Product Manual

AMPIXTRACT™ General Tissue Section DNA Isolation Kit

Catalog #: ENZ-GEN500

ENZ-GEN500-0050 - for 50 samples

ENZ-GEN500-0100 – for 100 samples

For the latest product information, including support documentation, visit us online:
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Technical Support (US): 800-942-0430
Technical Support (EU): +41 61 926 8989

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Product Manual

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Please read entire booklet before proceeding with the assay.

INTRODUCTION

The AMPIXTRACT™ kits are very suitable for isolating tiny amounts of DNA from microdissection samples, fresh tissue sections, formalin-fixed and paraffin-embedded tissues, plasma, serum, body fluids, etc. The quality of extracted DNA from formalin-fixed and paraffin-embedded tissues may be affected by the quality of the embedded tissue.

The AMPIXTRACT™ kits allow isolation of DNA size from 50 bp to 20 kb; DNA quantity from 1 ng to 2 µg, optimal at between 10 ng and 1 µg.

BACKGROUND

The *AMPIXTRACT*™ General Tissue Section DNA Isolation Kit is designed for isolating DNA from tissue sections. The kit uses a unique procedure and composition to efficiently isolate DNA in any targeted microscopic tissue area on a slide. The kit has the following features:

- The fastest procedure available, which can be finished within 2 hours, depending on sample types, with consistent isolation conditions.
- High efficiency of DNA isolation from tissue sections containing tiny amounts of DNA (as low as 1 ng).
- Use of non-toxic reagents and no phenol chloroform.

MATERIALS SUPPLIED

Components	50 samples (ENZ-GEN500-0050)	100 samples (ENZ-GEN500-0100)
S1 (DNA Digestion Solution)	0.3 ml	0.6 ml
S2 (DNA Digestion Powder)	1 vial	1 vial
S3 (DNA Isolation Buffer)	6 ml	11 ml
S4 (DNA Binding Buffer)	12 ml	22 ml
F-Spin Column	50	100
F-Collection Tube	50	100
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ADDITIONAL MATERIALS REQUIRED

The following solutions are required but not provided

- 90% ethanol
- 70% ethanol

Storage temp

STORAGE & STABILITY

Upon receipt: (1) S2 should be stored at –20°C, or stored at 4°C as soon as it is dissolved in S1 (up to 6 months); (2) Store all other components at room temperature. The kit can be stable for up to 6 months from the shipment date when stored properly.

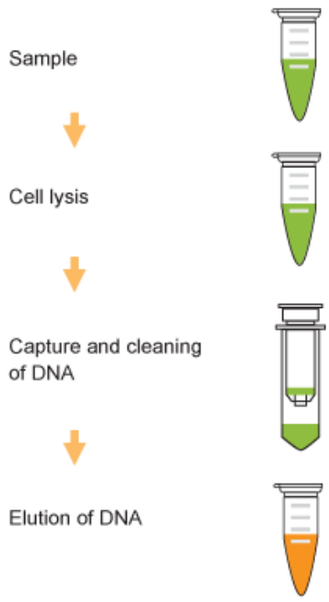
SAFETY WARNINGS & PRECAUTIONS

Important/ Warning

1. Wear appropriate personnel protective apparel. Avoid contact with clothes and exposed skin. In case of accidental skin exposure, flush with water immediately. Consult a physician if required.
2. Use a safety pipetting device for all pipetting. Never pipet by mouth.
3. Interpretation of the results is the sole responsibility of the user.

PRINCIPLE OF THE ASSAY

The AMPIXTRACT™ General Tissue Section DNA Isolation Kit simply applies our proprietary DNA isolation buffer to a selected microscopic tissue area. The area is removed and transferred into a tube. After treatment with DNA digestion buffer, the DNA is easily recovered in 8-20 µl by our specially designed Fast-Spin Column. DNA is ready for down-stream application.



Schematic Procedure for Using the *AMPIXTRACT*™ General Tissue Section DNA Isolation Kit

PROCEDURE

Note: Always cap spin columns before placing them in the microcentrifuge.

Before starting, prepare the following required solutions (not included): 90% ethanol, and 70% ethanol

1. Add 0.3 ml of **S1** to **S2** in order to create the **S1/S2 solution**. Vortex until solution is clear. Spin the solution down to the bottom.

2. Treat the tissue with the DNA Isolation Buffer:

   For microdissection samples, directly collect the sample into a vial containing 100 µl of **S3**, followed by adding 5 µl of **S1/S2 solution**. Mix well and incubate at 65ºC for 60-90 minutes.

   For tissues from fresh sections, add 0.5 µl of **S3** to 1 mm^2 (about 500-1000 cells) of tissue area and immediately remove the tissue area you need (1- 20 mm^2) from the slide with a scalpel. Transfer it to a 1.5 ml vial containing 100 µl of **S3**, followed by adding 5 µl of **S1/S2 solution**. Mix well and incubate this mixed solution at 65°C for 60-90 minutes or until the tissue is completely lysed (usually it is less than 2 hours). Vortex the sample for 5 seconds every 30 minutes. If tissue is not properly in this mixed solution after vortexing, spin it down into the solution.

   For paraffin samples, remove the paraffin first with deparaffin reagents according to the manufacturer's instructions or according to the following procedures:

   1) Drop the slide into 100% of *xylene* at room temperature for 10 min. Repeat once with new xylene.
   2) Drop the slide in 100% of *ethanol*, 95% and 70% for 5 minutes each. Air dry the slide. Add 0.5 µl of **S3** to 1 mm^2 of tissue area and immediately remove the tissue area you need (1-20 mm^2) from the slide. Transfer it to a vial containing 100 µl of **S3**, followed by adding 5 µl of **S1/S2 solution**. Mix well and incubate this mixed solution at 65°C for 60-90 minutes, or until tissue is completely lysed (it is usually less than 2 hours). Vortex the sample for 5 seconds, every 30 minutes. If tissue is not properly in this mixed solution after vortexing, spin it down into the solution.

3. Place a spin column into a 2 ml collection tube. Vortex the mixture for 5 seconds after incubation. Add 200 *µl* of **S4** to the mixture and transfer it to the column. Centrifuge at 12,000 rpm for 30 seconds. Discard the flowthrough. Replace the column to the collection tube (*Note: maximum volume of the column is 600 µl.)*
4. Add 200 µl of *70% ethanol* to the column and centrifuge at 12,000 rpm for 20 seconds. Add 200 µl of *90% ethanol* to the column and centrifuge at 12,000 rpm for 20 seconds. Discard the flowthrough and replace the column to the collection tube.
5. Add an additional 200 µl of *90% ethanol* to the column and centrifuge at 12,000 rpm for 40 seconds.
6. Place the column in a new 1.5 ml vial. Add 8-18 µl of **S5** directly to the column filter and centrifuge at 12,000 rpm for 20 seconds to elute DNA.

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GLOBAL HEADQUARTERS
Enzo Life Sciences Inc.
10 Executive Boulevard
Farmingdale, NY 11735
Toll-Free:1.800.942.0430
Phone:631.694.7070
Fax: 631.694.7501
info-usa@enzolifesciences.com

EUROPE
Enzo Life Sciences (ELS) AG
Industriestrasse 17
CH-4415 Lausen
Switzerland
Phone:+41/0 61 926 89 89
Fax:+41/0 61 926 89 79
info-ch@enzolifesciences.com

For local distributors and detailed product information visit us online:
www.enzolifesciences.com