

DIRECTIONS FOR USE

Clean, rinse, and drain instruments before immersing in undiluted SONACIDE. The lumen of hollow objects and needles should be flushed and filled with SONACIDE solution.

FOR DISINFECTION: To destroy vegetative organisms including *Pseudomonas* species, pathogenic fungi and viruses*, immerse objects in SONACIDE for 10 minutes at room temperature.

**To destroy tubercle bacilli immerse objects for 20 minutes. Remove and rinse with sterile water.

FOR COMPLETE STERILIZATION: To destroy viruses, tubercle bacilli, and resistant spores, including *Clostridium sporogenes* and *Bacillus subtilis*, immerse objects in SONACIDE maintained at 60° C. (140° F.) for 60 minutes. Remove and rinse with sterile water.

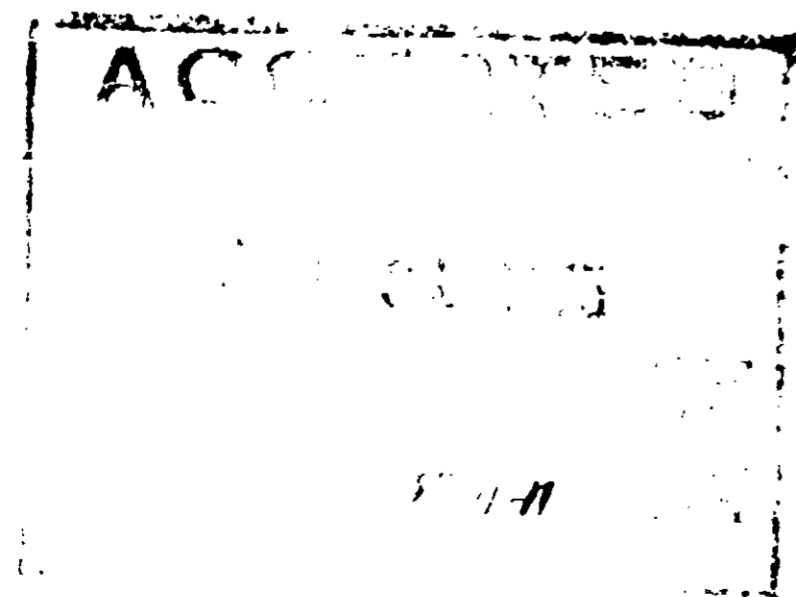
Use SONACIDE in covered containers to reduce evaporation.

Note: Fresh SONACIDE solutions are translucent. With age, SONACIDE may turn slightly yellow, but this coloration does not affect the potency.

Rinse this container thoroughly with water before discarding.

*When used as directed, this product will disinfect against Influenza A₂ (Hong Kong) virus, herpes simplex virus, Newcastle disease virus, and Echo virus Type 25 on inanimate surfaces.

U.S. PATENT 3,697,222 AND PATENTS PENDING



SONACIDE®

STERILIZING AND DISINFECTING SOLUTION

Sporicidal • Bactericidal • Virucidal*
Fungicidal • Pseudomonacidal • Tuberculocidal**

Ready for use • No premixing • Use undiluted

Active ingredient:

Glutaraldehyde 2%

Inert ingredients 98%

contains nonionic ethoxylates of isomeric linear alcohols [(CH₃)₂ (CH₂)_n O(CH₂-CH₂O)₁₂H• with 11 ≤ n ≤ 15] as synergistic agents

when necessary, orthophosphoric acid is added to adjust the pH to between 2.7 and 3.7

WARNING: HARMFUL IF SWALLOWED.
SEE OTHER WARNINGS ON RIGHT SIDE PANEL.

*See Directions for Use.

NET CONTENTS: 1 GALLON (128 FL. OZ.)

RECOMMENDED FOR USE: HOSPITALS, LABORATORIES, AND PLASMA CENTERS, SURGICAL INSTRUMENTS, ANATOMICAL MODELS, AND APPLICATORS (not recommended for use on corrugated metal).

