

Natural Additions Product Range

General:

The Natural Additions range of products from the Barth-Haas Group has been developed to provide an efficient and flexible means of adding hop aroma and flavour to beer.

Natural Additions products are prepared from whole cone hops by specific extraction and distillation methods with the addition of an enhanced compound of natural origin. Natural Additions products are supplied worldwide exclusively by the Barth-Haas Group and our channel partners.

Characteristics:

Natural Additions products are 100% soluble in beer and other beverages and offer an alternative means of adding different types of natural aroma. They can complement an aroma addition of traditional hop products (cones or pellets) with easier handling and reduced beer losses.

These Natural Additions products available are:

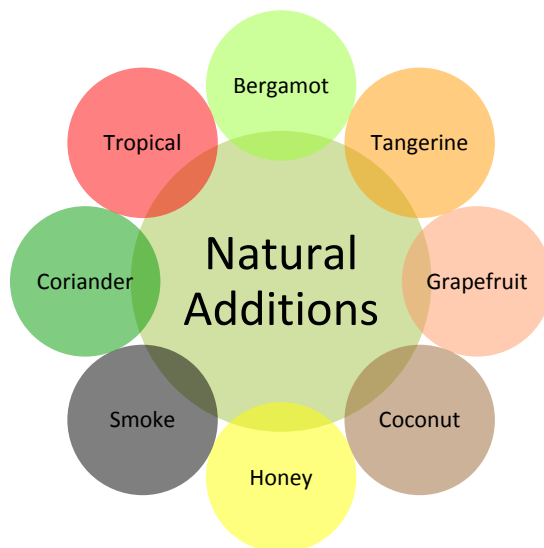


Figure 1: Examples from Natural Additions range

Product specifications:

Description:	water white solution, can be hazy
Specific Gravity (20°C):	0.750 - 1.350

Product Use:

The Natural Additions products are completely soluble in beer and are intended for addition to fined or filtered beers. The required amount of Natural Additions may be metered directly into the beer stream during transfer to bright beer tank or other appropriate vessel. The dose rate of Natural Additions per hectolitre is normally about 10 mL but may vary between 5–40 mL, according to the desired intensity of aroma and beer style.

On a large scale, Natural Additions products are used as a post fermentation addition to filtered beer, where 100% utilisation is feasible. These products may be added without prior dilution to beer either before or after the final filtration, preferably by metered injection into a turbulent beer stream during transfer. If possible, the pump should be set to dose the Natural Additions over approx. 95% of the total transfer time.

Trial Guide:

We recommend benchtop trials to determine which concentration gives the best desired effect. To get a better initial understanding for the effect of individual Natural Additions products and the required dose rate, we recommend dosing directly into a glass of beer. For more accurate results, we suggest following this up with dosing into bottles as explained below. The rate for initial tasting trials should be approximately 10 mL/hL of the Natural Additions as supplied. Natural Additions products can be dosed directly using a micropipette or syringe. For example, a 330 mL bottle, a 33 µL amount of Natural Additions gives a dose rate equivalent to 10 mL/hL. Chill the beer to normal drinking temperature. Open and introduce the required volume of Natural Additions in the headspace of the beer bottle and reclose the bottle. Invert the bottle several times to ensure mixing and chill again for at least two hours before opening and tasting.

Special properties of Natural Additions:

The Natural Additions products have the following properties:

- Natural: 100% derived from hops and another natural source by physical extraction processes.
- Fully soluble: utilisation is 100% because of full solubility in beverages.
- No negative impact on beer quality: does not increase beer haze or reduce beer foam stability.
- Easy handling: provided as a standardised solution for direct dosing.
- Light stability: free of hop (iso-)α-acids; can be used with any packaging type.
- Ideal for brand diversification: differentiate existing products or create new ones.

Packaging:

The standard package size of Natural Additions products is 1 L and 5 L aluminium flasks. Larger package units are available on request.

Storage and shelf life:

Natural Additions products are stable in unopened containers for at least 24 months between 0-20°C.

Safety:

Please refer to our SDS which can be downloaded on our website www.barthhaasgroup.com.

Labelling:

Natural Additions can be labelled in beer with >1.2% abv in Europe according to 1334/2008 as "Natural flavouring". Other possibilities: "Natural flavouring" or "natural hop flavouring with other natural flavourings" or for example "natural hop and honey flavouring"

Technical Support:

We will be pleased to offer help and advice on the use of Natural Additions products and are happy to assist with your product development. For more information on the Natural Additions product range, please contact us at

info@barthhaasgroup.com