MagCTL Collection Tube (MXCT-100)

Frequently Asked Questions

Q: What does MagCTL Collection Tube do?

A: MagCTL allows for the collection, stabilization, and safe transport of samples at room temperature. It simultaneously lysis collected cells and nucleic acids are released into the transport medium. Direct lysis of the released nucleic acids inactivates pathogens making sample handling and processing safer, therefore eliminating the need for controlled containment. Additionally, the release of nucleic acids means that the lysis step is skipped during sample extraction.

Q: How can one capture or isolate released nucleic acids in the transport medium?

A: Use magnetic beads (MAG-S2, MagBio Genomics Inc.) to capture the released nucleic acids and wash the beads with the wash buffer and elute the nucleic acids. MagBio offers a kit with no lysis buffer that captures nucleic acids for downstream application - MagCTL Nucleic Acid Capture Kit Contact info@magbiogenomics.com or visit our website for more information.

Q: What platforms have been validated for use with the MagCTL Collection Tube?

A: The following automated magnetic bead extraction system have been validated for use with the MagCTL Collection Tube - NAP16 (MagBio) Kingfisher Flex (Thermofisher), IsoPure 96 (Accuris). Please note that it is the end user's responsibility to validate tube's performance with downstream extraction, purification and detection platforms.

Q: What Swabs can be used with MagCTL?

A: The preferred swab is a sterile flocked swab. This is the swab that was validated with MagCTL Collection Tube. Flocked swabs collect as many cells as possible from the patient when compared with other swabs. Do not use cotton swabs with wooden shaft. 3D printed swabs have not been tested with MagCTL Collection Tube.

Q: How do I collect samples into the MagCTL Collection Tube?

A: Follow standard procedures for safe swab sample collection. Make sure that the sample swab is fully immersed in the stabilizer to avoid drying during transportation. Vortex samples briefly prior to nucleic acid capture.

Q: How do I dispose of samples collected in the MagCTL Collection Tube?

A: Please follow your laboratory's standard procedure for sample disposal.

Q: Can I use any extraction kit to capture nucleic acids from an aliquot of a sample collected in the MagCTL Collection Tube?

A: Samples collected using the MagCTL Collection Tube should be processed using the MagCTL Nucleic Acid Capture kit offered by MagBio Genomics. However, if customers want to use their own kit, they will need to buy a magnetic bead-based kit and not use the lysis buffer in the lysis step since the cells are already lysed by the proprietary transport medium in MagCTL Collection Tube. Add 200µL of sample aliquot to 500µL of Isopropanol and the magnetic beads. Following this, they will perform washes and elution steps as recommended by the manufacturer. If the customer is not using MagBio's validated kit, then it is the responsibility of the customer to validate their chosen extraction kit with MagCTL Collection Tube.

Q: Can I use bleach as a disinfectant in testing platforms that require bleach disinfection when using MagCTL?

A: YES! The MagCTL Collection Tube is GUANIDINE FREE and contains a simple detergent that does not interact with bleach during disinfection. The FDA recommends avoiding sample collection devices that contain guanidine since it can emit cyanide gas when exposed to bleach.

Q: Can I perform direct PCR on samples collected in the MagCTL Collection Tube without nucleic acid capture or isolation?

A: NO! The amount of salts and detergent in the transport medium is too high for direct PCR, this may act as inhibitors in PCR reaction. Therefore, nucleic acids need to be captured and washed before being used for any downstream applications.

Q: How long can I keep my sample at Room Temperature?

A: For DNA based pathogens, samples can be kept at RT for 45 days. For RNA based pathogens, samples are stabile for upto 8 days at RT. Samples can be bio-banked for long term storage and it should be noted that samples will not be affected by multiple freeze thaw cycles. In-house studies have shown longer stability of RNA compared to other transport media at ambient temperatures.

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