

PRESS RELEASE

NBB[®]-PCR Broth

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Optimised culture media for PCR detection: NBB[®]-PCR Broth

Fast approval of beer samples for breweries is extremely important in beer production. Molecular-biological detection using PCR (polymerase chain reaction) has today developed into the fastest and most reliable method for detecting and identifying beverage spoiling microorganisms. For this purpose, Doehler offers its ready-to-use NBB[®]-PCR Broth, which was developed especially for this detection method. The optimised composition of the raw materials in the medium promotes fast growth in the beer spoiling microorganisms and fast detection.. NBB[®]-PCR Broth offers an advantage that no other product can: a special production process makes NBB[®]-PCR Broth free from DNA spoiling microorganisms and PCR inhibitors of any kind. As a result, false positive and false negative results, both of which can have expensive consequences for breweries, are ruled out. The medium can be combined with all PCR and real-time PCR detection systems available on the market, making it suitable for universal use. It allows the analysis of all samples taken in breweries, from yeast to yeast-turbid beer.

The NBB[®]-PCR Broth was developed for fast and reliable detection of beverage spoiling microorganisms such as *Lactobacillus*, *Pediococcus*, *Pectinatus* and *Megasphaera*, and for all samples arising in breweries. Some culture media consist of raw materials that are already contaminated with DNA from other microorganisms. "This would lead to a false positive PCR result, forcing the brewery to spend time and money retesting perfectly good beer or, in the worst case scenario, throwing it away. We can rule this out 100% with the new NBB[®]-PCR Broth," says Dr Sabine Müller, Head of Product Management & Sales, DMD Culture Media at Doehler. Thanks to a production process specially tailored to this aspect, Doehler is the only producer who can guarantee that NBB[®]-PCR Broth contains no DNA from beverage spoiling microorganisms. The medium also contains no inhibitors at all that influence the PCR or real-time PCR. This enables enrichment and detection within just 48 to 72 hours, even of slow-growing microorganisms like *Lactobacillus lindneri* or *Pediococcus damnosus*, for example.

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NBB[®]-PCR Broth was validated in an extensive study by Dr.-Ing. Mathias Hutzler from the Microbiology and Yeast Center department of the Research Center Weihenstephan for Brewing and Food Quality at Technische Universität München. The investigation included comparing the culture medium NBB[®]-PCR with other culture media and its use in combination with various commercially-available PCR detection systems and a range of sample matrices. Comprehensive publication of the results is planned.

Optimum selectivity – For universal use!

The balanced ratio of growth substances and inhibitors in NBB[®]-PCR ensures optimum selectivity, allowing strictly anaerobic beer spoiling microorganisms such as *Pectinatus* und *Megasphaera* to be detected in just 48 to 72 hours. Doehler ensures that NBB[®]-PCR Broth offers consistent quality at the highest level using a comprehensive quality management system and internal and external examinations, from the raw material to the end product.

The medium can be used universally for the enrichment of and subsequent PCR or real-time PCR detection in yeast samples, yeast-turbid beers, filtered beers, water and rinsing water, samples from airborne bacteria collection and swab samples for hygiene monitoring. NBB[®]-PCR Broth is suitable as pre-enrichment for all PCR or real-time PCR systems, regardless of the detection system used. It is ready to use right away, thus eliminating the need for any preparation. There is no need for the usual cumbersome and time-consuming weighing, dissolving, pH adjustment and autoclaving – another feature that makes NBB[®]-PCR Broth stand out from other media.

Even simpler and more cost effective results!

NBB[®]-PCR Broth is perfect for combining with the new DMD[®] Screen & Ident Kits from Doehler. The new kits offer fast and absolutely reliable results and are so easy to use that no expert knowledge of microbiology is needed. Once the beer samples have been enriched with NBB[®]-PCR Broth, the DMD[®] Screen & Ident Kits can be used directly to detect beer

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spoiling microorganisms. The kits combine optimised PCR detection with detection that uses a test strip and is easy to analyse visually.

About Doehler:

Doehler (www.doehler.com) is a global producer, marketer and provider of technology-based natural ingredients, ingredient systems and integrated solutions for the food and beverage industry. Doehler's integrated approach and the broad product portfolio are the optimal basis for innovative and safe food & beverage applications. The product portfolio of natural ingredients ranges from flavours, colours, health & nutrition ingredients, cereal ingredients, dairy ingredients, speciality ingredients, dry ingredients and fruit & vegetable ingredients to ingredient systems.

Headquartered in Darmstadt, Germany, Doehler is active in over 130 countries and has 30 production sites, as well as sales offices and application centres on every continent. More than 5,000 dedicated employees provide our customers with fully integrated food & beverage solutions from concept to realisation.

"WE BRING IDEAS TO LIFE." briefly describes Doehler's holistic, strategic and entrepreneurial approach to innovation. This comprises market intelligence, trend monitoring, the development of innovative products and product applications, advice on food safety and microbiology, food law as well as Sensory & Consumer Science.

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