



User manual

DEV-Nutrient Agar (Product No. 2.04726.782)

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1. Information

Nutrient medium for the detection of

Total Viable Count

for water (as regulated per the German standard method DEV and drinking water regulations) or for various food products and rinse water samples.

DEV-Agar (pH 7.2 ± 0.2) is a ready-to-use agar for a fast and safe detection of the total amount of colonies in drinking, mineral and table water, in various food and rinse water samples. It can be used in the pour and spread plate method or as a basic culture medium for membrane filtration.

2. Handling

Required Material

Water bath (max. temp. 95°C/203°F)

Microbiological workbench

Sterile Petri dishes

Inoculation loop, Drigalski spatula or sample swabs (if necessary)

2 incubators

Application

Handle the samples under sterile conditions to avoid secondary contamination.

Melt the bottle content in a water bath at 95°C/203°F. Avoid overheating and remove the medium as soon as it is completely dissolved. The screw cap should be loosened before heating and closed tightly after removal from the water bath. To avoid glass breakage, it is recommended to leave the bottles on a heat-resistant surface at room temperature for a short period, e.g. 2 min, before placing them in a 45-50°C/113-122°F water bath to cool.

Ensure that the agar does not solidify again.

Do not leave the liquefied agar for longer than 4 h at 45-50°C/113-122°F in a water bath. This damages the agar structure and permanently changes its solidifying properties.

Repeated heating can restrain the functionality.

For the pour plate method (as indicated by the DEV):

Place 1 mL of the test sample in a 9 cm Petri dish and fill up with the fluid and warm agar to a height of 3-4 mm. Swirl the mixture gently by moving the closed Petri dish in a rotation following a "8" -figure on the workbench.

As a Nutrient base:

Fill the fluid and warm culture media into a Petri dish to a height of 3-4 mm. Cool the dish until the DEV-Agar solidifies and use it for:

- membrane filters by placing the filter on top of the agar
- for microbial spreading with a inoculation loop, Drigalski spatula or sample swabs



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Incubation

For water analyses according to DEV:

Place one test sample into an incubator at 35-39°C/95-102°F and incubate for 1-3 d. Incubate the other test sample at 20°C/68°F for 48 hours.

Evaluation

After the appropriate period of incubation count the colonies on the nutrient media (Colony Forming Units (CFU)). If the number of CFU cannot be counted (due a high germ density), testing must be repeated using a dilution of the sample. Water samples should not exceed 20 CFU in an incubation period of 1-3 d at 35-39°C/95-102°F and 100 CFU in 48 h at 20°C/68°F.

3. Storage and Packaging Information

Packaging and Content

unit	Cardboard Box (9x250 mL in glass bottles)
unit size (Box)	approx. 22 cm x 22 cm x 18 cm / 8.7 in x 8.7 in x 7.1 in
unit gross weight (Box)	approx. 4.1 kg/ 9 lbs.

Storage

Store at 4-8°C/40-46°F according to product specification.
Store under dry and dark conditions. Do not freeze product.

Waste Disposal

No dangerous good.
No hazardous material.
Please consider your local waste regulations.
Not inoculated agar can be disposed of with normal laboratory waste.
Inoculated and incubated samples are to be sterilized before disposal at a temperature of 121°C/250°F for 20 min.

Warnings

Do not cook or freeze the culture media. Do not keep the agar liquified longer than 4 h. Media not directly used should not be solidified again for future use. Repeated heating can restrain its functionality. Always wear protective clothing when handling hot media.



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4. Related products

Investigation material	Relevant target microorganisms	Product	Format	Description	Packaging	pH (±0.2)	Incubation T[°C]	Item no.
Water Drinking water Spring water Table and mineral water Well water Rinse water	Total viable count (TVC)	Nutrient Agar in accordance with DEV	Agar	Complex agar Application: Basic culture medium for membrane filtration, pour plate and spread plate method	9 x 250 mL (glass bottle)	7.2	20 or 37	2.04726.782
	Water-specific faecal indicator microorganisms <i>E. Coli</i> & <i>coliform bacteria</i>	LMC	Concentrated broth	Selective bouillon as qualitative pre-test	9 x 50 mL (glass bottle)		37	2.04713.700