse: gas, dust, pollen, viruses and micro-organisms (bacteria, molds and yeasts) and their potential presence in the premises can affect test results, especially those microbiological, biomolecular and immunological, as well as compromising the well-being of the animals. In order to permit the procedures for which the animal house was designed, or the shelter of animals in optimal conditions for their well-being, as well as treatment and surgical operations on them, it is necessary to define a sanitization plan of the corridor to avoid a potential contamination with any agent in every phase of the interventions (infectious or inert) coming from outside.

2. Reference Documents

- Recommendation of the Commission of the EEC 2007/526/EC.

- Manual of Biosafety in Laboratories (World Health Organization).

- Guide for the care and use of laboratory animals, 8th edition. National Research Council of The National Academies (USA).

- IS07218: 1996 (E): Microbiology of food and animal feeding stuffs - General rules for microbiological examinations.

- Manual of basic techniques for a health laboratory. Second edition. Geneva: World Health

Organization, 2002, ISBN 92 4 154530 5.

- Legislative Decree No. 626 of 19/09/94 (Official Gazette № 265 of 12/11/94 - Ordinary supplement № 141) with the modifications and additions made by the Decree Legislative № 242 of 19/03/96 (Official Gazette № 104 of 06/05/96 - Ordinary Supplement n. 75).

- Directive 2010/63 / EU on the protection of animals used for scientific purposes.

- LEGISLATIVE DECREE March 4, 2014, № 26 - Implementation of Directive 2010/63 / EU on the protection of animals used for scientific purposes (14G00036) (OJ Series General № 61 of 14-3-2014).

- Law 6 August 2013, № 96, article 13, on "Delegation to the Government for the transposition European directives and the implementation of other European Union acts - Delegation law European 2013. "

3. Definitions

- Sanitization: set of cleanliness and disinfection operations, which have respectively the purpose of eliminating dirt and inactivating or otherwise reducing contaminating microorganisms present in the air and on the surfaces of the work environments.

- Biofilm: association characterized by a remarkable stability between microorganisms and a set of substances, mainly of metabolic origin, called matrix.

- Matrix: set of predominantly metabolic substances rich in exocellular polysaccharides which covers, similarly to a protective capsule, the vegetative form of microorganisms that (stimulated in their proliferation) increase it and are in turn moved into the surrounding medium.

- Inert agent: dirt or atmospheric dust coming from outside.

- Corridor: in this document the term "corridor" will be used for the purpose of understanding the set of work surfaces, floors, objects and air to be sanitized.

- Personal Protective Equipment: shoe-covers, disposable laboratory coats, gloves, masks.

- Fully immunocompromised animals: NSG animals or with similar degree of impairment of the immune system.

- Immunocompromised animals: SCID, NOD/SCID animals or similar degree of impairment of the immune system.

- Immunocompetent animals: animals whose immune system is not compromised; they are normally used as a control in experimentation.

4. Abbreviations

- AWM: Animal Welfare Manager

- PPE: personal protective equipment

5. Responsibility

- The AWM is responsible for ensuring and verifying the correct application of this procedure and entrusts to the Technical Staff the execution of all its phases. Moreover, the AWM informs the cleaning staff how to carry out the cleaning work and which detergents and disinfectants ought to be used in the Laboratory.

- The Technical Staff is responsible for the execution of the technical steps entrusted to him by the AWM and their correct correspondence.

6. Operational criteria

6.1. Instruments and equipment

- Apparatus with germicidal UV lamps, air aspirator.

6.2 Reagents and reference materials

- Liquid disinfectant for surfaces, non-toxic with biocidal activity on bacteria, spores, yeasts and molds (for example Isopropyl alcohol, Biosteril or similar ones).

- Detergents for surfaces, equipment, floors, etc. (for example, Benzalkonium chloride, Isopropyl alcohol).

- 1N NaOH disinfectant solution or sodium hypochlorite having at least 12% free Cl.

- Methanol or 70% Ethanol.

- Distilled water.

Precautions

The operator will take care of:

- observe the instructions provided by the AWM.

