

DMD® Microbial Detection Solutions for Beverage Laboratories

Interactive product catalogue



WE BRING
IDEAS TO LIFE. | NATURAL INGREDIENTS
INGREDIENT SYSTEMS
INTEGRATED SOLUTIONS

DMD® Microbial Detection Solutions

Dedicated culture media solutions for the laboratory in the beverage industry



What is behind DMD®?

Under the Döhler Microsafety Design® (DMD®) brand, Döhler offers mainly ready-to-use media for the cultural detection of microorganisms in many applications for the beverage industry.

As a supplier of natural ingredients, Döhler represents a unique competence for the F&B industry with DMD® and many other services and solutions.

Our Portfolio

The spectrum comprises culture media, tested referring to the EN ISO 11133 standard, for analyzing water, non-alcoholic beverages, beer mixes and alcoholic beverages such as beer and wine, as well as culture media for the validation of production and filling lines or for weak point analysis and graduated control of hygiene monitoring purposes.

Our Mission

Our mission is to constantly improve and expand our portfolio from the user's perspective. This process is pushed forward together with internationally renowned universities, institutes and laboratories.

Select

Test sample

what would you like to analyze



Select

Microorganism

which target you would like to detect



Select

Product List

which medium you would like to use



For more detailed information please visit our website [doehler.com](https://www.doehler.com)

| DMD® Product search by sample type



Water

- Well water
- Mineral- and table water
- Rinse water
- Process water

Non-Alcoholics

- Still fruit drinks
- Carbonated soft drinks
- Energy & Sport drinks
- Tea Drinks
- Kombucha
- Mixed Drinks

Raw material

- Fruit bases
- Emulsions
- Sugar syrup

Juice & Nectar

- Fruit juices
- Vegetable Juice
- Nectars

Raw material

- Fruit concentrates
- Puree
- Sugar syrup

Beer

- Culture yeast
- Unfiltered beer
- Filtered (filterable) beer
- Alc.free/ light beer
- Beer specialities

Other Alcoholic Beverages

- Radler (Shandy)
- Hard Seltzer
- Alc pops
- Wine

Special Application

Hygiene monitoring

- Early time detection of biofilm

Filling Line Validation

- Media fill simulation



| DMD® Product search by target microorganisms



Water germs

- E.coli & Coliforms
- Total viable count (TVC)

Beverage spoiling MO's

- Yeast
- Lactic acid bacteria
- Acetic acid bacteria
- Molds

Alicyclobacillus spp.

- Alicyclobacilli
- Guaiacol forming Alicyclobacillus

TVC unspecific

- aerobic mesophilic germs

Beer spoiling bacteria

- Lactobacilli (brevis, backi, lindneri, acetotolerans, etc.)
- Megasphaera
- Pectinatus
- Pediococci, etc.

Yeast in breweries

- Culture Yeast
- Saccaromyces Wild Yeast
- Saccharomyces cerevisiae v. diastaticus
- Non-Saccharomyces Wild Yeast

Biofilm indicator MOs

- Ubiquitous
- Acetic acid bacteria
- Slime forming MO's



Water

Our reference media range according to international water regulation



Total Viable Count (TVC)



Nutrient Agar (DEV)



Plate Count Agar

The determination of the **total plate count (TVC)** in water is one of the most important water analyses worldwide and is described in various national and international regulations.

The **Nutrient Agar** according to **DEV** is a ready-to-use agar medium for total bacterial count, isolation and cultivation of bacteria in water and food. It complies with the requirements of § 64 LFGB, DEV - Deutsches Einheitsverfahren and DIN 38411.

Plate Count Agar, also known as Bacteria Count Agar or Caseine-Peptone Dextrose Yeast Agar complies with the requirements of EN ISO 4833 and ISO 17410.

E.coli and Coliforms



CCA



LMC (DEV)

Escherichia coli and other **coliform bacteria** are indicator organisms for water quality and a hygiene indicator in food production.

LMC is a single test and unique in the world, because water sampling and incubating is done directly and conveniently with the original **LMC** bottle. This saves time and additional laboratory material.

With the development of **CCA (Chromogenic Coliform Agar)**, color differentiation between E.coli and coliforms in one sample is now possible at the same time. Time-consuming differentiation methods are no longer necessary.



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation

Soft Drink, Mix Beverages and Raw Material

Innovative and long-established media – look for the right one!



Yeast, Molds & Bacteria



OFS Agar



SSL Broth



**TransFast®
Gel**



**TransFast®
Broth**



Wort Agar

Yeasts, above all fermentable yeasts, molds, lactic and acetic acid bacteria, are among the most frequently occurring harmful microorganisms in non-alcoholic beverages such as soft drinks, beverages containing fruit juice, tea beverages, etc., but also in acidic mixed beverages with beer, wine or milk.

Our culture media solutions are ready-to-use agars like **OFS** for the quantitative detection of mesophilic and acidophilic microorganisms - including hard-to-culture MO's like HRM - in beverages (pH < 4.3) or rinse water.

SSL - the original - is used as a liquid pre-enrichment of large sample quantities or samples that are not membrane-filterable in order to

detect even trace contaminations and higher safety. Also membrane filters can be incubated rolled up in the broth.

