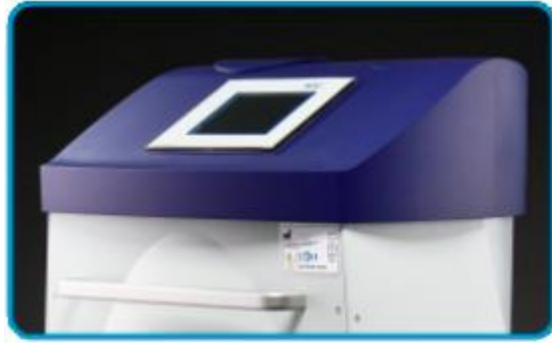


Elementary & Efficient Smart Sales Solutions







The quality of life passes through processes of prevention including the hygiene. This is the interaction between the environment and human health, shall develop procedures, requirements and measures to tackle environmental conditions and the behaviours of the human race. These procedures are:

Cleaning: daily mechanical removal of dirt from surfaces and objects with general detergents. To do only to the visible and accessible points.

Sanitation: mechanical method that makes use of chemical detergents to reduce dirt on surface and areas defined for a need of periodic application. The sanitization does not allow the total elimination of bacterial agents, and precedes the operations of sanitation and sterilization

Sanitization: method used to reduce heavily the biological contamination on objects and surfaces up to a level of safety. It is obtained by use of specific sanitizers.

Sterilization: Method that allows, with specific systems and technologies, the complete removal of any living pathogen.

The interest of our company is directed to the processes of environmental sanitation. This technology, using an appropriate sanitizing spray product, can in a short time, cut down nearly all bacterial, fungal and viral present on the surface on which it is applied; the result is the substantial reduction of the risk of infection and the guarantee of being able to live and stay in a safe and healthy environment.

The Esterilizer Sanitizer: An Italian company, partner of E2S3 Ltd, has developed this device called Esterilizer which is a new technology for healthcare-associated with infections in a professional way, in individual rooms. The device Esterilizer operates by generating a high kinetic energy cloud.

They have developed a concept of disinfection, using a spray technique that generates very fine drops of a product suitable to the environment to be sanitized. The cloud is formed by droplets of a diameter between 8 μm and 12 μm media Gauss.

A diffuser nozzle is built specifically to produce these drops allowing a perfect diffusion of the solution in the entire volume of the environment subjected to sanitization, as well as a homogeneous distribution on surfaces and in the interstices present. The combination of the size of the drops and the nozzle is the basis of the high capacity of the instrument to generate a level of optimal disinfection.

Smaller are droplets, lighter, longer is the time of their suspension. This gives a guarantee of full contact with the surfaces and the distribution of the disinfectant is mixed. Even the medical devices, equipment and present fittings in the ambient, are achieved in the interstices inaccessible.

The technology able to provide this service is the Esterilizer.

Our work is completed with the drafting of the document concerning biohazard environmental microbiological analysis and certification.



Technical Features	
Power supply and max electric power	220-230Vac – 50Hz 2kW
Complies with electromagnetic directives	EN 61000 - EN 61000.4.2 EN 61000.4.3 - EN 61000.4.4 EN 55011 - EN 55022
Certification CE	D.Lgs. 46/97 - DM



Application Field

- ✓ This technology is used with excellent results in the following areas:
- ✓ Hospital
- ✓ Cell Factory and relevant laboratory contamination control
- ✓ Social (schools, nursery schools, prisons etc.)
- ✓ Transport (trains, planes, ships, etc.)
- ✓ Pharmaceutical Industries
- ✓ Food Industries

Sanitizer Sterisim: The concept of cloud explains the mechanism of high power disinfecting determined by adherence of micro-droplets on all surfaces.

Given that most microorganisms are hygroscopic, they become naturally excellent targets for the disinfectant product, SANISIM solution. It is proposed as the ideal accompaniment to the Esterilizer cloud diffuser.

SANISIM solution is a disinfectant solution containing 6% hydrogen peroxide and 95% bidistilled water and silver ions. It is non-corrosive and biodegradable with no toxic residues.

Functions and Features : The diffuser of cloud Esterilizer is a fully programmable device.

The system is integrated with functions of control of the quantities including the control of the residual and used product SANISIM solution volume. The system provides, for the recording of data, the amount of product SANISIM solution widespread in the environment in automatic. The creation of a history of activity allows the user to extract data, save and print then by a PC.

Process safety is guaranteed by the traceability of each activity and, therefore, the possibility to record the parameters related to the product SANISIM solution, the operator and the environment.

Flow Control Output: A set of sensors, connected to the control system, allows the user to measure and adjust the output flow of the dry cloud and to compare it with pre-set fixed parameters thanks to an integrated calculation program.

