AROMATRIX FLORA PVT. LTD.

Factory: Plot No. 242, HPSIDC Industrial Area, Baddi,
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Tel.: +91-1795-244901; Fax: +91-1795-247300
E-mail: aromatrixflora@hotmail.com

Hop Pellets -Type 45

Type 45 Pellets or Enriched hop pellets are a hop product added to the kettle to provide bitterness and hop character. They can also be used for dry hopping. They provide more homogeneity, better storage stability and reduced storage/transport costs compared to raw hops. They produce a beer flavour which is not distinguishable from that produced from leaf hops. Supported by a long history of safe use in brewing, and in accordance with US FDA regulation 21 CFR 170.30(c) and 170.3(f), hop pellets are generally recognized as safe (GRAS).

Specifications:

Description:	Cylindrical pellets of approx. 6mm (0.24 inch) diameter, milled and compressed whole hops
Consistency:	A solid which normally breaks up into a powder
Colour:	Typically from dark-green to olive-green (depending on variety)
α-acids:	4-16%, depending on variety and crop year. Standardization is possible.
β-acids:	as in raw hops, depending on variety and crop year
Hop oils:	0.4 - 3.5 mL/100 g, depending on variety and crop year. Standardization is possible.
Moisture:	7-12%

Quality:

All Aromatrix Flora products are produced in plants accredited to internationally accepted quality standards.

Office: G-90, NEAR ANSAL PLAZA MALL, PALAM VIHAR, GURGAON-122 017, INDIA
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Product Use:

For efficient utilization of bitterness, the Leaf Hops should be added to the wort at the beginning or up to 15 minutes after the start of the boil. Utilization of α-acids into beer depends on the boiling system and conditions and is normally in the range of 30% - 35%. Added late into the boil, utilization of α-acids diminishes as the utilization of the aroma improves giving a characteristic hop flavour in the beer. The quantity to be added is calculated using the α-acids content of the product and the estimated utilization. For aroma, the quantity to be added should preferably be calculated using the oil content of the product. Pellets can be dosed automatically.

Packaging:

Pellets are packed in laminated foils with an aluminium layer as a barrier against diffusion of oxygen. They are sealed under inert gas and/or vacuum packed. The foil material used meets all food industry packaging regulations. The residual oxygen content in the foil packs is less than 2% by volume. Pack size is available in 10 kg.

Storage and Best-Before Recommendation:

Type 90 Pellets should be stored cool at 0-5° C. Pellets should be used within 3 years after processing. If stored at –20° C pellets should be used within 5 years. Foils once opened should be used within 24 hours to avoid deterioration of bitter acids and essential oils.

Safety:

If dust is generated, it is advisable to use a dust mask. Hop pellets are a combustible material. For further information please see the relevant Aromatrix Flora Material Safety Data Sheet (MSDS) from our web site.

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Analytical Methods:

The determination of α-acids comprises three types of methods, the specific measurement of α-acids by means of HPLC, spectrophotometric or conductometric methods:

- α-acids can be measured by any of the following methods:
  - EBC method 7.5 - (α-acids as lead conductometric value (LCV))
  - ASBC Spectrophotometric method (Hops-6) - (α and β-acids)
  - By HPLC, using the current ICE standard, according to the EBC 7.7 method, or the ASBC method (Hops-14) - (α and β-acids)

- Hop oil concentration can be measured by:
  - EBC 7.10
  - ASBC Hops-13

Technical Support:

We will be pleased to offer help and advice on the use of Hop Pellets in brewing.

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