The combination of liquid pre-enrichment **SSL** with subsequent plate pouring on **OFS Agar** is one of the most reliable methods with the highest degree of safety in the analysis of microbiologically sensitive beverages and raw materials (osmophilic yeasts, etc.).

TransFast® is an all-in-one detection system consisting of culture media, sterile sample containers and the Incubation Lightbox, a backlit incubator with a transparent front. Most easiest sample preparation is combined with fast evaluation within seconds in the incubator itself by simply illuminating the sample – globally unique!



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation

Juices & Nectars and Raw Material

Worldwide unique combination of ready-to-use media and bio-chemical test kit!



Alicyclobacilli, guaiacol forming



BAT-Agar



BAT-Broth



**Guaiacol
Detection Kit**



Alicyclobacilli are aerobic, acidophilic and thermophilic bacteria that can grow in highly acidic beverages such as fruit juices, but also in their raw materials like fruit juice concentrates or sugar syrups. Due to their ability to form spores, they can even survive pasteurization steps and grow out vegetative again under optimal conditions.

According to the current state of scientific knowledge, however, only 3 of about 40 alicyclobacilli known so far have the potential to form the beverage-spoiling off-flavor guaiacol (strong chemical odor).

In the two-step method, the first step is to culturally enrich and isolate the potential contamination with **BAT Broth** and **BAT Agar**. In the second step, the colonies formed by Alicyclobacilli is analyzed for its ability to form guaiacol using the biochemical **Guaiacol Detection Kit**.

The **BAT** culture media and the **Guaiacol Detection Kit** are described in IFU (International Fruit and Vegetable Juice Association) Method No.12 "Method on the Detection and Enumeration of Spore-forming Thermo-Acidophilic Spoilage bacteria".



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation

Beer

Trust in our ultimate solutions for all samples in the brewery!



Beer spoiling bacteria



NBB®-B
for yeast



NBB®-C
for unfiltered beer



NBB®-A
for filtered beer



NBB®-PCR
for PCR application



BQC Kit
For micro brewer lab



LMDA | HLP



Wort Agar



DSDM | LCSM | LWYM

Beer spoilage microorganisms, beside wild yeast, are mainly facultative or obligate anaerobic lactic acid bacteria with a specific alcohol and hop tolerance, e.g. *Lacto-bacillus brevis*, *L. lindneri* or *Pediococci*, etc.. They can already be present in raw materials such as water or pitching yeast and in the production process from brewhouse to bottling, from unfiltered to bottled beer. However, a much higher risk of contamination is found in bottling, when biofilms can become established as a source of secondary contamination.

The **NBB®** range includes ready-to-use media – from broth to agar - for the detection of trace contamination in all samples along the entire brewing process. Inventor Prof. Dr. Werner Back already placed the highest priority on safety, speed and selectivity. Through the discovery of special growth substances, even very slow-growing germs are reliably detected in just a short time.

In order to increase safety non-relevant microorganisms get inhibited. Breweries rely in **NBB®** around the globe.

The **BQC** (Brewers Qcheck Kit) contains only easy-to-use single tests, the interpretation is simple even for non-trained laboratory technicians

“Keep your yeast fit and pure”. Undesired contamination with wild yeast can be detected with **Siebel’s** media range. For years, **Siebel Institute of Technology US** has entrusted us with the production of their high-quality products.

Our latest in-house development in yeast analysis is **DSDM™**, a detection medium for *Saccharomyces cerevisiae var. diastaticus* – selective and fast!



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation

Other alcoholic beverages

Hard Seltzer or beer-mix beverages – look for the most selective solution!



Spoiling Lactic Acid Bacteria



NBB®-B



NBB®-C

For the microbiological evaluation, the selective properties of the beverage have to be considered. The presence/absence of CO₂, pH value, alcohol, also fruit acids or the different sugar spectra have a significant influence on the microbiological susceptibility. The same applies to low alcoholic beverages such as wine, cider, mixed beer drinks, alcopops or new types of beverages such as Hard Seltzer.

In order to consider the beverage-specific ingredients in their entirety and effectiveness, liquid enrichments are primarily used for microbiological testing. The aim is to quickly lead possible contaminants into their log phase at the highest selectivity level in order to detect them at an early stage.

Whether turbid or clear samples, with the liquid media the sample

Yeast & Mold



Wort Agar



OFS | SSL



**TransFast®
Gel | Broth**

quantity can be varied as desired to ensure the highest possible safety. **NBB®** for lactic acid bacteria, **SSL** and **TransFast®** for yeast and molds.

If the samples can be membrane-filtered, agar media are also used whose growth substances and pH are matched to the corresponding target germs. **OFS** or **Wort Agar** for beverage spoiling microorganisms



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation

Hygiene Monitoring

Keep control with the early warning system!



Biofilm indication



NBB®-B-Am

Biofilms are accumulations of a wide variety of microorganisms that can develop into complex associations. Starting with ubiquitous germs, as well as acetic acid bacteria and slime-forming microorganisms, which usually establish on substrate residues in inaccessible places in the bottling line, the biofilm gradually forms optimal conditions for beer and beverage spoilage organisms, most recently even for strictly anaerobic germs such as Pectinatus and Megasphera. If the biofilm breaks up, the germs are spread into the environment by aerosols and thus sporadically get into bottles. This is called spreading or secondary contamination and is responsible for more than half of all contamination.