SONACIDE is a fast acting disinfectant; 20 minutes for tuberculocidal action.

SONACIDE is effective at 140°F. for sterilization.

SONACIDE is a hard thermosetting plastic and is used in automated systems.

WARNING: Avoid contact with the eyes. Avoid contact with food as possible contamination of food.

Ayerst.
EPA Reg. No. 8

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RECOMMENDED FOR USE IN HOSPITALS, VETERINARY HOSPITALS, CLINICS, NURSING HOMES, AND MEDICAL OFFICES

FOR STERILIZING AND DISINFECTING RUBBER AND PLASTIC OBJECTS, STAINLESS STEEL SURGICAL AND MEDICAL INSTRUMENTS, SHARP INSTRUMENTS, LENSES, THERMOMETERS, ANESTHESIA AND INHALATION THERAPY EQUIPMENT SUCH AS FACE MASKS AND CORRUGATED RUBBER AND PLASTIC TUBING (not recommended for carbon steel)

SONACIDE® Sterilizing and Disinfecting Solution is fast acting at room temperature (10 minutes for disinfection; 20 minutes to destroy tubercle bacilli).

SONACIDE is *activated* by heat [60 minutes at 60°C. (140°F.) for complete sterilization].

SONACIDE can be used in pails or trays, in any standard thermostatically controlled heating bath, or in automated machines.

WARNING: Causes eye irritation. In case of contact with the eye, flush well with water and seek medical aid. Avoid prolonged and repeated contact with skin as possibility of sensitization exists. Avoid contamination of food.



Manufactured by AYERST LABORATORIES INC.
New York, N.Y. 10017

EPA Reg. No. 8991-11

EPA Est. 8991-NY-1

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Inert ingredients 98%

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RECOMMENDED FOR USE ON:
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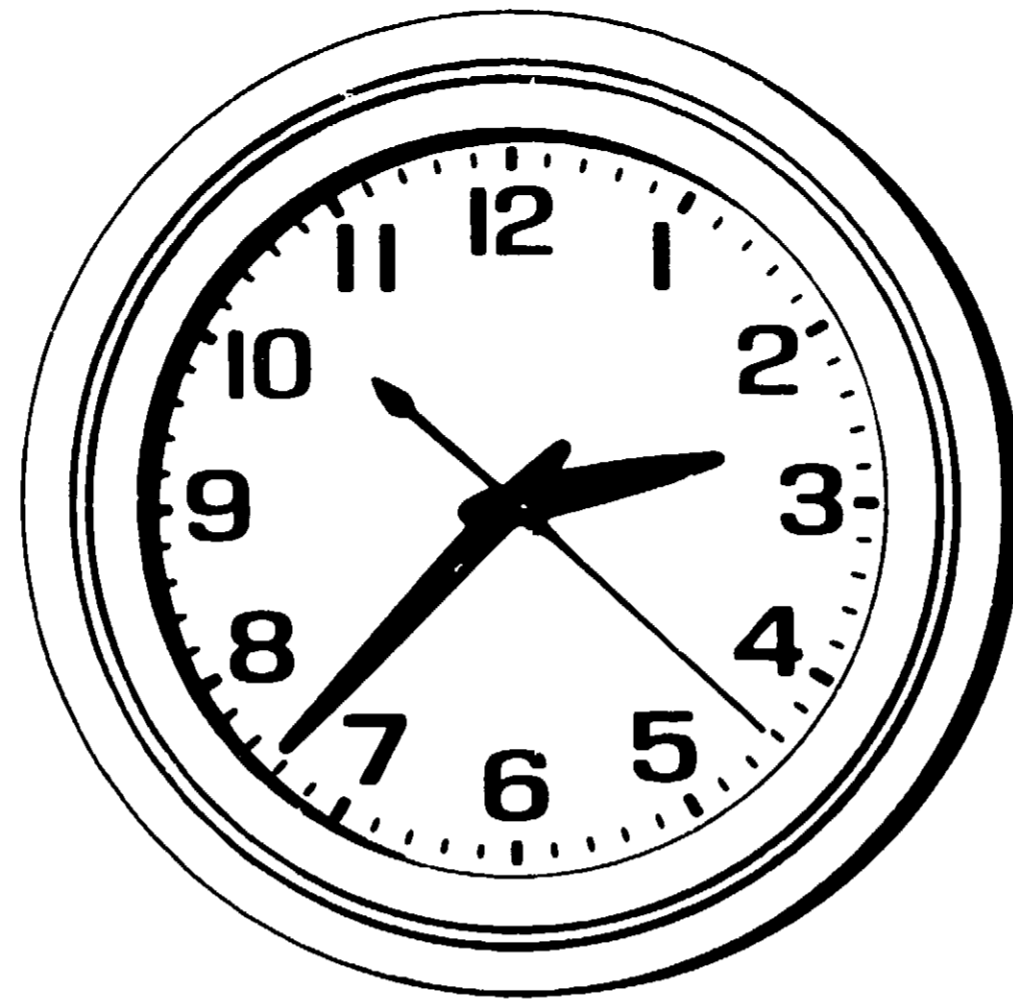
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Ayerst Manufactured by AYERST LABORATORIES INC
New York, N.Y. 10017

