

Wet Hopping

A new product for enhancing the hop flavor

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for
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Typical Hop products

Fresh Green Hop Cones

- Special in taste, due to the higher content in volatile compounds, which disappear due drying
- Only available for a short time, difficult to transport due to quick spoilage and microbiological instability
- Handling during brewing process is not really easy

Dried Hop Cones

- Reduced taste, due drying
- Big Volume, has to be stored under cooled conditions
- Handling during brewing process is not really easy

Hop Pellets

- Limited in taste due to drying process
- Easy in transport and storage (Should be stored under cooled conditions)
- Good microbiological stability
- Easy to handle

Extract

- Small Volume, easy in transport and storage, easy to handle
- Reduced aroma profile



Wet Hopping - What does that mean?

Wet hopping is adding fresh hops to the fermenter to improve flavor and aroma of the finished beer. In general it is the same as dry hopping, but the product is different. Biggest advantage of wet hopping is the “special” aroma, the freshness gives a more vibrant aroma and cleaner flavour.

But there are also problems:

- Fresh hop is only available for a short time
- Fresh hop is not available everywhere! Due to the short shelf life, it doesn't make sense to transport fresh hops over long distances, so most of the breweries, which offers wet hopped beers are situated in hop growing areas
- The microbiological properties of fresh hops are not always clear, so it is possible, to contaminate the green beer with microbes from the hops.



But there is a solution – Wet Hops from Hopfen-Kontor

Hopfen-Kontor developed and patented worldwide a process to preserve fresh hops without any chemical preservatives, just by heat, without losing the important volatile aromas of the hops.

Advantages:

- Preserving all the volatile aroma compounds which are in fresh hops
- In dependence where you add wet hops, you can achieve different flavour experiences
- For getting the same IBU you need nearly the same amount of product like with pellets
- Easy soluble and more soft resins
- Microbiological safe, no beer spoilage bacteria
- Easy to handle
- Easy to store



Wet Hops – What is it exactly?

Hopfen-Kontor is the owner of a hop farm, where all products are made – starting after the harvest of their own hops, treat them first by crushing it, then packaging under nitrogen atmosphere, then heating in a water bath for inactivating enzymes and microbes.

Wet Hops are packed in cans or aluminium compound foils so there is no influence of light or oxygen to the product and the shelf life is the same like hop pellets.

