

BIOBAN-C

BRAND OF

Calcium Propionate



MOLD AND ROPE INHIBITOR

ACTIVE INGREDIENT:

Calcium Propionate 98.0% by wt

INERT INGREDIENTS,

Including Moisture: 2.0% by wt

KEEP OUT OF REACH OF CHILDREN

FOR INDUSTRIAL OR FEED USES ONLY

Directions for use are given in technical literature available on request.

U.S.D.A. REG. NO. 271-29

Manufactured for

COMMERCIAL SOLVENTS CORPORATION

New York, N.Y. 10017

C-216-D

Technical Data Sheet



FOOD CHEMICALS

FC Series

TDS No. 5

USING BIOBAN™ BRAND OF SODIUM AND CALCIUM PROPIONATES IN BAKERY PRODUCTS

BIOBAN-S Sodium Propionate and BIOBAN-C Calcium Propionate are excellent as preservatives to retard mold growth and to inhibit ropiness. These are common problems encountered with bakery products where there exists a time lag between baking and consumption. BIOBAN antimycotic agents effectively retard product spoilage on prolonged storage without affecting taste, aroma, or baking quality. Both BIOBAN-S and BIOBAN-C are food-grade products meeting the Food Chemicals Codex specifications.

Calcium propionate appears to be the preservative of choice for yeast-leavened doughs in that there is no interference with the activity of the yeast. At a concentration of 0.2-0.5% based on the weight of the flour, calcium propionate considerably improves storage life of the baked goods, i.e., inhibits ropiness and reduces mold formation. Fungus spores normally do not survive the baking process, so spoilage in bread during storage is caused by later contamination with molds such as Cladosporium, Penicillium, Aspergillus, or other less-common genera.

Antimycotic agents also should be incorporated in batters if the baked product is to be stored for extended periods. Sodium propionate is especially suitable for cakes and other items of this type.

As an alternative to incorporation in the dough or batter, the antimycotic agent may be applied to the inner surfaces of wrappers. For such products as brown 'n' serve rolls this technique is particularly effective, as is also the use of sodium propionate applied in an oil spray to the finished rolls.

How to Incorporate BIOBAN Propionate Salts in Breads and Pastries

Both calcium and sodium propionate are effective in retarding spoilage due to mold growth in baked goods, and in inhibiting ropiness caused by Bacillus mesentericus. Calcium



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Conformity to Governmental Regulations

Food additives, such as sodium and calcium propionate, even though generally recognized as safe (GRAS) by the Food and Drug Administration, must be used under conditions of good manufacturing practice. The amount of BIOBAN added as chemical preservative must not exceed the amount reasonably required to accomplish the antimycotic effect. These food-grade chemicals also must be stored and handled as food ingredients.

Sodium propionate or calcium propionate, or a mixture of the two, are permitted as optional antimycotic ingredients in any of the following bakery products having Standards of Identity as shown in the Federal Food Additives Regulations (21 CFR 17).

Total use is limited to not more than 0.32 part per each 100 parts by weight of flour in:

Bread, rolls, or buns
White bread, rolls, or buns
Enriched bread, rolls, or buns
Milk bread, rolls, or buns
Raisin bread, rolls, or buns

Total use is limited to not more than 0.38 part per each 100 parts by weight of flour in:

Whole wheat bread, rolls, or buns
Graham bread, rolls, or buns
Entire wheat bread, rolls, or buns

Similarly, sodium and/or calcium propionate are permitted as optional antimycotic ingredients in any of the following cheeses having Standards of Identity as shown in the Federal Food Additives Regulations (21 CFR 19). The mold-inhibiting propionates may comprise not more than 0.3% by weight of the cheese or cheese food.

Use is limited to product in the form of slices or cuts in consumer-size packages of:

Pasteurized process cheese, with or without fruits, vegetables, or meats

Pasteurized process pimento cheese

Pasteurized blended cheese, with or without fruits, vegetables, or meats

Pasteurized process cheese food, with or without fruits, vegetables, or meats

Use is limited to product in consumer-size packages of:

Cold pack cheese food, with or without fruits, vegetables, or meats

The Meat Inspection Division of the U.S. Department of Agriculture permits the incorporation of sodium and/or calcium propionate in pizza crust at a maximum of 0.32 part per each 100 parts of flour used.

There are certain labeling requirements for products containing sodium and/or calcium propionate as permitted optional ingredients. Bakery products must be labeled "_____ added to retard spoilage;" cheese products must be labeled "_____ added to retard mold growth" or "_____ added as a preservative." The blank is to be filled in with the common name of the mold-inhibiting ingredient or ingredients used. Further, wherever the name of the food appears on the label so conspicuously as to be seen easily under customary conditions of purchase, the above statement shall immediately and conspicuously precede or follow such food name without intervening matter.

Typical Properties

| | <u>BIOBAN-S</u> Sodium Propionate | <u>BIOBAN-C</u> Calcium Propionate |
|----------------------------------------------------------|-----------------------------------------|------------------------------------------|
| Purity, % by wt (min.) | 99.0 | 98.0 |
| Inert ingredients, including moisture, % by wt (max.) | 1.0 | 2.0 |
| Appearance | granular white powder | |
| Bulk density, lb/ft ³ | 30-35 | 30-35 |

Containers

BIOBAN-S Sodium Propionate or BIOBAN-C Calcium Propionate as food-grade products meeting the specifications of the Food Chemicals Codex are packaged in 50-lb laminated paper bags or in fiber drums containing 150 lb net weight.

Store containers in a cool, dry place under sanitary conditions. Keep containers tightly closed. Sodium propionate is deliquescent and will cake if allowed to become damp. Calcium propionate is much less hygroscopic and generally remains free-flowing.

The manufacturer assumes no responsibility when these products are not used in accordance with the instructions and information contained herein.