

ISOTOTAL®

ISOTOTAL is a CO₂ extract of Magnum hop (Hallertau) recent crop which has been isomerized in "classical" conditions without any catalyst. These isomerisation conditions are as close as possible to those used during a normal brewing process. After isomerisation, the insoluble fraction is carefully discarded. All the hop isomerized bitter fractions and several aromatic compounds are present in this product allowing to get a bitterness which is identical to the one obtained by classical hopping. This product can be used after fermentation just before final filtration. ISOTOTAL is an ideal way to adjust beer bitterness to the desired value at the end of the process without modifying the quality of this bitterness. The benefits of the use of ISOTOTAL are high flexibility in beer bitterness adjusting, very high yields close to 100%, better beer foam and cling, improving of the perception of hop flavours.

AVAILABILITY

ISOTOTAL is standardized to 100 000 EBU; the addition of 1 ml of ISOTOTAL to 1 HI of beer will add 1 EBU.

DILUTION

ISOTOTAL can be used directly or can be diluted (for example 10 times). Soft or deionized water is needed. (Hard water may cause cloudiness). The pH of the soft water is adjusted with potassium hydroxide to reach a pH of 8-8.5 after dilution. The 1:9 dilution is prepared by slowly adding the volume of ISOTOTAL to the stirred soft water (final pH = 8.5 with potassium hydroxide).

ADDITION

The recommended addition point is at any point between the end of fermentation and the final filtration. The recommended procedure, injection of the aqueous solution into the beer stream, avoids precipitation of the hop acids due to pH shock. A practical place for injection could be the prefilter outlet-line or the final filter inlet-line. The rate of addition by the proportioning pump should be direct proportional to the beer flow in the line. A dip tube in the middle of the beer line provides excellent dispersion. Injections of ISOTOTAL should always be made with a positive pressure pumping system without using CO₂ back pressure as it will lower the pH of the injection solution and adversely affect the ISOTOTAL solubility.

USE RATE

Use rates will vary depending on the desired bitterness. As the product is used very late in the process there are no significant losses while in traditional hopping the yield from alpha-acids to bitterness units in final beer turns only around 30%. Contact our technical team for calculation of the specific use rate for your application.

BENEFITS

- High flexibility in beer bitterness adjusting.
- Very high yield close to 100%.
- Better foam and enhanced cling.
- Improving of hop flavours perception.

STORAGE

We recommend storage in full, tightly sealed containers at room temperature 20-25°C.

FOOD GRADE

This product complies with FDA recommended specifications for food additives. Certificates of analysis are provided with each delivery

Our technical advice on the uses of our materials is given without obligation. The buyer is responsible for the application and processing of our products, and he is also liable for observing any third party rights.

ADVANTAGES OF THE USE OF ISOTOTAL:

As partial hopping mean to complement classical hopping

- 1) same cost as classical hopping
- 2) identical bitterness quality to the one obtained by classical hopping
- 3) precise bitterness adjustment to the desired value
- 4) pleasant hop flavour adjustment
- 5) higher flexibility for beer brand differentiation (Brand Final Touch Concept*)

As post fermentation hopping mean without classical hopping

- 1) 2) 3) 4) 5) see above
- 6) faster fermentation rate
- 7) more fermentation cycles with the same yeast
- 8) more fusel alcohols and esters
- 9) recovery of unbitter yeast with higher commercial value

*BRAND FINAL TOUCH CONCEPT

base beer low colour, 7-8 % alcohol, 12-14 EBU

- > water rectification of alcohol content
- > bitterness adjustment with ISOTOTAL
- > colour adjustment with MALTEX HP 20000
- > flavour adjustment
 - > hop flavour with ISOTOTAL
 - > white beer flavour with WB-MIX
 - > others

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