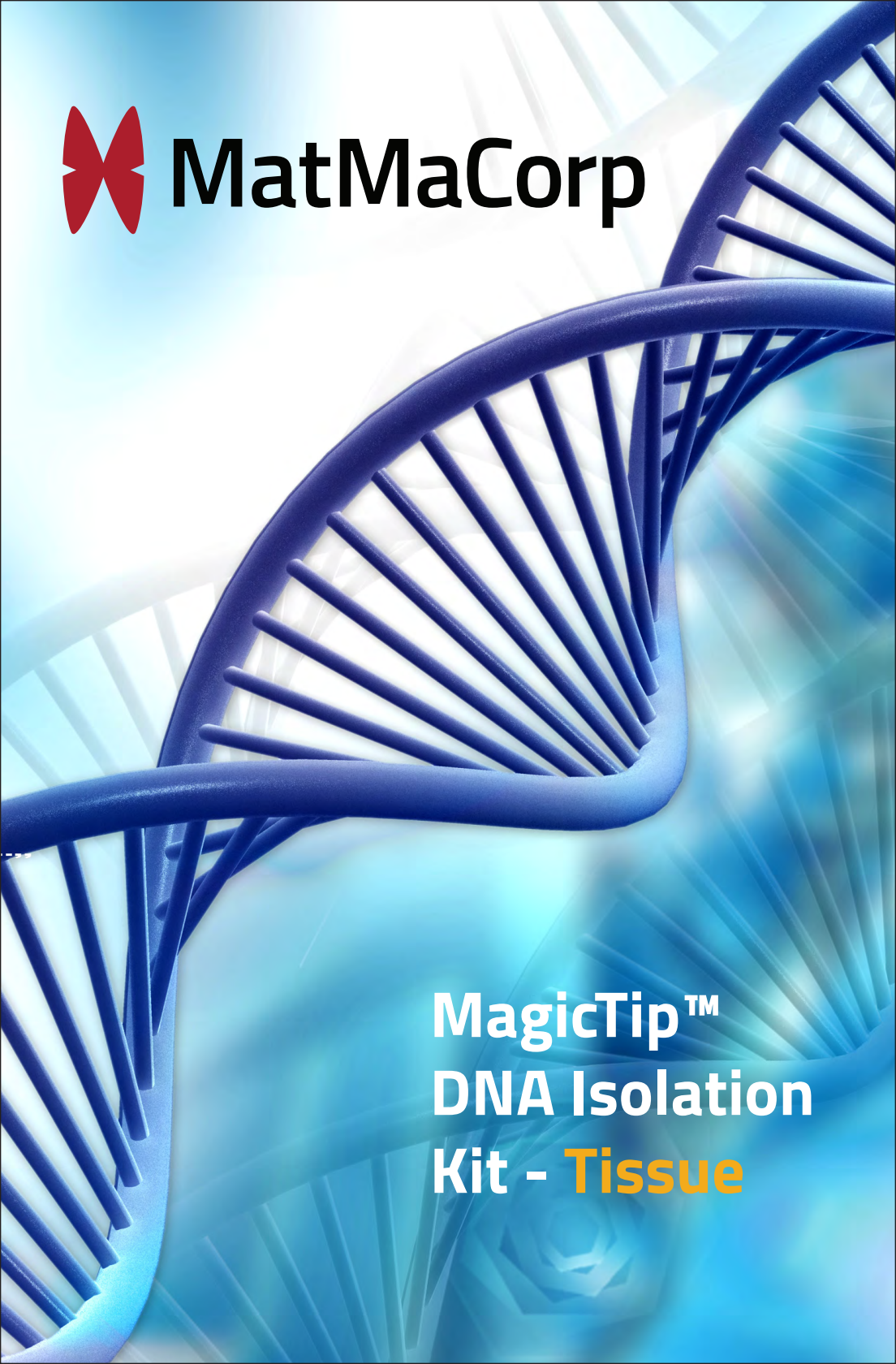
MatMaCorp
MagicTip™
DNA Isolation
Kit - Tissue

MagicTip™ DNA Isolation Kit - Tissue

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Manual: 1st Edition - January 2018

Patent Pending

Introduction

The MagicTip™ Tissue DNA Isolation Kit offers a quick and simple procedure that only requires a small amount of sample material. Under the right conditions, DNA from the sample 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. No special equipment or skills are necessary to use this kit.

In about 10 minutes, DNA can be isolated from small amounts of tissue from a variety of sources including: muscle, skin, organs, or connective tissue. This kit can also process ear tag punches.