This system allows the instrument to automatically turn off the machine in the case where the amount of product in relation to the number of operations carried out is no longer sufficient for further disinfections, forcing the operator to add another product of the same code and the same chemical composition.

INFECTIONS IN HEALTH ORGANIZATIONS

Hospital Infections are a major problem for ethical, safety and economic benefits. Just think that they are due to a number of deaths every year greater than that caused by road accidents.



Reliable sources report that hospital patients who contract a hospital infection represents for 8% to 10%. In Europe, there are approximately 4.1 million cases, equal to 1/20 of total admissions.

DEFINITION OF INFECTIONS FROM HEALTH CARE

It's infection that occurs in a patient hospitalized, healthy at time of admission.



When patient goes to the hospital to treat a pathology and it contracts another.

These infections may occur during hospitalization or after discharge. This depends from incubation time.

Infection causes

Infections can be transmitted by:

- ✓ •Hands
- ✓ •Air (air conditioning systems)
- ✓ •Water (especially Legionella)
- ✓ •Environments and medical devices

Each of these elements requires the adoption of a strategy that passes from :

- ✓ •Prevention and control
- ✓ •Cleaning
- ✓ •Sanification
- ✓ •Sanitization

classification of sanitary needs in hospitals

Hospital sanitary needs are divided into categories in order to target the measures to be adopted and the behaviour of the personnel; namely:



- 1.Cleaning
- 2.Sanification
- 3.Sanitization

1. CLEANING

Cleaning means removing filth by means of mechanical tools and taking waste and linen away.



Generally speaking, cleaning means removing any dust or filth layer from a surface or from objects. Is an operation usually carried out mechanically by means of water and a chemical cleansing product which normally remains ineffective in poorly accessible places (corners, hidden surfaces, dead angles, etc.)

2. SANIFICATION

Sanification means cleaning place in order to make and tidy for people.



Such a process results in the use of **chemical cleansing products** to reduce the number of bacteria that are present in the different areas and on various surfaces, which does not allow, anyways, the complete elimination of all germs, bacteria and other pollutants.

2. SANITIZATION

Sanitization means the disinfection of surfaces to be carried out when the environment must be decontaminated from all pathogens. It aims at killing all micro-organisms through the use of disinfectants.



A highly important method meant to keep any possible microbial contamination to safety levels via chemical disinfectants used by means of special systems or machines.

PROBLEMS LINKED TO TRADITIONAL SANIFICATION

The limits of traditional environmental Sanification are the following:



- ✓ It needs operators;
- ✓ It can skip surfaces that are not easily reachable;
- ✓ Poorly reachable surfaces become the culture soil for germs and microorganisms.

SANITIZATION: NEW TECHNOLOGIES

1. Need for by – passing or dispense with operators;
2. Use of wholly effective technologies.



In order to focus on eco-friendly and wholly effective methods we shall take into account the use of

PHYDROGEN PEROXIDE + Silver ions

whose decomposition products are safe.

This method respects environment and gives effective results.

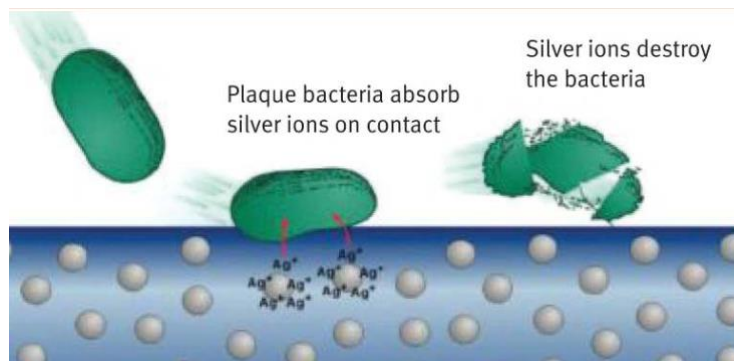
HYDROGEN PEROXIDE

Hydrogen peroxide is an oxidizing agent that removes pathogens through the hydrolysis of free radicals. It helps eradicate a large number of micro-organisms, such as:

- ✓ bacteria,
- ✓ fungi,
- ✓ viruses,
- ✓ spores

and it is considered as a safe and harmless disinfectant.

The combination of hydrogen peroxide and silver ions allows to inactivate micro – organisms by inhibiting the synthesis of proteins



Potential oxidation of various oxidants

Oxidizing agent	Oxidation potential	Risk of fire	Risk for people	Decay
Fluorine	3,0	high	high	slow
Hydro/water radicals	2,8	low	medium	medium
Ozone	2,1	high in gas stage	high	slow
Hydrogen peroxide	1,8	low	low	fast
Potassium Permanganate	1,7	high	low	slow
Chlorine dioxide	1,5	low	high	slow
Chlorine	1,4	medium	high	slow
Oxygen	0,4	high	medium	fast
UV	nn	low	high	fast



FEATURES OF HYDROGEN PEROXIDE

Hydrogen peroxide is a strong oxidant, has chemical formula H_2O_2 and the following structural formula: H-O-O-H.

