

For Research Use Only  
Store at Room Temperature



## **INSTRUCTION**

# **MANUAL**

**IBI Scientific TransMedia Kit**

IB47470, IB47471, IB47472

# IBI Scientific TransMedia Kit



## Specimen Transport Medium

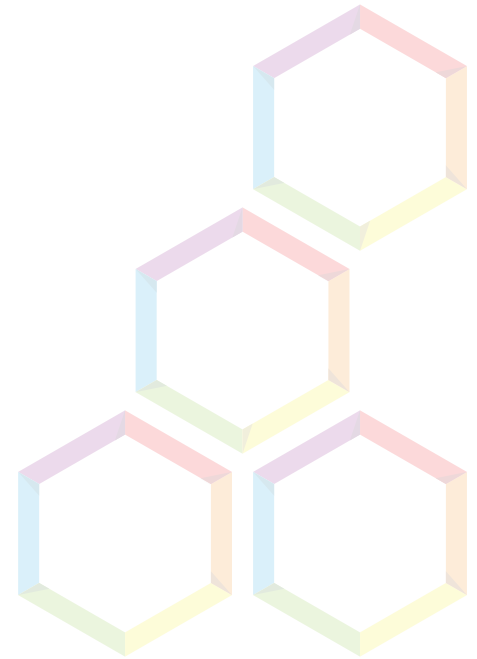
*For research use only*

### Sample

Nasopharyngeal swabs  
Oropharyngeal swabs  
Sputum specimens

### Functions

Virus/bacteria killing  
Nucleases inactivation  
RNA stabilization  
Sample long term storage  
Room temperature transport  
Human cfDNA/cfRNA stabilization



### Introduction

The IBI TransMedia Kit consists of a 8 mL storage tube with a cap containing 1 mL of the stabilization solution. These components are intended to inactivate virus and bacteria, lyse cells, lyse lipid membranes, denatures proteins, inactivates enzymes, and stabilize viral and bacterial DNA/RNA. The transport medium is designed for storage of specimens between 2-25 °C.

### Kit Contents

Product Name	IB47470	IB47471	IB47472
IBI TransMedia	1 ml x 10 tubes	1 ml x 100 tubes	1 ml x 400 tubes

### Safety Measures

IBI TransMedia contains Guanidine salts can form highly reactive compounds and release cyanide gas when combined with bleach (sodium hypochlorite). If the split medium containing potentially infectious agents, clean the affected area first with laboratory detergent and water, and then with 1% (v/v) sodium hypochlorite. During the procedure, always wear a lab coat, disposable gloves, and protective goggles.

### Sample Preservation Protocol

#### Protocol 1

#### For nasopharyngeal and oropharyngeal swab sample

- Collect the sample using a nasopharyngeal or oropharyngeal swab according to your internal procedures.
- Place the swab in the TransMedia Tube and break the swab shaft at the marked breaking point. Make sure the swab tip is completely immersed into the solution.
- Close the cap.
- Ready for transport or store at low temperature.

#### Protocol 2

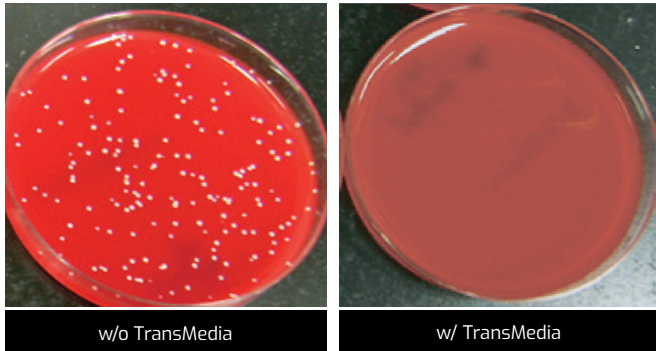
#### For sputum sample

- Add the sputum to the IBI TransMedia Tube (V/V=1:2, ex. add 0.5 ml sputum to 1 ml medium).
- Close the cap and vortex for 1 minute.
- Ready for transport or store at low temperature.

