XanthoFlav™ Extract on Diatomaceous Earth

**Overview**

- **XanthoFlav™ Extract on DE** offers the brewer the option of increasing the content of hard resins including xanthohumol and iso-xanthohumol in beer by a factor 8 to 10.

- **XanthoFlav™ Extract on DE** has a positive impact on beer flavor, especially on bitterness.

- **XanthoFlav™ Extract on DE** provides a basis for the development of new (functional) beverages.

- **XanthoFlav™ Extract on DE** is suitable for additions during wort boiling.

**Specifications**

- **Description:** olive green powder
- **Total resin**: 15 – 20 %
- **Beta acids**: < 2.0 %
- **Alpha acids**: < 5.0 %
- **Iso-alpha acids**: 0.5 – 2.0 %
- **Xanthohumol**: 1.0 – 2.0 % (without the carrier material DE: 7 – 12 %)
- **Density**: 550 g/l

*dependent on variety and crop year*
**Product Use**

- **Dosage**
  Dosage of the XanthoFlav™ Extract on DE cannot be calculated on the basis of (iso-) alpha acids, as hard resins provide an important proportion of the bitterness of this product. Therefore, we recommend using the total resin value as a basis for the calculation of XanthoFlav™ Extract on DE.

  **Example:**
  To achieve 1 BU by using XanthoFlav™ Extract on DE an average dosage of 1.4 g of total resins per hl is required, respectively 7.0 – 9.4 g/hl of XanthoFlav™ Extract on DE.

  **Note:**
  Yields of bitter substances and formation of iso-xanthohumol depends considerably on individual conditions at the brewery. Hence, the dosage above only serves as a value for orientation.

- **Ideal Usage:**
  - an addition at or shortly after boiling begins
  - avoid stabilization with PVPP

**Properties**

- **Appearance**
  XanthoFlav™ Extract on DE is an olive green powder.

- **Flavor**
  When added during wort boiling, XanthoFlav™ Extract on DE imparts a smooth bitterness, which is mainly attributable to the hard resins.

- **Utilization**
  XanthoFlav™ Extract on DE can be added during wort boiling. When added at the start of boiling – as with alpha acids – the xanthohumol is isomerized to iso-xanthohumol.

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

**Packaging**

XanthoFlav™ Extract on DE can be packaged in cans and drums according to customer requirements:

- Cans: 0.5 to 10 kg
- Drums: 50 and 200 kg

XanthoFlav™ Extract on DE can be produced to any alpha acid concentration desired by our customers and packaged in cans (e.g. 450 g of alpha acids per can).

---

**Graph:**

- XN boiled in water and in water + roasted barley extract

---

S.S. Steiner, Inc.
New York, USA
Tel: (1) 212 838 8900
Fax: (1) 212 593 4238
E-mail: sales@hopsteiner.com

Simon H. Steiner, Hopfen, GmbH
Mainburg, Germany
Tel: (49) 8751 8605-0
Fax: (49) 8751 8605-80
E-mail: info@hopsteiner.de

Steiner Hops Ltd.
Epping, England
Tel: (44) 1992 572331
Fax: (44) 1992 573780
E-mail: enquiries@hopsteiner.co.uk

Hopsteiner Trading (Zhuhai) Co., Ltd.
Zhuhai, PRC
Tel: (86) 756 322 3340
Fax: (86) 756 322 3345
E-mail: info@hopsteiner.com.cn

PDS 22/08 issued 09/2018
### 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

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.

### Remarks

We take a great deal of care in the preparation of XanthoFlav™ Extract on DE from natural raw materials (hops and diatomaceous earth). However, the use or application of XanthoFlav™ Extract on DE remains the sole responsibility of the buyer.

### Analytical Methods

#### Concentration of Bitter Substances

Xanthohumol, can be measured using the following method:

- HPLC according to Analytica-EBC 7.15 with current international standard

Iso-alpha, alpha and beta acids can be measured using the following methods:

- HPLC according to Analytica-EBC 7.8 or ASBC Hops-16 with the current ICE and ICS standards

Total resin (soft and hard resins) can be measured using the following method:

- Analytica-EBC 7.5

---

### Storage

XanthoFlav™ Extract on DE should be stored in sealed containers at temperatures < 10 °C (50 °F). Opened containers should be used within a few days.

### Best Before Date

XanthoFlav™ Extract on DE is stable for four years from the date it was produced / packaged if stored under the recommended conditions.

### Safety

When handling this product, it is advisable to wear a dust mask. If XanthoFlav™ Extract on DE 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.