- ✓ is a compound containing peroxide ions (O_2^{2-}). The peroxide ions have a single bond ($O-O$), therefore very unstable: the oxygen atom tends to bind quickly. When it binds to contaminant agent kills him.
- ✓ In contrast to other chemical substances, hydrogen peroxide does not produce compounds or gases. Security depends on its concentration in water solution.
- ✓ Hydrogen peroxide may be used for different applications, since it is highly selective. If the reaction conditions (temperature, pH doses, reaction time and addition of catalysts) change, it will attack different pollutants.
- ✓ The mechanism of disinfection is based upon the release of oxygen free radicals: $H_2O_2 \rightarrow H_2O + O_2$. The pollutants are broken down by the oxygen free radicals so that water alone remains. The free radicals have both an oxidizing and a disinfection power. Hydrogen peroxide eliminates proteins through oxidization.

EFFICACY OF HYDROGEN PEROXIDE AND SILVER CATIONS THROUGH THE VAPORIZATION PROCESS

The power of disinfection of hydrogen peroxide is well known since time immemorial, but its application has undergone a certain extent of evolution in order to obtain excellent results. Thanks to a panel of specialists, M.D.F. has created a new disinfectant (SANISIM solution) containing both hydrogen peroxide molecules and silver salts, which enhance its power of disinfection. The product is vaporized in the environment and spread in particles whose diameter ranges from 6 to 9 μm (Gauss average) so as to make it efficient also on hidden or unreachable surfaces or appliances. During nebulization SANISIM solution is spread as a dry mist composed of billions of droplets loaded with hydrogen peroxide molecules and silver positive ions which settle evenly on every cm^3 of the environment, thus allowing to kill any bacteria, viruses and mycoses present on the various surfaces.

EFFICACY OF THE SANISIM solution ESTERILIZER COMBINED SYSTEM

The combined SANISIM solution – ESTERILIZER system represents our up – to – date technology for environmental sanitization. Our special machine, ESTERILIZER, has been designed by M.D.F. to eradicate nosocomial diseases and pathologies from the environment through the vaporization of SANISIM solution, our powerful disinfectant.

Thanks to the combination of ESTERILIZER (the machine), and SANISIM solution, (the product), our system guarantees:

- a) High quality performances with results in accordance with the technical norms and standards of the sector;
- b) Saving in time.

The efficacy of such technology has been analysed, assessed and certified at the Sanitary and Health Department of Bari University by simulation of real use conditions.



The combined SANISIM solution – ESTERILIZER system is a valid disinfection system that guarantees efficacy, efficiency, safety and user – friendliness:

Efficacy:

1. Removal of 99.99% of environmental viruses, bacteria, fungi and spores;
2. Sanification of the whole environment, including the air and content of the vaporized areas;
3. The special vaporization system allows to spread very small particles of disinfectant.

The combined SANISIM solution – ESTERILIZER system is a valid disinfection system that guarantees efficacy, efficiency, safety and user – friendliness:

Efficiency:

1. Very reduced time of application (from few minutes to max 50 minutes for an area of 600 cubic meters); for larger spaces it is possible to use additional machines and product;
2. All appliances may be kept in situ during treatment;
3. The treated areas may be quickly re – entered (after 15 minutes only);
4. No personnel is needed since it is a machine aided process.

The combined SANISIM solution – ESTERILIZER system is a valid disinfection system that guarantees efficacy, efficiency, safety and user – friendliness:

Safety:

1. The product which is spread is absolutely non – toxic, non – caustic, it doesn't wet and it is fully eco-friendly;
2. Safe remote – control via Wi – Fi.



The combined SANISIM solution – ESTERILIZER system provides:

- 1. Machine
- 2. Product
- 3. Service

SANISIM solution-ESTERILIZER

The **ESTERILIZER** machine (EU trademark) is a wholly programmable appliance. Its use is integrated with an electronic control system and its functions include the control of the chosen volume and of the disinfectant residue. The system is programmed to implement the automatic and permanent data recording. The user is allowed the computer – aided extraction and printing of the recorded data.

Checkable parameters:

- ✓ Quantity of hydrogen peroxide contained in the tank;
- ✓ Duration of vaporization according to the volume chosen for the room.

The sanitizing liquid **ESTERILIZER solution** is a decontaminating solution composed of hydrogen peroxide (6% concentration) and portions of silver cations.

The system allows the perfect tracking of the sanitizing product thanks to the input of all parameters of **ESTERILIZER solution** (*lot, concentration, excipients, etc*) into the machine before disinfection.

