

NEWSLETTER 01/2013

TECHNICAL SUPPORT

Dry Hopping – Influence of hop product and contact time

We carried out tests in our pilot plant to check the influence of hop product and contact time for dry hopping. The beer we used was a moderate pale ale with 5,6 % alcohol and with a bitterness of 32 IBU. For dry hopping we added the variety Hallertau Tradition in the form of leaf hops and pellets from the same processing order (see table 1). The beer was stored at 4°C for 18 days. Sampling was done prior to dry hopping and then after 4 and 8 hours and then again after 1, 5, 7, 11, 13 and 18 days according to the numbers 1 to 10 in both diagrams.

Table 1: Analytical data of the hops used for dry hopping

	Leaf hops	Pellets
Alpha HPLC (EBC 7.7)	5,4 %	5,7 %
Total oil	0,5 ml/100g	0,6 ml/100g
Linalool (% of total oil)	1,1 %	1,0 %

The alpha acids increase quickly, by about 2 mg/l within the first day. They then slow down with only a further increase of 1 to 2 mg/l to the end of the trial. There is no significant difference between leaf hops and pellets (figure 1).

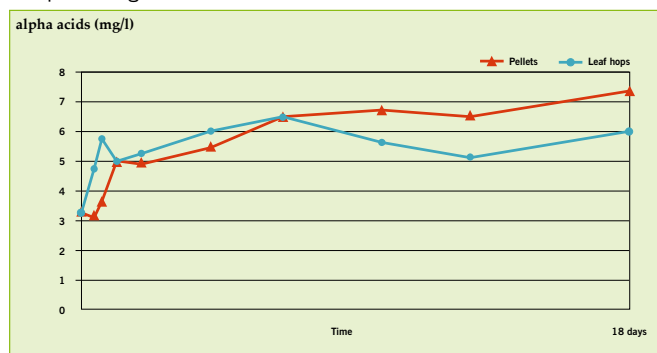


Figure 1: Increase of alpha in dry hopped beer

Figure 2 shows that linalool behaves completely differently in leaf hops and pellets. When pellets are used a much higher concentration is achieved compared to cone hops. The dissolution of the hop oil, especially when pellets are used, is relatively fast. After the first day almost 50 % of the final quantity has already dissolved. In the case of cone hops 70 % of the final linalool concentration is reached, which is, however, only half of the level in the pellet beer. We could observe that for both products the dissolution process is mainly completed within one week.

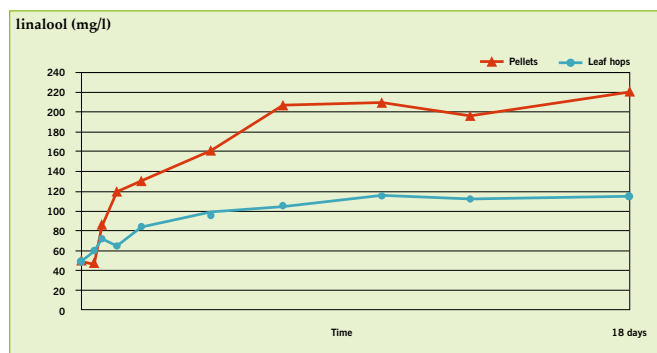


Figure 2: Increase of linalool in dry hopped beer

In case of further questions our technical support team will be glad to assist you!

Simon H. Steiner, Hopfen, GmbH

Newsletter, January 2013



HOPSTEINER FORUM

Notice the dates of the upcoming **"Hopsteiner FORUM"** in 2013:

- 2nd Hopsteiner Forum: May, 8th
- 3rd Hopsteiner Forum: June, 19th
- 4th Hopsteiner Forum: July, 3rd
- 5th Hopsteiner Forum: September, 4th
- 6th Hopsteiner Forum: November, 15th

Topics are available on our Homepage <http://www.hopsteiner.de/forum.html>

We are looking forward to your registration. info@hopsteiner.de

Check out our new service: the Hopsteiner calendar gives regular updates of events dealing with issues relevant to the brewing scene. So you are always up to scratch.

+++Hopsteiner calender+++