Tissue from the following species have been successfully tested:

- Chicken
- Cow
- Pig
- Fruit Fly
- Turkey
- Zebrafish
- Rabbit
- Mouse

Kit storage

The MagicTip™ Tissue DNA Isolation kit can be stored at room temperature. Exposing components of this kit to high temperatures (above 90°C), and 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.*

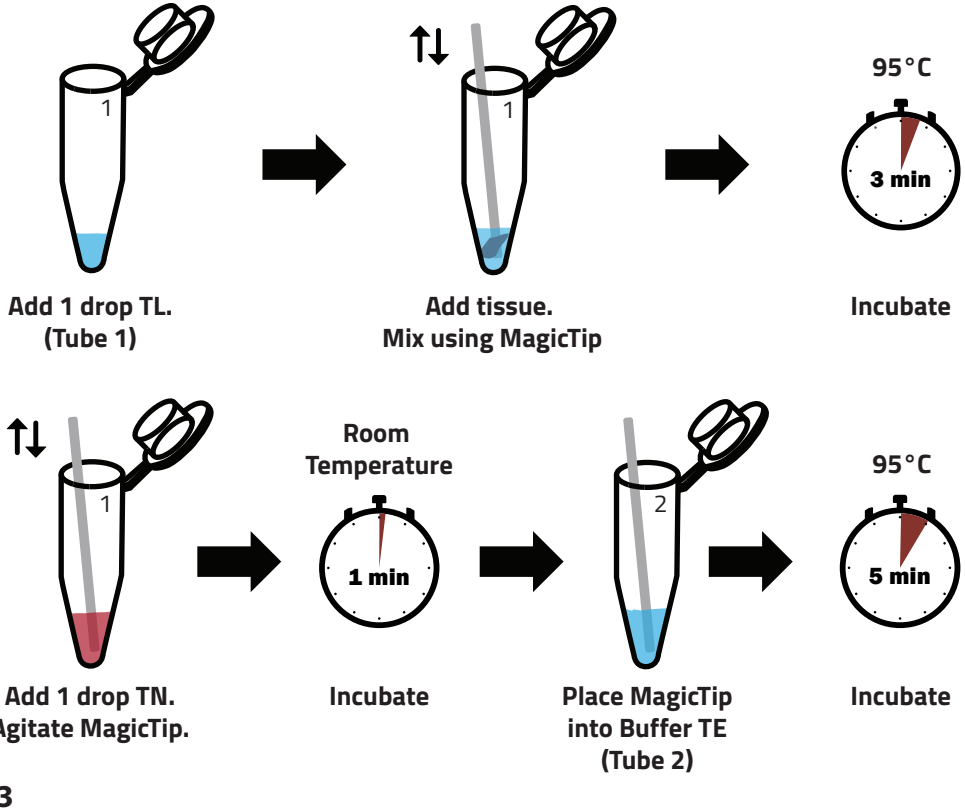
NOTE: PLEASE READ THIS ENTIRE MANUAL INCLUDING THE DETAILED PROCEDURE, BEFORE BEGINNING THE PROTOCOL

Kit Contents

100 of each:
Tube 1
Tube 2
MagicTips™

1 of each:
Dropper bottle with Lysis Buffer TL
Dropper bottle with Neutralizing Buffer TN
Dropper bottle with Elution Buffer TE
Disposable tube rack

Overview



MagicTip™ Tissue Kit Protocol

This protocol has been optimized to isolate DNA from fresh or frozen tissue samples. For DNA isolation from other sample types, please use 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 1.5 mL Eppendorf centrifuge tubes.

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 Buffer TL into tube 1.

3. Place one drop of Buffer TE 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.*

NOTE: If using tissue preserved in formalin (such as ear punches from the AllFlex® ear tag system), each sample must be washed by swishing the sample around in 100% ethanol, or if ethanol is not available, water will suffice. Repeat wash five times before continuing.

Procedure:

1. To tube 1 that has Lysis Buffer TL, add a piece of tissue that is approximately 30mg. Alternatively, a MagicTip™ could be used to scrape off bits of tissue from a larger piece, approximately the size of this circle: ●

   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.

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: Tissue should remain in the solution and not stuck to the walls of the tube or on the MagicTip™.

3. Heat tube to 95°C for 3 minutes.

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

5. Add one drop of Neutralizing Buffer TN to tube 1 and mix vigorously with MagicTip™ for 6 seconds.

6. Incubate at room temperature for 1 minute in tube rack to allow DNA to bind to MagicTip™.

7. Remove MagicTip™ from tube 1 and place into tube 2 with the same sample ID and discard tube 1.

   NOTE: If any amount of tissue is stuck to the MagicTip™, gently scrape off all the visible material using the rim of tube 1 before placing the MagicTip™ into tube 2.

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

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

10. Discard MagicTip™.

11. DNA preparation is complete.

Troubleshooting

Problem	Cause	Solution
Low Yield	Buffer TL and samples not mixed well	Mix buffer and tissue sample very vigorously for about 6 seconds or more.
	Incorrect temperature	Check that incubation temperatures are correct before loading sample tubes onto heat source.
	Excessive tissue or too little tissue	If too much material is added to tube 1, DNA will not bind effectively. Samples greater than 50mg will experience a decreased yield. Samples less than 5mg yields insufficient amount of DNA.
	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 TN addition, the MagicTip™ can be gently scraped against the side of the tube to remove the material.

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