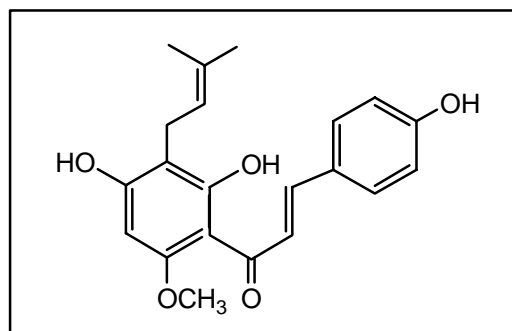


## Xantho-Flav Extract

### ❖ Overview

- **Xantho-Flav Extract** is a natural product produced from hops.
- The active ingredient in **Xantho-Flav Extract** is the hop polyphenol xanthohumol.
- Xantho-Flav Extract can be used as an ingredient in food, cosmetics or pharmaceutical applications.

### Molecular Structure of Xanthohumol



### ❖ Specification

- **Description:** A green colored powder.
- **Bitter compounds:** 70-80%
- **Prenylated Flavonoids:** 10-25%
  - **Xanthohumol:** 8-15%
  - **Iso-xanthohumol:** <2%
- **Ethanol** < 0.5% by GC
- **Density:** ~0.75 g/ml
- **Solubility:** Very soluble in ethanol, nearly insoluble in water.

Further information on solubility:  
*J. Agric. Food Chem. 1999, 2421 – 2428.*

## ❖ Packaging

**Xantho-Flav Extract** is packaged in various types of containers depending on customer requirements.

### ❑ Storage stability:

**Xantho-Flav Extract** is stable for two years from the date of production. The product should be stored < 5 °C and be protected from light.

### ❑ Safety:

**Xantho-Flav Extract** is classified in GHS category 5. If **Xantho-Flav Extract** comes in contact with the eyes wash off with plenty of water and seek medical attention. For full safety information please see the relevant Steiner material safety data sheet.

### ❑ Quality:

All Hopsteiner® products are produced in plants accredited to internationally accepted quality standards. **Xantho-Flav Extract** is Food Grade and Kosher.

## Analytical methods

### ❑ Concentration of Xantho-Flav Extract in Product:

The concentration of **Xantho-Flav Extract** can be determined by UV Spectrophotometric analysis or by HPLC using modified method Analytica-EBC 7.8 with UV detection at 370 nm or 290 nm for isoxanthohumol. The recommended procedures can be obtained from Steiner.

## ❖ 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 commercial trials
- ❑ Specialist analytical services

### ❑ Physiological Properties

**Xantho-Flav Extract** contains a high concentration of the prenylated flavonoid Xanthohumol. As demonstrated in numerous “in-vitro”-tests Xanthohumol shows a wide range of potentially beneficial effects, among which is its high degree of antioxidative activity. Its bioavailability, impact on metabolism, and pharmacokinetics have all been examined in animal testing. A dose rate of 100 mg of Xanthohumol per kg of animal weight showed no toxic effect. (*Molecular Nutrition and Food Research Edition 9/05*)

### ❑ Orac Test Results:

#### Peroxy Radical Scavenging Capacity

	<u>µmol Trolox/g</u>
Xanthohumol (> 98%)	23447
Isoxanthohumol (> 98%)	19073
*Quercetin-Dihydrate (90%)	21779

#### Hydroxyl Radical Scavenging Capacity

	<u>µmol Trolox/g</u>
Xanthohumol (> 98%)	72245
Isoxanthohumol (> 98%)	29600
*Quercetin-Dihydrate (90%)	5610

\*Quercetin-Dihydrate (90%) was used as a reference standard.



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