- use appropriate personal protective equipment in compliance with the recommendations indicated in the relevant technical data sheets.

- comply with the Safety Data Sheets and the Operating Sheets of the products used.

For anything not expressly indicated, it is advisable to refer to the Safety regulations

of the Workers referred to in the D.L. 626/94.

6.3. Implementation of the test

- Operative procedures on fully immunocompromised O immunocompromised animals -

OR - Reception and acclimatization of totally immunocompromised O immunocompromised animals.

- Change cages, feed and water for animals totally immunocompromised.

- Change cages, feed and water for immunocompromised animals.

- Operative procedures on immunocompetent animals - OR - Reception and acclimatization

immunocompetent animals

OR

- Change cages, feed and water for immunocompetent animals.

The above mentioned procedures indicated with "OR" are mutually exclusive. They will only be carried out following the corridor sanitization, so that the equipment used has already acted and there are no toxic residue in the air or in surfaces that can be dangerous for the operator. To this end, refer to the boards of specific safety of the individual products (A. 4) or the technical data sheet of the equipment (A. 5). It is advisable, where the experimentation times allow, to carry out these procedures in different days.

Annex 2 details the order in which the procedures can be performed, or the mutual exclusivity of the same. More procedures can be performed in the same work session only if they are carried out according to the direction indicated by the arrows; *viceversa* it is necessary first implement the sanitization process, and then proceed with the desired procedure.

The disinfection, which is the fundamental phase of the process, can be implemented by either physical or chemical means, but in both cases, the elimination of bacterial load always depends on the success of the phases that must precede its application, for example the removal of dust and cleaning of surfaces and equipments.

At the entrance of the rooms in which sanitation is planned, carpets with bacteriostatic activity have been affixed to prevent the potential spread of contamination determined from the introduction of bacterial debris by means of soles or cart wheels.

6.3.1 Method for the sanitization of surfaces in laboratories

Cleaning and disinfection of work surfaces must be carried out at the end of the work activity and no more than one hour after the conclusion of it (in order to avoid a high adhesion of the residues to the surfaces), after removing the used dpi and replacing them with new ones.

A paper cloth will be soaked in disinfectant solution (Incidin liquid or similar - see 4 for methods of use and dilutions) to carry out the cleaning. Flat surfaces will then be rinsed with drinking water, successively disinfected with 70% ethanol and finally dried. Floors will be cleaned with a suitable cloth using a Na-Na-hypochlorite solution with at least 12% free Chlorine (see annex A1_1.1). During this procedure hypochlorite must not come into contact with metal surfaces. All necessary rinses will be performed until the washing water is clean.

The roughness of the surfaces, determined by the state of wear of the materials, it is essential for the formation and consolidation of biofilm. Disinfection of surfaces must be performed taking care to cyclically change the disinfectant in order to avoid a possible formation of resistant microorganisms in the environments.

6.3.2. Method for the sanitization of air

Before starting the decontamination process it is necessary to:

- make sure that all the cleaning and disinfection has been carried out in the room to be treated, including all the equipments present, as described in point 6.3.1

- scrupulously follow the indications given on the Safety Data Sheet and on the Sheet

Operative (A. 4 and A. 5) of the product/equipment in use;

- carefully close all the doors and apply on them (from the outside) the sign All.2.

6.3.2.1. Method by the use of the “apparatus with U.V. germicidal lamps, air aspirator "

This method was created specifically to ensure microbial decontamination in the microbiology laboratories, cell cultures, production environments, and animal houses. It is a very simple application, which can also be implemented in the presence of personnel and does not generate any post-treatment residues. The method involves the use of a device designed and built to drastically reduce the contamination of microorganisms, bacteria, molds, yeasts and viruses. This instrument works by first aspirating the air present in the environment, then subjects it to the action of UV rays emitted by lamps at low power (55 watts), and finally release it back into the environment. Short ultraviolet rays wavelength have a disinfectant/bactericidal action as they interact with nucleic acids of all microorganisms. UV rays are only present within the instrument without exiting into the external environment; thus, only the air sucked in by the appliance comes into contact with UV rays. In the laboratory the appliance can remain in operation consistently throughout the whole working day.

