

NET WEIGHT: 425 LBS.

R. M. #07615

Q-372

1677-42A
 ACCEPTED
 SEP-15-1978
 THE FEDERAL INSECTICIDE
 AND RODENTICIDE ACT
 POISON REGISTERED
 1677-42A

QUATERNARY AMMONIUM CONCENTRATE

FOR FORMULATION ONLY

EPA Reg. No. 1677-42AA

FOR INDUSTRIAL USE ONLY

Active Ingredients:	53.0%
Alkyl (50% C ₁₄ , 40% C ₁₂ , 10% C ₁₆) dimethyl benzyl ammonium chlorides	50.0%
Isopropyl alcohol	3.0%
Inert Ingredients:	47.0%

*See Technical Information Sheet
for Directions.*



A product of

ECONOMICS LABORATORY, INC.

General

6784/0400/0772

DANGER:

Keep out of reach of children. Corrosive. Causes eye damage and skin irritation. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. Avoid contamination of food.

FIRST AID:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, drink *promptly* a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

NOTE TO PHYSICIAN:

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

CONTAINER DISPOSAL:

Rinse empty container thoroughly with water before discarding.

DATE _____

CODE _____

NET WEIGHT: 425 LBS.

R. M. #07615

Q-372

AC F 777
SEP-15-1977
REGISTERED
11777

QUATERNARY AMMONIUM CONCENTRATE

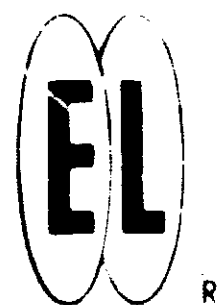
FOR FORMULATION ONLY

EPA Reg. No. 1677-42AA

FOR INDUSTRIAL USE ONLY

Active Ingredients:	53.0%
Alkyl (50% C ₁₄ , 40% C ₁₂ , 10% C ₁₀) dimethyl benzyl ammonium chlorides	50.0
Isopropyl alcohol	3.0
Inert Ingredients:	47.0%

See Technical Information Sheet
for Directions.



A product of

ECONOMICS LABORATORY, INC.

General Offices: St. Paul, Minn. 55101 • Sales Offices: 4 Corporate Park Drive, White Plains, N.Y. 10604

DANGER:

Keep out of reach of children. Corrosive. Causes eye damage and skin irritation. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. Avoid contamination of food.

FIRST AID:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

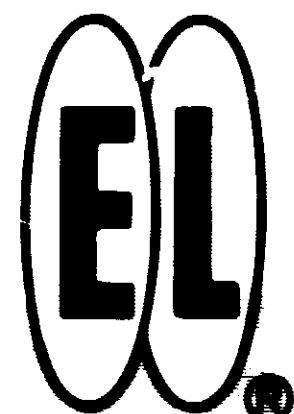
NOTE TO PHYSICIAN:

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

CONTAINER DISPOSAL:

Rinse empty container thoroughly with water before discarding.

DATE
CODE



TECHNICAL BULLETIN

Q-372

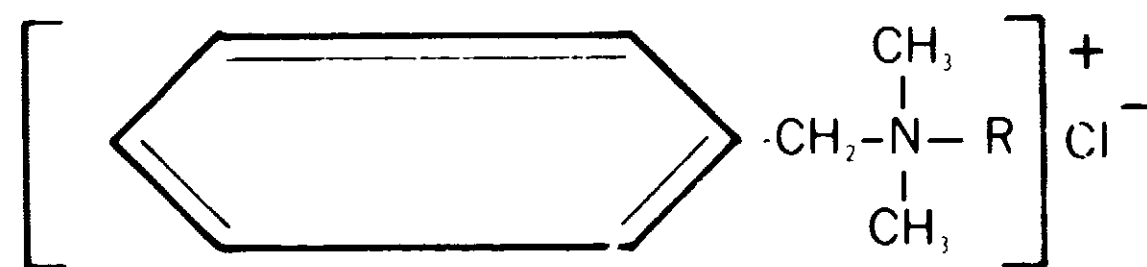
50% CONCENTRATE

ACCEPTED
Sep. 15 - 1973
UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
FOR ECONOMIC POISON REGISTERED
UNDER NO. 1677-42

