

Genaxxon Bioscience Tissue DNA Prep Kit

**Magnetic Beads Tissue DNA Prep Kit for purification of
DNA from Tissue and Blood Spots**

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Product	Cat#	Package size
Magnetic Beads Tissue DNA Prep Kit	S5350.0100	100 Preps.
Magnetic Beads Tissue DNA Prep Kit	S5350.1000	1000 Preps

Manual Contents

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Abbreviations

L, mL, µL g, µg, ng	Litres, milli litres, micro litres respectively grams, micro grams, nano grams respectively
TE RT	Tris-EDTA (10 mM Tris-HCl, pH8.1, 1 mM EDTA) Room temperature (18°C – 24°C)

Related products / overview

- Genaxxon Rapid Plasmid Midi Kit S5339
- Genaxxon Rapid Plasmid Maxi Kit S5340
- Genaxxon Ultra Pure Plasmid Mini Kit S5341
- Genaxxon Ultra Pure Plasmid Midi Kit S5342
- Genaxxon Ultra Pure Plasmid Maxi Kit S5343
- Genaxxon Endotoxin-free DNA Mini Kit S5355
- Genaxxon Endotoxin-free DNA Midi Kit S5335
- Genaxxon Endotoxin-free DNA Maxi Kit S5335
- Genaxxon Magnetic Beads Whole Blood genomic DNA Mini-prep Kit S5352
- Genaxxon pMBL TA Cloning Kit M3164
- Genaxxon Insert Inspector M3458

Notes on Warranties and Disclaimer

Genaxxon is dedicated to your success and every batch of this product is tested with an extensive routine procedure to make sure that it meets all your needs. However, it has neither been developed nor tested for a specific application.

This product is for research use only. For *in vitro* use only

Genaxxon's liability with respect to any product is limited to the replacement of the product. No other warranties are provided by Genaxxon. Genaxxon is not liable to any direct, indirect, incidental or consequential damage arising out of or in connection with the use of any of Genaxxon products.

Protocol

Purification Protocol for DNA from dried blood spots

1. Cut 6 mm diameter punches from a dried blood spot. Place punched-out circle in a micro-centrifuge tube, add **180 µL Lysis Buffer (2)** together with **10 µL Proteinase K** and incubate **15 minutes at 56°C**.
2. Add **280 µL Binding Buffer (3)** to the lysate and remove the paper punch-out or transfer the Lysate-Binding Buffer (3) mixture to a new tube.
3. Add **14 µL** resuspended **Magnetic Beads (1)**. Mix with 10 pipetting strokes and incubate for 5 minutes at room temperature.
4. Following incubation, place the tube in a Magnetic Separator to draw the **Magnetic Bead/DNA Complex** to the side of the tube. Leave 2 minutes, then discard supernatant and remove the tube from the magnet position.
5. Add 500 µL Washing Buffer A (4) to the tube and thoroughly resuspend the beads in the washing buffer by pipetting the bead pellet up and down 15 times..
6. Separate the magnetic Bead/DNA Complex in the magnetic separator for 1 minute. Aspirate and discard supernatant.
7. Remove tube from the magnet position and repeat the washing procedure (steps 5 & 6) using **Washing Buffer B (5)**.
8. After removing the last traces of **Washing Buffer B (5)**, leave tube in the Magnetic Separator.
9. With the tube in the Magnetic Separator and the beads attracted to the side of the tube gently add **1 mL** (or as large a volume as possible) **Washing Buffer C (6)**, **being careful not to disrupt the pellet**. Leave **60 seconds** without resuspending the bead pellet and then carefully remove and discard the supernatant.
NOTE: resuspension of the bead pellet in **Washing Buffer C (6)** may reduce the final DNA yield).
10. Add **50 µL** (or another suitable volume) of **Elution Buffer (7)** to the tube and thoroughly resuspend the **Magnetic Bead/DNA Complex** by pipetting the pellet up and down 10 to 15 times.
11. Incubate the suspension for **5 minutes at 55°C** with agitation (1000 rpm) to facilitate complete DNA elution.
12. Following DNA elution place the tube in the Magnetic Separator for 2 minutes or until all the **Magnetic Beads (1)** have separated from the eluate. Transfer the eluate containing the purified DNA to a clean tube (For UV measurement it is recommended to put the tube containing the eluate again in the magnetic separator and leave for 2 minutes).

Kit Contents & Storage Information

Magnetic Beads Tissue DNA Prep Kit

Item	Cat: S5350.0100	Cat: S5350.1000
	Amount	Amount
Magnetic Beads	7.8 mL	78 mL
Lysis Buffer	11 mL	110 mL
Binding Buffer	28 mL	280 mL
Washing Buffer A	55 mL	550 mL
Washing Buffer B	55 mL	550 mL
Washing Buffer C	110 mL	1100 mL
Elution Buffer	11 mL	110 mL
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Elution Buffer (7)

The Elution Buffer (7) included in this kit is 10 mM Tris/HCl pH 8.0. TE buffer pH 8.0 can also be used without any protocol adjustments.

Required Materials (not supplied)

- Magnetic Particle Separator
- Proteinase K stock solution

This kit is optimized for use with a Magnetic Separator (e.g. Magnetic separator M 12+12 for 1.5 mL tubes.)