6.3.3. Method to decontaminate equipment and workbenches in case of accidental contamination from bacterial cultures or germs present in the samples

6.3.3.1 Working surfaces

In case of accidental pollution of equipment and workbenches due to organic material and/or contamination with germs present in the samples these *steps* must be followed:

- wear disposable gloves;

- cover the leaked material with a disposable paper cloth soaked in a solution of disinfectant (Incidin liquid or similar - see 4 for use and dilutions), and successively pour the disinfectant first on the edges and then in the middle of the cloth and leave for 20-30 minutes;

- collect the disposable paper and the leaked material and place it in suitable condition container for special waste;

- carefully clean the surfaces concerned by using a suitable disinfectant and let it dry.

6.7 Collection, processing and expression of results

At the end of each sanitizing intervention of the air it is advisable to verify the success of the treatment. The evaluation is done through the environmental microbiological control reported in the POS-02. The work surfaces, in case the control shows that results are not conformed yet to their use, will obviously be subjected to another microbiological control.

Annex 1_1.1

OPERATING CARD FOR THE USE OF DISINFECTANTS	
Product trade name: BLEACH **Chemical composition: SODIUM HYPOCLORITH (NaOCl)**	
PREPARATION	
Working concentration: **>12%**	**Quantity to be prepare:** **5L DILUTION 1:20** **(250 ml of NaOCl + 4750 ml of water)**
Contact time: **5'**	**Lab tools to be used for preparation:** **GRADUATED CYLINDER, GRADUATED CONTAINER**
Solution temperature: **ROOM TEMPERATURE**	**Checks before use:** **N.A.**
APPLICATION	
D.P.I. to be worn by the staff: **GLOVES, DISPOSABLE LAB COATS**	
Premises interested in the treatment: **CORRIDOR, ROOM 1**	**Surfaces and /or equipment on which to operate: FLOORS, WHEELS OF CARRIAGE**
Application procedure: **DRY A DELICATE CLOTH** **AND WIPE THE SURFACES**	**Lab tools to be used for the application:** **DELICATE WASHING CLOTH**
Rinsing application mode: **PLENTY OF WATER**	**Disposal of the remaining solution:** **LIQUID SPECIAL WASTE**

THE LABORATORY MANAGER

OPERATING CARD FOR THE USE OF DISINFECTANTS	
Product trade name: **Chemical composition:**	
PREPARATION	**Working concentration:** / **Quantity to be prepare:**
	Contact time: / **Lab tools to be used for preparation:**
	Solution temperature: / **Checks before use:**
APPLICATIO N	**D.P.I. to be worn by the staff:**
	Premises interested in the treatment: / **Surfaces and /or equipment on which to operate:**
	Application procedure: / **Lab tools to be used for the application:**
	Rinsing application mode: / **Disposal of the remaining solution:**