Q-372 is a 50% concentrate of a special mixture of alkyl dimethyl benzyl ammonium chlorides in water and isopropyl alcohol. This special mixture consists of 40% of C₁₂H₂₅ (lauryl or dodecyl), 50% of C₁₄H₂₉ (myristyl or tetradecyl) and 10% of C₁₆H₃₃ (cetyl or hexadecyl) homologs which are the most effective germicidal components of alkyl (C₈-C₁₈) dimethyl benzyl ammonium chlorides. This blend was also chosen for its effectiveness in hard waters.

Chemical and Physical Properties:

Structure:



R represents alkyl radicals of straight chain hydrocarbon chains from C₁₂H₂₅ to C₁₆H₃₃.

Molecular Weight (average): 359.6

Appearance: Water-white to pale yellow liquid; slight odor of amine. Congeals at low temperatures; becomes homogeneous when heated to room temperature.

most nonionic surface active agents in the formulation of detergent-sanitizers.

Q-372 is a cationic compound and therefore will react with anions. However, the reaction is quantitative, so that traces of anionic substances may reduce but not necessarily completely nullify the bacterial activity. Soap or anionic wetting agents should not be admixed with Q-372.

Bacteriological Properties: Q-372 is a powerful germicide, particularly against a broad spectrum of pathogenic microorganisms. The action of Q-372 is relatively non-selective inasmuch as it acts effectively against most microorganisms.

Since phenol coefficients are not applicable to evaluate the bacterial killing index of quaternary ammonium compounds, only AOAC Use-Dilution Test data is presented to demonstrate the effectiveness of Q-372 as a hard surface disinfectant.

AOAC Use-Dilution Test: The official AOAC Use-Dilution Test is applicable to testings disinfectants miscible with water to determine maximum dilutions effective for practical disinfection. The effective use dilution for Q-372 against *Staphylococcus aureus*, *Salmonella choleraesuis* and *Pseudomonas aeruginosa* has been found to be 0.045% (450 ppm - 100% active basis).

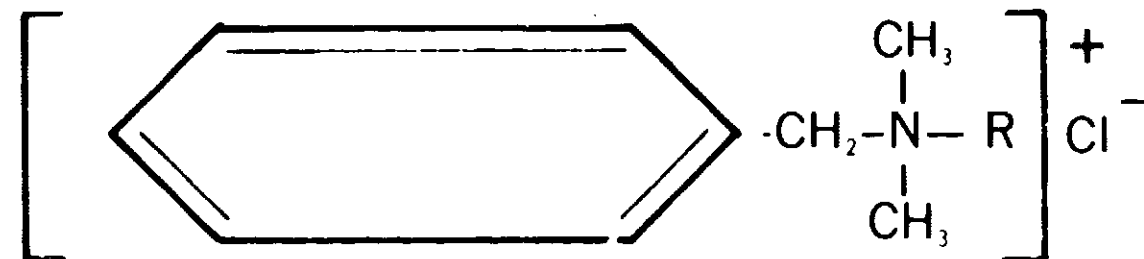
Antibacterial Activity in Hard Water: The official AOAC Germicidal and Detergent-Sanitizers method for determining the

50% CONCENTRATE

Q-372 is a 50% concentrate of a special mixture of alkyl dimethyl benzyl ammonium chlorides in water and isopropyl alcohol. This special mixture consists of 40% of C₁₂H₂₅ (lauryl or dodecyl), 50% of C₁₄H₂₉ (myristyl or tetradecyl) and 10% of C₁₆H₃₃ (cetyl or hexadecyl) homologs which are the most effective germicidal components of alkyl (C₈-C₁₈) dimethyl benzyl ammonium chlorides. This blend was also chosen for its effectiveness in hard waters.

