

FT-A2WVA0



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## Schaedler Agar

*For the cultivation of anaerobic microorganisms from contaminated specimens*

### Product Description

<b>Name :</b>	<b>Schaedler Agar</b>			
<b>Catalog Number :</b>	A2WVA0, 500 g			
<b>Formula in g/l :</b>	Trypticasein Soy Broth	10.00	Tris (Hydroxymethyl Aminomethane)	3.00
	Peptone Mixture	5.00	Hemin	0.01
	Dextrose	5.00	L-Cystine	0.40
	Yeast Extract	5.00	Bacteriological Agar	13.50
<b>Final pH:</b>	<b>7,6 ± 0,2 at 25°C</b>			

**Storage:** 2-25°C. Once opened keep powdered medium closed to avoid hydration.

### Directions for use

#### Preparation

Suspend 41.9 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C and, if desired, add 5% sterile defibrinated blood, homogenize gently and pour into Petri dishes. Be careful to avoid bubble formation when adding the blood. The prepared medium should be stored at 8-15°C. The color is amber, slightly opalescent.

The dehydrated medium should be homogeneous, free-flowing and pale beige in color. If there are any physical changes, discard the medium.

#### Use

SCHAEDLER AGAR is prepared according to the formulation described by Schaedler, Dubos, and Costello, and modified by Mata and all. It can easily support the growth of anaerobes from the intestinal and digestive tracts and other organs without the interference of the accompanying aerobic flora because of its superior nutritive properties and its low oxidation-reduction potential. In normal conditions, the multiplication of anaerobes is diminished by the rapid increase of enterococci, *Escherichia coli*, *Enterobacter* and other intestinal facultative bacteria.

Although thioglycollate is widely used to lower the oxidation-reduction potential favoring the development of anaerobes, it has been proved that it is an inhibitor of other organisms. In this case the medium includes Cystine which, together with Dextrose, acts as a reducing agent. Trypticasein soy broth, Peptone and Yeast extract provide nitrogen, vitamins, minerals and amino acids essential for growth. Dextrose is a carbon source. Tris (Hydroxymethyl Aminomethane) acts as a buffer system. Hemin stimulates organism growth. L-Cystine is a reducing agent. Bacteriological Agar is the solidifying agent.

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It is recommended to consult methods for the cultivation of anaerobic organisms in food analysis.

Suspend a determined amount of the sample in a known volume of physiological saline. Take a small aliquot and make serial dilutions. With a calibrated loop inoculate duplicate plates, previously dried, and incubate for the appropriate time and temperature. For enumeration, select those plates that contain 30 to 100 colonies.

For the enumeration of *Enterococcus faecalis*, the aerobe and facultative anaerobe, which is an indicator of fecal contamination, Schaedler Agar can be used in the following manner:

Inoculate the food sample (frozen, pre-cooked) in suspension by streaking. Incubate aerobically at 25°C and at 35°C for 24 to 48 hours, and count *E. faecalis*

If testing pre-cooked meat, also inoculate the base medium (with added neomycin) to investigate the presence and number of *Clostridium welchii*. Incubate anaerobically.

Schaedler can be used adding to it selective substances for the isolation and recovery of *lactobacilli*, *streptococci*, *clostridia*, *Bacteroides*, and *Flavobacterium* from feces and contents of the intestinal tract.

## Microbiological Test

The following results were obtained from type cultures after anaerobic incubation at a temperature of  $35 \pm 2^\circ\text{C}$  and observed after 24-48 hours.

Microorganisms	Growth	Recovery Rate (%)
<i>Bacteroides fragilis</i> ATCC 25285	Good	$\geq 50\%$
<i>Clostridium butyrium</i> ATCC 9690	Good	$\geq 50\%$
<i>Clostridium perfringens</i> ATCC 13124	Good	$\geq 50\%$
<i>Streptococcus pyogenes</i> ATCC 19615	Good	$\geq 50\%$

## References

- **Schaedler, R.W.** *et al.* The Development of the Bacterial Flora in the Gastrointestinal Tract of Mice. *J. Exp. Med.* 122. 59-66 (1965)
- **Mata L.J.** *et al.* Fecal Microflora in a Preindustrial Region. *Appl. Microbiol.* 17. 396:602 (1966)

## Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>. Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06

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