THE LABORATORY MANAGER

Annex 2

ENTRY FORBIDDEN TO UNAUTHORIZED PERSONNEL

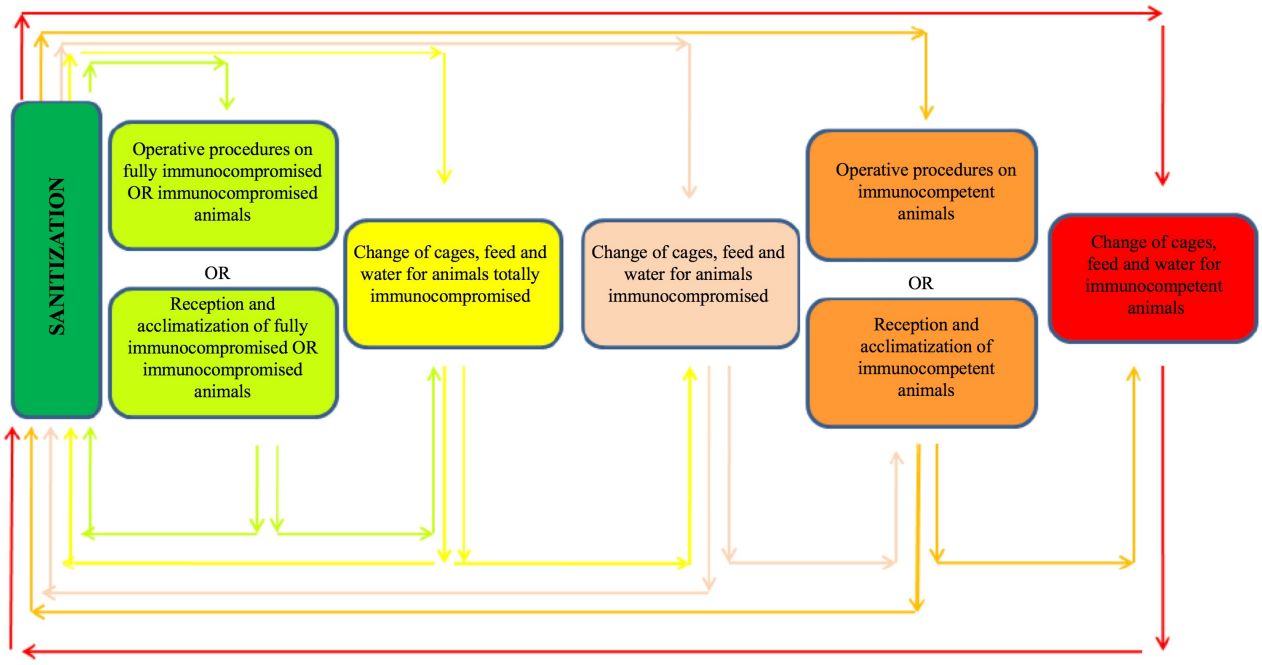
SANITATION IN PROGRESS

THE MANAGER OF ANIMAL WELFARE

_____

SANITIZING OF AREA (ANIMAL HOUSE)

Annex 3



Annex 4

ECOLAB

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

INCIDIN LIQUID

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	:	INCIDIN LIQUID
Product code	:	104241E
Use of the Substance/Mixture	:	Surface Disinfectant
Type of substance	:	Mixture
		For professional users only.
Product dilution information	:	No dilution information provided.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Surface disinfectant. Manual process Medical devices . Manual process Medical devices ; Spray and wipe process
Recommended restrictions on use	:	Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company	:	Ecolab Ltd. PO Box 11; Winnington Avenue Northwich, Cheshire, United Kingdom CW8 4DX + 44 (0)1606 74488 ccs@ecolab.com

1.4 Emergency telephone number

Emergency telephone number	:	Food & Beverage, Institutional, Agriculture, Textile Hygiene: Northwich: +44 (0)1606 74488 Healthcare: Leeds: +44 (0)113 232 2480 Swansea: +44 (0)1252 717616
Poison Information Centre telephone number	:	Not Available
Date of Compilation/Revision	:	16.06.2014
version	:	1.0

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids , Category 3	H226
Eye irritation , Category 2	H319
Specific target organ toxicity - single exposure , Category 3, Central Nervous System	H336

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

INCIDIN LIQUID

Classification (67/548/EEC, 1999/45/EC)

Xi; IRRITANT	R10
The classification of this product is based on toxicological assessment.	R67
	R36

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Warning

Hazard Statements	: H226	Flammable liquid and vapour.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.
Precautionary Statements	: **Prevention:**	
	P280e	Wear eye protection/face protection.
	P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Hazardous components which must be listed on the label:
propan-2-ol
propan-1-ol

2.3 Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
propan-2-ol	67-63-0 200-661-7 01-2119457558-25	F-Xi; R11-R36-R67	Flammable liquidsCategory 2; H225 Eye irritationCategory 2; H319 Specific target organ toxicity - single exposureCategory 3; H336	>= 30 - < 50
propan-1-ol	71-23-8 200-746-9 01-2119486761-29	F-Xi; R11-R41-R67	Serious eye damage/eye irritationCategory 1; H318 Flammable liquidsCategory 2;	>= 25 - < 30