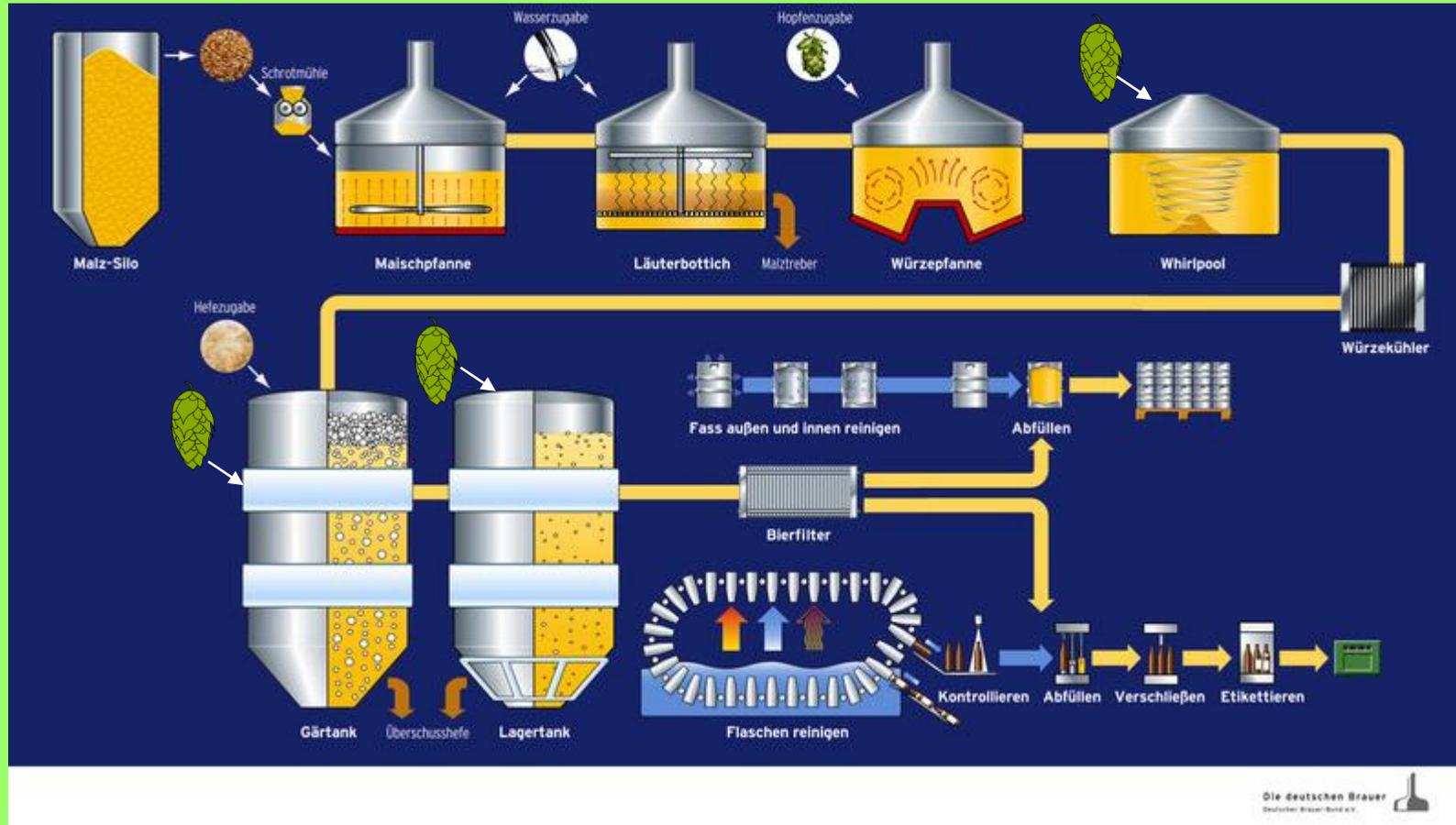
Wet hops are easy to handle, to transport and to store!



Wet hop treatment of a uncrushed hop cone (left) and a normally dried hop cone (right)



Wet Hops – Where to use it.....



.....and which results do I get?

Addition in the wort kettle:

- It will deliver just bitterness and nearly no intensive flavour when adding it at the beginning of the wort boiling process. As later you add it, as more flavours you will get. Just like you do it at the moment with the pellets. But with Wet Hops you have slight aroma of fresh green hops, although these aroma compounds are the most volatile ones and will disappear at first when boiling.

Addition in the Whirlpool:

- Not so much bittering, but very intensive in flavour, like when you are hopping with pellets, but an already strong taste of fresh green hops

Addition in fermentation or Lagering tank:

- The full aroma of fresh green hops and additionally more bitterness than with pellets. The hop oils are also all preserved therefore you will have the full range of the hops when you add it in this stage of production.



A little bit of Analytics!

Content of different Acids in Wet Hops as well as in

	Wet Hops			Dried Hops
	Alpha-Acid	Iso-Alpha-Acid	Beta-Acid	Alpha-Acid
Perle	5,00	1,82	4,55	7,70
Select	3,64	1,36	4,55	5,42
Herkules	13,18	3,64	5,00	16,04
Polaris	20,00	3,64	5,00	19,74
Mandarina	7,27	1,36	6,36	8,03
Cascade	4,55	1,36	7,27	5,10
Melon	4,55	1,36	8,64	5,97
Blanc	7,73	2,73	6,82	
Calista	3,18	0,91	8,64	
Ariana	4,55	5,00	5,00	
	(Calculated to dry matter)			



A short summary

- **Wet Hops show the same acid amount than dried hops, but Wet hops are higher in flavour due to the volatile compounds**
- **Wet Hops offer a wide range of application point and with that a wide range of different tastes**
- **Wet Hops are easy to transport, store and to handle**
- **Wet Hops are safe concerning microbiology**

Try it by your own and ask for a sample!

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