EPA Reg. No. 8991-11

EPA Est. 8901 NY-1



HOW TO MAKE A QUICK KILLING

ACCEPTED
31 1975
Pesticide
Product Act
Registration System
Product

31 DEC 1974
REGISTRATION NUMBER
PESTICIDES, EPA

A HIGH SPEED STERILIZING SOLUTION

SONACIDE®

STERILIZES IN 1 HOUR AT 60°C (140°F)

Sterilizes in 1 hour at 60°C (140°F)†

Kills all microorganisms, including vacuum dried spores in 60 minutes. This is a complete sterilization procedure, including destruction of viruses and tubercle bacilli.

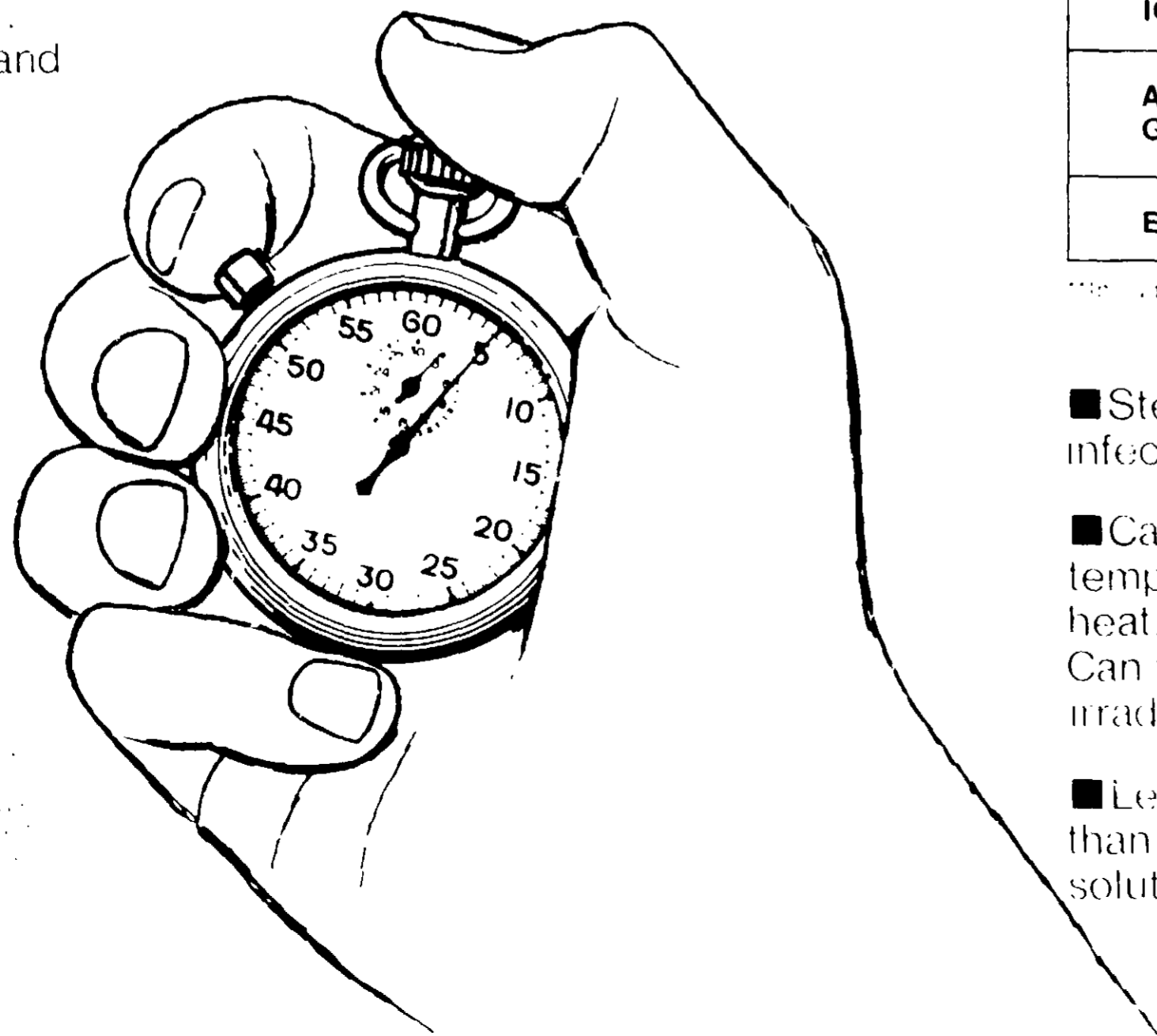
Disinfects in 5 Minutes at 60°C (140°F)†

