

# Tryptic Soy Agar (CASO) with Polysorbate 80 and Lecithin

Medium for environmental monitoring and for determining efficiency of containers, equipment and surfaces.  
The medium conforms to the United States Pharmacopeia XXVI (2003).

## Mode of Action

Casein and soy peptones provide the replication of even fastidious microorganisms. Sodium chloride maintains osmotic equilibrium. QUISNO et al. (1946), BRUMMER (1976) and ERLANDSON et al. (1953) reported that Lecithin and Polysorbate80 inactivate many residual disinfectants. Polysorbate 80 neutralizes phenols, hexachlorophene and formalin. Lecithin inactivates quaternary ammonium compounds.

## Typical Composition (g/litre)

Peptone from casein 15.0; peptone from soymeal 5.0; sodium chloride 5.0; polysorbate 80 5.0; lecithin 0.7; agar-agar 15.0.

## Preparation

Suspend 45.7 g in 1 litre of distilled or dem. water and heat to boiling, if necessary, with frequent agitation until completely dissolved. Autoclave at 121 °C for 15 minutes.

Cool the medium to about 45 °C, mix well and pour in Petridishes or **RODAC** (Replicate **O**rganism **D**etection and **C**ounting) plates (about 17 ml).

pH 7.3 ± 0.2 at 25 °C.

The prepared medium is clear and yellowish-brown.

## Experimental Procedure

Inoculate the medium by spreading method (in Petridish). Using RODAC plates for checking the cleanliness and disinfection efficiency of surfaces, press the plate with even pressure onto the surface. Avoid rubbing to prevent damage of the agar bed. **Clean the surface afterwards to remove any remainings of the agar.**

Incubation: 24-48 hours at 35 °C aerobically.

## Literature

QUISNO, R., I. W. GIBBY, AND M. J. FOTER: A neutralizing medium for evaluating the germicidal potency of the quaternary ammonium salts. - **Am.J.Pharm.**, **118**; 320-323 (1946).

BRUMMER, B.: Influence of possible disinfectant transfer on Staphylococcus aureus plate counts after contact sampling. - **App. Environ. Microbiol.**, **32**; 80-84 (1976).

ERLANDSON, A. L., Jr., and C. A. LAWRENCE: Inactivating medium for hexachlorophene (G-11) types of compounds and some substituted phenolic disinfectants. - **Science**, **118**; 274-276 (1953).

## Ordering Information

Product	Merck Cat. No.	Pack size
Tryptic Soy Agar (CASO) with Polysorbate80 and Lecithin	1.07324.0500	500 g

## Quality control

Test strains	Growth after 24 hours	Pigment	Colony colour
Staphylococcus aureus ATCC 25923	good / very good	-	yellow to white
Pseudomonas aeruginosa ATCC 10145	good / very good	+	green-blue



*Pseudomonas aeruginosa*  
ATCC 10145



*Staphylococcus aureus*  
ATCC 25923