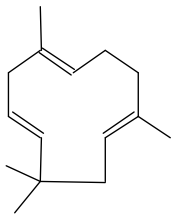
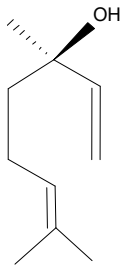
Beta AromaExtract

❖ Overview

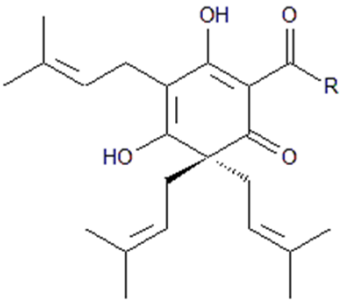
- **Beta AromaExtract** is derived from CO_2 hop extract and contains predominantly **Beta acids** and hop essential oils.
- **Beta AromaExtract** can be added early to the wort kettle as an antifoam agent. If added late in the boil, this product imparts a distinct hop aroma to beer.
- **Beta AromaExtract** can help suppress microbial infections due to the presence of beta acids.
- **Beta Aroma Extract** does not contribute to the sensory bitterness of beer.



Humulene



R-Linalool



Beta acid

❖ Specifications

- Description: A yellow-brown, waxy solid containing β-acids, essential oils, fats and waxes
- Beta acids*: 24 – 52 %
- Hop oil*: 4 – 22 %
- Iso-alpha acids: 0.2 – 2.9 %
- Alpha acids: 0.2 – 1.2 %
- Density: 1.0 g/ml at 20 °C (68 °F)

*dependent on variety and crop year

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❖ Properties

- Appearance

  Beta AromaExtract is a yellow-brown, semisolid or moderately viscous paste which becomes fluid when warmed.

- **Utilization**

  Actual utilization will vary from brewery to brewery due to differences in equipment and process conditions.

- **Flavor**

  Beta AromaExtract provides a non iso-alpha bitterness when added to the kettle. Late kettle additions impart a typical late hop aroma to the finished beer. Small quantities of residual iso-alpha and alpha acids will also contribute to beer bitterness.

- **Quality**

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

❖ Packaging

Beta AromaExtract can be packaged in cans and pails according to customer requirements:

Cans: 0.5 to 4 kg (USA)
0.5 to 4.2 kg (Germany)
Pails: 4 to 20 kg (USA only)
Jugs: 2.5 Gal. (USA only)
Drums: 50 and 200 kg

❖ Product Use

Beta AromaExtract is typically added during wort boiling. An early addition can help to prevent over-boiling of the wort. Good recovery of aroma substances can be achieved when added late to the boil.

- **Dosage**

  Actual dosage of **Beta Aroma Extract** will depend on the extract analysis, the time of the addition and the desired intensity of hop aroma.

  Example: (hop oil content of 15 %)
  Add 13.4 g/hl **Beta AromaExtract** toward the end of the boil. This corresponds to a hop oil addition of 2.0 g/hl.

- **Application**

  Pre-warming cans of **Beta AromaExtract** is not necessary. Suspending punctured cans in the boiling wort will ensure that all of the extract is completely flushed out into the kettle.

  If **Beta AromaExtract** is added by means of automatic dosing units, it should be warmed to 60 °C (140 °F) and gently mixed to ensure perfect dosing.

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- **Storage**

  Beta AromaExtract should be stored in sealed containers at temperatures < 10 °C (50 °F). Opened containers should be used within a few days.

- **Best Before Date**

  Beta AromaExtract is stable for six years from the date it was produced / packaged if stored under the recommended conditions.

- **Safety**

  Beta AromaExtract should be handled like regular CO_2 extract. Any product coming into contact with the skin should be immediately washed off with soap and water or an appropriate hand cleanser. If **BetaAroma 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 Beta Acids**

  Beta acids (as well as iso-alpha acids and alpha acids) can be measured using the following methods:
  – HPLC according to Analytica-EBC 7.8 or ASBC Hops-16 with the current ICS and ICE standards

- **Concentration of Hop Oil**

  The hop oil concentration can be measured using the following methods:
  – Analytica-EBC 7.10
  – ASBC Hops-13

❖ 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

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