



Collection & transport

Thermo Scientific InhibiSURE Viral Inactivation Medium SmartNote Series

Part 1 – Viral Inactivation Medium – An Introduction

Ensuring safety at point of care (POC) testing, during transport of viral test samples and within the testing laboratory has never been more important than during the SARS-CoV-2 pandemic. The necessity to deliver reliable results in the shortest possible time is paramount and continues to drive the scientific community to develop increasingly sophisticated technology.

Viral test samples containing infectious respiratory viruses such as SARS-CoV-2 may pose a risk of infection to healthcare personnel during sample extraction, in transit and within the testing environment. On arrival at testing laboratories, active viral samples are typically handled in a microbiological safety cabinet or treated with heat or chemicals to inactivate the virus.

Collection devices that inactivate viruses may be comprised of a formulation that is potentially hazardous to humans or the environment. The development of Thermo Scientific™ InhibiSURE™ Viral Inactivation Medium enables safe collection, transport and handling of SARS-CoV-2 samples due to inactivation of the virus along with a non-hazardous formulation.

What is InhibiSURE Viral Inactivation Medium?

InhibiSURE Viral Inactivation Medium (VIM) is a liquid specimen collection and transport medium used to inactivate SARS-CoV-2. The device is intended to be used with unprocessed nasal, nasopharyngeal and throat swabs. Viral Inactivation Medium should be used when sampling patients suspected of being infected with SARS-CoV-2 (COVID-19). It is suitable for use with molecular testing methods including column, and bead capture RNA purification and qPCR.

How does Viral Inactivation Medium work?

The inactivation liquid rapidly destroys the parts of the virus needed to enter and infect human cells. Because of this, the sample can be safer to handle, transport and test in the laboratory and the need for heat or chemical inactivation, is removed. The viral nucleic acid (RNA) is preserved by the medium for detection in molecular testing assays (PCR).

Why should I switch from Viral Transport Medium (VTM) or Saline to Viral Inactivation Medium?

Viral Transport Medium is designed to keep viruses and other obligate intracellular pathogens viable. Because of this, there is still a risk of infection when transporting or handling specimens. In a laboratory, unless handled in a microbiological safety cabinet, samples contained in Viral Transport Medium are typically subject to an inactivation step such as heat or chemical treatment prior to testing, increasing laboratory technicians' workload and sample processing time.

Saline does not inactivate viruses so must be treated in a similar way to Viral Transport Medium. Because a Viral Inactivation Medium inactivates viruses within the sample tube, it does not require further inactivation.

How does InhibiSURE Viral Inactivation Medium compare to the other inactivation media?

Other inactivation media typically rely on a formulation that is potentially hazardous to inactivate viruses. Many contain a guanidine-based chemical that, if mixed with bleach or strong acids, could release toxic cyanide gas. Thermo Fisher Scientific developed the InhibiSURE Viral Inactivation Medium formula to be non-hazardous, whilst maintaining superior levels of SARS-CoV-2 inactivation and RNA stability.

What viruses does InhibiSURE Viral Inactivation Medium inactivate?

InhibiSURE Viral Inactivation Medium is validated for inactivation of SARS-CoV-2, the virus that causes COVID-19.



Want to find out more? Contact our Microbiology experts today microbiology@thermofisher.com or visit thermofisher.com/viraltesting

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