The service is provided as follows :

- 1) The machine is placed at the centre of the room;
- 2) Input of data (e.g. volume of the room, lot of the product, etc.);
- 3) Check of the product level scheduled for the whole process;
- 4) Start of vaporization through local or remote control;
- 5) Wait for the product to be vaporized and to act into the environment;
- 6) End of the vaporization process and access to the room after only 15 minutes.

Buffer tests:

Buffer tests are carried out before and after use of the sanitizing product with following cross check of data

Conclusions

- The regular use of the combined SANISIM solution – ESTERILIZER system and the following control analyses have confirmed the unfailing efficacy of the treatment;
- All tests, checks and analyses are carried out in accordance with the NF EN 1040 norms;
- Our certified laboratories used are compliant with the Quality Control Systems enforced by the European Community;
- The combined system SANISIM solution-ESTERILIZER can be extended to all areas where there is a combination of people and concentration of risk of infection.

Application fields



- Hotels;
- Communities (schools, gyms, bureaus and offices, beauty- centres, swimming- pools etc.);
- Health care centres (hospitals, elderly homes, doctor's practices, dental surgeries, vet's rooms);
- Means of transport (ships, planes, trains, buses, subways);
- Houses to rent (e.g. weekly rented vacation places) and reception centres for emigrants or refugees);
- Restaurants (kitchens, restrooms, reception rooms);
- Any other highly crowded public or private place.



Reg. Numero / Reg. Number	MED 31467	Revisione / Revision	1
Primo rilascio / First issue date	2017-01-11	Valido da / Valid from	2017-01-11
Scadenza / Valid until	2020-04-20	Ultima modifica / Last change date	2017-01-11

Pagina / Page 1 di / of 2

Certificato CE del Sistema di Garanzia della Qualità/ EC Quality Assurance System Certificate

Si certifica che, sulla base dei risultati degli audit effettuati, il Sistema completo di garanzia di Qualità dell'Organizzazione/ We certify that, on the basis of the audits carried out, the full Quality Assurance System of the Organization:



è conforme ai requisiti applicabili della Direttiva 93/42/CEE e successive modifiche ed integrazioni, Allegato II escluso il pto 4, attuata in Italia con Dlgs. 46 del 1997/02/24 e successive modifiche ed integrazioni per le seguenti tipologie di Dispositivi Medici/ Is in compliance with the applicable requirements of 93/42/EEC Directive as amended, Annex II without point 4, transposed in Italy by Dlgs. 46 of 1997/02/24 as amended for the following Medical Devices:


Sistema di disinfezione per dispositivi medici non invasivi / Disinfection system for medical device

Soluzione disinfettante per dispositivi medici non invasivi a base di perossido e ioni argento / Disinfectant solution for non-invasive medical device based on peroxide and silver ions

Kiwa Cermet Italia S.p.A.
Società con socio unico, soggetta
all'attività di direzione e coordinamento
di Kiwa Italia Holding Srl
Via Cadriano, 23
40057 Granarolo dell'Emilia (BO)
Tel +39.051.459.3.111
Fax +39.051.763.382
E-mail: info@kiwacermet.it
www.kiwacermet.it



Chief Operating Officer
Giampiero Belcredi



Organismo Notificato n. 0476
Notified Body nr. 0476

Reg. Numero / Reg. Number	MED 31467	Revisione / Revision	1
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Certificate

**Allegato tecnico al Certificato/
Technical sheet enclosed to the Certificate**

Identificazione dei Dispositivi Medici/ Identification of Medical Devices:

Tipologia / Medical Devices:

Sistema di disinfezione per dispositivi medici non invasivi / Disinfection system for medical device

Classe di rischio / Risk class:

II a

Codice NANDO / NANDO codes:

MD 1107

Marca / Brandname:

Modello / Model:

Sistema sanisim / Sanisim system

Codici / Codes:

Sanisim

Tipologia / Medical Devices:

Soluzione disinfettante per dispositivi medici non invasivi a base di perossido e ioni argento / Disinfectant solution for non-invasive medical device based on peroxide and silver ions

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Modello / Model:

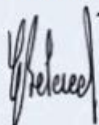
Soluzione sanisim / Sanisim solution

La lista completa dei codici, relativi ai modelli certificati, è disponibile presso Kiwa Cermet Italia./ The complete list of the codes related to the certificated models is available at Kiwa Cermet Italia. Il presente Certificato è soggetto al rispetto dei requisiti contrattuali di Kiwa Cermet Italia ed è valido solo per le tipologie di dispositivi sopra identificate soggette a sorveglianza/ This Certificate is subject to Kiwa Cermet Italia regulations and it is valid only for the above mentioned Medical Devices that are subject to survey. L'allegato tecnico è parte integrante del presente Certificato./ The technical sheet is an integrating part of this Certificate.

