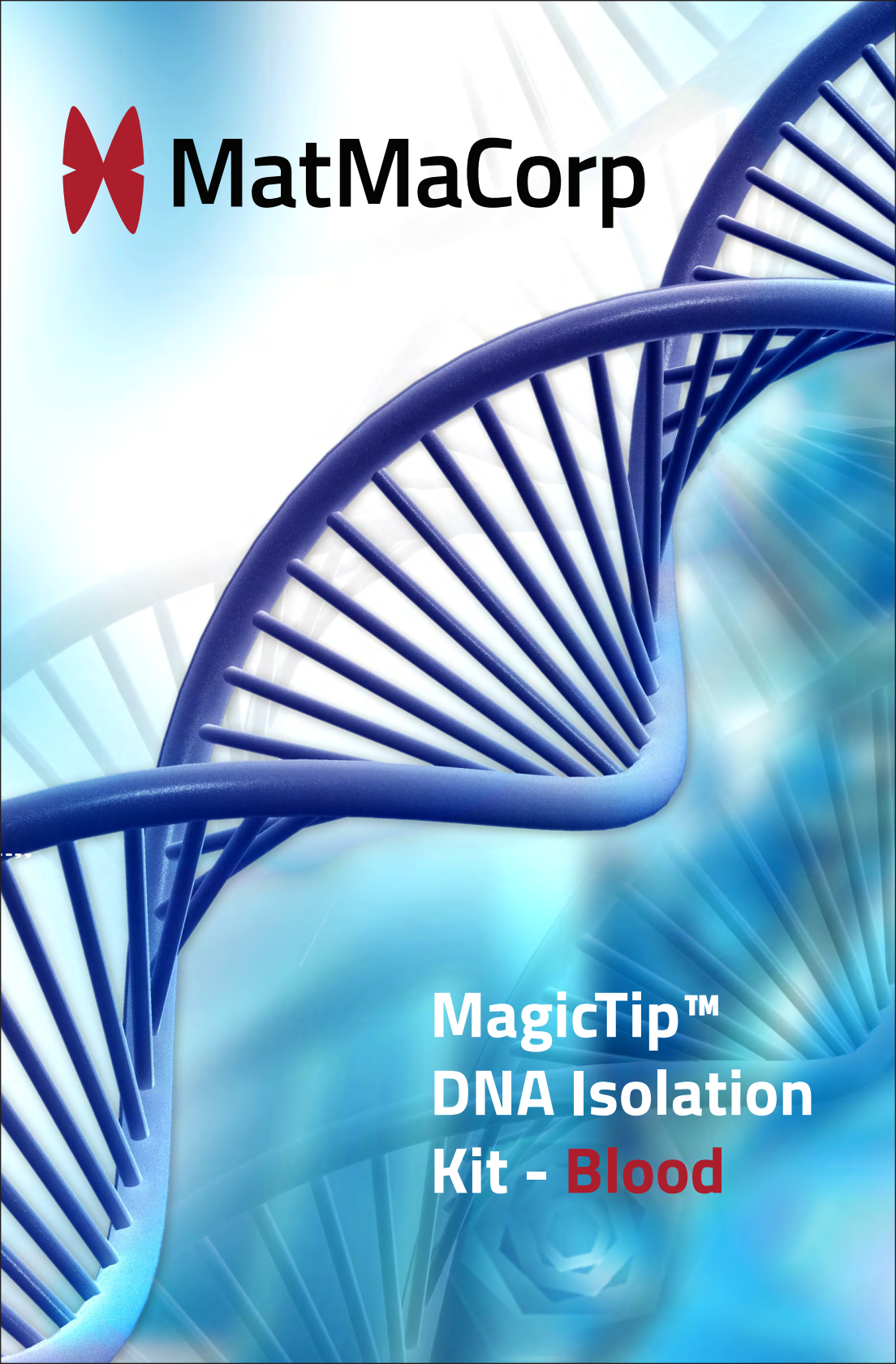

MatMaCorp
MagicTip™
DNA Isolation
Kit - Blood

MagicTip™ DNA Isolation Kit - Blood

Table of Contents

Manual: 1st Edition - January 2018

Patent Pending

Introduction

The MagicTip™ Blood DNA Isolation Kit offers a quick and simple procedure that requires only a small volume of sample material. Under the right conditions, DNA from blood is bound to the MagicTip™. The binding is reversed in the elution step yielding DNA for use in MatMaCorp's Solas 8™ or other applications such as PCR. The simplicity of this system allows the kit to be used in a variety of settings inside or outside of the laboratory.