# IBI Scientific TransMedia Kit

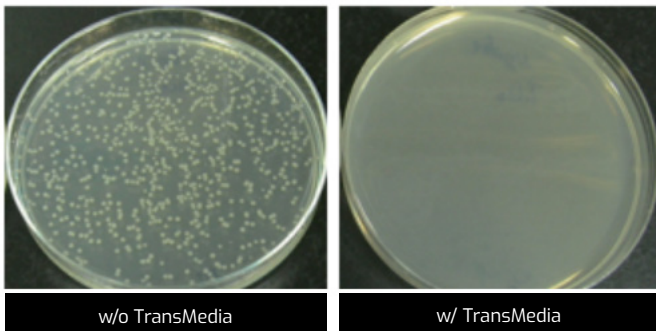


## Test data Bacteria Killing



### Test 1

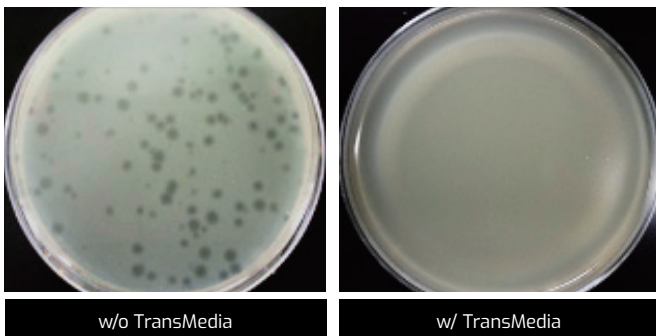
*Staphylococcus aureus* (Gram-positive) were grown to 0.8 of OD600. A 10,000x dilution was made, the same amount of cells were placed in TransMedia and treated at room temperature for 1 hour and without treatment were plated on BAP plates and incubated for 48 hrs. The results showed that the *Staphylococcus aureus* cells can be completely killed by IBI TransMedia Kit.



### Test 2

*Escherichia coli* (Gram-negative) were grown to 0.8 of OD600. A 10,000x dilution was made, the same amount of cells were placed in TransMedia and treated at room temperature for 1 hour, and without treatment, were plated on LB plates and incubated for 18 hrs. The results showed that the *Escherichia coli* cells can be completely killed by IBI TransMedia Kit.

## Virus Killing



The MS2 phage (RNA, non-enveloped, icosahedral virus) with TransMedia treatment and without treatment were mixed with the cells and pour to a plate with a lawn of actively growing compatible bacteria. After overnight growth, the plaques can be visualized, quantitated, and then titer determined. The results showed that the MS2 phage can be completely killed by IBI TransMedia.

## RNA Stability

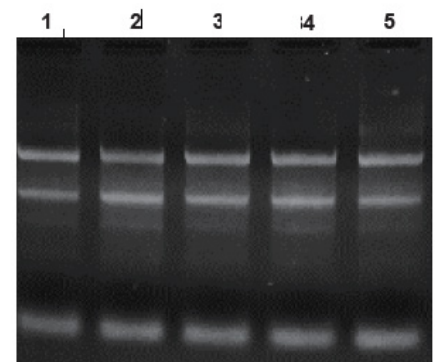
IBI TransMedia provides long-term storage of *E. coli* total RNA. It efficiently protects all RNA species (23S RNA, 16S, RNA, mRNA, and 5S RNA/tRNA) from nucleases attacking.

Lane 1: Original RNA.

