Leptospira Medium Base EMJH

Intended Use
Leptospira Medium Base EMJH is used for isolation , cultivation and maintenance of *Leptospira* species.

Summary
In 1816, Adolf Weil described the first recognized leptospiral infections in humans. Leptospirosis is a zoonotic disease, having its reservoir in wild, domestic, and peridomestic animals. Infection usually results from direct or indirect exposure to the urine of leptospiruric animals. Indirect exposure through contaminated water and soil accounts for most sporadic cases. Direct exposure occurs in pet owners, veterinarians and persons working with livestock. Direct culture of blood is the most reliable way to detect Leptospira during the first week of illness. After the first week of illness and for several months thereafter, leptospires may be isolated by direct culture of undiluted urine specimens. By autopsy, leptospires may be isolated from kidney and liver tissues as well as from blood and urine.

The basal medium and enrichment are prepared according to the formulations described by Ellinghausen and McCullough as modified by Johnson and Harris. Leptospira Medium EMJH was used in cultivation studies of *Leptospira* by the addition of Leptospira Enrichment

Principle
Leptospira Medium Base EMJH contains ammonium chloride, a nitrogen source, and thiamine, a growth factor. Sodium phosphate dibasic and potassium phosphate monobasic are buffering agents. Sodium chloride maintains the osmotic balance of this formula. Leptospira Enrichment EMJH contains albumin, polysorbate 80 and additional growth factors for *Leptospira*. Leptospira Enrichment supplement provides long chain fatty acids as the carbon, energy source and vitamin for the growth of *Leptospira.*

Formula*

Ingredients	**g/L**
Disodium phosphate	1.00
Monopotassium phosphate	0.30
Sodium chloride	1.00
Ammonium chloride	0.25
Thiamine	0.005
Final pH (at 25°C)	7.5 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 2.55 g of the powder in 900 mL distilled water.
2. Mix to dissolve the medium completely.
3. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

4. Cool to room temperature and aseptically add 100 ml of sterile Leptospira Enrichment. Mix well and dispense aseptically in sterile tubes or bottles as desired.

Quality Control

Dehydrated appearance: White coloured, homogenous, free flowing powder.
Prepared Appearance: Basal medium: Colourless clear solution; After addition of Leptospira Enrichment: Light yellow coloured clear solution in tubes.
Culture Response: Cultural characteristics was observed after an incubation of 30 ± 2°C for up to 7 days.

Organism (ATCC)	**Growth**
Leptospira interrogans serotype australis (23605)	Good
Leptospira interrogans serotype canicola (23470)	Good
Leptospira kirschneri (23604)	Good

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Elliott, S.H. 1980. Discussion and clinical diagnosis of Leptospirosis J. Am. Med. Tech. 42:37-44.
2. Faine, S. (ed.). 1982. Guidelines for the control of leptospirosis. W. H. O. Offset publication no. 67. World Health Organization, Geneva.
3. Weyant, R.S., S.L. Bragg, and A.F. Kaufmann. 1999. Leptospira and Leptonema, p. 739-745. In Murray, P.R., E.J. Baron, M.A. Pfaller, F.C. Tenover and R.H. Yolken (ed.). Manual of clinical microbiology, 7th ed. ASM Press, Washington, D.C.
4. Ellinghausen, Jr., H.C., and W.G. McCullough. 1965. Nutrition of Leptospira pomona and growth of 13 other serotypes: fractionation of oleic albumin complex (OAC) and a medium of bovine albumin and polysorbate 80. Am. J. Vet. Research. 26:45-51.
5. Johnson, R., and V.G. Harris, 1967. Differentiation of pathogenic of leptospires. J. Bacteriol. 94:27-31.
6. Rule, P.L., and A.D. Alexander. 1986. Gellan gum as a substitute for agar in leptospiral media. J. Clin. Microbiol. 23:500-504.
7. Isenberg, H.D. (ed.). 1992. Clinical microbiology procedures handbook. American Society for Microbiology, Washington, D.C.
8. Koneman, E.W., S.D. Allen, V.R. Dowell, Jr, W.M. Janda, H.M. Sommers, and W.C. Winn, Jr. 1988. Color atlas and textbook of diagnostic microbiology, 3rd ed. J.B. Lippincott Company, Philadelphia, PA.
9. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	**Product description**	**Pack Size**
201120160500	Dehydrated Culture Media	500 g