**Overview**

- **AlphaExtract** is a pure, aqueous solution of natural alpha acids in the form of potassium salts, derived from CO₂ hop extract.

- **AlphaExtract** imparts a smooth bitterness to beer with a bitterness only 10 % of that of iso-alpha acids.

- In addition, **AlphaExtract** improves the stability and cling of beer foam.

![Sensory and analytical bitterness](image)

**Specifications**

- **Description:** yellow to amber solution containing the potassium salts of alpha acids from hops
- **Concentration:** 20.0 ± 1.0 % (w/w) of alpha acids
- **pH:** 8.5 (± 0.5)
- **Viscosity:** 6 mPas at 20 °C (68 °F)
- **Density:** 1.050 (± 0.020) g/ml at 20 °C (68 °F)
Properties

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

Packaging

AlphaExtract is normally packaged in 20 kg pails. Other sizes are available on request, e.g. IBC of 640 – 1000 kg.

Product Use

AlphaExtract is typically added before the final step in filtration.

Dosage

Dosage of AlphaExtract is based on the product concentration, the desired dosing rate and the expected utilization. Actual utilization will vary from brewery to brewery depending on the time and point of the addition.

Addition

We recommend adding AlphaExtract at full strength (undiluted) into the center of the beer stream for at least 70 % of the total volume being transferred, preferably prior to the final step in filtration. An accurate, high pressure dosing pump is required to add the product into the beer stream at a point where vigorous mixing is assured.

If dilution is necessary, always add AlphaExtract to demineralized water and adjust the pH to 8.5 – 9.5 using potassium hydroxide (KOH) or potassium carbonate (K₂CO₃).

If containers are used over several days, it is recommended that the headspace be flushed with nitrogen (CO₂ is not suitable).
• **Concentration of Alpha Acids in Beer**
The concentration of alpha acids in beer is best determined by HPLC using the current ICE standard. If either the Analytica-EBC 9.8 or ASBC Beer-23 method is applied, please note that 1 mg/l of alpha acids is equal to an increase of 0.4 – 0.6 bittering units. At the same time, the sensory bitterness only slightly changes although the analytical bitterness value increases.

• **Supplementary Information**

• **Usage in Combination**
If **AlphaExtract** is to be used in combination with **Iso-Extract**, stable aqueous solutions of alpha acids plus iso-alpha acids can be produced to customer specifications. If **AlphaExtract** and Tetra are used in combination, **AlphaExtract** must be added to the beer before **Tetra**.

• **Stability of Alpha Acids in Beer**
It is not unusual to detect a loss of alpha acids over the normal shelf life of beer. Nevertheless, this has been known to have no effect on the stability and cling of beer foam.

• **Light Stability of Alpha Acids**
It is not recommended that **AlphaExtract** be used in light stable beers, as alpha acids can transform into iso-alpha acids, which are not light stable.

• **Cleaning Recommendation**
**AlphaExtract** 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**
**AlphaExtract** should be stored in sealed containers at 1 – 5 °C (34 – 41 °F). Avoid exposure to sunlight and use opened containers as soon as possible.

• **Best Before Date**
**AlphaExtract** is stable for one year from the date it was produced / packaged if stored under the recommended conditions.

• **Safety**
**AlphaExtract** should be handled using routine precautions to avoid contact with skin and, in particular, the eyes. Any product coming into contact with the skin should be immediately washed off with soap and water or an appropriate hand cleanser. If **AlphaExtract** 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**
Alpha acids can be measured using the following methods:
- HPLC according to Analytica-EBC 7.7 or ASBC Hops-14, with the current ICE standard
Technical Support

We are pleased to offer assistance and advice on the full range of Hopsteiner® products:

- copies of all relevant analytical procedures
- Safety Data Sheets (SDS)
- assistance with pilot or full-scale brewing trials
- special analytical services

Patent

AlphaExtract is covered by US Patent 9,796,955

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.