



# FMB 1210-5 QUAT

## concentrated germicide

FOR FORMULATING DISINFECTANTS, SANITIZERS, FUNGICIDES, AND WATER TREATMENT MICROBICIDES.

**ACTIVE INGREDIENTS:**  
n-alkyl (C14 50%, C12 40%, C16 10%) dimethyl benzyl ammonium chloride ..... 20.0%  
didecyl dimethyl ammonium chloride ..... 30.0%  
**INERT INGREDIENTS:** ..... 50.0%

### DANGER: KEEP OUT OF REACH OF CHILDREN

#### STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. 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.

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes severe eye and skin damage. Do not get in eyes or on skin. Wash contaminated clothing before reuse. Wear goggles or face shield and rubber gloves when handling the concentrate. Harmful or fatal if swallowed. Avoid contamination of feed.

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply in marine and/or estuarine or fields. Do not discharge into lakes, streams, ponds or public waters unless in accordance with an NPDES permit. For guidance, contact your Regional Office of the Environmental Protection Agency.

#### PHYSICAL AND CHEMICAL HAZARDS

FMB 1210-5 is a cationic germicide. Do not mix with soap or anionic materials.

### STORAGE AND DISPOSAL

This product must be kept under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use. Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

### PESTICIDE DISPOSAL

Pesticide, spray mixture, or rinsate that cannot be used or chemically reprocessed should be disposed in a landfill approved for pesticides or buried in a safe place away from water supplies.

### CONTAINER DISPOSAL

Triple rinse (or equivalent) and dispose in an incinerator or landfill approved for pesticide containers, or bury in a safe place. Consult federal, state, or local authorities for approved alternative procedures such as limited open burning.

#### INSTRUCTIONS FOR FORMULATION

Formulators using this product are responsible for EPA registration of their formulated products.

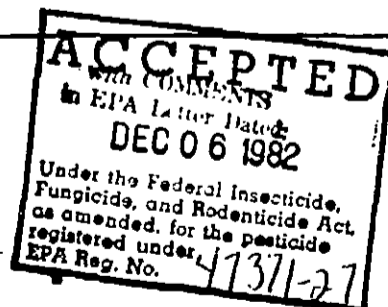
Refer to Technical Bulletin on FMB 1210-5 Quat for instructions on formulation and other information.

E.P.A. Reg. No. 303-135 E.P.A. Est. No. 303-IN-1

HL-10112

HL-1

Huntington Laboratories, Inc. Huntington, IN 46750 • Lansdale, PA 19380 • Dallas, TX 75217 • Oakland, CA 94604 • Brampton, Ontario





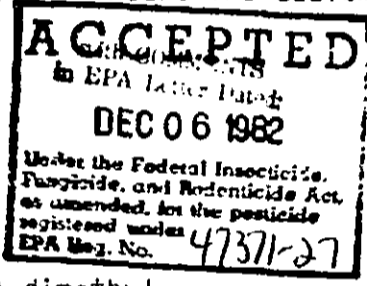
Chemicals Division

# FMB 1210 QUAT

For formulation of disinfectants, sanitizers, fungicides, water treatment microbicides, swimming pool algaecides, oil field water flood, salt water disposal products, and mildewicides.

FMB 1210-5 Quat consists of a powerful quaternary system of didecyl dimethyl ammonium chlorides and n-Alkyl (C<sub>14</sub> 50%, C<sub>12</sub> 40%, C<sub>10</sub> 10%) dimethyl benzyl ammonium chlorides. This multi-purpose quat provides you with an efficient disinfectant-sanitizer system.

Huntington's Quality Control program consists of checking each and every batch made, chemically and microbiologically, to insure the customer that every batch meets our rigid specifications.



### Chemical Composition

#### Active Ingredients:

didecyl dimethyl ammonium chloride	30%
n-Alkyl (C <sub>14</sub> 50%, C <sub>12</sub> 40%, C <sub>10</sub> 10%) dimethyl benzyl ammonium chloride	20%

#### Inert Ingredients:

Water	50%
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Products containing quaternary ammonium compounds that are shipped in interstate commerce must be registered with the Environmental Protection Agency. The efficacy of these formulations containing FMB 1210-5 Quat must be established by the utilization of the appropriate procedures. The Chemicals Division of Huntington Laboratories can assist you with registration of your product.

FMB 1210 Quats are technical chemicals designed for formulation of germicides. For example, disinfectant cleaners in hospitals and nursing homes, as disinfectant cleaners for use in schools and colleges, other public institutions, households, poultry, dairy, and swine farms.

FMB 1210 Quats are for disinfecting pre-cleaned hard, non-porous surfaces in 10 minutes with a recommended use solution of 450 ppm active quat for hospital use areas and with a recommended use solution of 250 ppm active quat for general use areas.

