Cat. # 9790A
9791A

For Research Use

TaKaRa

TaKaRa BioMasher Standard (Non-sterile)
TaKaRa BioMasher Standard (Sterile)

Product Manual

v202004

Table of Contents

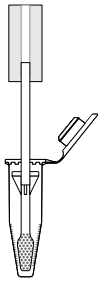
I. Description

TaKaRa BioMasher Standard is a disposable microtube homogenizer designed to efficiently crush small amounts of biological samples for nucleic acid and/or protein extraction. This product is a set of a 1.5-ml microtubes and micro stir bars. The inner wall of the tube and the tip of the stir bar are textured allowing effective disruption of the sample. In addition, a lid in the middle of the micro stir bar can be prevented scattering of samples and reagents during crushing. After the sample has been homogenized, the tube can be centrifuged to minimize sample loss.

The TaKaRa BioMasher Standard is available either sterilized (Cat. #9791A) or nonsterilized (Cat.# 9790A).

II. Components

1. TaKaRa BioMasher Standard (micro stir bar and microtube) 50
2. Stir bar grip (PESTLE GRIP) 1



III. Storage

Room temperature

＊ Keep out of sun and UV light.

IV. Materials

TaKaRa BioMasher Standard

Polypropylene microtubes	Autoclavable
Polyacetal stir bar	Not autoclavable*
Silicon rubber stir bar grip	Autoclavable

* The stir bar can not be autoclaved. If you require sterilization, please use Cat. #9791A.

V. Protocol

NOTE: Wear a mask, gloves, lab coat, and safety goggles. If necessary, perform in a safety cabinet.

1. Insert the micro stir bar into the end of the PESTLE GRIP.
2. Add the sample to the microtube. Use less than 100 mg of sample. If necessary, add the extraction reagent (less than 250 μl).
3. Insert the micro stir bar into the microtube. With the PESTLE GRIP, rotate and move the micro stir bar up and down, crushing the sample. If necessary, perform on ice.
4. After crushing, disconnect the PESTLE GRIP and discard the micro stir bar. The PESTLE GRIP can be used repeatedly; store for future use.
5. Close the lid of the microtube. The sample is ready for extraction.

VI. Experimental Example

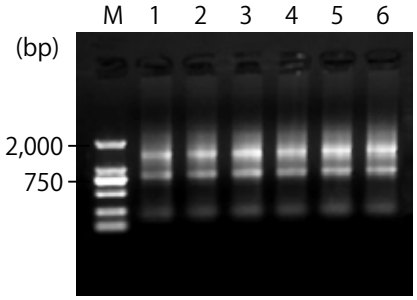
【Total RNA extraction from mouse liver】

100 mg of mouse liver was crushed using the TaKaRa BioMasher Standard (Sterile). As a comparison, 100 mg frozen mouse liver was crushed with a mortar or with bead crusher. All samples were extracted total RNA using 1 ml RNAiso Plus (Cat. #9108/9109) according to the recommended protocol. Total RNA was quantified and analyzed on an 1% agarose gel.

［Results］

Processing the samples using the TaKaRa BioMasher Standard had similar extraction efficiency as the mortar and bead crushing protocols.

Crushing method	total RNA (μg)	A_{260}/A_{280}
1. Mortar	360	1.70
2. Mortar	424	1.80
3. Bead crusher	530	1.92
4. Bead crusher	494	1.93
5. TaKaRa BioMasher Standard	411	1.89
6. TaKaRa BioMasher Standard	431	1.90



M : Wide-Range DNA Ladder (100 - 2,000 bp)
1-6 : Equal amounts of RNA

VII. Related Products

RNAisoPlus (Cat. #9108/9109)
NucleoSpin RNA (Cat. #740955.10/.50/.250)
NucleoSpin RNA XS (Cat. #740902.10/.50/.250)
NucleoSpin Tissue (Cat. #740952.10/.50/.250)
NucleoSpin Tissue XS (Cat. #740901.10/.50/.250)