



Sautons Fluid Medium Base

M1276

Sautons Fluid Medium is used for the cultivation and enumeration of Mycobacteria in accordance with I.P.

Composition**

Ingredients	Gms / Litre
Ferric ammonium citrate (brown)	0.0167
L-Asparagine	1.330
Citric acid	0.660
Magnesium sulphate, 7H ₂ O	0.166
Dipotassium hydrogen phosphate	0.177
Sodium dihydrogen phosphate	0.056
Sodium chloride	0.035
Polysorbate 80	0.833
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 3.19 grams of dehydrated medium in 1000 ml distilled water containing 20 ml glycerol. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes. Mix well and dispense as desired.

Principle And Interpretation

Dilute Sautons Medium is used for determining the number of colony forming units (CFU) in vaccines of known potency as per I.P. (1, 2).

As per the I.P. method, contents of the freeze-dried vaccine for human use are reconstituted with the diluent stated on the vial. Contents of 5 such containers are pooled and three dilutions of the pooled vaccine are prepared using Sautons Fluid Medium so as to obtain an optimum of 100, 40 and 20 colonies from an inoculum of 0.2 ml. An inoculum of 0.2 ml from each dilution is further inoculated onto L.J. Medium (M162) slant surface and incubated at 37°C for 28 days. The vaccine passes the test if 0.1 ml of the reconstituted vaccine contains between 1 x 10⁵ and 33 x 10⁵ colony forming units.

Salts like ferric ammonium citrate and magnesium sulphate provide inorganic ions and nitrogen sources essential for the growth of Mycobacteria. Asparagine is added to promote the initiation of growth and increase the growth rate.

Quality Control

Appearance

White to cream homogeneous free flowing powder

Colour and Clarity of prepared medium

colourless clear to slightly opalescent solution

Reaction

Reaction of 0.32% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M1276: Cultural response observed after an incubation at 35-37°C for 2 weeks.

Organism	Growth
Cultural Response	
<i>Mycobacterium smegmatis</i>	good
ATCC 14468	
<i>M. tuberculosis</i>	good
H37RV(25618)	

Storage and Shelf Life

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

Reference

1. Indian Pharmacopoeia, 1996, Ministry of Health and Family Welfare, Govt. of India.
2. Atlas R. M., 1993, Handbook of Microbiological Media, Parks L (Ed.) CRC Press, Inc.

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