The FMB 1210 Quats are effective against the representative gram-positive pathogen *Staphylococcus aureus*, the representative gram-negative pathogen *Salmonella choleraesuis*, the representative hepatitis pathogen *P. adenovirus type 5*, bactericidal against several gram-negative and gram-positive bacterial pathogens, fungicidal against several species of fungi (e.g., *Aspergillus*, *Candida*, *Trichoderma*, *Trichosporon*, *Dicellaëna*, and *Heterospora* spp.), and virucidal against several pathogens in the presence of 1% organic matter.

BEST QUALITY AVAILABLE

<u>Organism</u>	<u>ppm of Active Quat</u>	<u>No. of Strains Tested</u>
Pseudomonas aeruginosa	450 ppm	150
Staphylococcus aureus	250 ppm	160
Salmonella choleraesuis	250 ppm	160
Escherichia coli	250 ppm	20
Salmonella typhi	250 ppm	20
Serratia marcescens	250 ppm	20
Klebsiella pneumoniae	250 ppm	20
Streptococcus pyogenes	250 ppm	20
Shigella flexneri	250 ppm	20
Proteus mirabilis	250 ppm	20
Staphylococcus aureus phage 80	250 ppm	20
Staphylococcus aureus phage 81	250 ppm	20
Enterobacter aerogenes	250 ppm	20
Mycoplasma gallisepticum	250 ppm	20

Fungicidal

Aspergillus flavus	250 ppm
Aspergillus fumigatus	250 ppm
Aspergillus glaucus	250 ppm
Candida albicans	250 ppm
Trichophyton interdigitale	250 ppm

Virucidal

*Bovine Rhinotracheitis virus	450 ppm
*Bronchitis virus	450 ppm
*Newcastle virus	450 ppm

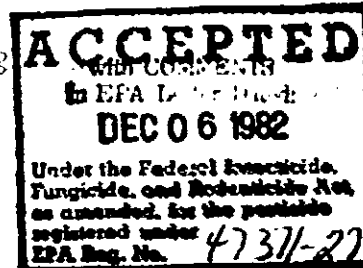
Sanitizer

Staphylococcus aureus	150 ppm
Escherichia coli	150 ppm

HOSPITAL DISINFECTION . . . . .	450 ppm quat
GENERAL OR HOUSEHOLD DISINFECTION . . . . .	250 ppm quat
SANITIZATION . . . . .	150 ppm quat

FMB 1210 Quats are effective against Staphylococcus aureus and E. coli as a sanitizer in 800 ppm hard water as tested by the A.O.A.C. Germicidal and Detergent-Sanitizer Method at 150 ppm quat. FMB 1210 Quats fulfill the criteria of Appendix F of the Grade A Pasteurized Milk Ordinance 1978 Recommendation of the U.S. Public Health Service.

For use in plants operating under the USDA Poultry, Meat, Rabbit, Shell Egg Grading, and Egg Products Inspection Programs. FMB 1210-5 Quat is for use as a sanitizer on all surfaces not always requiring a rinse. Before using this compound, food products and packaging materials must be removed from the room or carefully protected. For food contact use, do not rinse with potable water.



FMB 1210 Quats are for use sanitizing previously cleaned and rinsed dishes, silverware, glasses, and other food utensils at 150 ppm active. FMB 1210 Quats may be used on food contact surfaces in public eating places. For food contact use, do not rinse with potable water.

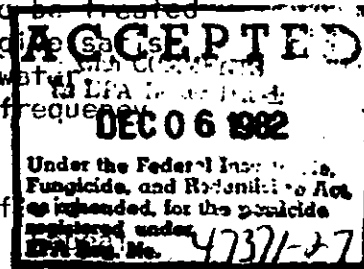
Eggs that have been sanitized with FMB 1210 Quat shall be subjected to a thorough potable water rinse only if they are broken for use in the manufacture of egg products.

FMB 1210 Quats are for use to sanitize the udders, flanks, and teats of dairy cows. Do not rinse with potable water. Use a fresh towel for each cow. Avoid contamination of sanitizing solution by dirt and soil. Do not dip towel back into sanitizing solution. When solution becomes visibly dirty, discard and provide fresh solution.

To control algae and bacterial slimes, use FMB 1210 as directed. For best results, slug feed. The frequency of addition of microbicide needed depends on many factors. The following are examples of acceptable directions for use.

#### Recirculating Cooling Towers

1. Initially use 6 fluid ounces per 1,000 gallons of water to be treated (20 ppm active quaternary). Should the above dosage not give satisfactory factory results, use 9 fluid ounces per 1,000 gallons of water. Repeat the initial dose every seven days or increase the frequency if needed.
2. When the above treatment level is successful, use 2 to 3 fluid ounces per 1,000 gallons of water to maximize efficiency. Repeat weekly as needed. Should slime develop again, go back to initial dosage.



Cooling tower waters that are inherently low in algae growth and bacteria count may be adequately controlled by the lower range of these dosages; slug fed every seven days. Dilute the appropriate amount of FMB 1210 in 1 or 2 gallons of water, then add to the tower. Should tower be heavily fouled, a precleaning is required.