Storage Conditions

This kit may be stored at room temperature (15 - 25°C) and is stable for at least 1 year following delivery.

Sample and Protocol Adjustments

Important Note

Before use, **Proteinase K** has to be added to **Lysis Buffer (2)** to a final concentration of 250 µg/mL (e.g. add 25 µL Proteinase K stock solution (10 mg/mL) to 1 mL **Lysis Buffer (2)**).

Introduction

This kit is designed for simple and fast DNA purification from tissues (10 mg) and 2-4 mm mouse tail sections. The complete protocol takes approximately 30 minutes, with expected yields of:

15-25 μg DNA from 2-4 mm (10 mg) mouse tail.

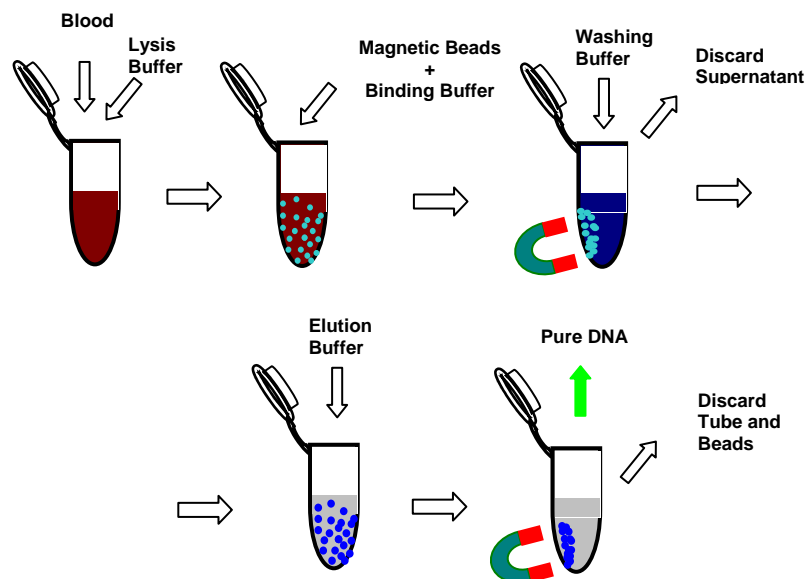
24-40 μg DNA from 10 mg liver.

UV Measurements

In some cases there may be traces of the magnetic beads left in the eluate after removal from the tube. Such particles will not interfere with PCR and most downstream applications but may increase the background in UV measurements. In such a case, prior to UV analysis, we recommend an additional application of the magnet to the eluate for 2 minutes in order to separate any traces of particles.

For pure DNA the expected A260/A280 ratio is between 1.7 – 2.0.
The A260 value should be between 0.1 and 1.0 for accurate readings.

Operation Procedure



Protocol

Purification Protocol for DNA from 10 mg Tissue

1. Cut up to 10 mg tissue into small pieces and place it in **100 μL Lysis Buffer (2)** containing Proteinase K. Incubate with agitation (600 rpm) at **56°C unit lysis is complete**. Occasional vortexing will decrease incubation time. Lysis overnight is possible and does not influence the preparation. After lysis, spin down material that is not lysed (e.g. bones, hairs, etc.) and use the supernatant for the next steps. Working with not lysed material will not affect the quality of the DNA, but will make the isolation process more difficult.
2. Premix **75 μL resuspended Magnetic Beads (1)** with **263 μL Binding Buffer (3)** and add the mixture to the lysate. Mix with 10 pipetting strokes and incubate 10 minutes at room temperature.
3. Following incubation, place the tube in a Magnetic Separator to draw the Magnetic Bead/DNA Complex to the side of the tube. Leave 2 minutes, then discard the supernatant and remove the tube from the magnet position..
4. Add **500 μL Washing Buffer A (4)** to the tube and thoroughly resuspend the beads in the wash buffer by pipetting the bead pellet up and down 15 times.
5. Separate the Magnetic Bead/DNA Complex in the magnetic separator for 1 minute. Aspirate and discard supernatant.
6. Remove tube from the magnet position and repeat the washing procedure (steps 4 & 5) using **Washing Buffer B (5)**!
7. After removing the last traces of **Washing Buffer B (5)**, leave tube in the Magnetic Separator.
8. With the tube in the Magnetic Separator and the beads attracted to the side of the tube gently add **1 mL** (or as large a volume as possible) **Washing Buffer C (6)**, being careful not to disrupt the pellet. Leave **90 seconds** without resuspending the bead pellet and then carefully remove and discard the supernatant. **NOTE:** resuspension of the bead pellet in **Washing Buffer C (6)** may reduce the final DNA yield).
9. Add **100 μL** (or another suitable volume) of **Elution Buffer (7)** to the tube and thoroughly resuspend the **Magnetic Bead/DNA Complex** by pipetting the pellet up and down 10 to 15 times.
10. Incubate the suspension for **10 minutes at 55°C** with agitation (1000 rpm) to facilitate complete DNA elution.
11. Following DNA elution place the tube in the Magnetic Separator for 2 minutes or until all the **Magnetic Beads (1)** have separated from the eluate. Transfer the eluate containing the purified DNA to a clean tube (For UV measurement it is recommended to put the tube containing the eluate again in the magnetic separator and leave for 2 minutes).