In about 10 minutes, DNA can be isolated from as little as 10µL (2µL for nucleated blood) or up to 50µL of blood. No special equipment or skills are necessary to use this kit.

Kit storage

The MagicTip™ Blood kit can be stored at room temperature. Exposing components of this kit to high temperatures (above 90°C) or freezing should be avoided. Use of this kit is not recommended after the expiration date.

Disclaimer

This product has been developed and designed for research purposes only. It is not intended for diagnostic use. Material Safety Data Sheets (MSDS) for all MagicTip™ Isolation Kits can be found at *www.matmacorp.com.*

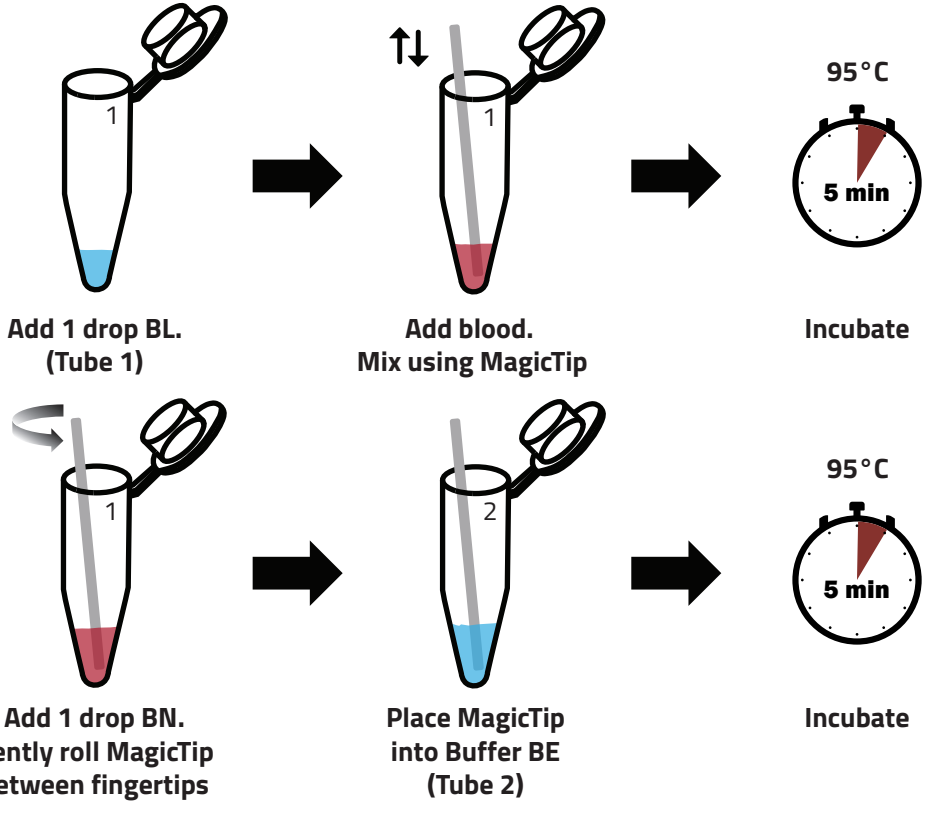
NOTE: PLEASE READ THIS ENTIRE MANUAL INCLUDING THE DETAILED PROCEDURE, BEFORE BEGINNING THE PROTOCOL

