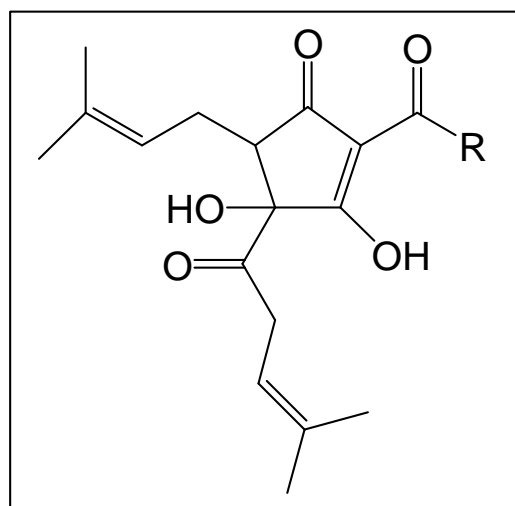


Iso-Extract –30% (Iso)

❖ Overview

- **Iso-Extract** is a pure aqueous solution of the potassium salts of iso- α -acids produced entirely from CO₂ hop extract.
- Isoalpa acids are naturally formed when hop alpha acids are boiled (e.g. brewing process). Isoalpa 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 Isoalpa Acids



R= isopropyl, isobutyl, secbutyl

❖ Specification

- **Description:** A yellow aqueous solution of the potassium salts of iso- α -acids.
- **Concentration:** 30.0 \pm 2.0% (w/w) of iso- α -acids by HPLC
- **pH:** 9.5 (\pm 1.0)
- **Density:** 1.07 (\pm 0.005) g/ml
- **Solubility:** Soluble in demineralized water.

□ **Appearance**

A homogeneous, pale amber, clear aqueous solution; mobile and free flowing at normal storage and use temperatures. Miscible with demineralized water and alcohol.

□ **Quality**

All Hopsteiner® products are produced in plants accredited to internationally accepted quality standards. Iso is Food Grade, Kosher and is not an antibiotic.

□ **Packaging**

Iso-Extract is regularly available in 20-kg pails (HDPE) or 200-kg drums (PP). Other package sizes (including totes) are available on request.

□ **Storage stability:**

Iso-Extract has good storage stability. When stored in sealed containers at room temperatures **Iso** will maintain its integrity for at least 12 months. Ambient storage temperatures between 10-20°C (50-65°F) are ideal.

□ **Best Before Date**

Iso-Extract 30% is stable for 2 year from date of production under the recommended storage conditions.

□ **Safety:**

Iso-Extract 30% should be handled with due care, especially to prevent contact with the eyes. Any contamination of the skin should be washed off with soap and water. If **Iso-Extract 30%** gets into the eyes, irrigate with

excess water until clear and seek immediate medical attention.

For full safety information please see the relevant Steiner material safety data sheet.

Product Use

In order to inhibit gram positive bacteria growth, Iso-Extract 30% is typically added to a yeast propagator or fermenter at a dose rate of 30 to 50 ppm. The product can be simply poured or added via a metering pump.

Analytical methods

□ **Concentration of iso- α -acids in Product:**

The concentration of iso- α -acids can be determined by UV Spectrophotometric analysis or by HPLC using the current ICS standard according to the modified EBC 7.8 method. The recommended procedures can be obtained from Steiner.

❖ **Technical Support**

We will be pleased to offer help and advice on the full range of Hopsteiner® products:

- Copies of all relevant analytical procedures
- Material Safety Data Sheets (MSDS)
- Assistance with pilot or commercial trials
- Specialist analytical services

Rev. 3.18.10