



Jägermeister – Quality You Can Taste

Dr Nils Bertram, General Manager of Anton Paar OptoTec GmbH

For more than 75 years the long-established company Mast-Jägermeister has continuously sought to ensure the highest level of quality and outstanding taste of its smashingly successful herbal liquor. A secret recipe, consistent brand development, innovative marketing and the employment of high-precision analysis methods are the main reasons why Jägermeister has become the world's major liquor brand. In the company's main production site in Wolfenbüttel, Germany, an Abbemat refractometer from Anton Paar is employed for quality control.

"Only very few people know that Wolfenbüttel is the only place in the world where the base material, the essence of the Jägermeister taste, is produced. 3.8 million litres of this precious material are maturing in our oak barrels," explains Dr Berndt Finke, manager of the raw materials and manufacturing department. The main production site in Wolfenbüttel in Lower Saxony, Germany, is the central hub of the company Mast-Jägermeister. The linkage of tradition and innovation is reflected in the architecture of the main office building in Wolfenbüttel, built in 2006, just as in the corporate design of the unique liquor classic. The green glass of the interior light panels, the solid oak floorboards and the general dominance of the colour green stand out as much as the distinctive green bottle, the label with the Jägermeister script and the Hubertus stag head.

Curt Mast, the inventor of the unique Jägermeister recipe in 1934, probably couldn't have anticipated that his 70-proof herbal liquor would be this successful. With 89.2 million 0.7-litre bottles sold in 2012, into more than 90 countries, Jägermeister ranks at 7th place on the Impact International list of the Top 100 premium spirits. With foreign proceeds of about 80 %, Jägermeister is Germany's most successful export spirit.

A world of taste

The production of Jägermeister is based on 56 botanicals, such as exotic herbs, rare spices, blossoms, roots and fruits gathered from all parts of the world. Dr Finke gives some examples: "We use cardamom from Guatemala, star anise from Vietnam, Ceylon cinnamon from Sri Lanka, saffron from Spain or bitter orange peel from Paraguay – we refine raw materials from all over the world and distribute the final product back into the world." The raw materials are subjected to stringent quality control in Wolfenbüttel, after which they are manually weighed in accordance with the original recipe, ground, mixed and finally macerated in ethanol, in stainless steel containers. The botanicals also undergo a gentle cold extraction process, in which cold solvents (alcohol and water) are employed to extract the according soluble components. After five to six weeks, the maceration is completed and the extracts are mixed to form the base material. This mixture is stored for another nine to twelve months in oak barrels, some of them old enough to be called ancient, holding 2000 litres up to 24,000 litres each. "The wooden barrels are not only handcrafted masterpieces, they are also a real asset of ours. Every sold bottle of Jägermeister originates here, even though you wouldn't expect the base material of a herbal liquor to have been stored in barrels," Dr Finke explains.



Wolfenbüttel is the only location for base material production and storage in barrels

Once the base material is released for production, its taste harmonised by the storage in the oak barrels, the final product is mixed in a dosing system. In close keeping with the recipe, liquid sugar, caramel, neutral alcohol and purified water are added and the herbal liquor is bottled directly after filtration. "The unique taste of Jägermeister is based on the excellent harmony of the four most important taste components star anise, citrus, bitter herbs and ginger. All other components play a more supporting role." The entire production process is constantly monitored by the in-house laboratory and tasting committee, as this is the only way to ensure the product's customary high quality. A batch of Jägermeister passes through a total of 383 quality controls. For a final control and product release, the product is tested using the DSA density and sound velocity meter from the company Anton Paar.



Dr Berndt Finke, manager of the raw materials and manufacturing department



The main office and production building in Wolfenbüttel

Quality sets a premium spirit apart

Dr Finke is convinced: "Optimising the quality of your raw materials is your best shot at turning out an excellent product."

Jägermeister's success not only owes to an innovative marketing strategy aimed at providing customers with a unique (taste) experience and a brand to identify with, but is certainly also based on the use of modern analytical technology. Apart from dedicated analysis via GC, MS and HPLC to control the botanic components, a high-precision Abbemat refractometer is used for quality control of incoming liquid sugar and for concentration measurement of RTDs (Ready-To-Drinks).



A selection of Jägermeister ingredients: exotic herbs, rare spices, blossoms, roots and fruits.

The refractive index is measured to calculate the Brix value, which in turn helps determine if the incoming liquid sugar meets the Jägermeister product specifications. "We require large volumes of sugar; this is a valuable component for a liquor. If the Brix values of the delivered product do not match our specified Brix values, this has an immediate effect due to our huge production volumes. There's real money on the line here," Dr Finke says. "As for the RTDs, we only measure the concentration of the filled product. If a component is missing, the refractive index would immediately deviate and we would know that something went wrong."

Dr Finke speaks from experience: "Abbemat 550 is a fast and reliable analytical instrument that is extremely helpful in this regard. It delivers highly accurate and stable results." Mast-Jägermeister also decided to go with an Anton Paar refractometer because of its robust and user-friendly design and because it is a well-established solution in the sugar industry. The Wolfenbüttel site defines itself as a competence centre where quality and process reliability are of the highest priority: "Our aim is to constantly advance our quality by improving the raw material quality, even if the consumer does not necessarily notice this at first sip."

Abbemat 550: Ready for any job today and fit for tomorrow

The Abbemat refractometers of the Performance Plus line are designed for research and development as well as demanding quality control applications. They are easily expanded by a wide range of options via Plug and Play, so Abbemat 550 is readily adapted to meet all future needs.

To enable frequent method changes, the menu is intuitive and simply navigated via touchscreen. Abbemat 550 measures refractive indexes with an accuracy of ± 0.00002 nD.



Abbemat 550 refractometer for concentration measurement of liquid sugar and quality control of raw materials and RTDs