Provides complete disinfection. This product is registered with the EPA under Registration No. 15136-1.

Disinfects in 10 Minutes at Room Temperature†

Bactericidal action assures death of highly resistant *Pseudomonas* strains... kills pathogenic fungi and viruses.*

†Kills tubercle bacilli in 20 minutes.



SONACIDE is a registered trademark of the manufacturer. It is a high speed sterilizing solution that kills all microorganisms, including vacuum dried spores in 60 minutes. This is a complete sterilization procedure, including destruction of viruses and tubercle bacilli. Disinfects in 5 minutes at 60°C (140°F) and in 10 minutes at room temperature. Bactericidal action assures death of highly resistant Pseudomonas strains... kills pathogenic fungi and viruses.† Kills tubercle bacilli in 20 minutes. Can be used at room temperature, with medium heat, and even in autoclaves. Can withstand ultrasonic irradiation. Leaves a smaller residue than buffered alkaline solutions. Can be practically used and reused 4 weeks in open container at room temperature or in closed container at elevated temperature. Does not affect plastics, the sharpness of cutting instruments, or the markings on thermometers. Does not coagulate blood.

STABLE, REUSABLE, ALSO DESIGNED FOR USE WITH ULTRASONIC

SONACIDE®

STERILIZES IN 1 HOUR AT 60°C (140°F)

■ The first new sterilizing solution in over a decade

■ Sets new standards in speed, stability and biocidal capability

How Sonacide compares with other sterilizing techniques

STERILIZING AGENT	HOW USED	TEMP.	TIME FOR STERILIZATION
SONACIDE	Aqueous solution - 2%	60°C	1 hour
Autoclaving steam	Autoclaving steam 15 psi	121°C	20 minutes
FORMALDEHYDE	Alcohol solution - 8%	25°C	18 hours
IODINE	Solution - 2%	25°C	7 days
ALKALINE GLUTARALDEHYDE	Aqueous solution - 2%	25°C	10 hours
ETHYLENE OXIDE	100% ethylene oxide gas	60°C	2-9 hours**

**See manufacturer's instructions.

■ Sterilizes in 1 hour, disinfects in 5 or 10 minutes

■ Can be used at room temperature, with medium heat, and even in autoclaves. Can withstand ultrasonic irradiation

