

# 浓缩酒花粉

## Lupulin Powder

### 概述 OVERVIEW

浓缩酒花粉由酒花原花制成，可在麦汁煮沸阶段添加至煮沸锅。本品能精准调控啤酒的苦味值、并赋予啤酒典型的酒花香气特征。

Lupulin Powder is a hop product made from leaf hops, added to the wort kettle during the boiling process. It contributes to the desired bitterness of a beer as well as its characteristic hop aroma.

浓缩酒花粉也适用于酿造冷端工艺（干投酒花），可显著增强啤酒的酒花香气。其高浓度的 $\alpha$ -酸与酒花精油成分，特别适合在回旋阶段需要大量添加酒花的酿造工艺。

Lupulin Powder is suitable for use on the cold side (dry hopping) of the brewing process. It imparts a pronounced hop aroma to beer. Moreover, the high concentrations of alpha acids and hop oil in this product are advantageous for breweries adding large quantities of hops in the whirlpool.

通过提高苦味物质和酒花油的含量，降低了运输和储藏成本。并可以减少酒损。  
Through the enrichment of bitter acids and essential oils, transportation and storage costs are lower for Lupulin Powder. Furthermore, beer losses can be reduced.

### 规格 SPECIFICATIONS

简述 Short description:	啤酒花粉末，用于麦汁煮沸和干投阶段对苦味与酒花风味的提升 mechanically highly enriched hop powder for (intensive) bitterness and hop flavor during wort boiling and dry hopping
$\alpha$ -酸 Alpha acids:	6-35%
$\beta$ -酸 Beta acids:	5-20%
酒花油 Hop oils:	1-10ml/100g
水分 Moisture content:	6-9%

### 性能 PACKAGING

#### 外观 Appearance

浓缩酒花粉为黄绿色酒花粉末。  
Lupulin Powder is a yellow-green hop powder.

#### 风味 Flavor

浓缩酒花粉在啤酒中产生的风味与酒花原花无异，可为啤酒提供苦味和香气。其风味表现取决于酒花品种、添加量及添加时间。更多详细信息，请参考斯丹纳酒花品种说明页。  
Lupulin Powder produce flavors in beer indistinguishable from those of regular pellets. Lupulin Powder provide bitterness and aroma to the beer. The flavor depends on the variety, quantity and time of addition. For further information, please refer to the hop variety data sheets.

#### 利用率 Utilization

若在煮沸初期（开始煮沸后15分钟内）添加，利用率通常为30%-35%；若在煮沸后期添加，利用率可能降至20%或更低（具体取决于实际工艺条件）。两种添加方式均可根据目标风味强度及啤酒风格进行调整。  
Given as an early kettle addition (up to 15 min after the boil begins), hop utilization normally falls within a range of 30 - 35 %. When Lupulin Powder is added late in the boil, utilization can decline to 20 % or less, depending on individual process conditions. Both additions can vary depending on the desired intensity and the beer style

#### 质量 Quality

所有斯丹纳产品均在符合国际认证质量标准的生产设施中加工制造，并配备完善的残留物监控体系。  
All Hopsteiner products are processed in facilities which fulfill internationally recognized quality standards. A monitoring system for residues is in place.

## 包装规格 PACKAGING

本产品采用标准包装规格，也可以根据客户要求提供其它规格。

Our products are delivered in their respective recommended standard packaging. Alternatives may be possible upon customer request.

美国(US)与德国(DE)加工厂的包装规格如下：

Standard packages of our processing plants in the USA (US) and Germany (DE) are:

- 5、10、90、140kg, 五层铝箔充惰性气体软包装(DE)  
5, 10, 90, 140 kg softpack under inert gas in 5-layer aluminum composite foils (DE)
- 20kg, 五层铝箔充惰性气体软包装(US)  
20 kg soft pack under inert gas in 5-layer aluminum composite foils (US)

## 产品使用 USAGE

### 添加量 Dosage

浓缩酒花粉的添加量，可根据其  $\alpha$ -酸含量及预估/已知利用率进行计算。煮沸后期添加（通常为煮沸结束前5-20分钟）会降低  $\alpha$ -酸利用率，但能增强啤酒花香气与风味。

The quantity of Lupulin Powder in an addition can be calculated using the alpha acid content of the powder and an estimated or known utilization. Late kettle additions of Lupulin Powder (typically 5 - 20 min prior to the end of the boil) reduce alpha acid utilization but increase hop aroma and flavor.

### 添加方法 Application

浓缩酒花粉可直接投入麦汁煮沸锅或酒花投置器中。干投酒花通常是通过不同的技术，在二次发酵或熟酒罐中添加。

Lupulin Powder can be added directly to the wort kettle or hop dosing vessel. Dry hopping normally involves the addition of Lupulin Powder during secondary fermentation or maturation using various techniques.

### 存储 Storage

建议低于5°C (41°F) 存储（未启封）。

The recommended storage temperature in the original unopened packaging is < 5°C (41°F) .

短期运输过程中的温度波动，不会影响产品质量。

Short-term, transport-related temperature deviations do not affect product quality.

### 最佳使用时间 Best Before Date

在建议的储藏条件下，最佳使用时间为生产/包装日期后至少五年。

Under the recommended storage conditions, the shelf life from the date of production/ packaging is at least 5 years.

### 安全性 Safety

确保工作场所通风良好，并佩戴个人防护装备。避免接触眼睛和皮肤，请勿吸入蒸汽或粉尘。更详尽的安全资料请参考斯丹纳产品安全数据表。

Ensure good ventilation of the workplace and wear personal protective equipment. Avoid contact with eyes and skin. Do not inhale vapors or dusts. For full safety information, please refer to the relevant Hopsteiner safety data sheet.

## 分析方法 ANALYTICAL METHODS

使用ASBC（美国酿造协会）和Analytica-EBC（欧洲酿造协会）等国际权威机构颁布的最新标准方法进行检测。

International approved methods listed in committees such as ASBC or Analytica-EBC using current standards are applied.

## 产品分析 Product analytics

### 苦味物质含量 Concentration of bitter substances

- Analytica-EBC 7.4 (LCV)
- Analytica-EBC 7.5 (LCV)
- ASBC Hops-6B (LCV)
- Analytica-EBC 7.7 (HPLC)
- ASBC Hops-14 (HPLC)
- ASBC Hops-6A (Spectro)

### 酒花油含量 Concentration of hop oils

- Analytica-EBC 7.10 (Distillation)
- ASBC Hops-13 (Distillation)

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