Kiwa Cermet Italia S.p.A.
Società con socio unico, soggetta
all'attività di direzione e coordinamento
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Via Cadriano, 23
40057 Grànarolo dell'Emilia (BO)
Tel +39.051.459.3.111
Fax +39.051.763.382
E-mail: info@kiwacermet.it
www.kiwacermet.it

CERMET

Chief Operating Officer
Giampiero Belcredi



CE

Organismo Notificato n. 0476
Notified Body nr. 0476

SANISIM SOLUTION 6 % H₂O₂

DATA SHEET
Rev. 3 del 12/09/2017

DATA SHEET SANISIM SOLUTION

1	Applicant's name and address	
	Society	Dimensione Service s.a.s. : Via III Trav Ludovico D'Angiò, 22 70032 Bitonto (BA) - ITALIA
	Telephone	: +39 080-3752362
	Fax	: +39 080-2143172
	e-mail address	: info@dimensioneservice.it
2	STATEMENT OF PRODUCT (see annex certificate)	
	Active principle	
	Chemical name	: SANISIM SOLUTION 6% H ₂ O ₂
	CAS Nr.	: 7722-84-1
	CEE Nr.	: 008-003-00-9
	Molecular formula	: H ₂ O ₂
	Other component	
	Chemical name	: Silver nitrate
	CAS Nr.	: 7761-88-8
	CEE Nr.	: -
	Molecular formula	: AgNO ₃
	Quantitative formula	
	hydrogen peroxide	: 6%
	Silver nitrate	: 40,8mg/l
	distilled water	: 100% c.s.p.

3	PHYSICS APPEARANCE	
	SANISIM SOLUTION It is presented in liquid form	

4	PRODUCT USE AND JUSTIFICATION USE
----------	--

The system allows SANITISING all surfaces including those that are generally inaccessible or hidden in hospitals or other hazardous environments such as crowded. The tests and performed experiments show a great disinfectant activity on microorganisms. SANISIM is based on the synergy of two principles: the hydrogen peroxide more silver cations: (H₂O₂ + Ag⁺).

The mechanisms of action are:

- 1) The oxidizing action of hydrogen peroxide which generates:
 - Oxidation of lipid membrane structures.
 - An alteration of ribosomes and nucleic acids.
- 2) Cathodic Action of Ag⁺, implies:
 - A inversion of polarity of membrane with a consequent alteration.
 - An inhibition of synthesis protein.

These two combined actions ensure the elimination of microorganisms. The system uses a spreading and spraying technology.

Ionization:

The sprinkler system produces a quality aerosol mixed with droplets of size about 8µm, equipped with electrostatic charge to facilitate the nucleation process.

SANISIM SOLUTION 6 % H₂O₂

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Nucleation:

Nucleation is a process by means of which small droplets adhere both to atmospheric particles on the surfaces, creating an interface between the droplets and particles on one side, and between the substance in the gaseous phase and the liquid disinfectant from other side.

The SANISIM method ensures a higher degree of disinfection, because the disinfectant fully is present on all the surfaces to be treated. The method is the only one that provides to an activity of broad-spectrum disinfection.

5	PROPERTY 'PHYSICAL AND CHEMICAL	
	Physical and chemical properties	Value
	Denomination	SANISIM SOLUTION
	Physical state	Liquid
	Smell	Slightly acidic
	Colour	Colorless
	Density at 20 ° C (kg/l)	0,9646
	pH a 20°C	4,0 ± 0,5
	Fusion point (°C)	-55
	Boiling point (°C)	~ 110
	Temperature of autodecomposition (°C)	111
	Inflammability piont	No data available
	Explosive Limit	No data available
	Auto ignition point or spontaneous ignition	No data available
	Water solubility	Total
	Viscosity at 20°C (cP)	0,98
	Vapor pressure at 20°C (mmHg)	18,30
	Saturation of vapor in air at 25°C (mg/m ³)	787

6	Saturation of vapor in air at	
	Product is distributed in bottles in PE from 1L to be used in SANISIM device. To transport the product it may be contained in tanks of 3L, 5L and 20L.	
	Distribution spraying	: Sanitizzazione Full 6 ml/m ³
	Distribution spraying	: Sanitizzazione preventiva 3 ml/m ³

7	DURATION OF PRODUCT (see the stability annex tests)
	Product is an oxidizing agent and responsive, stable if you follow the recommended conditions of storage and handling. The commercial product is stabilized to prevent decompositions for contamination. SANISIM SOLUTION stabilized for 1 year from date of manufacture. The products are stabilized to prevent the contaminants to keep him losing his business.