NBB®-B-Am Bouillon allows continuous monitoring of weak points in production and filling by detecting indicator germs from biofilms by means of swab samples. Samples are taken 1-2 times a week with

E.coli/Coliform



LMC

sterile swabs at critically defined points, incubated in **NBB®-B-Am Bouillon** and analyzed for target indicators.

The biological condition of a non-sterile production facility is not critical if the number of positive findings is below the safety limit of 20-30 %. Higher or increasing findings over weeks indicate the development of persistent biofilms. To avoid the risk of secondary contamination, intensive cleaning and disinfection must be carried out to restore the non-critical range.

If the swab method is also to be used in water bottling plants, the use of back-diluted **LMC** for the detection of coliform bacteria is recommended.



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation

Aseptic Filling Line Validation

Check the limits of the performance of your filling line!



TVC (total viable count) unspecific



**AVM®
Powder**



**AVM® veg
Powder**



**AVM® veg
Broth**

Filling line validations are carried out after new installation and then regularly once a year or after maintenance work. In order to obtain an accurate overall picture of the filling process with regard to re-contamination, a simulation is performed with a standardized nutrient medium. In this way, precise conclusions can be made regarding the performance of the system, as an extrapolation of random samples from one filling would only provide an insufficient result.

AVM® - Aseptic Validation Medium - is the registered brand name of the Linden Grain Medium from the Döhler Microsafety Design® portfolio.

It is available as a powder for in-house production of the liquid broth. Döhler was the first to develop AVM® in vegan form, also for use in

strong as well as weak acidic ranges. The ready-to-use broth, a unique application is delivered by a tank truck within a day's drive from Darmstadt direct to the location of validation.

AVM® is an important tool in the context of certification according to the food safety standard ISO 22000, the HACCP system and standards such as IFS and BRC.



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation

DMD® Product overview



| Industry | Application | Target Microorganisms | Sample Type | DMD® | | |
|---|--------------------------------|---|---|---|--|---|
| | | | | Product | ID No | Packaging |
| Beer | Beer Analysis | Beer spoiling bacteria mainly lactic acid bacteria | Culture Yeast | NBB®-Broth | 2.04710.782 | 9x 250mL glass bottle |
| | | | | NBB®-Broth (single tests) | 2.04723.646 | 20x 10mL glass tubes |
| | | | | NBB®-Powder (for in-house production of broth) | 2.04716.462 | 300g alu bag |
| | | | Unfiltered Beer | NBB®-Concentrate | 2.04711.782 | 9x 250mL glass bottle |
| | | | Filtered Beer | NBB®-Agar | 2.04709.782 | 9x 250mL glass bottle |
| | | | | NBB®-Powder (for in-house production of agar) | 2.04716.462 | 300g alu bag |
| | Yeast Analysis | Yeast Saccharomyces Wild Yeast Non-Saccharomyces Wild Yeast Saccharomyces var. diastaticus | Culture Yeast | Wort Agar | 8.40360.782 | 9x 250mL glass bottle |
| | | | Unfiltered Beer | LWYM (Siebel) Powder | 9.04675.244 | 200g + 60mL plastic bottle |
| | | | Filtered Beer | LCSM (Siebel) Powder | 9.23552.244 | 200g + 60mL plastic bottle |
| | | | | DSDM™ Powder | 9.71231.244 | 200g plastic bottle |
| PCR Pre-enrichment | Beer spoiling bacteria | Culture Yeast Unfiltered Beer Filtered Beer | NBB®-PCR Broth | 7.85420.782 | 9x 250mL glass bottle | |
| Hygiene Monitoring | Biofilm Indicator MO's | Qualitative (swab) | NBB®-Broth Am | 2.04706.782 | 9x 250mL glass bottle | |
| | | Quantitative | NBB®-Broth AM (single tests) LMDA (Siebel) Powder | 2.04706.646 9.23555.244 | 20x 10mL glass tubes 500g plastic bottle | |
| Starter Kit for smaller breweries with less lab equipment | | | Culture Yeast, Beer, Water | Brewers QCheck Kit® | 2.11753.244 | 2x 50ml LMC glass bottle 20x 10ml NBB-B glass tubes 20x 10ml NBB-B-Am glass tubes 30 Sterile swabs |
| Non Alcoholic Beverages (NAB) Mix Beverages | NAB Analysis | Yeast, molds, bacteria | Raw material for the manufacturing of NAB e.g. fruit concentrates, bases, sugar syrup, etc. NAB w/o CO ₂ e.g. soft drinks, energy & sport drinks, still drinks juices & nectars, etc. | OFS Agar (original) | 2.04707.782 | 9x 250mL glass bottle |
| | | | | SSL Broth (original) for enrichment | 2.04712.782 | 9x 250mL glass bottle |
| | | | | TransFast® Broth for enrichment | 2.04727.782 | 9x 250mL glass bottle |
| | | TransFast® Gel | | 2.04731.782 | 9x 250mL glass bottle | |
| | | Wort Agar | | 8.40360.782 | 9x 250mL glass bottle | |
| | | BAT-Agar | | 2.04719.782 | 9x 250mL glass bottle | |
| | | Alicyclobacillus sp (IFU 12) | | BAT-Broth for enrichment | 2.04717.782 | 9x 250mL glass bottle |
| | | Guaiacol forming Alicyclobac. | | Guaiacol Detection Kit , enzymatic | 2.04737.991 | kit with 40 glass tubes |
| | | Total viable count, unspecific | | Plate Count Agar | 8.76631.782 | 9x 250mL glass bottle |
| | Hygiene Monitoring | Biofilm Indicator MO's | Swabs | NBB®-Broth Am NBB®-Broth AM (single tests) | 2.04706.782 2.04706.646 | 9x 250mL glass bottle 20x 10mL glass tubes |
| Filling line validation | Total viable count, unspecific | Fill simulation | AVM® (= Linden Grain) liquid AVM® Powder AVM® veg Powder | 2.04705.050 2.04704.872 8.50872.872 | tank car (only EU) 20kg bucket 20kg bucket | |
| Water | Water Analysis | Total viable count DIN EN ISO 6222 | Water | DEV Nutrient Agar | 2.04726.782 | 9x 250mL glass bottle |
| | | <i>Escherichia coli</i> /Coliforms DIN EN ISO 9308-1 | (well, mineral- and table water, rinse and process water, etc.) | Plate Count Agar | 8.76631.782 | 9x 250mL glass bottle |
| | Hygiene Monitoring | Coliforms | | Chromogenic Coliform Agar LMC Broth (single tests) | 8.43330.244 2.04713.700 | 6x 200mL glass bottle 9x 50mL glass bottle |
| | | | | LMC Broth | 2.04713.700 | 9x 50mL glass bottle |
| Laboratory equipment | | Swabs | Sterile swab with wooden stick | 2.04725.244 | 100 pc, single packed | |
| | | Incubation | TransFast® test tubes , 75mL, sterile | 2.04730.001 | 100 pc | |
| | | | TransFast® Incubation Lightbox | 4.40000.000 | 1 pc | |