■ Leaves a smaller residue than buffered alkaline solutions

■ Can be practically used and reused 4 weeks in open container at room temperature or in closed container at elevated temperature

■ Does not affect plastics, the sharpness of cutting instruments, or the markings on thermometers

■ Does not coagulate blood

A HIGH-SPEED STERILIZING SOLUTION

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Kills all microorganisms, including vacuum dried spores in 60 minutes. This is a complete sterilization procedure, including destruction of viruses and tubercle bacilli

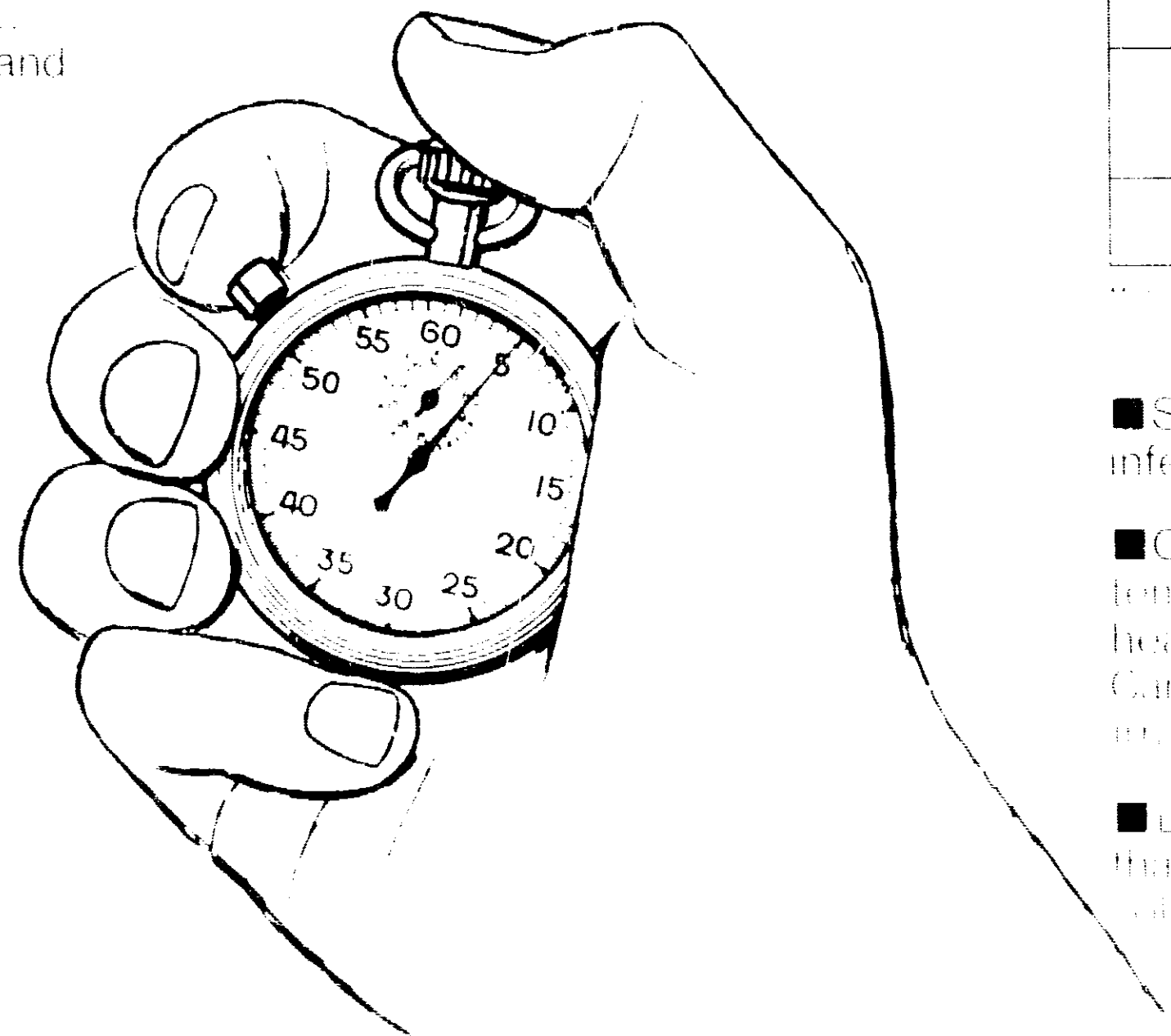
Disinfects in 5 Minutes at 60°C (140°F)†