8	PACKAGING AND SALE
	HDPE plastic bottles with inner cap and cap sealed 1L

9	STATEMENT OF PRODUCTION FACTORY
	The currently laboratory that produces small amounts of SANISIM SOLUTION è: Raro Srl – Industria Detergenti Professionali
	Via 1° Maggio, 14 – 75100 MATERA (MT) Tel. 0835 383370 – Fax 0835 383473 MILANO – Tel. 02/96460832 – Fax 02/96460048 VAT: CE IT 00116260779
	e.mail: info@rarosrl.com Internet site: http://www.rarosrl.com/

SANISIM SOLUTION 6 % H₂O₂

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	PRODOTTO
	N ° of registration in Register of medical devices class IIb CE n° 0546
10	CERTIFICATE ANALYSIS OF ACTIVE PRINCIPLES AS-QUANTITY (See attached)
11	SAMPLES OF DIFFERENT PRODUCTION BATCH NR. or LOT WILL BE TAKEN FROM THE LABORATORY AND MADE AN ASSESSMENT OF CHEMICAL PHYSICS TO CONFIRM THE VALIDITY 'OF PRODUCT (to do periodically to qualify SANISIM solution manufacturer)
12	ANALYTICAL METHODS TO DETERMINING ACTIVE INGREDIENT
	To verify the contents and wealth of hydrogen peroxide proceeds to value the active component of the product:
	1. SANISIM solution it is diluted to a concentration of 0.5-0.6%
	2. In 10 ml, It is added 1 g of KI diluted in 100ml of water and 20ml of H ₂ SO ₄ (1V / 2V of water) shaking all
	3. Iodine that will develop is titrated with sodium thiosulfate 10N until the disappearance of the brown color. You can add starch to improve the loss of color.
	<i>1ml sodium thiosulfate is equivalent to 1.7001 mg of hydrogen peroxide</i>
	Note: To accelerate the reaction it can add a 2% ammonium molybdate
	valuation method of silver nitrate method:
	The silver nitrate is incorporated in the same formula. The product is very pure and chlorides with absence of any other impurities, for which it is sufficient that the solution in distilled water is total, leaving no residue and a completely transparent and colorless. To analyze the other active ingredient of the product, on: atomic absorption spectrophotometry with silver lamp.
13	CHEMICAL AND PHYSICS INFORMATION ON STABILITY
	EXPLOSIVE PROPERTY
	The dissolutions of H ₂ O ₂ up to 70% are not considered explosive. However, explosion may take place when the hydrogen peroxide is mixed with organic compounds to form a single phase, an emulsion or a suspension. Determining factors include: <ul style="list-style-type: none"> - Concentrations with a mixture of H₂O₂, H₂O and organic matter; - type of organic matter - presence an initiator - temperature of the mixture - Presence of a decomposition catalyst in the mixture. H ₂ O ₂ It is highly explosive when it is placed in contact with strong oxidizing agents or reducers.
	COMBURENT PROPERTY
	It is not an explosive product under normal conditions. It can be broken down by heat, radiation or impurities, which cause explosive gases or intervenes in oxidation reactions with heat dispersion and risk of combustion.
	CORROSIVE PROPERTY
	When using as a disinfectant, the product is always used in a watery solution. The result of corrosion of materials of evidence suggests no or only few corrosive effects of watery solution of product of common materials, such as: steel, aluminum, wood and polymers.
	PHYSICAL CHEMISTRY INCOMPATIBILITY WITH OTHER PRODUCTS
	Incompatibility: High temperatures, metals, oxidants and reducers, acids, alkalis, halogens, electromagnetic radiation, organic solvents, etc. In the case of decomposition, it breaks down into oxygen and water according to the following equation::

SANISIM SOLUTION 6 % H₂O₂

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	<p style="text-align: center;">$2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2 + 98 \text{ kJ per mole}$</p> <p>In an alkaline the rate of decomposition rapidly increases with the increase of pH. The H₂O₂ absorbs a broad spectrum of radiation, for this light can cause a decomposition photochemistry. The heating of the hydrogen peroxide to external agents is important. On the basis of physical-chemical criteria, the rate of decomposition both at the surface as in solution can duplicate itself every 10 °C increase in temperature. In case of a contamination of the reaction is accelerated. The most dangerous contaminants are the salts of iron, copper, vanadium, tungsten, molybdenum, silver or platinum. This phenomenon is known with the name of homogeneous decomposition. Small amounts of contaminants, may originate a rapid decomposition. The effect of pH on the contaminated peroxide decomposition rate is very high.</p> <p>al theories on the mechanism of decomposition reaction of H₂O₂.</p> <p>metal ions, it comes to chain reactions in which said ions oxidize and reduce subsequently, a small amount for this reason can cause decomposition of a large amount of peroxide.</p> <p>When it is placed in contact with the hydrogen peroxide can be produced a solid material insoluble rapid decomposition. the hydrogen peroxide decomposes on contact with any surface at room temperature. The rate of decomposition varies greatly according to the material and the state of said surface. The oxides and hydroxides of heavy metals and the noble metals are very active decomposition catalysts. The activity is greater the greater the specific surface area.</p>
--	--