PCA - Plate Count Agar

Agar for the enumeration of bacteria in food, water and other materials of sanitary importance

1. Ready-to-use culture medium without complex preparation for direct use
2. Complies with the specification given by the American Public Health Association (APHA) and ISO 4833
3. Quality tested according to ISO 11133:2014



Suitable for

- Water
- Food products
- Dairy products

- Pour plate method
- Streaking method
- Membrane filtration



Detectable microorganisms

- Total Viable Count of fastidious and non-fastidious bacteria



Basis information

- Agar
- Product No.: 8.76631.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 7,0 ± 0,2
- Incubation: 29-31 °C
3 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Nutrient Agar DEV

Complex agar for determining the total viable count (TVC) in water

1. Ready-to-use culture medium for direct usage
2. Reliable and fast results after 1-3 days
3. Meets the requirements of § 35 LMBG, the DEV (Deutsches Einheitsverfahren) – German standard method – and DIN 38411
4. Quality tested according to ISO 11133:2014



Suitable for

- Spring and well water
- Drinking, table and mineral water
- Rinsing water

- Pour plate method
- Streaking method
- Membrane filtration



Detectable microorganisms

- Total Viable Count of fastidious and non-fastidious bacteria



Basis information

- Agar
- Product No.: 2.04726.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 7,2 ± 0,2
- Incubation: 35-39° or 20° C
1-3 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



LMC

Lactose Multi Concentrated broth according to DEV

1. Ready-to-use culture medium as single test
2. Sampling and incubation bottle in one for easy-to-use
3. Reliable result after 2 days
4. Clear detection as indicator changes from purple to yellow
5. Quality tested according to ISO 11133:2014



Suitable for

- Spring and well water
- Drinking, table and mineral water
- Rinsing water
- Swap samples

- Microbiological detection



Detectable microorganisms

- E. coli
- Coliforms



Basis information

- Concentrated Broth
- Product No.: 2.04713.700
- Packaging: 9 x 50 ml (glass bottle)
- pH: 7,2 ± 0,2
- Incubation: 35-39 °C
2 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



CCA – Chromogenic Coliform Agar

Differentiating chromogenic agar for the detection and bacterial count of E. coli and Coliforms in water samples

1. Ready-to-use culture medium without complex preparation for direct use
2. Simultaneous detection of E. coli and Coliforms with differentiation by colored colonies
3. According to ISO 9308-1 and the new German Drinking Water Ordinance
4. Quality tested according to ISO 11133:2014



Suitable for

- Spring and well water
- Drinking, table and mineral water
- Rinsing water

- Pour plate method
- Streaking method
- Membrane filtration



Detectable microorganisms

- E. coli
- Coliforms



Basis information

- Agar
- Product No.: 8.43330.244
- Packaging: 6 x 200 ml (glass bottle)
- pH: 6,8 ± 0,2
- Incubation: 38 °C
1 day; aerobic/anaerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



OFS

Selective agar, based on Orange Serum Agar for cultivation and determining mesophilic and acidophilic microorganisms

1. **Ready-to-use culture medium without complex preparation for direct use**
2. **Reliable results after ca. 3 days only**
3. **Pre-enrichment with SSL and pouring plate with OFS for the highest degree of safety**
4. **Quality tested according to ISO 11133:2014**



