

Product Data Sheet

DEOXYCHOLATE AGAR

Product No. GB-DCM-00114-1A

INTENDED USE

For direct differential count of coliforms in dairy products and also for isolation of enteric pathogens from rectal swabs, faeces and other pathological specimens.

PRODUCT SUMMARY

Deoxycholate Agar is prepared as per the formulation by Leifson. This media is used for the isolation and maximum recovery of intestinal pathogens belonging to Salmonella and Shigella species. The selectivity of medium permits the use of fairly heavy inocula without danger of overgrowth of the Shigella and Salmonella by other micro-flora. For the routine examination of stool and urine specimens, it is recommended that other media such as MacConkey Agar, Bismuth Sulphite Agar etc. be used in conjunction with this medium. It can also be used to streak specimen from Selenite Broth cultures. This is particularly recommended for the detection of Shigella and Salmonella in the examination of rectal swabs and faeces. These organisms produce colourless colonies on this medium.

Product Specifications

Ingredients	Gms / Ltr
Peptone	10.000
Lactose	10.000
Sodium deoxycholate	1.000
Sodium chloride	5.000
Dipotassium phosphate	2.000
Ferric citrate	1.000
Sodium citrate	1.000
Neutral red	0.030
Agar	15.000

INSTRUCTION FOR USE

- Dissolve 45.03 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Avoid excessive or prolonged heating during reconstitution.
- Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Salmonella Typhi	6539	50-100	Luxuriant	>=50%	Colourless	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	>=10 ³	Inhibited	0%	-	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	Inhibited	0%	-	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Good	40-50%	Pink with bile precipitate	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Good-Luxuriant	>=50%	Colourless	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Good-Luxuriant	>=50%	Colourless	35-37°C	18-24 Hours
Shigella flexneri	12022	50-100	Good	40-50%	Colourless	35-37°C	18-24 Hours

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Light yellow to pink homogeneous free flowing powder
 Appearance of prepared medium: Reddish orange coloured, clear to slightly opalescent gel forms in Petri plates.
 pH (at 25°C) : 7.3±0.2



PRINCIPLE

The medium consists of Peptone and Beef extract which provides nitrogenous and carbonaceous compounds, long chain amino acids and other essential nutrients for the growth of bacteria. Dextrose is the fermentable carbohydrate and Pyridoxal is the co-factor for the decarboxylase enzyme. Bromo cresol purple and cresol red are the pH indicators in this medium. When the medium is inoculated with the dextrose fermenting bacteria, the pH is lowered due to acid production, which changes the colour of the indicator from purple to yellow. Acid produced stimulates decarboxylase enzyme. Decarboxylation of lysine yields cadaverine while putrescine is produced due to ornithine decarboxylation. Arginine is first hydrolyzed to ornithine which is then decarboxylated to form putrescine. Formation of these amines increases the pH of the medium, changing the colour of the indicator from yellow to purple.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding

This product is for research use only.