FAA AGAR PLATE WITH 5% BLOOD

Instructions for Use

For *in vitro* diagnostic use.

Intended use

FAA agar plate with 5% blood (Fastidious Anaerobe Agar-Horse Blood, FAA-HB) is a general propagation medium which can be used in cultivation-based diagnostics. Particularly suitable and recommended for anaerobic resistance determination[1].
Microbiological findings on FAA agar plates with 5% blood should be interpreted in conjunction with standardised diagnostic methods and local guidelines for general resistance determination.
For professional use only for *in vitro* diagnostics.

Description

The Petri dish contains a brownish-red opaque agar with a layer thickness of approximately 4 mm.

Composition

FAA agar plate with 5% blood	
Peptone mix	Vitamin K
Sodium chloride	L-arginine
Starch	Pyrophosphate
Sodium bicarbonate	Sodium succinate
Glucose	Horse blood (defibrinated)
Sodium pyruvate	Agar
Cysteine hydrochloride	pH 7,4 ± 0,2
Haemin	

Table 1

Principle

Most clinically significant anaerobic bacteria can grow on FAA agar plates with 5% blood. The mixture of peptones, vitamin K and succinate has been developed to ensure improved growth conditions. Haemins increase species-specific pigmentation for diagnostic use[2]. Growth-promoting substances such as cysteine, arginine and pyrophosphate increase the growth rate of the most common anaerobic pathogenic bacteria. The low glucose level ensures minimal production of acid and alcohols, which would otherwise inhibit colony growth. Based on the optimal content of standardised substrate components, the FAA agar plate can be used to determine the resistance of anaerobic bacteria.

Precautions

FAA agar plate with 5% blood is only for *in vitro* diagnostics. Do not use the product if there are signs of microbial contamination, discolouration, desiccation or other signs of deterioration. Check that the Petri dish is intact before use.

Materials included

FAA agar plate with 5% blood in a 9 cm plastic Petri dish, suitable for stacking and fully automated microbiological laboratory systems.

Materials required but not included

Microbiological utensils for:

- Sampling
- Collection media
- Inoculation needle
- Suitable incubation conditions for propagation methods.
- Serological and biochemical reagents for further identification

Storage and stability

FAA agar plate with 5% blood must be stored at 2 – 8 °C, have a shelf-life of 12 weeks from production and must not be frozen.

Information on storage and shelf-life is printed directly on the product packaging.

With storage under these conditions, the FAA agar plate with 5% blood can be used up until the printed expiration date.

Sample collection and storage

Please refer to local guidelines for sample collection and storage of the specific sample materials used for cultivation on FAA agar plate with 5% blood.

Quality control

The following ATCC strains can be used for internal quality control of an anaerobic resistance determination.

Antibiotic Discs	Clostridium perfringens ATCC 13124	Bacteroides fragilis ATCC 25285
Meropenem (10 µg)	34 – 40 mm	32 - 39 mm
Vancomycin (5 µg)	14 – 20 mm	
Clindamycin (2 µg)	20 - 26 mm	23 - 29 mm
Metronidazole (5 µg)	20 - 26 mm	29 - 36 mm
Penicillin (1 µg)	23 - 29 mm	
Piperacillin/Tazobactam (30-6. µg)	30 - 36 mm	29 - 35 mm

Table 2 (zone breakpoints from EUCAST [1])

QC test of FAA agar plate with 5% blood includes a purity check - physical/chemical check and resistance determination by disc diffusion performance testing, which are done on selected microbiological ATCC reference strains see Diagram 3 and 4.

Reference strain for FAA agar plate with 5% blood	Growth +/-	Colony colour	Haemolysis
Clostridium perfringens ATCC 13124	+	Grey	+
Fusobacterium necrophorum ATCC 51357	+	White	+
Bacteroides fragilis ATCC 25285	+	Grey-white	-

Table 3

Procedure

It is best for the procedure to allow the FAA agar plate with 5% blood to reach room temperature before use. The sample to be examined is sown manually or mechanically on FAA agar plate with 5% blood so that single colonies can grow, e.g. 3-step spreading, and incubated under selected atmospheric incubation conditions and at the desired temperature with the bottom facing upwards for a minimum of 16-24 hours. For procedures for determining the resistance of anaerobic bacteria using disc diffusion or MIC determination, e.g. E-test, please refer to EUCAST recommendations and method standards[1].
After incubation is finished, the FAA agar plate with 5% blood is interpreted for growth, colony colours, haemolysis. If FAA agar plate with 5% blood is used for resistance determination by disc diffusion or by MIC determination with E-test, zone diameters or elliptical minimum inhibitory concentrations and colony sizes are interpreted. See Diagram 2 and 4.

Interpretation guide

Diagram 4 shows photographic illustrations of inhibition zones in disc diffusion sensitivity testing on FAA agar plate with 5% blood.

Species	Interpretation	Photo
Clostridium perfringens ATCC 13124	Zone diameter is interpreted at full inhibition, disregarding swarming and haemolysis.	
Bacteroides fragilis ATCC 25285	Zone diameter is interpreted at full inhibition, disregarding dust/haze within the zone	
Fusobacterium necrophorum ATCC 51357	Zone diameter is interpreted at full inhibition, disregarding any haemolysis.	

Table 4

Disposal

Sown products must be disposed of in accordance with applicable regulations on clinical hazardous waste.

Limitations

For cultivation-based *in vitro* diagnostics only. Follow the procedures specified by EUCAST[1] regarding correct anaerobic incubation conditions when propagating on FAA agar plate with 5% blood, to achieve standardised resistance determination.

Performance

Analysis certificates with performance data on FAA agar plate with 5% blood can be downloaded from SSI Diagnostica's website[2].

Incident reporting

Any unintended incident arising from the use of FAA agar plates with 5% blood should be reported to the manufacturer.

Quality certification

SSI Diagnostica is quality assured and certified according to ISO 13485. Analysis certificates can be downloaded from our website[2].

IVD REF

99439

Product no. 99439 FAA agar plate with 5% blood (10 pcs./pack)

Referencer

1. www.eucast.org/ast_of_bacteria/disk_diffusion_methodology
2. www.ssidiagnostica.com

Manufacturer, information and ordering

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