Suitable for

- Non-alcoholic beverages pH < 4.5
- Fruit juice concentrates
- Beverage compounds and sugar
- Beer, wine & milk mix beverages

- Pour plate method
- Streaking method
- Membrane filtration



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Detectable microorganisms

- Beverage spoiling
 - Yeasts
 - Molds
 - Lactic acid bacteria
 - Acetic acid bacteria



Basis information

- Agar
- Product No.: 2.04707.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 5,0 ± 0,2
- Incubation: 25-29 °C; 3 days; aerobic



SSL

Selective broth for the cultivation of meso- and acidophilic microorganisms in non-alcoholic beverages

1. Ready-to-use culture medium for direct use
2. Rapid and selective (pH 5.0)
3. For direct detection or as liquid pre-enrichment instead of membrane filtration
4. Reliable results after 2-3 days simple detection of acid-tolerant microorganisms
5. Quality tested according to ISO 11133:2014



Suitable for

- Non-alcoholic beverages pH < 4.5
- Fruit juice concentrates
- Beverage compounds and sugar
- Beer, wine & milk mix beverages

- Sample enrichment
- Microorganism cultivation



Detectable microorganisms

- Yeasts
- Molds
- Lactic acid bacteria
- Acetic acid bacteria



Basis information

- Broth
- Product No.: 2.04712.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 5,0 ± 0,2
- Incubation: 25-29 °C; 2-3 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Wort Agar

Agar for isolation and colony counting of yeasts and molds

1. Ready-to-use culture medium without complex preparation for direct use
2. Original brewery's hopped wort from own production provides the optimal sugar spectra
3. Optimized pH value simultaneously inhibits the accompanying bacterial flora
4. Quality tested according to ISO 11133:2014



Suitable for

- Beer and wine
- Non-alcoholic beverages, including fruit juices
- Membrane filtration
- Pour plate method
- Airborne microorganism sampling
- Swab samples



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Detectable microorganisms

- Yeasts
- Molds



Basis information

- Agar
- Product No.: 8.40360.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 4,8 ± 0,2
- Incubation: 27-29 °C; 3-5 days; aerobic



TransFast® Gel

Transparent gel for the most easy detection of beverage spoiling microorganisms in less than 48 hours

1. Ready-to-use culture medium for immediate use
2. Fast results detection of yeasts, molds and bacteria in less than 48 hours
3. Simple screening – permanent visual evaluation at a glance
4. Quality tested according to ISO 11133:2014



Suitable for

- Ready-to-drink beverages
- Beverage compounds
- Fruit juice concentrates
- Rinsing water samples

- Membrane filtration
- Microbiological detection



Detectable microorganisms

- Yeasts
- Molds
- Lactic acid bacteria
- Acetic acid bacteria



Basis information

- Gel
- Product No.: 2.04731.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 4,3 ± 0,2
- Incubation: 25-29 °C; 1-2 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



TransFast® Broth

Broth for a fast and safe detection of beverage spoiling microorganisms

1. Ready-to-use culture medium for immediate use
2. Pre-enrichment and pouring tube method with TF Gel for the highest degree of safety
3. Increased efficiency – direct use and simple handling
4. Quality tested according to ISO 11133:2014



Suitable for

- Ready-to-drink beverages
- Beverage compounds
- Fruit juice concentrates
- Rinsing water samples

- Membrane filtration
- Microbiological detection
- Sample enrichment



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Detectable microorganisms

- Yeasts
- Molds
- Lactic acid bacteria
- Acetic acid bacteria



Basis information

- Broth
- Product No.: 2.04727.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 6,1 ± 0,2
- Incubation: 25-29 °C; 1-3 days; aerobic



TransFast® Incubation Lightbox

Incubator device as part of the TransFast System

1. Uniques incubator with transparent front for easy visual evaluation
2. Backlit for an optimal screening of test samples
3. Space for 20 test samples



Suitable for

- Incubation of test samples enriched with TransFast Gel in transparent tubes



Product features

- Adjustable temperature <math><75^{\circ}\text{C}</math>
- Lightning color: cool white



Basis information

- Electronical device
- Product No.: 4.40000.000
- Demension: 1342 x 176 x 153 mm (W/H/D)
- 230 VAC/max. 110 W



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



TransFast® Tubes

Sample flasks as part of the TransFast System

1. Sterile and one-way sample flasks
2. Volume 75 ml with a calibration mark at 50 ml for easy usage
3. Crystal clear for easy visual evaluation



Suitable for

- Incubation of test samples enriched with TransFast Gel



Product features

- Gas-permeable
- Resealable



Basis information

- Plastic tubes
- Product No.: 2.04730.001
- Packaging: 100 pc. (1 carton)



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Swabs

Sterile swabs for easy swab tests

1. Sterile and one-way swabs with cotton head
2. Wooden stick for easy break off to avoid secondary contamination
3. Easy opening of the packed swabs



Suitable for

- For taking swabs



Product features

- Sterile
- Single packed



Basis information

- Sterile swabs
- Product No.: 2.04725.244
- Packaging: 100 pc. (1 carton)



