

NBB[®] —

*Fast and reliable
detection of beer spoiling
microorganisms*



NBB[®] for the reliable
detection of Lactobacilli,
Pectinatus and Megasphera
in all samples arising in
breweries.

NBB® – Ready-to-use culture media for fast and reliable detection of beer spoiling microorganisms

Under its NBB® brand, Döhler offers innovative culture media for the fast and reliable detection of beer spoiling microorganisms, such as Lactobacilli, Pectinatus and Megasphaera, in all samples collected in breweries.

NBB® culture media are suitable for detection in:

- yeast samples
- unfiltered beers containing yeast
- filtered beers
- water and rinsing water
- airborne microorganism sampling
- swab samples for hygiene monitoring

NBB® – The system

The need for reliable and easy-to-use cultural detection methods drives the development of the NBB® culture media, which has been ongoing for 30 years. Clear and fast detection, a reliable result – even for a very low level of contamination in a large sample volume – and easy handling for efficient laboratory work are the key driving forces behind these developments. That is why renowned customers in the beverage industry around the world place their trust in this high standard, extensive knowledge and expertise. Publications containing independent investigations and comparisons reinforce the position as the market leader.



NBB® – Benefits for users

With their special growth promotion components and nutrients optimized for beer spoiling microorganisms, NBB® culture media offer a wide range of benefits. Döhler exclusively uses raw materials of non-animal origin, eliminating the risk of animal materials entering the beverage quality control process. Comprehensive functional tests examine the quality of the NBB culture media by means of a special panel of test strains, which were also obtained from breweries.

• NBB® – Flexible formats for immediate use

As ready-to-use culture media, all NBB® products can be used immediately; there is no need for complex weighing of individual components, handling poisonous substances, preparing solutions or autoclaving. There is a suitable, optimised NBB® culture medium for every sample to be analysed in the brewing process (see table of NBB-Methods).

• NBB® – Fast results

Specifically optimised to detect beer spoiling microorganisms, the nutrient combination of the NBB® culture media allows microorganisms to grow very quickly. Just one day's incubation may be sufficient in severe contaminations. Low bacterial count or slow-growing bacteria, such as *Lactobacillus lindneri* or bacteria in a poor physiological state, can be detected after a maximum incubation of 5 to 7 days.

• NBB® – Easy screening

The colour change from red to yellow of the indicator added to almost all NBB® culture media allows beer spoiling microorganisms to be inspected visually in a simple and reliable manner. This makes both quantitative and qualitative analysis easier.

• NBB® – Enhanced selectivity

Using a sophisticated inhibitor system, the harmless accompanying flora and yeast cultures necessary for the brewing process are inhibited. Only beer spoiling bacteria are detected, thus preventing false negative results.

NBB® – Products

NBB®-A [pH 5.8] Agar

A solid agar medium used to pour agar plates after simple melting.

- Reduced preparation time through direct melting in the bottle
- Used for membrane filtration, swab and pour plate procedures as well as for airborne bacteria sampling
- Simple, visual screening through indicator change from red to yellow



NBB®-C [pH 6.4] Concentrated broth

Liquid culture medium to adjust the required selectivity through the addition of yeast-cloudy beer samples.

- Simple addition of beer sample to be analysed
- Microscopic final inspection, no indicator verification



NBB®-B [pH 5.8] Broth

Liquid culture medium with indicator for detection in yeast samples or as enrichment medium.

- Direct use of liquid medium
- Simple, visual screening through indicator change from red to yellow



NBB®-B-AM [pH 5.8] Broth

Liquid culture medium for detection of indicator microorganisms from biofilms.

- Simple hygiene monitoring for weak point analyses and trending
- Sampling with swabs at critical points throughout the brewing process
- Direct use of liquid medium
- Simple, visual screening through indicator change from red to yellow



NBB®-P, Powder

Powder for the in-house production of NBB®-A and NBB®-B, using beer from own production.

