Leeds Acinetobacter Agar Base

M1839

Leeds Acinetobacter Agar Base is recommended for isolation of *Acinetobacter* species and for selection of MDR (Multi Drug Resistant) *Acinetobacter* with the addition of MDR selective supplement.

Composition**

Ingredients	Gms / Litre
Casein acid hydolysate	15.000
Soya peptone	5.000
Sodium chloride	5.000
Fructose	5.000
Sucrose	5.000
Mannitol	5.000
Phenylalanine	1.000
Ferric ammonium citrate	0.400
Phenol red	0.020
Agar	12.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 53.42 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and add the rehydrated contents of two vials of MDR Selective Supplement (FD271) or Leeds Acinetobacter Selective Supplement (FD335). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Acinetobacter species are ubiquitous bacteria that have been isolated from patients with nosocomial infection, environment, soil, and water. *Acinetobacter* is mostly found in every type of infections (3). There is an alarming situation as *Acinetobacter baumannii* is found resistant to commonly used antibiotics including beta-lactams and aminoglycosides (2,3). Immunocompromised patients requiring mechanical respirations are at more risk of infection by *Acinetobacter* species. (1) There are many media developed for the growth of *Acinetobacter*. Leeds Acinetobacter Medium was developed by Jawad et.al. at the University of Leeds(4).

Casein acid hydrolysate and soya peptone provide nitrogeneous and carbonaceous compounds, long chain amino acids and vitamins to the organisms. Sucrose, Fructose and Mannitol serve as the carbohydrate source. Sodium chloride maintains the osmotic balance. The phenylalanine serves as the substrate for enzymes which are able to deaminate it to form phenylpyruvic acid which reacts with ferric ions from ferric ammonium citrate resulting in brown black colonies by species like *Providencia*. The phenol red in the medium serves as a pH indicator. The acidity produced by utilization of carbohydrates results in yellow coloured colonies while the liberation of ammonia ions by the utilization of nitrogeneous material in the medium results in pink coloured colonies. Selective supplement helps ininhibiting contaminating microflora.

Quality Control

Appearance
Light yellow to pink coloured homogeneous free flowing powder

Gelling
Firm, comparable with 1.2% Agar gel

Colour and Clarity of prepared medium
Red coloured clear to slightly opalescent gel forms in Petri plate.

Reaction
Reaction of 5.34% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

M1839: Cultural characteristics observed with added supplement (FD271 or FD335) after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Cultural Response				
Acinetobacter baumannii ATCC BAA-1605	50 -100	luxuriant	>=50 %	pink mucoid colonies with pink color diffused into the medium
Acinetobacter baumannii ATCC BAA-747	>=10^3	inhibited	0 %	
Acinetobacter baumannii ATCC 19606	>=10^3	inhibited	0 %	
Acinetobacter haemolyticus ATCC 19002	>=10^3	inhibited	0 %	
Acinetobacter lwofii ATCC 15309	>=10^3	inhibited	0 %	
Escherichia coli ATCC 25922	>=10^3	inhibited	0 %	
Citrobacter freundii ATCC 8090	>=10^3	inhibited	0 %	
Enterococcus faecalis ATCC 29212	>=10^3	inhibited	0 %	
Burkholderia cepacia ATCC 25416	>=10^3	inhibited	0 %	

Storage and Shelf Life

Store below 30°C in tightly capped container and prepared medium at 2-8°C . Use before expiry date on the label.

Reference

1.Bergogne- Berezin, E., m. L. Joly-Guillou, and J.F. Vieu. 1987. Epidemiology of nosocomial infections due to Acinetobacter calcoaceticus . J. Hosp. Infect. 10:105-113

2.Montefour, K., et.al.2008. Acinetobacter baumanni : An EmergingMultidrug Resistant pathogen in critical care Nurse; 28:15-25

3.Valentine, S.C., et.al. 2008 Phenotypic and molecular characterization of Acinetobacter baumanni . Clinical isolates from nosocomial outbreaks in Los Angeles Country, California. J.Clin. Microbiology.; 46:2499-2507

4.Jawad A., Hawkey P.M., Description of Leeds Acinetobacter Medium, a New Selective and Differential Medium for Isolation of Clinically Important Acinetobacter spp., nad Comparison with Herella and Holton's Agar

Revision : 03/ 2016

CE