

IVD in vitro diagnosticum - For professional use only



Yersinia Selective Agar (Base) acc. to SCHIEMANN (CIN-Agar)

Yersinia Selective agar (base) acc. to Schiemann (CIN-agar)

Cat. No. 1.16434.0500
(500 g)

Medium proposed by SCHIEMANN (1979) for the selective cultivation of Yersinia, particularly Y. enterocolitica and Y. pseudotuberculosis, from clinical specimens, foodstuffs, water etc.

The medium complies with the recommendations of the APHA (1992) for food examination.

See also General Instruction of Use

Warnings and precautions see www.merck-chemicals.com

Principle

Microbiological method

Mode of Action

The accompanying flora is largely inhibited by a mixture of antibiotics [Yersinia Selective Supplement (CIN)], crystal violet and bile salts. The growth of Yersinia is, however, promoted by pyruvate and a superior nutrient base. Yersinia degrade the present mannitol to form acid; the colonies therefore turn red due to a change in the colour of the indicator neutral red.

Typical Composition (g/litre)

Peptone from casein 10.0; peptone from meat 10.0; yeast extract 2.0; D(-)mannitol 20.0; sodium pyruvate 2.0; sodium chloride 1.0; magnesium sulfate 0.01; bile salt mixture 1.0; neutral red 0.03; crystal violet 0.001; agar-agar 12.5.

Preparation and Storage

Cat. No. 1.16434. Yersinia Selective Agar Base acc. to SCHIEMANN (CIN-Agar) (500 g)

Usable up to the expiry date when stored dry and tightly closed at +15 to +25°C. Protect from light .

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25°C.

Suspend 58.5 g/litre autoclave (15 min at 121 °C), cool to 45-50 °C. Add the contents of one vial of Yersinia Selective Supplement (CIN) to 500 ml culture medium and mix under sterile conditions. Pour plates.

pH: 7.4 ± 0.2 at 25 °C.

The plates are clear and red.

Specimen

e.g. Stool, smears of infected tissue.

Clinical specimen collection, handling and processing , see general instructions of use.

Experimental Procedure and Evaluation

Inoculate the plates with sample material from an enrichment culture, e.g. ITC Broth, Yersinia Broth acc. to OSSMER, by the streak-plate method.

Incubation: 24-48 hours at 28 °C aerobically.

Yersinia grows to produce colonies that have a dark red centre and a transparent periphery. The size of the colonies, the width of their edges and their surface structure may vary depending on the serotype.

Certain accompanying microorganisms (e.g. some Enterobacteriaceae and Pseudomonas) may also sometimes exhibit scanty growth.

Quality control

<i>Test strains</i>	<i>Growth</i>	<i>Red centre</i>
Yersinia enterocolitica ATCC 9610	good / very good	+
Yersinia enterocolitica ATCC 35669	good / very good	+
Escherichia coli ATCC 25922	none	
Salmonella typhimurium ATC 14028	none	
Enterobacter cloacae ATCC 13047	none / poor	
Staphylococcus aureus ATCC 25923	none	

Additives

Merck Cat.No.	Product	Pack Size
1.16466.0001	Yersinia Selective Supplement (CIN)	1 x 16 vials
1.16701.0500	Yersinia Selective Enrichment Broth acc. to OSSMER	500 g
1.16723.0500	Irgasan-Ticarcillin Chlorate (ITC) Broth	500 g

Literature

American Public Health Association: Compendium of Methods for the microbiologica Examination of Foods. – 3rd ed. (1992).
BERINGER, T.: Erfahrungen mit einem neuen Yersinia-Nährboden. **Ärztl. Lab.**, **30**, 327-330 (1984).
PRIMAVERSI, C.A., u. LORRA-EBERTS, A.: Erfahrungen mit einem neu entwickelten Selectiv-Agar nach Schiemann zum Nachweis von Yersinia enterocolitica. - **Lab. med.**, **7**; 59-61 (1983).
SCHIEMANN, D.A.: Synthesis of a selective agar medium for Yersinia enterocolitica. - **Canad. J. Microbiol.**, **25**; 1298-1304 (1979).

