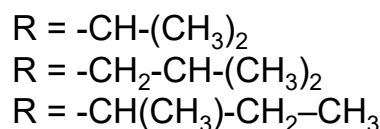
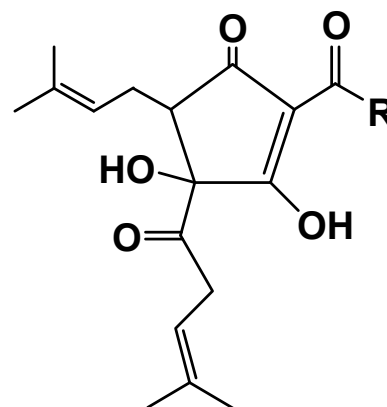


Isomerized Hop Extract 30 %

❖ Overview

- **Isomerized Hop Extract 30 % (Iso-Extract)** is an aqueous solution of the potassium salts of iso-alpha acids produced exclusively from CO₂ hop extract.
- Iso-alpha acids are naturally formed when hop alpha acids are boiled (e.g. brewing process). Iso-alpha acids are responsible for inhibiting gram positive bacteria growth during beer or cereal fermentations. About 25 ppm of Iso-Extract 30% can inhibit the growth of most gram-positive bacteria under laboratory conditions.
- **Iso-Extract** is commonly added to yeast propagators, mash tanks, and fermenters of cereal-based fermentation plants at 50 ppm.

Molecular Structure of Iso-alpha acids



❖ Specifications

- Description: clear, pale amber to yellow aqueous solution of the potassium salts of iso-alpha acids
- Iso-alpha acids: typically 30.0 ± 2.0 % (w/w)
- Alpha acids: < 0.6 %
- Beta acids: < 0.2 %
- Hop oil: < 0.1 %
- pH: 9.0 (± 1.0)
- Viscosity: 15 – 20 mPas at 20 °C (68 °F)
- Density: 1.065 (± 0.005) g/ml at 20 °C (68 °F)

❖ Properties

• Appearance

Pale amber to yellow in color, **Iso-Extract** is a clear, homogeneous, aqueous solution. Free flowing at the recommended storage and application temperatures, **Iso-Extract** is miscible in demineralized water, alcohol and propylene glycol.

• Standardization

Iso-Extract is typically supplied as a 30 % w/w solution of the potassium salt of iso-alpha acids; however, 10 or 20 % concentrations are also available.

• Quality

All Hopsteiner® products are processed in facilities which fulfill internationally recognized quality standards.

Iso-Extract is food grade, kosher and is not an antibiotic.

❖ Packaging

Iso-Extract is normally packaged in 20 kg pails. Other sizes are available on request, e.g. 5-Gal. Jerricans or IBC of 640 – 1000 kg.

❖ Product Use

In order to inhibit gram positive bacteria growth, **Iso-Extract** is typically added to a yeast propagator or fermenter at a dose rate of 30 to 50 ppm.

• Cleaning Recommendation

Iso-Extract should not be left in dosing lines at low temperatures. Lines and dosing pumps should be flushed with warm, slightly alkaline, demineralized water or ethanol for purposes of cleaning.

• Storage

Iso-Extract should be stored in sealed containers at 5 – 15 °C (41 – 59 °F). Avoid exposure to sunlight and use opened containers as soon as possible.

• Best Before Date

Iso-Extract is stable for three years from the date it was produced / packaged if stored under the recommended conditions.

• Safety

Iso-Extract is an intensely bitter product. Solutions of **Iso-Extract** are mildly alkaline and therefore contact with sensitive skin should be avoided. If **Iso-Extract** gets into the eyes, flush with copious amounts of water until clear and seek medical attention. For full safety information, please refer to the relevant Hopsteiner® safety data sheet.

❖ Analytical Methods

• Concentration of Bitter Substances

Iso-alpha acids can be measured using the following methods:

- HPLC according to Analytica-EBC 7.9 or ASBC Hops-9C, Hops-9D with the current ICS standard.

❖ Technical Support

We are pleased to offer assistance and advice on the entire Hopsteiner® product range:

- Information on all relevant analytical procedures
- Safety Data Sheets (SDS)
- Special analytical services

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.