

74303 Legionella Agar Base (BCYE Agar without L-cysteine, Base)

Legionella Agar Base with the addition of supplement is used for the presumptive identification of *Legionella* species.

Composition:

Ingredients	Grams/Litre
Charcoal activated	2.0
Yeast extract	10.0
Agar	13.0
Final pH (at 25°C) 6.9 ± 0.2	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:

Suspend 12.5 grams in 450 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add contents of 1 vial of Legionella BCYE Supplement without L-Cysteine (Cat. No. 43753).

Principle and Interpretation:

Legionella Agar initially called as F-G agar was modified by Feely et al (1) by replacing Starch with charcoal and casein hydrolysate with yeast extract which resulted in better recovery of *Legionella pneumophila* (2). Pasculle et al (3) reported that the addition of ACES (N-2-acetamido-2-amino ethane sulphonic acid; present in the supplement) buffer improved the nutritive value of medium. Edelstein (4) suggested addition of α-Ketoglutarate (in the supplement) to increase the sensitivity of this medium. The medium contains yeast extract to provide the necessary nitrogenous nutrients for *Legionella* growth. Activated charcoal nullifies toxic compounds that either accumulate in the medium during growth or develop during sterilization of medium. Addition of ACES buffer helps in maintaining proper pH of the medium for the optimal growth of *Legionella*.

Legionella species absolutely need L-Cysteine to growth. Presumptive *Legionella* species colonies can be subcultured onto Legionella Agar Base with Legionella BCYE Supplement without L-Cysteine (BCYE Agar without L-Cysteine) and BCYE Agar. Then all plates are incubated at 35°C for 48 to 72 hours and observed for growth. Colonies which grow on BCYE Agar, with L-Cysteine, but not on BCYE Agar without Cysteine, can be regarded as presumptive *Legionella* species.

BCYE Agar: Cat. No. 86558 + Supplements (Cat. No. 92394 + Cat. No. 94029)

BCYE Agar without Cysteine: Cat. No. 74303 + Supplement (Cat. No. 43753)

Cultural characteristics after up to 48-72 hours at 35°C.

Organisms (ATCC)	Growth*	Growth**
<i>Legionella pneumophila</i> (33153)	+++	-
<i>Legionella dumoffii</i> (33343)	+++	-
<i>E. coli</i> (25922)	-	++

Key : * = Growth on BCYE Agar

** = Growth on BCYE Agar without Cysteine



References:

1. Feely J. C., et al, 1978, J. Clin. Microbiol., 8(3):320.
2. Feely, Gibson, Gorman, et al, 1979, J. Clin. Microbiol., 10(4):437.
3. Psculle, Feely, Gibson et al, 1980, J. Infect. Dis., 141:727.
4. Edelstein, 1981, J. Clin. Microbiol., 14:298.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

The vibrant M, Millipore, and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. Detailed information on trademarks is available via publicly accessible resources.
© 2018 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.