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



NBB[®]-A

Selective agar for the isolation, cultivation and quantitative detection of beer spoiling bacteria in filtered beer

1. Ready-to-use culture medium without complex preparation for direct use
2. Simple, visual screening by means of an indicator change from red to yellow
3. Unique growth substance component even for hard-to-culture beer spoilers
4. Sophisticated system to inhibit the brewing yeast and harmless accompanying flora
5. Quality tested according to ISO 11133:2014



Suitable for

- Filtered beers
- Wine
- Water and rinsing water

- Pour plate method
- Streaking method
- Membrane filtration
- Airborne bacteria collection



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Detectable microorganisms

- Lactobacilli (e.g. *L. brevis*, *L. lindneri*)
- Pediococci (e.g. *P. damnosus*)
- Pectinatus spp.
- Megasphaera spp.



Basis information

- Agar
- Product No.: 2.04709.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 5,75 ± 0,15
- Incubation: 26 -28 °C; 5 days; anaerobic



NBB[®]-B

Selective liquid medium for fast trace detection of beer spoiling bacteria in yeast culture

1. Ready-to-use culture medium for immediate use
2. Simple, visual screening by means of an indicator change from red to yellow
3. Unique growth substance and inhibiting component for highest selectivity
4. Quality tested according to ISO 11133:2014
5. Available as single test 10 ml in glass tubes or as multi-portion 250 ml in glass bottle



Suitable for

- Yeast samples
- Unfiltered beers containing yeast
- Swab samples
- Airborne bacteria collection samples

- Microbiological detection
- Membrane filtration



Detectable microorganisms

- Lactobacilli (e.g. *L. brevis*, *L. lindneri*)
- Pediococci (e.g. *P. damnosus*)
- Pectinatus spp.
- Megasphaera spp.



Basis information

- Broth
- Product No.: 2.04710.782
Packaging: 9 x 250 ml (glass bottle)
- Product No.: 2.04723.646
Packaging: 20 x 10 ml (glass tubes)
- pH: 5,75 ± 0,15
- Incubation: 26 -28 °C; 5 days; anaerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



NBB®-C

Concentrated, selective liquid medium for fast trace detection of beer spoiling bacteria in unfiltered beer

1. Ready-to-use culture medium for immediate use
2. Adjustable selectivity of the enrichment by using the own beer type and sterile water
3. Simplest preparation by adding the liquid enrichment to the beer sample
4. Quality tested according to ISO 11133:2014



Suitable for

- Yeast-cloudy beers
- Unfiltered beers containing yeast
- Yeast samples
- Wort samples

- Liquid enrichment



Detectable microorganisms

- Lactobacilli (e.g. *L. brevis*, *L. lindneri*)
- Pediococci (e.g. *P. damnosus*)
- Pectinatus spp.
- Megasphaera spp.



Basis information

- Concentrated Broth
- Product No.: 2.04711.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 6,5 ± 0,2
- Incubation: 26 -28 °C; 7 days; anaerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



NBB[®]-PCR

Pre-enrichment culture medium for subsequent PCR-based detection

1. Ready-to-use culture medium for immediate use
2. Fast enrichment within 48 to 72 hours
3. Free of beer spoiling DNA and PCR inhibitors
4. Universal medium for all brewery samples and all PCR detection systems
5. Quality tested according to ISO 11133:2014



Suitable for

- Yeast samples
 - Yeast-turbid beers
 - Filtered beers
 - Water and rinsing water
 - Swab samples
-
- Sample enrichment



Detectable microorganisms

- Lactobacilli (e.g. *L. brevis*, *L. lindneri*)
- Pediococci (e.g. *P. damnosus*)
- Pectinatus spp.
- Megasphaera spp.



Basis information

- Broth
- Product No.: 7.85420.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 5,7 ± 0,2
- Incubation: 26 -28 °C; 2-3 days; anaerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



NBB®-P

Powder for the production of NBB®-Agar and NBB®-Broth

1. Ready-to-use powder mix
2. Beer own selectivity of the prepared medium by using own beer
3. Fast results – optimised nutrient combinations for fast growth of spoiling microorganisms
4. Quality tested according to ISO 11133:2014



Suitable for

- Yeast samples
- Unfiltered and filtered beers
- Airborne microorganism sampling

- Pour plate method
- Streaking method
- Membrane filtration



Detectable microorganisms

- Lactobacilli (e.g. *L. brevis*, *L. lindneri*)
- Pediococci (e.g. *P. damnosus*)
- Pectinatus spp.
- Megasphaera spp.