NBB® – Methods

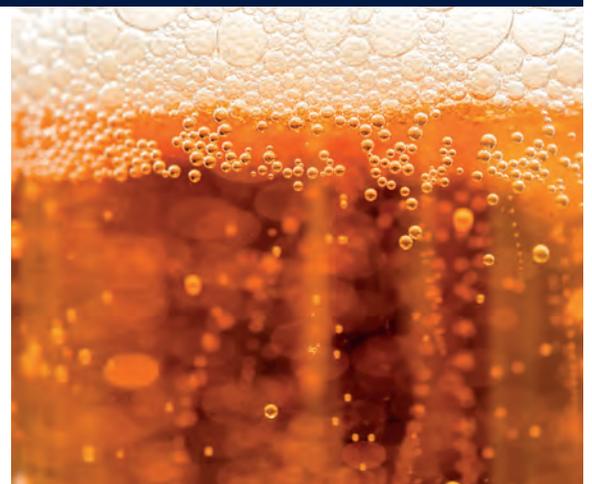
Sample type	Product	Format	Method
Yeast samples Selected, harvested and brewing yeast Yeast sediments	NBB®-B	Broth in bottle	0.5-1 ml of sample + 10-20 ml of NBB®-B
		Broth in tubes	
Yeast-cloudy beers Green beer Unfiltrate Wheat beer	NBB®-C	Concentrated broth	95% of sample + 5% of NBB®-C
Clear beers Membrane filtered samples	NBB®-A	Agar	Filtration of 50-200 ml of sample
Water, rinsing water Membrane filtered samples	NBB®-A	Agar	Filtration of 50-200 ml of sample
Environmental air Sampling of airborne microorganism on agar plates	NBB®-A	Agar	Direct sampling
Surfaces in filling plants Hygiene monitoring using swabs	NBB®-B-AM	Broth	1 swab in 10 ml of NBB®-B-AM
	NBB®-P	Powder	For the in-house production of NBB®-A
Laboratory accessories	Smear swabs, without tube		

As a specialist for innovative microbiological culture media in the beverage industry, Döhler also offers a range of other simple, reliable and fast solutions.

Are you interested in NBB® or other culture media? Then contact our sales representative or send us an email: dmd@doehler.com



	Item no.	Packaging	Incubation T [°C]	t [d]	Condition	Analysis
	2.04710.782	9 x 250 ml (glass bottle)	28°C	3-5	aerobic	qualitative
	2.04723.646	20 x 10 ml (tube)				
	2.04711.782	9 x 250 ml (glass bottle)	28°C	7-12	anaerobic	qualitative
	2.04709.782	9 x 250 ml (glass bottle)	28°C	5-7	anaerobic	quantitative
	2.04709.782	9 x 250 ml (glass bottle)	28°C	5-7	anaerobic	quantitative
	2.04709.782	9 x 250 ml (glass bottle)	28°C	5-7	anaerobic	quantitative
	2.04706.782	9 x 250 ml (glass bottle)	28°C	3	aerobic	qualitative
and NBB®-B, using beer from own production.	2.04716.462	300 g (bag)				
	2.04725.444	100 pc. (bag)				



About Döhler

Döhler (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. Döhler's integrated approach and the broad product portfolio are the optimal basis for innovative and safe food & beverage applications. The product portfolio ranges from flavours, colours, health & nutrition ingredients, cereal ingredients, dairy ingredients, speciality ingredients, fruit & vegetable ingredients to ingredient systems.

Headquartered in Darmstadt, Germany, Döhler is active in over 130 countries and has 26 production sites, as well as sales offices and application centres on every continent. More than 4,000 dedicated employees provide our customers with fully integrated food & beverage solutions from concept to realisation.

"WE BRING IDEAS TO LIFE." briefly describes Döhler'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.



Enjoy Multi-Sensory Experiences

see
smell
taste
feel



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