Kit Contents

100 of each:
Tube 1
Tube 2
MagicTips™

1 of each:
Dropper bottle with Lysis Buffer BL
Dropper bottle with Neutralizing Buffer BN
Dropper bottle with Elution Buffer BE
Disposable tube rack

Overview



MagicTip™ Blood Kit Protocol

This protocol has been optimized to isolate DNA from fresh or frozen blood samples. For DNA isolation from other sample types, we recommend the appropriate MagicTip™ kit. Although the procedure below is for a single sample, multiple samples may be processed together if desired.

Materials needed by user:

- A heat block (or other heat source) capable of 95°C and compatible with 1.5mL Eppendorf centrifuge tubes.
- Syringe or other tool for dispensing blood sample. If available, a pipette may be used.

Preparation:

1. One Tube 1 and one Tube 2 are needed for each sample; label this pair with the sample ID and place tubes in the paper tube rack provided.

2. Place one drop of Lysis Buffer BL into tube 1.

3. Place one drop of Elution Buffer BE into tube 2.

4. Repeat steps 1-3 for remaining samples.

NOTE: If you are using the Solas 8™ for DNA isolation, please refer to the appropriate protocol on the screen of the device. Alternatively, you can find a PDF copy of the protocol on the MagicTip™ product page at *www.matmacorp.com*.

Procedure:

1. Add one drop of blood (approximately 20µL) to tube 1 that has lysis buffer BL.

2. Place a fresh, unused MagicTip™ in tube 1 and mix solution vigorously with the MagicTip™ for about 6 seconds to evenly lyse sample.

   NOTE: Gloves are recommended to prevent contamination. It is important that the end of the MagicTip™ that is handled with bare fingers is not the end used for DNA binding. This MagicTip™ should remain in the tube during all steps until instructed otherwise.

3. Heat tube to 95°C for 5 minutes.

4. Remove tube from heat and place in tube rack.

5. Add one drop of Neutralizing Buffer BN to sample and gently mix for about 3 seconds. **DO NOT MIX VIGOROUSLY** as this may affect DNA yield.

6. Gently scrape MagicTip™ against the rim of tube 1 to remove any visible cellular debris and place into tube 2 with the same sample ID. Discard tube 1.

   NOTE: At this point the MagicTip™ normally has a reddish hue. If any cell debris is stuck to the MagicTip™, gently scrape off all the material using the rim of Tube 1 before placing the MagicTip™ into Tube 2.

7. To elute DNA from MagicTip™, heat tube 2 for 5 minutes at 95°C.

8. Remove tube 2 from heat and immediately agitate MagicTip™ vigorously for 5-10 seconds to release DNA into the solution.

9. Discard MagicTip™.

10. DNA preparation is complete.

Troubleshooting

Problem	Cause	Solution
Low Yield	Buffer BL and samples not mixed well	Mix buffer and blood solutions very vigorously for about 6 seconds or more.
	Incorrect temperature	Check that incubation temperatures are correct before loading sample tubes onto heat source.
	Low volume of blood	If blood sample is under 5uL, yield will decrease. Increase the volume of blood if possible (up to 20µL).
	Decreased elution	MagicTip™ not agitated vigorously enough in tube 2 following final incubation. Tube 2 should be incubated for at least 5 minutes at 95°C but can be incubated for up to 15 minutes for a slight increase in DNA yield.
Problem	**Cause**	**Solution**
Low Purity	Too much debris carried over from binding	If there is an excess amount of material stuck to the MagicTip™ after Buffer BN addition, the MagicTip™ can be gently scraped against the side of the tube to remove the material.

Contact Us:

(1) 402-742-0357 (Main)
(1) 402-387-7900 (Customer Support)

www.matmacorp.com

info@matmacorp.com