Basis information

- Powder
- Product No.: 2.04716.462
- Packaging: 300g (bag)
- Incubation: 26 -28 °C; 5 days; anaerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



NBB[®]-B-Am

Broth for the detection of biofilms as part of hygiene monitoring in the beverage industry

1. Ready-to-use culture medium for immediate use
2. Sampling with swabs at critical points throughout the production process
3. Simple, visual screening by an indicator change from red to yellow
4. Available as single test 10 ml in glass tubes or in multi-portion 250 ml in glass bottle
5. Quality tested according to ISO 11133:2014



Suitable for

- Swap samples
- Microbiological detection



Detectable microorganisms

- Biofilm indicator microorganisms (e.g. acetic acid and lactic acid bacteria)



Basis information

- Broth
- Product No.: 2.04706.782
Packaging: 9 x 250 ml (glass bottle)
- Product No.: 2.04706.646
Packaging: 20 x 10 ml (glass tube)
- pH: 5,75 ± 0,15
- Incubation: 25 -29 °C; 3 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Brewers QCheck® Kit

Collection of easy-to-use single tests for micro brewer labs

1. **Ready-to-use culture media for water and beer sampling**
2. **Simple evaluation by clear and easily visible color change**
3. **Reliable findings with fully tested, optimized media composition**
4. **No expert knowledge and expensive equipment needed**
5. **Quality tested according to ISO 11133:2014**



Suitable for

- Water samples
- Yeast samples
- Yeast-turbid beers and filtered beers
- Swab samples

- Microbiological detection
- Membrane filtration



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Detectable microorganisms

- Lactobacilli (e.g. *L. brevis*, *L. lindneri*)
- Pediococci (e.g. *P. damnosus*)
- Pectinatus spp., Megasphaera spp.
- *E. coli*, Coliforms
- Biofilm indicator microorganisms (e.g. acetic acid and lactic acid bacteria)



Basis information

- Kit
- Product No.: 2.11753.244
- Content: 2 x 50 ml LMC in glass bottle
20 x 10 ml NBB®-B in tubes
20 x 10 ml NBB®-B-Am in tubes
incl. 30 swabs
- Incubation: aerobic/anaerobic



BAT-A

Selective agar for the detection of Alicyclobacillus spp.

1. Ready-to-use culture medium without complex preparation for direct use
2. Specific growth promoting components and nutrients for fast bacterial growth
3. Without toxic cobalt(II) chloride hexahydrate and boric acid
4. Complies with IFU (International Fruit Juice Union) Method No.12, 2019
5. Quality tested according to ISO 11133:2014



Suitable for

- Hot and cold filled fruit juices,
 - Fruit juice concentrates,
 - Compounds and
 - Sugar
-
- Pour plate method
 - Streaking method
 - Membrane filtration



Detectable microorganisms

- Alicyclobacilli spp.



Basis information

- Agar
- Product No.: 2.04719.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 4,0 ± 0,2
- Incubation: 43-47 °C; 3 days;
aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



BAT-B

Selective nutrient broth for the liquid pre-enrichment of Alicyclobacilli in sensitive, viscose or not- and filterable products

1. Ready-to-use culture medium for immediate use
2. Specific growth promoting components and nutrients for fast bacterial growth
3. Without toxic cobalt(II) chloride hexahydrate and boric acid
4. Complies with IFU (International Fruit Juice Union) Method No.12, 2019
5. Quality tested according to ISO 11133:2014



Suitable for

- Hot and cold filled fruit juices,
 - Fruit juice concentrates,
 - Compounds and
 - Sugar
-
- Sample enrichment



Detectable microorganisms

- Alicyclobacilli spp.



Basis information

- Broth
- Product No.: 2.04717.782
- Packaging: 9 x 250 ml (glass bottle)
- pH: 4,0 ± 0,2
- Incubation: 43-47 °C; 3 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Guaiacol Detection Kit

Reliable and sensitive enzymatic detection kit of guaiacol-forming Alicyclobacilli

1. Biochemical detection kit with ready-to-use components
2. Special IB broth as pre-enrichment
3. Enzymatic transformation of colourless guaiacol into brown-coloured complexes for simple and reliable visual analysis in only 10 min
4. Complies with IFU (International Fruit Juice Union) Method No.12, 2019



Suitable for

- Identification



Detectable microorganisms

- Off flavour forming Alicyclobacilli ssp.



Basis information

- Detection Kit
- Product No.: 2.04737.991
- Packaging: incl. 40 tubes (box)
- Incubation: 47 °C; 0-1 day; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



AVM[®] veg Powder

Plant based powder for producing a liquid AVM[®] veg Broth – Linden Grain medium

1. Ready-to-use plant-based powder mix - no ingredients of animal origin in the filling line
2. Made from strictly-checked raw materials
3. Fast detection after 5-7 days
4. Efficient fast release of the filling line – no long down time
5. Quality tested according to ISO 11133:2014



Suitable for

- Regular validation
- Validation following maintenance or servicing on the line
- Challenge tests for checking the function of individual device components



Detectable microorganisms

- Yeasts
- Molds
- Bacteria



Basis information

- Powder
- Product No.: 8.50872.872
- Packaging: 20 kg (bucket)
- Incubation: 26-30 °C; 5-7 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



AVM[®] Powder

Powder for producing a liquid AVM[®] Broth - Linden Grain medium

1. Ready-to-use powder mix
2. Made from strictly-checked raw materials
3. Fast detection after 5-7 days
4. Efficient fast release of the filling line – no long down time
5. Quality tested according to ISO 11133:2014



Suitable for

- Regular validation
- Validation following maintenance or servicing on the line
- Challenge tests for checking the function of individual device components



Detectable microorganisms

- Yeasts
- Molds
- Bacteria



Basis information

- Powder
- Product No.: 2.04704.872
- Packaging: 20 kg (bucket)
- Incubation: 26-30 °C; 5-7 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



