Canvax Reagents, S.L.U.
Luis de Mercado Street, 19
Boecillo Technological Park
47151, Boecillo
Valladolid, Spain.

Tlf: +34 983 54 85 63
info@canvaxbiotech.com

www.canvaxbiotech.com

DATA SHEET

Version: 03
Revision date: 25/05/2023

1. Identification

Product name **HigherPurity™ Tissue DNA Extraction Kit**
(Reagent based) (Isolation of DNA from 5 mg – 100 mg tissue samples)

Cat. No **AN0052** **50 reactions** if processing 5-10 mg tissue samples
5 reactions if processing 50-100 mg tissue samples

Cat. No **AN0052-XL** **250 reactions** if processing 5-10 mg tissue samples
25 reactions if processing 50-100 mg tissue samples

2. Description

HigherPurity™ Tissue DNA Extraction kit is a simple and rapid method for high-quality genomic DNA purification from fresh or frozen solid tissue.
The procedure includes: lysis, protein removal, DNA precipitation, washing and hydration.

3. Composition

Item	Quantity	
	AN0052	AN0052-XL
S2 Buffer	20 mL	100 mL
S3 Buffer	8 mL	30 mL
Proteinase K*	20 mg	4 x 20 mg
RNAse A Solution (10mg/mL)	100 µl	400 µl
EB Buffer	10 mL	30 mL

*Dissolve Proteinase K in water to obtain a 20 mg/mL stock solution. The Proteinase K solution can be stored for se veral days at 2–8 ˚C. For longer-term storage, the unused portion of the solution may be stored in aliquots at –20 ˚C until needed. .

4. Storage specifications

The kit is shipped at ambient temperature. Upon arrival, store Proteinase K at -20°C and RNAse A (10mg/mL) should be stored at -20°C. If any kit reagent forms a precipitate, warm at 55–65 ˚C until the precipitate dissolves and allow to cool to room temperature before use.

5. Features

- **Safe:** no phenol-chloroform extraction.
- **Efficient:** 5-100 µg of genomic DNA from a 10 mg animal tissue sample (50-500 µg of genomic DNA from a 100 mg).
- **Ready to use** genomic DNA, in all molecular biology applications.

6. Applications

High molecular weight genomic DNA purified with the kit is suitable for direct use in all common molecular biology applications: PCR, cloning, DNA sequencing, Southern blot analysis, etc.

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7. Quality Certifications

Tissue Genomic DNA Extraction kit is tested on a lot-to- lot basis by isolating total DNA from 5 mg of ifrozen tissue. DNA purified is analysed by:

- Spectrophotometer: Ratio 260/ 280 (1.6-1.8)
- Agarose gel electrophoresis.

8. Further information

Product Use Limitations This product is developed, designed and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

Disclaimer The information provided in this Data Sheet is correct to the best of our knowledge and belief at the date of publication. This information is intended only as a guide and should not be taken as a warranty or quality specification. Canvax Reagents S.L.U. shall not be held liable for any damage resulting from handling or from contact with the above product.

DETAILED PROTOCOL

Choose ■ if processing 5-10 mg from frozen or fresh tissue.
Choose ▲ if processing 50-100 mg from frozen or fresh tissue.

1. Grind ■ **5–10 mg** or ▲ **50–100** mg frozen or fresh tissue in liquid nitrogen with mortar and pestle. Work quickly and always keep tissue on ice, including when tissue is being weighed.
2. Transfer ground tissue to ■ **1.5 mL** / ▲ **15 mL** grinder tube on ice.
3. Add ■ **15 µl** / ▲**150** µl **proteinase K** and ■ **300 µl** / ▲ **3 mL** **buffer S2** and mixing by pipetting.
4. Incubate in a water bath at 60 °C for 3 hours or until tissue has completely lysed, and then cool to room temperature.
5. Add ■**1.5 µl** / ▲**15 µl** **RNase A solution** to the sample and mix by inverting tube 30 times and leave to incubate for 15-60 minutes at 37°C.
6. Incubate for■**1 min** / ▲ **3 min** on ice to quickly cool the sample.
7. Add ■ **100 µl** / ▲**1 mL** **buffer S3** and mixing with vortex vigorously for 20 seconds.
8. Centrifuge at ■ **13000xg** / ▲**2000xg** for ■ **3** /**10 minutes**. A dark brown pellet should be visible. If no pellet is observed, incubate on ice for 5 minutes and centrifuge again.
9. Transfer the supernatant to a new ■ **1.5 mL** / ▲ **15 mL** tube containing ■ **300 µl**/ ▲**3 mL** **isopropanol**. Mix by gentle inversion 50 times.
10. Centrifuge at ■ **13000xg** / ▲**2000xg** for ■ **1**/**3 minutes** and remove the supernatant using a pipette and dry the pellet with the tube inverted on absorbent paper for 5-10 minutes. The DNA will be visible as a small white pellet.
11. Wash with ■ **300 µl** / ▲**3 mL** **70% ethanol** and centrifuge at ■ **13000xg** / ▲**2000xg** for 1 minutes.
12. Remove the supernatant using a pipette and dry the pellet with the tube inverted on absorbent paper for 5-10 minutes.
13. Add ■**100 µL** / ▲**400 µl** of **Buffer EB** and vortex for 5 seconds at medium speed to mix. Close the cap and incubate for 1 hour.
14. Resuspend the DNA and store at -20 ° C.