One-Tube Tissue DNA Extraction Kit

Product information for BS8401/BS8402:

Kit Contents

Components	BS8401 100 Preps	BS8402 500 Preps
Lysis-Buffer-T	20 ml	100 ml
Proteinase K	2 ml	10 ml
Universal Buffer NST	20 ml	100 ml
Protocol	1	1

Storage and Stability

Transportation at ambient temperature. Store at 4°C, Valid for 1 year. . Proteinase K solution can be stored at 4°C for 6 months, or -20°C for long-term.

Introduction

The kit is designed for rapid isolation of genomic DNA from animal tissue, mouse tail and ear clips, human hair or saliva, fish and insect tissues. There is no need for phenol extraction, overnight digestion, DNA precipitation or column purification; the lysate

can be use directly as PCR template. The one-tube procedure minimizes possibility of cross-contaminations between samples. The whole procedure takes less than 15 minute and this kit is an example of speed and efficiency. The kit is suitable for high throughput PCR screening of large scale samples. This kit also works for other application such as Genotyping, Transgene screening, Knockout analysis and Sequencing.

Recommended Samples Size per Prep

- 0.3-0.5 cm mouse tail
- 0.5-2 mm mouse ear punch
- 2-5 mg piece of tissue
- 1-10 hairs with roots
- 20 µl saliva
- 2-3 mm^2 piece of zebrafish fin

Features

- ć Simple and rapid. Whole procedure can be performed in one tube, takes approx 15 minutes.
- ć The whole procedure is performed in one single tube to prevent cross-contamination among samples.

- Convenient for high-throughout PCR screening.
- Suitable for extraction of genomic DNA from various species.

Protocols for Tissue Sample

1. Add 100 µl Lysis-Buffer-T, 10 µl of Proteinase K solution to a 0.5 ml centrifuge tube. Mix by vortexing.

Note: For batch extractions, Lysis-Buffer-T and Proteinase K may be pre-mixed at a ratio of 10:1 prior to use.

2. Add sample into the buffer, ensure that the sample is fully submerged in the solution.

3. Incubate the sample at room temperature for 10 min.

Note: Incubation at 56°C may enhance tissue lysis and amplification.

4. Incubate the sample at 95°C for 3 min.

Note: Tissues may not be completely digested at the end of the incubation, but this does not affect PCR performance.

5. Add 100 µl Universal Buffer NST. Mix by inverting the tube for about 10 times or vortex briefly.

6. The mixture can be used as PCR template directly. The volume of this template should not exceed 1/10 of the total PCR reaction volume.

Note: No spin step is required.

7. Save the remaining samples at 4°C.

Note 1: The DNA is not sufficient for electrophoresis analysis.

Note 2: For long term storage, remove undigested tissue or transfer the extracts to new tubes. Store DNA at -20°C

Protocols for Buccal Swab

1. Collect buccal cells on swab and dry the swab at room temperature for about 10 minutes.

Note: A foam-tipped swab is recommended.

2. Add 200 µl Lysis-Buffer-T, 10 µl of Proteinase K solution to a 0.5 ml centrifuge tube. Mix by vortexing.

Note: For batch extractions, Lysis-Buffer-T and Proteinase K may be pre-mixed at a ratio of 10:1 prior to use.

3. Place the dried buccal swab into the prepared lysis solution for 2 minutes and rotate the swab in the solution at least 5 times.

4. Rotate and press the swab firmly against the side of the tube to ensure that most of the liquid remains in the tube. Discard the swab.

5. Incubate the sample at room temperature for 5 min.

Note: Incubation at 56°C may enhance tissue lysis and amplification.

6. Incubate the sample at 95°C for 3 min.

Note: Tissues may not be completely digested at the end of the incubation, but this does not affect PCR performance.

7. Add 200 µl Universal Buffer NST. Mix by inverting the tube for about 10 times or vortex briefly.

8. The mixture can be used as PCR template directly. The volume of this template should not exceed 1/10 of the total PCR reaction volume.

Note: No spin step is required.

9. Save the remaining samples at 4°C.

Note 1: The DNA is not sufficient for electrophoresis analysis.

Note 2: For long term storage, remove undigested tissue or transfer the extracts to new tubes. Store DNA at -20°C