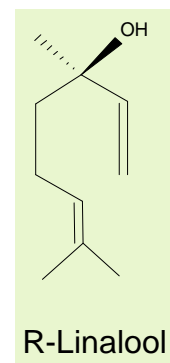
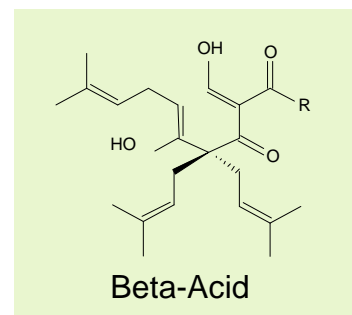
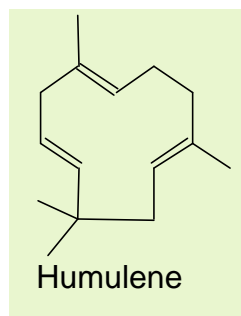


Beta Aroma Extract

❖ Overview

- **Beta Aroma Extract** is produced from CO₂-extract and contains predominantly hop **Beta acids** and essential **oils**.
- Whereas iso-extracts and reduced extracts are usually added post fermentation, **Beta Aroma Extract** is best added to the kettle, helping to prevent over-boiling and also suppressing the growth of gram positive bacteria during fermentation.
- Added late in the kettle boil, **Beta Aroma Extract** intensifies the **Aroma** provided by normal hopping thus enabling a more distinct hop aroma in beer.



❖ Specification

- **Description:** A yellow-brown, waxy solid containing β -acids, essential oils, fats and waxes; actual composition will vary according to hop variety used.
- **Beta-acids:** 40 – 50 % (depending on variety)
- **Iso-alpha-acids:** 0.5 – 2.0 % (depending on variety)
- **Alpha-acids:** < 3.0 %
- **Hop oils:** 8 – 15 % (depending on variety)
- **Density:** 1.0 g/ml (depending on variety)

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❖ Properties

□ Appearance

A semi-solid or moderately viscous, yellow-brown extract which becomes mobile when heated.

□ Flavor

Beta Aroma Extract provides a non-iso- α bitterness when added to the kettle. Late addition towards the end of boiling will help to enhance the hop character in finished beer. Small quantities of residual iso- α and α -acids will also contribute to beer bitterness.

□ Quality

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

❖ Packaging

Beta Aroma Extract can be filled in various can sizes (up to 4 kg), in 20-kg pails or in 200-kg drums.

❖ Product Use

Beta-Aroma-Extract serves three main functions:

- Suppression of **OVER-BOILING**
- Enhancement of **HOP AROMA**
- **BACTERIOSTATIC** activity

Beta Aroma Extract is typically added during wort boiling. Early addition can help to prevent over-boiling of the wort.

Good recovery of aroma substances can be achieved when added late in the boil.

□ Dosage

Actual dosage will depend on the extract analysis, time of addition and degree of hop character required.

Example (for an oil content of 14 %):

Dosage into the wort towards the end of boiling: 14 g/hl. This corresponds to a hop oil dosage of 2 g/hl. However, the actual dosage of **Beta Aroma Extract** should be investigated in preliminary tests, as achievement of the desired aroma enhancement will depend on the individual boiling system and time of addition.

□ Addition

If handled in bulk, **Beta Aroma Extract** must be warmed to approx. 50°C (122°F) prior to use; otherwise use as normal kettle extract.

□ Storage

In order to preserve the essential oils, **Beta Aroma Extract** should be stored at < 10° (50°F) in unopened containers.

□ Best Before Date

Beta Aroma Extract is stable 2 years from date of production.

□ Safety

Beta Aroma Extract should be handled just like normal CO₂-extract. Any material coming into contact with the skin should be washed off immediately with soap and water. If **Beta Aroma Extract** gets into the eyes, irrigate thoroughly with water until clear and seek medical attention.

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

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❖ Analytical Methods

The following methods are used in the analysis of **Beta Aroma Extract**:

- ❑ β -acids and residual α -acids by HPLC-method EBC 7.8 using the current ICE-standard.
- ❑ Iso- α -acids by HPLC-method EBC 7.8 using the current ICS-standard.
- ❑ Hop oil concentration is measured by the method IOB 6.3 or alternatively by ASBC *Hops-13*.

❖ 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