			H225 Specific target organ toxicity - single exposureCategory 3; H336	

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
In case of skin contact	:	Rinse with plenty of water.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Fire Hazard Keep away from heat and sources of ignition. Flash back possible over considerable distance. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	:	Remove all sources of ignition. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions	:	Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation. Keep away from fire, sparks and heated surfaces. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Wash hands thoroughly after handling.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage	:	Keep away from heat and sources of ignition. Keep in a cool, well-

areas and containers: ventilated place. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : 0 °C to 25 °C

7.3 Specific end use(s)

Specific use(s) : Surface disinfectant. Manual process
Medical devices . Manual process
Medical devices ; Spray and wipe process

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

CAS-No.	Components	Value type (Form of exposure)	Control parameters	Update	Basis
67-63-0	propan-2-ol	TWA	400 ppm 999 mg/m3	2006-09-01	UKCOSSTD
		STEL	500 ppm 1,250 mg/m3	2006-09-01	UKCOSSTD
71-23-8	propan-1-ol	STEL	250 ppm 625 mg/m3	2005-04-06	UKCOSSTD
		TWA	200 ppm 500 mg/m3	2005-04-06	UKCOSSTD

8.2 Exposure controls

Appropriate engineering controls

Engineering measures : Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Eye/face protection (EN 166) : Safety glasses with side-shields

Hand protection (EN 374) : No special protective equipment required.

Skin and body protection (EN 14605) : No special protective equipment required.

Respiratory protection (EN 143, 14387) : None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified

respiratory protection equipment meeting EU requirements(89/656/EEC, 89/686/EEC), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.

Environmental exposure controls

General advice : Consider the provision of containment around storage vessels.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	light yellow
Odour	:	citrus
pH	:	8.0, 100 %
Flash point	:	25 °C closed cup
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	0.9
Water solubility	:	soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, kinematic	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

no data available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Toxicity

Acute oral toxicity	:	There is no data available for this product.
Acute inhalation toxicity	:	There is no data available for this product.
Acute dermal toxicity	:	There is no data available for this product.
Skin corrosion/irritation	:	There is no data available for this product.
Serious eye damage/eye irritation	:	Eye irritation
Respiratory or skin sensitization	:	There is no data available for this product.
Carcinogenicity	:	There is no data available for this product.
Reproductive effects	:	There is no data available for this product.
Germ cell mutagenicity	:	There is no data available for this product.
Teratogenicity	:	There is no data available for this product.

STOT - single exposure	:	There is no data available for this product.
STOT - repeated exposure	:	There is no data available for this product.
Aspiration toxicity	:	There is no data available for this product.

Components

Acute oral toxicity	:	propan-2-ol LD50 rat 4,710 mg/kg
Acute inhalation toxicity	:	propan-2-ol 4 h LC50 rat: 30 mg/l
Acute dermal toxicity	:	propan-2-ol LD50 rabbit: 12,870 mg/kg

Potential Health Effects

Eyes	:	Causes serious eye irritation.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Inhalation may cause central nervous system effects.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Irritation
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	Dizziness, Drowsiness

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Product

Toxicity to fish	:	no data available
Toxicity to daphnia and other aquatic invertebrates	:	no data available
Toxicity to algae	:	no data available

Components

Toxicity to fish	:	propan-2-ol 96 h LC50 Fish : 9,640 mg/l

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
European Waste Catalogue	:	200113* - solvents

SECTION 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number	:	1987
14.2 UN proper shipping name	:	ALCOHOLS, N.O.S. (Isopropanol, Propanol)
14.3 Transport hazard class(es)	:	3
14.4 Packing group	:	III
14.5 Environmental hazards	:	No
14.6 Special precautions for user	:	None

Air transport (IATA)

14.1 UN number	:	1987
14.2 UN proper shipping name	:	Alcohols, n.o.s.

(Isopropanol, Propanol)

14.3 Transport hazard class(es)	:	3
14.4 Packing group	:	III
14.5 Environmental hazards	:	No
14.6 Special precautions for user	:	None

Sea Transport (IMDG/IMO)

14.1 UN number	:	1987
14.2 UN proper shipping name	:	ALCOHOLS, N.O.S. (Isopropanol, Propanol)
14.3 Transport hazard class(es)	:	3
14.4 Packing group	:	III
14.5 Environmental hazards	:	No
14.6 Special precautions for user	:	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	Not applicable.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National Regulations

Take note of Dir 94/33/EC on the protection of young people at work.

