

## Technical Information

### Inactivator Broth, Modified (Twin Pack)

**Product Code: DM 2724**

**Application:** -Inactivator Broth, Modified (Twin Pack) is used for isolation and detection of microorganisms contaminating clean surfaces in environmentally controlled areas and accidentally contaminated raw material samples of pharmaceutical formulations.

### Composition\*\*

Ingredients	Gms / Litre
<b>Part A</b>	-
Casein enzymic hydrolysate	17.000
Papaic digest of soyabean meal	3.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	1.250
Potassium dihydrogen phosphate	1.250
Dextrose	2.500
Soya lecithin	3.000
Histidine HCl	1.000
Cysteine HCl	1.000
<b>Part B</b>	-
Tween 80	30.000
Final pH ( at 25°C)	7.3±0.1

\*\*Formula adjusted, standardized to suit performance parameters

### Principle & Interpretation

In activator broth, modified is used for detection of microorganisms by inactivation of antimicrobial agents. This medium contains casein enzymic hydrolysate and papaic digest of soyabean meal which provides necessary nitrogenous sources and other nutrients required for microbial growth. Soya Lecithin and Tween 80 act as a neutralizing agent by inactivating many residual disinfectants. Soya lecithin neutralizes quaternary ammonium compounds and Tween 80 neutralizes phenols, hexachlorophene and formalin (1). Histidine and Cysteine acts as a detoxicant, it neutralises toxic chemicals and also act as reducing agent. If sample is being cultured from a swab, the swab can be directly dipped in the medium. The tubes should be incubated at 37±20°C for 48 hours for bacteria and 25-30°C for 72 hours for fungi. When incubation has been completed growth may be checked and compared with an uninoculated control.

### Methodology

Suspend 35.0 grams of dehydrated media powder **Part A** in 970 ml in distilled water. Add 30 ml of Tween 80 (**Part B**) to the medium. Mix thoroughly & heat with frequent agitation to dissolve the medium completely. Dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity

Light yellow coloured slightly opalescent solution without any precipitate

#### Reaction

Reaction of 3.5% aqueous solution containing 3 ml Tween 80 at 25°C. pH : 7.3±0.1



Dehydrated Culture Media  
Bases / Media Supplements

#### pH Range

7.20-7.40

#### Cultural Response

DM 2724: Cultural characteristics (i) for bacteria after at 35-37°C for 24-48 hours (ii) for fungi at 25-30°C for 48-72 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<b>Cultural Response</b>			
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	>=70%
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good-luxuriant	>=70%
<i>Bacillus subtilis</i> ATCC 6633	50-100	good-luxuriant	>=70%
<i>Salmonella Typhi</i> ATCC 6539	10 <sup>3</sup>	inhibited	0%
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	good-luxuriant	>=70%
<i>Bacteroides vulgatus</i> ATCC 8482	50-100	good-luxuriant	>=70%
<i>Aspergillus niger</i> ATCC 16404	50-100	good-luxuriant	>=70%

## Storage and Shelf Life

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

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

1. British Pharmacopoeia, 2007, The Stationery Office British Pharmacopoeia.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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