

E.P.A. Reg. No. 1457-15

Active Ingredients:

Alkyl (95% C₁₆, 5% C₁₂) trimethyl ammonium bromide 100%

BROMAT is a highly effective bactericidal quaternary ammonium compound, also described in the British Pharmacopeia (1959) as Cetrimide.

Recommended Areas for Use:

Food processing plants, animal farms, restaurants, theatres, hotels, schools, hospitals, medical, dental, and veterinary establishments. **NOT FOR USE OR STORAGE IN OR AROUND THE HOME.**

BROMAT may be used to disinfect the following equipment or areas:

- | | | |
|--------------------|------------------------------|-----------------------|
| Milking machines* | Food processing equipment* | Animal cages |
| Milk cans* | Dishes, glasses and cutlery* | Urinals |
| Food storage bins* | Cold storage rooms* | Walls, floors, tables |

*To be followed by a potable water rinse.

Recommended Dilutions for Disinfection Applications:

BROMAT must be diluted before use. The following concentrations are recommended:

- 1 oz. BROMAT to 20 gallons of water (400 ppm active ingredient) for previously cleaned and non-porous surfaces
- 1 oz. BROMAT to 10 gallons of water (800 ppm active ingredient) for previously cleaned porous surfaces
- 1 oz. BROMAT to 5 gallons of water (1600 ppm active ingredient) where infectious disease germs are known to be present

Consult Technical Data Sheet for further information.

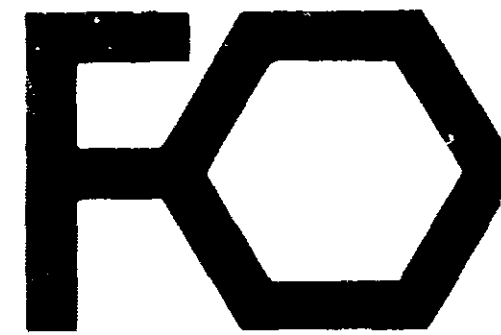
DO NOT REUSE EMPTY CONTAINER. DESTROY IT BY PERFORATING OR CRUSHING. BURY OR DISCARD IN A SAFE PLACE.

DANGER
KEEP OUT OF REACH OF CHILDREN

Corrosive. Causes severe eye and skin damage. 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 or absorbed through the skin. 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.



technical data

Fine Organics Inc.

100 Main Street • New Jersey 07034 • N. J. 07034 • (609) 426-1100
FAX: (609) 426-1100 • 1001 N. J.

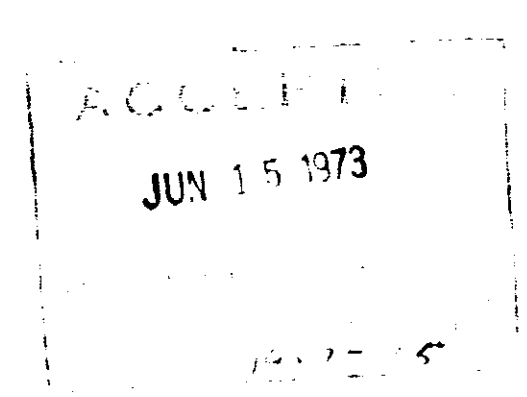
B R O M A T

Chemical Name - Cetyl* Trimethylammonium Bromide *95%

Common Synonyms - Cetrimide (BP 1950); Cetr ammonium Bromide

PROPERTIES

Bromide Content:	Actual	21.2 - 21.5%
	Theoretical	21.0%
Form:	White, free flowing powder	
Melting Point:	Softening at 210°C. Decomposition at 235 - 240°C.	
Solubility:	Alcohol	Very good
	Chloroform	Very good
	Ethyl Glycol	Slight
	Acetone	Slight
	Ether	Insoluble
	Petroleum Ether	Insoluble
	Benzene	Insoluble
	Glycerine	Insoluble
	Water	10% at 25°C. 20% at 50°C.
Stability:	Excellent	
pH:	1% at 25°C.: 8 - 9	
Taste:	Crystalline form:	Astringent, bitter
	Use Dilution:	Tasteless and odorless



MANUFACTURED BY: Fine Organics Inc.
205 MAIN STREET • NEW JERSEY 07034

PROPERTIES (Cont'd.)

Toxicity: LD₅₀, Subcutaneous Administration: 125 mg/kg body weight - guinea pigs and rabbits

LD₅₀, Oral Administration: 760 mg/kg body weight - rats

LD₅₀, Acute Dermal: 600 mg/kg body weight - rabbits

Chronic Toxicity: 5 days a week for 6 weeks, 25 mg/kg showed no harmful effects - rabbits

Subacute Dermal - 21 day: No harmful effects on skin, body weight, organs at 800 ppm applied at 2 ml/kg body weight - rabbits

Primary Skin Irritation Index: 1 (800 ppm solution)

Eye Irritation: No permanent damage to iris or cornea at 1% concentration level.

100% Concentrate: Corrosive, causes skin and eye damage.

Germicidal Properties:*

BROMAT is cationic in nature and acts like metallic cations and cationic dyes, exchanging ions with bacteria. Furthermore, its ability to reduce surface tension brings it in close contact with the bacteria. A 0.1% solution in water has a surface tension of 40.0 dynes.

BROMAT belongs to a family of compounds known as Quaternary Ammonium Compounds which exhibit more activity against Gram-positive bacteria. Their germicidal power is superior to that of the anionic detergents. They are partly neutralized by anionic soaps, and this neutralizing effect is marked when testing Gram-negative bacteria, but is only slight or absent when testing Gram-positive bacteria. Moreover, the cationic detergents inactivate some vira, denature some proteins, neutralize some toxins and inhibit some ferments.

MATERIAL AND METHODS

The (MEC) minimum effective concentrations were determined by the standard tube dilution method. All dilutions were prepared aseptically in Bacteriostasis Broth (Difco) and Sabazoud Dextrose Broth (Difco), inoculated at a 1% level using 24 hour broth cultures or spore suspensions of seven (7) day agar plants. All inoculated tubes were incubated for 48 hours at 37°C. The results are presented in the following table.

BACTERIOSTATIC CONCENTRATIONS OF BROMAT

<u>Test Organisms</u>	<u>MEC in ppm</u>
Staphylococcus aureus	< 1
Escherchia coli	31
Pseudomonas aeruginosa	1000
Salmonella choleraesius	63
Bacillus subtilis	2
Salmonella typhosa	500
Brevi bacterium ammoniagenes	< 2
Klebsiella pneumonia	31
Pityrosporun ovale	125
Candida albicans	< 2

PEB:lk
6/1/73