Other regulations	:	The Chemicals (Hazard Information and Packaging for Supply) Regulations. The Control of Substances Hazardous to Health Regulations. Health and Safety at Work Act.

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: OTHER INFORMATION

Full text of R-Phrases

R11	Highly flammable.
R36	Irritating to eyes.
R41	Risk of serious damage to eyes.
R67	Vapours may cause drowsiness and dizziness.

Full text of H-Statements

H225	Highly flammable liquid and vapour.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Full text of other abbreviations

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

INCIDIN LIQUID

Prepared by : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

ANNEX: EXPOSURE SCENARIOS

DPD+ Substances:

The following substances are the lead substances that contribute to the mixture Exposure Scenario according to the DPD+ Rule:

Route	Substance	CAS-No.	EINECS-No.
Ingestion	No lead substance		
Inhalation	propan-2-ol	67-63-0	200-661-7
Dermal	No lead substance		
Eyes	propan-1-ol	71-23-8	200-746-9
aquatic environment	No lead substance		

To calculate if your downstream Operating Conditions and Risk management Measures are safe, please calculate your risk factor at the website below:

www.ecetoc.org/tra

Short title of Exposure Scenario : **Medical devices ; Spray and wipe process**

Use descriptors

Main User Groups : Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Sectors of end-use : **SU22:** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Process categories : **PROC10:** Roller application or brushing
PROC11: Non industrial spraying
PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

Product categories	:	**PC35:** Washing and cleaning products (including solvent based products)
Environmental Release Categories	:	**ERC8a:** Wide dispersive indoor use of processing aids in open systems

Short title of Exposure Scenario	:	**Surface disinfectant. Manual process**

Use descriptors

Main User Groups	:	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	:	**SU22:** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	:	**PROC10:** Roller application or brushing **PROC8a:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Product categories	:	**PC35:** Washing and cleaning products (including solvent based products)
Environmental Release Categories	:	**ERC8a:** Wide dispersive indoor use of processing aids in open systems

Short title of Exposure Scenario	:	**Medical devices . Manual process**

Use descriptors

Main User Groups	:	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	:	**SU22:** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	:	**PROC10:** Roller application or brushing **PROC8a:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Product categories	:	**PC35:** Washing and cleaning products (including solvent based products)
Environmental Release Categories	:	**ERC8a:** Wide dispersive indoor use of processing aids in open systems

UV STERIL AIR SYSTEM

DISPOSITIVI PER LA DISINFEZIONE DELL'ARIA

KOVER SYNERGY
INDOOR AIR QUALITY

Brevettato & Certificato

Brevetto n. 1.325.727

Conformità alle normative CE
Direttiva 93/42 CEE
Dispositivi medici Classe I

SPECTRAL UV CTI

cod, 11204 - cod, 11204 - B

Il funzionamento è basato su un sistema di ventilazione forzata a ciclo chiuso.

L'aria aspirata nel modulo, passa prima attraverso un filtro meccanico posizionato nella bocchetta d'ingresso.

Qui gli inquinanti più grossolani vengono bloccati evitando l'imbrattamento dei tubi germicida.

Successivamente l'aria è costretta a passare a diretto contatto di tubi a vapori di mercurio che, grazie all'emissione di radiazioni UV-C espletano la massima azione germicida.