14	EFFICIENCY (See annex evidence)	<p>Thanks to its great destructive power of germs and its magnificent residual behavior, you can spray SANISIM solution as a disinfectant to wide range disinfectant for all type of surfaces and environments:</p> <p>It is effective against:</p> <ul style="list-style-type: none"> - Sterilization: bacteria Gram + e Gram -. - Virulicidal : wide range - Fungicide : wide range. - Sporicide : bacterial spores and fungi. - Protozoa: amoeba, giardia, etc. - Oocysts of coccidia: Eimeria spp, cryptosporidium. - Alghicida: algae. <p>The solution SANISIM activity follows the rules of the effectiveness of disinfectants European Committee for Standardization: EN 1275, EN 1276, EN 1040 and EN 1650.</p> <p>Amply exceeds the requirements of these requests the European Standards on chemical antiseptics and disinfectants.</p>
	UNI EN 1040:2006	Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of basic bactericidal activity of chemical disinfectants and antiseptics - Test method and requirements (phase 1).
		<i>Pseudomonas aeruginosa; Staphylococcus aureus, Escherichia coli; Enterococcus sp.</i>
	NF T 72-281	Determination of bactericidal, fungicidal, sporicidal activity for aerial surface disinfection processes
	UNI EN 13697:2001	Chemical disinfectants and antiseptics - Quantitative Test for non-porous surfaces for the evaluation of bactericidal and / or fungicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas - Test method and requirements without mechanical action (phase 2 / step 2)
		"Chemical disinfectants and antiseptics - Preservation of test

SANISIM SOLUTION 6 % H₂O₂

DATA SHEET
Rev. 3 del 12/09/2017

UNI EN 14353:2013	organisms used for determining of bactericidal (including Legionella), mycobactericidal, sporicidal, fungicidal and virucidal (including bacteriophages)"
UNI EN 13727:2014	Chemical disinfectants and antiseptics - Quantitative suspension test for evaluation of bactericidal activity in medical area - Test method and requirements (phase 2, step 1)
UNI EN 14561:2006	Chemical disinfectants and antiseptics - Quantitative carrier test for evaluation of germs of bactericidal activity for instruments used in medical area - Test method and requirements (phase 2, step 2)
UNI EN 14562:2006	Chemical disinfectants and antiseptics - Quantitative carrier test for the evaluation of fungicidal or yeasticidal activity for instruments used in the medical area - Test method and requirements (phase 2, step 2)
UNI EN 14563:2009	Chemical disinfectants and antiseptics - Quantitative carrier test for the evaluation of mycobactericidal or tuberculocidal activity of chemical disinfectants used for instruments in the medical area - Test method and requirements (phase 2, step 2)
UNI EN 14348:2005	Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of mycobactericidal activity of chemical disinfectants in the medical area including instrument disinfectants - Test methods and requirements (phase 2, step 1)
UNI EN 13704:2005	Chemical disinfectants - Quantitative suspension test for the evaluation of sporicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas - Test method and requirements (phase 2, step 1)
The effectiveness of the disinfectant in front of bacteria and fungi is also demonstrated in the information of the evidence made by the head of the laboratory Dr. SERINO TECNOLAB place at premises of our company. The full feature set of efficacy and final report reports for all bacteria considered.	

15	TOXICITY PRODUCT (See annex evidence)
	Toxicity tests made SANISIM solution of acute toxicity, eye irritation and skin irritation are in according to Directive 67/548 / EEC. The tests made with a disinfectant dose more than twice that recommended by the manufacturer, have given the following results: <ul style="list-style-type: none"> - Study Eye irritation: SANISIM solution does not produce; - Study of skin inflammation: SANISIM solution does not produce.

THE RECOMMENDED DOSES, SANISIM COLUTION IS TOTALLY HARMLESS TO MEN AND ANIMALS AND TO ALL AREAS WHERE TO APPLY.

16	SAFETY DATA SHEET (See attached)
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17	CLASSIFICATION AND LABELING OF PRODUCT IN THE LAW (See attached)
	Copies of labels (See attached)

18	INDICATIONS AND QUANTITATIVE OF ACTIVE EXPRESSED IN g per 100g (See annex Certificate of Analysis)
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19	INSTRUCTIONS AND METHOD USE (See Label)
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20	WARNINGS AND SAFETY PHRASES
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SAFETY STANDARDS IN HANDLING, MIXING AND APPLICATION

- For handling it is recommended to place the product in accessible places, hydrants of water to proceed as quickly as possible, the dilution of the product in the event of an accident.
- In the place of handling you must have good ventilation. You must have showers and washrooms. II Staff should be trained on the hazards of the product and the forms of embodiment in the case of an accident.
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TREATMENT METHOD AND ELIMINATION OF PRODUCT IN EXCESS AND ITS CONTAINERS

The disposal of the product will be carried out by neutralization with water. The containers and packaging will not be used for other products.