#### Oil Field Water Flood or Salt Water Disposal Systems; (Do not apply in Marine and Estuarine Oil Fields.)

1. For the control of slime forming and sulfate reducing bacteria in oilfield water flood or salt water disposal systems, add 5-10 ppm (active) FMB 1210 (1½-3 gallons per 3,000 barrels of water) continuously. Levels for effective control will vary depending on conditions at the site.
2. For intermittent use, dose at a rate of 5-20 ppm (active) FMB 1210 (1½-6 gallons per 3,000 barrels of water) for 4-8 hours per day, one to four times a week as needed to maintain control.

Add FMB 1210 directly from the drum with the proper type of metering equipment.

Formulators using this product are responsible for EPA registration and USDA authorization for their formulated products. For technical service and registration assistance, contact the Chemicals Division at Huntington Laboratories. A complete registration package is available upon request.

BEST DOCUMENT AVAILABLE

**DANGER: CORROSIVE.** Causes severe eye and skin damage. Do not get in eyes or on skin. Wash contaminated clothing before reuse. Wear goggles or face shield and rubber gloves when handling the concentrate. Harmful or fatal if swallowed. Avoid contamination of food.

**STATEMENT OF PRACTICAL TREATMENT**

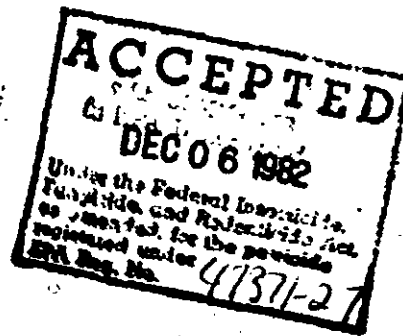
In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician 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.

Consult the label for other instructions and precautionary statements before use of FMB 1210 Quats.

FMB 1210-5 Quat      EPA Reg. No. 303-135

H&S Chemicals Division  
970 East Tipton Street  
Huntington, Indiana 46750



BEST AVAILABLE

06 DEC 1982

H & S Chemicals Division  
970 East Tipton Street  
Muntinton, IN 46750

Attention: Mr. Richard Sheets

Gentlemen:

Subject: FMB 1210-5 Quat  
EPA Registration No. 47371-27

The Bulletin "FMB 1210 Quat," submitted May 26, 1982, in connection with registration under FIFRA, is acceptable, provided that you:

- I. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

- I. First page:

- (a) In the second paragraph, replace the words "a powerful" with the words "an effective" as in "...consists of an effective system...." Also, in this paragraph and in the following table, the alkyl chain length distribution of quaternary ammonium compound, the active ingredient, must be the same in the Technical Bulletin and in the label. It should be:

n-Alkyl(C<sub>14</sub> 50%, C<sub>12</sub> 40%, C<sub>16</sub> 10%)  
dimethyl benzyl ammonium chloride

Note that it is (10% C<sub>16</sub>) not (10% C<sub>10</sub>).

- (b) We note that you have added the proposed uses "For formulation of swimming pool algacides, oil field water flood, salt water disposal products, and mildewcides."

- II. Second page:

- (a) In the second paragraph, add the phrase "FMB 1210 Quat Formulations are" at the beginning of the first sentence. Also add the following for this paragraph:

Authorization for the use of a formulated product in USDA inspected meat, poultry and food processing plants must be obtained by the formulators from USDA.

III. Third page:

- (a) Second paragraph, place the qualifying word "Food" at the beginning of the first sentence, as "Food eggs that have been sanitized...."
- (b) Third paragraph, replace the words "sanitize" and "sanitizing" with the word "wash."
- (c) Fourth paragraph, replace the sentence "To control algae and bacterial slimes use FMB 1210 as directed" to "FMB 1210 Quats control algae and bacterial slimes."

IV. Fourth page, the correct/current EPA Registration Number must appear.

The label submitted May 26, 1982, submitted in connection with registration under FIFRA, is acceptable, provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
  - a. Make a full statement on your label as you do on your Technical Brochure as:  
  
For formulating...swimming pool algacides, oil field water flood, salt water disposal products, and mildewcides."
  - b. The current/most recent company name and address must appear on the labels. Likewise, the current/most recent EPA Registration Number and Establishment Number.
2. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

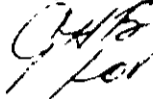
Your FDA letter establishing effective and safe sanitizing levels for your product has been noted and made part of your file.

47371-07

-3-

The submitted information clarifies and completes the data reports derived to support efficacy claims indicated in the Technical Bulletin.

Sincerely yours,



John M. Lee  
Product Manager (31)  
Disinfectants Branch  
Registration Division (TS-767C)

Enclosure

TS-767C:LEE:DCR-03541:WANG-1231C:ert:Raven:479-2013:11/18/82