

酒花颗粒45型（浓缩型） Pellets Type 45 (Concentrated)

概述 OVERVIEW

酒花颗粒45型由酒花原花加工而成，可在麦汁煮沸阶段添加至煮沸锅中。根据添加时间的不同，可以赋予啤酒需要的苦味和特定的酒花香气。

Pellets Type 45 are a hop product made from leaf hops, added to the wort kettle during the boiling process. Depending on the time of the addition, these pellets contribute to the desired bitterness as well as to the characteristic hop aroma of beer.

酒花颗粒45型同样适用于酿造过程的冷端工艺（干投酒花），能为啤酒带来明显的酒花香气。Pellets Type 45 are also suitable for use on the cold side (dry hopping) of the brewing process. They impart a pronounced hop aroma to beer.

酒花颗粒45型在加工过程中去除了部分非必需的植物物质，从而浓缩了苦味成分和精油成分。除降低了运输和储存成本外，还能减少酒损。

Pellets Type 45 are enriched in bitter acids and essential oils by removing some of the non-essential plant material during processing. Aside from lower transportation and storage costs, beer losses can also be reduced.

规格 SPECIFICATIONS

- 简述 Short description: 圆柱形啤酒花颗粒，由特定品种的酒花原花粉碎后，经制粒机加工制成。
cylindrical hop pellets; mechanically produced from milled leaf hops of a certain variety
- α -酸 Alpha acids: 2-25%
- β -酸 Beta acids: 2-24%
- 酒花油 Hop oils: 0.5-7.0ml/100g
- 水分 Moisture content: 6-9%

性能 PACKAGING

外观 Appearance

酒花颗粒45型呈橄榄绿色，颗粒尺寸约为直径6mm×长度10-15mm。
Pellets Type 90 are olive green pellets, approximately 6mm x 10-15mm in size (diameter x length).

风味 Flavor

酒花颗粒45型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。

Pellets Type 45 Pellets produce flavors in beer indistinguishable from those of leaf hops. Pellets Type 45 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 Hopsteiner 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 Pellets Type 45 are 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

酒花颗粒45型的添加量，可根据其 α -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 α -酸利用率，但能增强啤酒花香气与风味。

The quantity of Pellets Type 45 in an addition can be calculated using the alpha acid content of the pellets and an estimated or known utilization. Late kettle additions of Pellets Type 45 (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

酒花颗粒45型可直接投入麦汁煮沸锅或酒花投置器中。由于其良好的自流性，也可实现自动化添加。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。

Pellets Type 45 can be added directly to the wort kettle or hop dosing vessel. Alternatively, owing to their free-flowing nature, additions of Pellets Type 45 can be automated. Dry hopping normally involves the addition of Pellets Type 45 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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