Chemical and Physical Properties:

Structure:



R represents alkyl radicals of straight chain hydrocarbon chains from C₁₂H₂₅ to C₁₆H₃₃.

Molecular Weight (average): 359.6

Appearance: Water-white to pale yellow liquid; slight odor of amine. Congeals at low temperatures; becomes homogeneous when heated to room temperature.

Solubility: Freely soluble in water, alcohol, and acetone; insoluble in ether and only slightly soluble in benzene.

Specific Gravity: 0.972 @ 23.9°C (75°F)

pH: 10% solution - 6.0 - 8.0

Weight per gallon: 8.1 pounds

Stability: Stable over wide range of temperatures and long periods of time.

Compatibility: Compatible with most inorganic salts commonly employed in the formulation of alkaline detergents and with

most nonionic surface active agents in the formulation of detergent-sanitizers.

Q-372 is a cationic compound and therefore will react with anions. However, the reaction is quantitative, so that traces of anionic substances may reduce but not necessarily completely nullify the bacterial activity. Soap or anionic wetting agents should not be admixed with Q-372.

Bacteriological Properties: Q-372 is a powerful germicide, particularly against a broad spectrum of pathogenic microorganisms. The action of Q-372 is relatively non-selective inasmuch as it acts effectively against most microorganisms.

Since phenol coefficients are not applicable to evaluate the bacterial killing index of quaternary ammonium compounds, only AOAC Use-Dilution Test data is presented to demonstrate the effectiveness of Q-372 as a hard surface disinfectant.

AOAC Use-Dilution Test: The official AOAC Use-Dilution Test is applicable to testings disinfectants miscible with water to determine maximum dilutions effective for practical disinfection. The effective use dilution for Q-372 against *Staphylococcus aureus*, *Salmonella choleraesuis* and *Pseudomonas aeruginosa* has been found to be 0.045% (450 ppm - 100% active basis).

Antibacterial Activity in Hard Water: The official AOAC Germicidal and Detergent-Sanitizers method for determining the maximum water hardness tolerances for recommended concentrations of germicides. A 200 ppm solution of Q-372 will kill 99.999% of the test microorganisms in 30 seconds in water containing up to 600 ppm hardness.

Typical Formulation Using Q-372:

Detergent Disinfectant:

Q-372	20%
Nonionic	10%
EDTA (40% active)	1%
Water	69%

Recommended Use Concentration: 1/2 oz. per gallon

FOR FORMULATION ONLY

EPA Reg. No. 1677-42AA



6784/0400/0772



A product of ECONOMICS LABORATORY, INC.

General Offices: Osborn Building, St. Paul, Minnesota 55102
 Executive, Sales and Advertising Offices: 4 Corporate Park Drive, White Plains, N. Y. 10604
 Div: Magnus/Industrial - Kleenade/Food Processing - Institutional - Consumer
 Refer to telephone directory for listing in White or Yellow Pages

Products and Services available World Wide Through Affiliated Soilax Companies in: Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Greece, Holland, Hong Kong, Italy, Japan, Mexico, New Zealand, Norway, Panama, Philippines, Puerto Rico, South Africa, Sweden, Switzerland, Thailand, United Kingdom, Venezuela, West Indies.