AVM® Broth

Liquid Linden Grain medium for the trace detection of beverage-spoiling microorganisms

1. Ready-to-use medium for the immediate use
2. Made from strictly-checked raw materials
3. Fast detection after 5-7 days
4. Efficient fast release of the filling line – no long down time
5. Quality tested according to ISO 11133:2014



Suitable for

- Regular validation
- Validation following maintenance or servicing on the line
- Challenge tests for checking the function of individual device components



Detectable microorganisms

- Yeasts
- Molds
- Bacteria



Basis information

- Broth
- Product No.: 2.04705.050
- Packaging: min. 3 tons (tank car)
- pH: 4,0 - 4,4
- Incubation: 26-30 °C
5-7 days; aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



LMDA

Siebel's culture complex medium for the detection of microorganisms that are common in breweries

1. All-in-one powder mix for the production of LMDA agar
2. Easy identification of acid forming bacteria by calcium carbonate (CaCO₃)
3. Aerobically incubated for hygiene monitoring or anaerobically for investigating filtration efficiency
4. Culture yeasts can be inhibited by the addition of cycloheximide.
5. Recommended by ASBC



Suitable for

- Filtered beers
- Wine
- Water and rinsing water

- Pour plate method
- Streaking method
- Membrane filtration
- Airborne bacteria collection



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Detectable microorganisms

- Lactobacilli (e.g. *L. brevis*, *L. lindneri*)
- Pediococci (e.g. *P. damnosus*)
- Pectinatus spp.
- Megasphaera spp.
- Environmental germs



Basis information

- Powder
- Product No.: 9.23555.244
- Packaging: 1 x 500 g (plastic bottle)
- Incubation: ca. 30 °C; 4-7 days; anaerobic/aerobic



HLP

Siebel's culture medium for simple testing of the most common beer spoiling bacteria

1. All-in-one powder mix for the production of HLP gel or agar
2. Autoclaving the medium before use is not required
3. Cycloheximid included for higher selectivity
4. Simple visual differentiation of Lactobacilli and Pediococci
5. Recommended by ASBC



Suitable for

- Filtered beers
- Water and rinsing water

- Pour plate method
- Streaking method
- Membrane filtration
- Airborne bacteria collection



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Detectable microorganisms

- Lactobacilli (e.g. *L. brevis*, *L. lindneri*)
- Pediococci (e.g. *P. damnosus*)



Basis information

- Powder
- Product No.: 9.23556.244
- Packaging: 1 x 500 g (plastic bottle)
- Incubation: 28 - 30 °C; 5-7 days; aerobic



LWYM

Siebel's culture medium for the quantitative detection, cultivation and isolation of wild yeast populations in brewing culture yeast

1. All-in-one powder mix for the production of LWYM agar
2. Crystal violet solution suppresses growth of culture yeast with adjusted concentration
3. Growth of especially *Saccharomyces* WY gets supported, no growth of Non-*Saccharomyces* WY
4. Recommended by ASBC



Suitable for

- Culture yeast
- Beer

- Pour plate method
- Streaking method
- Membrane filtration
- Airborne bacteria collection



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



Detectable microorganisms

- *Saccharomyces* WY



Basis information

- Powder
- Product No.: 9.04675.244
- Packaging: 1 x 200 g Powder (plastic bottle)
1 x 60 ml CV solution
- Incubation: 28 - 30 °C; 4-6 days;
aerobic



LCSM

Siebel's culture medium for the quantitative detection, cultivation and isolation of wild yeast populations in brewing culture yeast

1. All-in-one powder mix for the production of LCSM agar
2. LCSM in combination with cupric sulfate solution suppresses culture yeast and encourages growth of non-Saccharomyces yeast.
3. Growth of non-Saccharomyces wild yeast cannot be excluded
4. Recommended by ASBC



Suitable for

- Culture yeast
- Beer
- Pour plate method
- Streaking method
- Membrane filtration
- Airborne bacteria collection



Detectable microorganisms

- Non-Saccharomyces WY



Basis information

- Powder
- Product No.: 9.23552.244
- Packaging: 1 x 200 g Powder (plastic bottle)
1 x 60 ml CS solution
- Incubation: 28 - 30 °C; 4-6 days;
aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



DSDM™

Selective culture medium for the detection of *S. cerevisiae var. diastaticus*

1. All-in-one powder mix for the production of DSDM™ broth
2. Special nutrient supply supports the growth of the super-attenuating yeasts
3. The growth of cultured yeasts is suppressed
4. Color change from blue/purple to yellow/green indicates a pH gradation (acid formation)
5. Flexible system: solid medium by adding own agar



Suitable for

- Culture yeast
- Beer

- Sample enrichment
- Membrane filtration



Detectable microorganisms

- *S. cerevisiae var. diastaticus*



Basis information

- Powder
- Product No.: 9.71231.244
- Packaging: 1 x 200 g Powder (plastic bottle)
- Incubation: 28 - 30 °C; 5-12 days; (an)aerobic



Water



Soft drinks



Juice



Beer



Other alcoholic



Hygiene



Validation



WE BRING
IDEAS TO LIFE.

NATURAL INGREDIENTS
INGREDIENT SYSTEMS
INTEGRATED SOLUTIONS