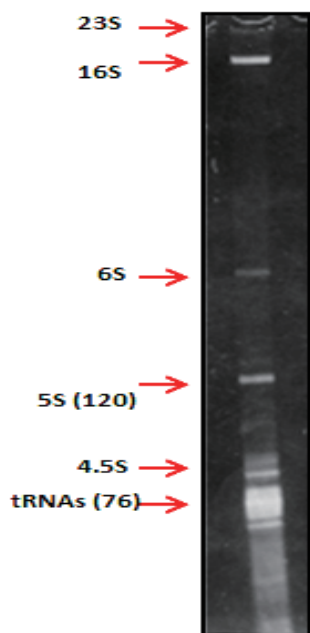
Lane 2: RNA stored in the IBI TransMedia for 1 day at room temperature. Lane 3:

RNA stored in the IBI TransMedia for 2 days at room temperature. Lane 4: RNA

stored in the IBI TransMedia for 3 days at room temperature. Lane 5: RNA stored in the IBI TransMedia for 7 days at room temperature.

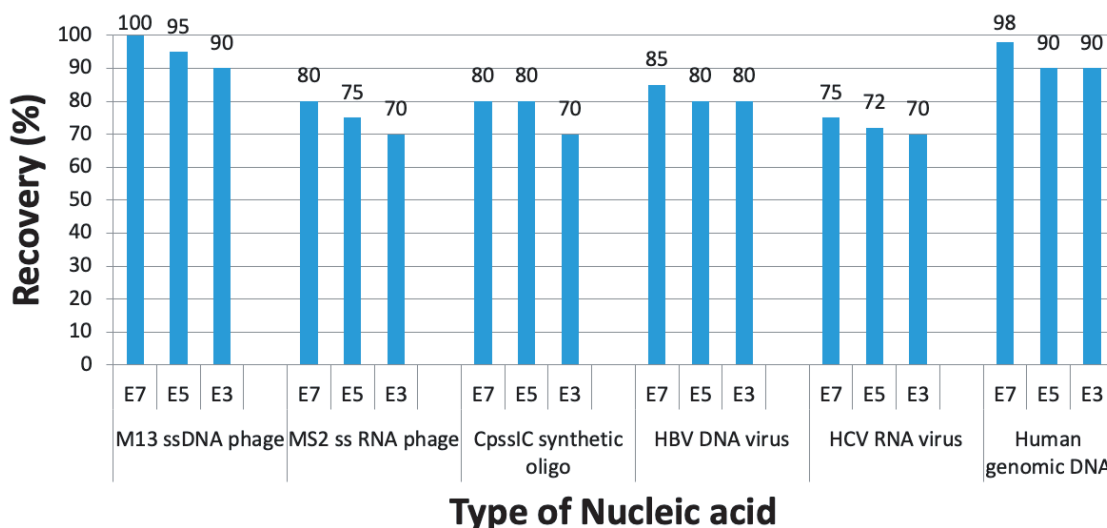


## RNA integrity



RNA purified by IBI TransMedia showed high quality and excellent RNA integrity. *E. coli* cells were lysed and stored in IBI TransMedia for 7 days. RNA were purified. RNA species were separated on a 6% semi-denaturing PAGE. RNA species were cut out from the gel, purified, and were confirmed by Northern blot hybridization using P32-labeled oligo probes specific to various RNA species. Various RNA were also demonstrated by RT-PCR assays. These experiments demonstrate that various RNA species (23S, 16S, 6S, 5S, 4.5S, and 4S (tRNA) can be protected from RNase attack in IBI TransMedia. Gel results also showed the RNA were kept in an excellent integrity.

## Compatible to spin column and magnetic bead nucleic acid purification kits



Different copy numbers of nucleic acid from M13 DNA phage, MS2 RNA phage, long synthetic oligo DNA, HBV DNA virus, HCV RNA virus, and human genomic DNA were spiked into IBI TransMedia. The nucleic acid were then purified from IBI TransMedia using spin column and magnetic beads format kits individually. The nucleic acid recovery were determined by qPCR or qRT-PCR. The results showed that high yield of nucleic acid can be recovered (70-100%) using spin column and magnetic beads kits from IBI TransMedia.