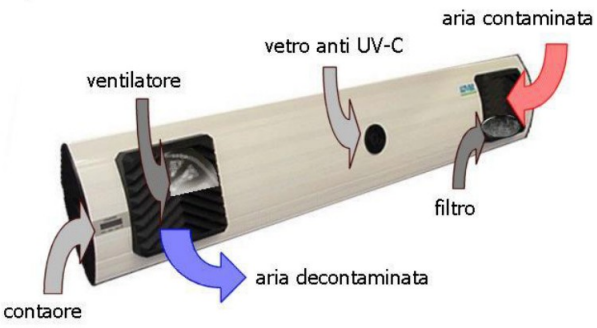
Uno schermo speculare ad alto potere riflettente concentra le riflessioni delle radiazioni UV-C.

L'aria viene espulsa dalla bocchetta d'uscita determinando così l'abbattimento microbiologico.

IL GRANDE VANTAGGIO DI QUESTO SISTEMA CONSISTE NELL'ASSOLUTA MANCANZA DI PERICOLOSITÀ PER L'UOMO IN QUANTO NON SI HA LA MINIMA FUORIUSCITA DI RADIAZIONI UV-C DAL MODULO.

E' quindi possibile effettuare una disinfezione continua e costante dell'aria di qualsiasi ambiente, durante ogni fase lavorativa.

Principio di funzionamento



SPECTRAL UV CTI

cod, 11204 - cod, 11204 - B

SCHEDA TECNICA	
Tensione di esercizio	230V 50 Hz
Consumo	70W
Portata	100 m^3/h
Funzionamento	continuo
Rumorosità	29dB
Lampada	n.2 tubi UV-C da 15W
Lunghezza d'onda	253,7 nm
Energia ultravioletta	9500 $\mu W/cm^2$
Efficacia di abbattimento microbiologico	99,96% riferito alla radiazione germicida UV 253,7nm per l'inattivazione *di Mycobacterium tubercolosis*
Sostituzione tubi UVC	6000 ore
Equipaggiamento	• **Filtro antipolvere** • **Contaore elettronico** per controllo/sostituzione filtro e tubi • **Telecomando** • **Ionizzatore d'aria**
Struttura	in alluminio estruso
Bocchetta uscita d'aria	regolabile
Controllo accensione lampade	vetro blu anti UV-C
Emissione esterna raggi UVC	nessuno
Pericolosità	nessuna
Emissione di ozono	nessuna
Colore	Ral 9010
Installazione	a parete/su base
Misure di ingombro	cm 120x18x8
Peso	Kg. 7 + Kg 3 Base

La ***KOVER*** Srl comunica che i dati riportati sono puramente indicativi e si riserva di modificarne il contenuto in ogni momento senza preavviso.

- **CONTAORE ELETTRONICO** per il controllo del filtro antipolvere e dell' effettiva vita dei tubi germicida.
- Ogni 2000 ore viene segnalato lo stato di avanzamento delle effettive ore di funzionamento mediante led Verde-Giallo-Rosso. **Ogni 2000 ore sostituzione del filtro antipolvere**
- Trascorse 6000 ore tutta l'apparecchiatura si spegne ed il led rosso lampeggia. **Ogni 6000 ore sostituzione dei tubi germicida**
- Dopo l'avvenuta sostituzione dei tubi germicida un tasto di RESET (blu) posto sul contaore elettronico consente il ripristino dello stesso.

I dispositivi **UV STERIL AIR SYSTEM** studiati per la disinfezione dell'aria possono essere utilizzati in:

OSPEDALI - STUDI DENTISTICI - AMBULATORI MEDICI - AMBULATORI VETERINARI - LABORATORI D'ANALISI - INDUSTRIE FARMACEUTICHE - INDUSTRIE ALIMENTARI – ALLEVAMENTI - LOCALI ADIBITI ALLA PRODUZIONE DI CIBI E BEVANDE - UFFICI - ABITAZIONI - LOCALI PUBBLICI

LA DISINFEZIONE DELL'ARIA
PER MEZZO DEI RAGGI ULTRAVIOLETTI
UVGI
IN CONDIZIONI DI MASSIMA SICUREZZA
CONTRO
VIRUS – BATTERI - SPORE