

## BETABIO 10%

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### OVERVIEW

**BetaBio 10%** is produced from CO<sub>2</sub> hop extract.

**BetaBio 10%** mainly contains the natural beta acid fraction of the hop extract, dissolved (as potassium salts) in food-grade propylene glycol. Beta acids are well-known to have potent antimicrobial properties, particularly against gram-positive bacteria and certain algae.

**BetaBio 10%** is typically added to materials or process streams that require antibacterial protection.

### SPECIFICATIONS

Short description	beta acid extract
Beta acids	10.0 ± 0.5 % (w/w) HPLC
pH	11.0 ± 0.5 (1 pt product: 3.5 pts water)
Density	ca. 1.0 g/ml (20 °C / 68 °F)
Viscosity	5 - 7 mPas (20 °C / 68 °F)

### PROPERTIES

#### APPEARANCE

BetaBio 10% is a clear amber-colored liquid.

#### QUALITY

All Hopsteiner® products are processed in facilities which fulfill internationally recognized quality standards. A monitoring system for residues is in place.

### PACKAGING

Our products are delivered in their respective recommended standard packaging. Alternatives may be possible upon customer request.

Standard packages of our processing plants in the USA (US) and Germany (DE) are:

- Pail 20 kg (US)
- Drum 200 kg (US)

## USAGE

We recommend that BetaBio 10% be used in its undiluted form. It is not difficult to pump and is compatible with the usual materials used in food processing plants.

## DOSAGE

Actual dosage will depend on the application, but typically 25 ppm of BetaBio 10% is effective as an antibacterial agent.

## STORAGE

The recommended storage temperature in the original unopened packaging is 20 °C (68 °F).

Bulk storage in heated tanks (up to 40 °C) is also possible, provided the product is not directly exposed to air and used within about 3 months.

## BEST BEFORE DATE

Under the recommended storage conditions, the shelf life from the date of production/ packaging is at least 1 year.

## SAFETY

Ensure good ventilation of the workplace and wear personal protective equipment. Avoid contact with eyes and skin. Do not inhale vapors or dusts. For full safety information, please refer to the relevant Hopsteiner® safety data sheet.

## ANALYTICAL METHODS

International approved methods listed in committees such as ASBC or Analytica-EBC using current standards are applied.

## PRODUCT ANALYTICS

Concentration of bitter substances

- Analytica-EBC 7.8 (HPLC)

## TECHNICAL SUPPORT

We are pleased to offer assistance and advice on:

- safety data sheets
- support for brewing trials on a pilot or commercial scale
- analytical services and information about analytical procedures

Disclaimer: The information provided in this document is believed to be correct and valid. However, Hopsteiner® does not guarantee that the information provided here is complete or accurate and thus assumes no liability for any consequences resulting from its application.

## ADDITIONAL INFORMATION

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Both beta acids and propylene glycol are classified as GRAS.

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