SAFETY TIME FOR ENTRY IN AREAS TREATED

Contact time 15 minutes before entering into the environment with any required Personal Protective Equipment.

SPECIAL PRECAUTIONS IN STORAGE AND TRANSPORT:

The types of containers where one has to store the product will be of aluminum or stainless steel. The containers can be of PVC, PE, PTFE. The tanks will be closed for collection pens with anti leak channeling. The product is incompatible with metals and plastics. The product should be stored in cool and ventilated places, separated from incompatible products and high temperature sources

Transport information:

ONU Number: Not classified

Risk class: CORROSIVE

IMO/IMDG: Not classified

IMDG: Not classified

ADR/RID: Not classified

Packaging group: Not classified

N ° identification of the danger: Not classified

PANELS ORANGE NUMBERED: Not classified

PRECAUTIONS IN CASE OF FIRE. NATURE OF GAS IN BURNING

It is not a product it will flammable fuel and its solutions, under normal conditions, are not explosive. It can decompose by heat, radiation or metal impurities which give rise to explosive vapors or intervene in oxidation reactions with loss of heat or fire risk.

Means of extinction: Use a thin layer of water to absorb gases and films to cool equipment, containers, etc.

Inadequate methods of extinction: none known

Special instructions against fire: it will use water spray to cool containers exposed to the fire still not caught fire, and to dilute the missing products. You must use appropriate clothing and respiratory protection due to product vapors. Cool with water containers and stores as they may explode for gas formation. Working backs to the wind. Extraordinary danger to fire: Risk of corrosive vapors of the product and dispersion of oxygen (oxidizing).

Special protective clothing in case of fire: self-contained breathing clothes and adequate

OTHER TOOL OF SAFETY

TOOL TO BE IMPLEMENTED IN ACCIDENTAL LOSS:

Personal precautions: keep staff not protected far from infected area with wind behind. Avoid contact with losses and use appropriate protective clothing.

Precautions for products: use a film of water to absorb gases of fumes. Prevent that the product Log in to the water mains tubes, tanks, closed rooms. Dilute with plenty of water.

Implementation methods: signal the area and follow current legislation on the environment.

SANISIM SOLUTION 6 % H₂O₂DATA SHEET
Rev. 3 del 12/09/2017**FIRST AIDS**

Danger nature: corrosive action on live tissues. Risk of suffocation and permanent lung injury.

basic information about the first aid: remove person concerned from danger zone. Wash with plenty of water, keep still and fix it. Get medical attention.

Effects of exposure: burning, irritation of mucous membranes, coughing.

Actuations for Eyes: Wash with plenty of water for 15 minutes at least and go to the eye doctor urgently.

Clothing: remove them immediately, showering.

Skin: wash the affected area with plenty of water and consult a doctor.

Ingestion: If conscious, give water and keep it repaired. Do not induce vomiting. keep immobile.

Inhalation: Move the affected person from the contaminated area, in the open air, and practice artificial respiration if necessary.

Need for medical care: Always urgent.

Are needed in workplaces: Showers and security sinks, eye and respiratory protection masks gloves, suits and boots resistant to acids

NOTE: With sending of product is attached safety data sheet

RESIDUAL

This information is not necessary because product SANISIM solution is applied as a dry fog and spray on all surfaces to be treated. It is a totally biodegradable product, does not leave any kind of residue.



<http://www.e2s3.eu/E2S3-ESTerilizer/index.php>

Dr. Venanzio Bielli
C.E.O. E2S3 Srl
+39.3294527646

Per. Ind. Giuseppe Rucci
Direttore Tecnico Progetto ESTERILIZER
Tel. +39.391-4013092

E2S3 Sucursal española
Las Palmas de Gran Canaria

Andrea Mascaretti
Tel. +34.610764308
Email andreamasca2019@gmail.com

Valentina Bielli
Tel. +34.603314960
Email vava@bielli.it

Italian headquarters

E2S3 Srl
Via Volta n°3
20028 Legnano (MI)
Italy

Poland Branch Office

Przemyslaw Kaminski
East Europe Strategies Director
& Board Member
Paczków
Telephon: +48-774339445
Mobile: +48-606200267
przemyslaw.kaminski@e2s3.eu

China branch - 中国分公司

E2S3 co, Ltd
大连市中山区友好路 227 号悦泰城里 412,
412 Yuetai City Lane, No.227 Youhao
Road, Distretto di Zhongshan, Dalian

孙妍丽 – Sun Yanli

亚洲项目发展经理和董事会成员
Manager for Asia projects' development
& Board Member

Mobile 手机: 139-4285-3997
微信: sun13942853997