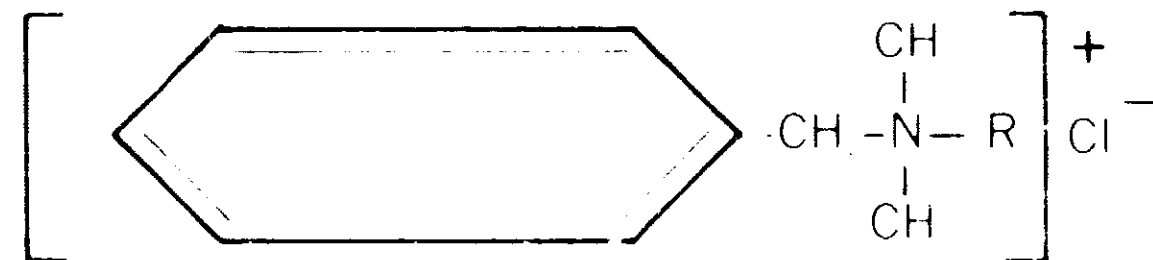


50% CONCENTRATE

Q-372 is a 50% concentrate of a special mixture of alkyl dimethyl benzyl ammonium chlorides in water and isopropyl alcohol. This special mixture consists of 40% of $C_{12}H_{25}$ (lauryl or dodecyl), 50% of $C_{14}H_{29}$ (myristyl or tetradecyl) and 10% of $C_{16}H_{33}$ (cetyl or hexadecyl) homologs which are the most effective germicidal components of alkyl (C_{12} - C_{16}) dimethyl benzyl ammonium chlorides. This blend was also chosen for its effectiveness in hard waters.

Chemical and Physical Properties:

Structure:



R represents alkyl radicals of straight chain hydrocarbon chains from $C_{12}H_{25}$ to $C_{16}H_{33}$.

Molecular Weight (average): 359.6

Appearance: Water-white to pale yellow liquid, slight odor of amine. Congeals at low temperatures; becomes homogeneous when heated to room temperature.

Solubility: Freely soluble in water, alcohol, and acetone; insoluble in ether and only slightly soluble in benzene.

Specific Gravity: 0.972 at 23.9°C (75°F)

pH: 10% solution: 6.0-8.0

Weight per gallon: 8.1 pounds

Stability: Stable over wide range of temperatures and long periods of time.

Compatibility: Compatible with most inorganic salts common, employed in the formulation of alkaline detergents, and with

most nonionic surface active agents in the formulation of detergent sanitizers.

Q-372 is a cationic compound and therefore will react with anions. However, the reaction is quantitative, so that traces of anionic substances may reduce but not necessarily completely nullify the bacterial activity. Soap or anionic wetting agents should not be admixed with Q-372.

Bacteriological Properties: Q-372 is a powerful germicide, particularly against a broad spectrum of pathogenic microorganisms. The action of Q-372 is relatively non-selective inasmuch as it acts effectively against most microorganisms.

Since phenol coefficients are not applicable to evaluate the bacterial killing index of quaternary ammonium compounds, only AOAC Use-Dilution Test data is presented to demonstrate the effectiveness of Q-372 as a hard surface disinfectant.

AOAC Use-Dilution Test: The official AOAC Use Dilution Test is applicable to testings disinfectants miscible with water to determine maximum dilutions effective for practical disinfection. The effective use dilution for Q-372 against *Staphylococcus aureus*, *Salmonella choleraesuis* and *Pseudomonas aeruginosa* has been found to be 0.045% (450 ppm) on 100% active basis.

Antibacterial Activity in Hard Water: The official AOAC Germicidal and Detergent Sanitizers method for determining the maximum water hardness tolerances for recommended concentrations of germicides. A 200 ppm solution of Q-372 will kill 99.999% of the test microorganisms in 30 seconds in water containing up to 600 ppm hardness.

Typical Formulation Using Q-372:

Detergent Disinfectant:

Q-372	20%
Nonionic	10%
EDDA (40% active)	1%
Water	69%

Pre-arranged Use Dilution: 1:200 (1:2 per gallon)

FOR FORMULATION ONLY

EPA Reg. No. 1677-42AA



6754/7405/9772



A product of ECONOMICS LABORATORY, INC.

Center Office: Osborn Building, St. Paul, Minnesota 55102
 Field, Sales, and Advertising Offices: 41 separate Foreign and Domestic Locations
 Div. Magnus Industrial, Klenzade, Food Processing, Industrial and Consumer
 Refer to telephone directory for listing in White or Yellow Pages.

Products and Services available World Wide Through Affiliated Soilax Companies in: Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Greece, Holland, Hong Kong, Italy, Japan, Mexico, New Zealand, Norway, Panama, Philippines, Puerto Rico, South Africa, Sweden, Switzerland, Thailand, United Kingdom, Venezuela, West Indies.

