

DRCA (Differential Reinforced Clostridial Agar)



Medium used for the cultivation and enumeration of anaerobes, especially *Clostridium* spp. by the MPN method.

*Equally use with Reinforced Clostridial Differential Agar (MB-R0936) and NIER (MB-R0936N).

• CONTENTS (Liter)

Tryptone	5.0 g
Peptone	5.0 g
Beef Extract	8.0 g
Yeast Extract	1.0 g
L-Cysteine HCl	0.5 g
Soluble Starch	1.0 g
Dextrose	1.0 g
Sodium Acetate	5.0 g
Sodium Bisulfite	0.5 g
Ferric Ammonium Citrate	0.5 g
Resazurin Sodium	0.002 g
Agar	15.0 g
Final pH = 6.8 ± 0.2 at 25°C	

• PROCEDURE

Suspend 42.5 G of powder in 1 L of distilled or deionized water or suspend 85.0 G of powder in 1 L of distilled or deionized water for double strength. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Mix well. Pour into petri dishes.

• INTERPRETATION

DRCA (Differential Reinforced Clostridial Agar) is a medium used for the cultivation and enumeration of anaerobes, especially *Clostridium* spp. by the MPN method. Tryptone, peptone, beef extract, yeast extract and soluble starch provide nitrogen, carbon, amino acids and minerals. L-Cysteine HCl provides growth factors. Dextrose provides energy source. Sodium acetate is a selective agent. Sodium bisulfite and ferric ammonium citrate are components of H₂S indicator system. Resazurin sodium is an indicator of anaerobic condition with a pink color indicating the presence of oxygen. Agar is the solidifying agent.

• TECHNIC

Inoculate the plates with spreading the specimen on surface of the medium using a sterile loop. Incubate at 35 ± 2 °C for 48 ± 3 hours under anaerobic condition. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: beige

Prepared medium

Appearance: clear

Color: light pink

Incubation conditions: 35 ± 2 °C / 48 ± 3 hours under anaerobic condition

Microorganism	ATCC	Inoculum CFU	Growth	H ₂ S production
<i>Clostridium perfringens</i>	13124	50-100	good	+ (black colonies)
<i>Clostridium sporogenes</i>	11437	50-100	good	+ (black colonies)

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration are evident. Store prepared medium at 2 - 8°C.

• REFERENCES

1. Gibbs and Freame. 1965. J. Appl. Microbiol. 28:95
2. Attenborough Sheila J. and Scarr M. Pamela, 1957, J. Appl. Bacteriol.
3. Miller, Gerrett and Prickett. 1939. Food Res. 4:447.
4. Refer to the NIER.

• PACKAGE

Cat. No : MB-D0976 DRCA (Differential Reinforced Clostridial Agar)	500 G
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