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HOP SCIENCE

KNOWLEDGE FOR YOUR SUCCESS

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BARTH-HAAS GROUP
FOR YOUR SUCCESS

HUMULINONES –YES YOU CAN!

20 years ago, the International Hop Standards Committee (IHSC) was founded to take care of the production, release and maintenance of HPLC calibration standards for use in the quantitative determination of various bitter components in hops, hop products and in beer. The new standard for Humulinones was prepared with the help of John Paul Maye, Bob Smith and Jeremy Leker. The validation procedure included a collaborative HPLC study in which the prospective new standard was crosschecked against a high purity, DCHA-humulinoses standard. So go ahead and find your humulinones.¹

FILTRATION BEHAVIOUR OF HOP PARTICLES FOR EFFICIENT DRY HOPPING

Most breweries have gained a lot of experience in dry hopping, knowing which set up for dry hopping leads to a certain dry hop flavour, mostly using a solid-liquid separation technique. These German Researchers look into the properties of hop filter cakes and the relevant operational parameters for the separation of hop particles from beer. With the aim that these findings may directly help breweries reduce the duration of dry hopping while increasing the product yield. The considerable swelling volume of hop pellets is favourable for aroma extraction due to the surface area increase of the primary particles. Swelling of the pellets at higher temperatures accelerates this step as well as disintegration. However, performing filtration at higher temperatures can reduce the permeability remarkably, thus justifying cold extraction. Given the compressibility of the hop filter cake, low operating pressures are also beneficial. If yeast cells are present, the pressure drop rises, so the operational parameters might need to be adjusted. Just as in real life, good dry hopping requires a lot of compromises...²

ALL ABOUT ALPHA ACID ISOMERIZATION

Dedicated to Dr. Koen Goiris, who passed away in 2017, this Belgium research group published an extensive overview about everything there is to know about alpha acid and its isomerization. From the biosynthesis of bitter acids in the hop plant, the solubility properties of alpha acids in wort and beer, to the reaction mechanisms and kinetics of converting alpha acids into iso alpha acids — all relevant research and publications are summarized here. And as the authors say and I agree “this review paper will help scientists to find their way and discover new things in the fascinating field of hop research.”³

REFERENCES:

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2. P. M. Bandelt Riess, Characterizing the Filtration Behavior of Hop Particles for Efficient Dry Hopping Methods. Brewing Science, 71 (September/October 2018), pp. 74-80 https://www.brewingscience.de/index.php?tpl=table_of_contents&year=2018&edition=0009%252F0010&article=91984
3. B. Jaskula-Goiris, L. De Cooman and K. Goiris, Humulus Lupulus: Hop Alpha-acids Isomerization A Review, Brewing Science, 2018 https://www.brewingscience.de/index.php?tpl=table_of_contents&year=2018&edition=0011%252F0012&article=92219

Barth Haas Grants

BARTH-HAAS GRANT
HOPS ARE OUR WORLD

If you have a research idea about hops, let us know. Application for the Barth Haas Grants 2019 is now open. One thing is new this year. Instead of funding several research ideas with smaller grants, we will be funding two research ideas with larger grants. Find out more here:

<https://www.barthhaasgroup.com/en/why-barth-haas#barth-haas-grant>

Hops Academy:

BARTH-HAAS HOPS ACADEMY

Hop Flavourist Course- Level 1 – The Connoisseur

Interested in diving into hop aroma and training your sensory memory? This two-day course on March 18th and 19th in Nuremberg on our Barth Haas Campus, will give you new insights into the world of hop aroma with extensive sensory training. Find out more here:

https://www.barthhaasgroup.com/images/pdfs/date_infos_hops_academy/hop-f_avouristimb-maerz-2019.pdf