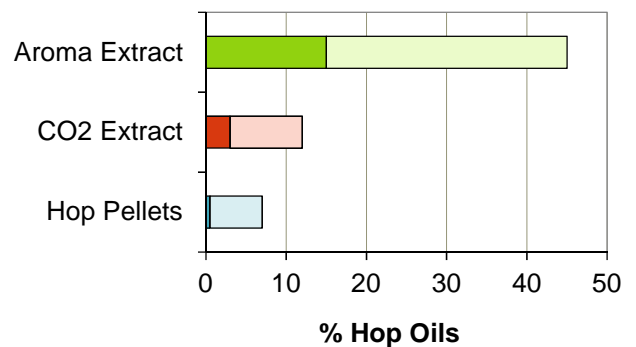


## Aroma Extract

### ❖ Overview

- **Aroma Extract** is an enriched hop oil product made from CO<sub>2</sub> hop extract.
- **Aroma Extract** can be added early to the kettle as an anti-foam. If dosed late in the boil this product provides a distinct hop aroma to beer.
- **Aroma Extract** can help to suppress microbial infections due to the presence of beta acids.
- **Aroma Extract** doesn't contribute to sensory bitterness of beer.

Comparison of Hop Oil Concentration in Hop Products



### ❖ Specification

- Description: A dark brown semisolid extract containing hop essential oils and waxes.
- Hop oil\*: 15 - 45 %
- Beta acids\*: < 20 %
- Iso-alpha acids: < 0.5 %
- Alpha acids: < 0.5 %
- pH: 7.5 – 8.0
- Viscosity: 35 – 50 mPas at 50°C (122°F)
- Density: 1.0 g / ml at 20°C (68 °F)

\* dependent on variety and crop year

## ❖ Properties

### • Appearance

Dark brown, semisolid or moderately viscous paste which becomes fluid on warming.

### • Utilization

Actual utilization will vary from brewery to brewery depending on plant and process conditions.

### • Flavor

**Aroma Extract** provides hop character when added to the kettle. Late kettle addition will help to enhance a typical late hop aroma of finished beer.

### • Quality

All Hopsteiner® products are produced in plants accredited to internationally accepted quality standards.

## ❖ Packaging

**Light Stable Aroma Extract** can be packaged in cans and pails according to customer requirements:

Cans: 0.5 to 4 kg USA  
0.5 to 10 kg Germany  
Pails: 3 to 20 kg USA only

## ❖ Product Use

**Aroma Extract** is typically added to the brew kettle to achieve a typical hop aroma. An early addition helps to decrease foaming of wort at the start of boiling.

### • Dosage

Actual dosage will depend on the extract analysis (hop oil content), time of addition and desired intensity of hop aroma.

Example: (hop oil content of 30 %)

Add 6.7 g/hl **Aroma Extract** toward the end of the boil. This corresponds to a hop oil addition of 2.0 g/hl.

### • Addition

**Aroma Extract** is used in cans. It's not necessary to warm up prior to their use. Punctured containers suspended into the boiling wort will ensure that all of the extract is completely flushed out into the kettle.

- **Storage**

**Aroma Extract** should be stored in sealed containers at <10°C (50°F). Opened containers should be used within a few days.

- **Best Before Date**

**Aroma Extract** is stable 6 years from date of production under the recommended storage conditions.

- **Safety**

**Aroma Extract** should be handled like regular CO<sub>2</sub>-extract. Any material coming into contact with skin should be washed off immediately. If **Aroma Extract** gets into the eyes, irrigate thoroughly with water until clear and seek medical attention.

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

## ❖ Analytical Methods

- **Concentration of Hop Oils**

Hop oil concentration can be measured by any of the following methods:

- Analytica-EBC 7.10
- ASBC Hops-13

- **Concentration of Beta Acids**

Beta acids (as well as Iso-alpha, alpha acids) can be measured by any of the following methods:

- HPLC method according to Analytica-EBC 7.8 or ASBC Hops-16 using the current ICS & ICE standards

## ❖ 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 full brewery trials
- Specialist analytical services

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