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Disinfects in 10 Minutes at Room Temperature †

Bactericidal action assures death of highly resistant *Pseudomonas* strains... kills pathogenic fungi and viruses.*

† Kills tubercle bacilli in 20 minutes.



STABLE REUSABLE ALSO DESIGNED FOR USE WITH ULTRASONICS

SONACIDE®

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■ Sets new standards in speed, stability and biocidal capability

How Sonacide compares with other sterilizing techniques

STERILIZING AGENT	HOW USED	TEMP.	TIME FOR STERILIZATION
SONACIDE	Aqueous solution - 2	60 C	1 hour
STEAM	Autoclaving steam 15 psi	121 C	20 minutes
FORMALDEHYDE	Alcohol solution - 8	25 C	18 hours
IODINE	Solution - 2 †	25 C	7 days
ALKALINE GLUTARALDEHYDE	Aqueous solution - 2	25 C	10 hours
ETHYLENE OXIDE	100% ethylene oxide gas	60 C	2-9 hours**

* See data sheet for details

■ Sterilizes in 1 hour, disinfects in 5 or 10 minutes

■ Can be used at room temperature, with or without heat, and even in autoclaves. Can withstand ultrasonic irradiation

■ Leaves a residue less toxic than buffered alkaline solutions

■ Can be practically used and reused 4 weeks in open container at room temperature or in closed container at elevated temperature

■ Does not attack plastics, rubber, glass, metal, or other materials commonly used in the laboratory

■ Available in 100 ml and 500 ml bottles

RAPID ACTING STABLE REUSABLE

SONACIDE®

For the disinfection of
water, swimming pools,
drinking water, etc.

The Story of Sonacide

Sonacide is the result of a series of breakthroughs in polymer physics, microbiology and theoretical chemistry which took place within the last five years. The key to the broad activity of Sonacide was a series of observations—the first two made by Sierra and Beachler¹ and the third by the same authors with the assistance of Last² which demonstrated that 1) certain alkaline aqueous pentavalent solutions, the active solutions, were still active when heated; 2) at different pH's and heating times certain polymers could be made to be totally, greatly, partially, or not at all disinfected and 3) in many but not all cases, a reduction in concentration of active material could be tolerated.

In 1957 E. Beachler, Last and Sierra³ discovered the active solution and the mechanism of action of the active solution. They found that the active solution was a solution of a certain pentavalent solution which was active in the alkaline range and that the active solution was stable to heat.

It was also discovered that the active solution was stable to heat and that the active solution was stable to heat.

The mechanism of action of the active pentavalent solutions could be explained by the equilibrium between active and inactive polymers and the pentavalent monomer. The fact that *irreversible* polymers are formed in the alkaline range is explained and highly alkaline pentavalent solutions have a short life and poor bacterial activity while the fact that polymers in the acid range *revert to the active monomer when heated* is explained. Any acid pentavalent solution better than monomer.

For the first time in the history of disinfection a polymer could make Sonacide work and microorganisms in 60 minutes at a temperature as low as 140° to 160° C. in the system, the polymer.

References
1. Sierra, E. and Beachler, E. J. *Journal of Polymer Science*, **1**, 100 (1946).
2. Last, J. P., Sierra, E. and Beachler, E. J. *Journal of Polymer Science*, **1**, 100 (1946).
3. Sierra, E., Beachler, E. J. and Last, J. P. *Journal of Polymer Science*, **1**, 100 (1946).

Ayerst Division of Ayerst Laboratories, Inc., New York, N. Y.