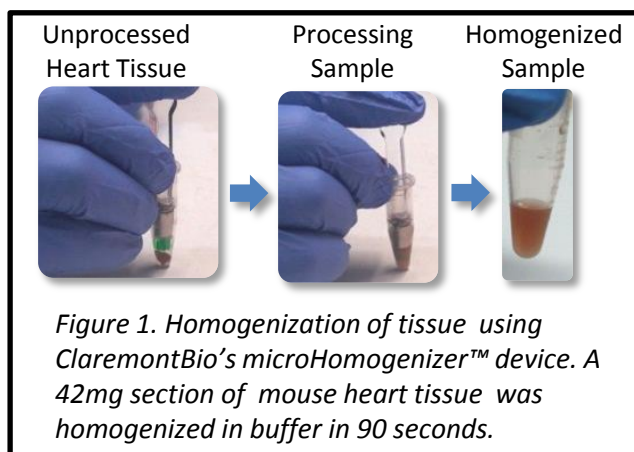




microHomogenizer[™] Cartridges: Rapid homogenization of tissue samples for RNA isolation

ClaremontBio's *microHomogenizer*[™] devices are miniaturized solutions for quick and easy homogenization of tissue. Designed to be portable, *microHomogenizer*[™] cartridges are convenient for use on the lab bench, in an ice bucket, in the cold room, in a biological safety hood or in the field. Developed as a disposable, the devices mitigate the risk of sample cross-contamination and limit exposure of the sample to the user.



The homogenization of tissues is rapid (Figure 1) and can be completed in 90 seconds for soft tissues and 2-4 minutes for harder tissues or RNA^{later} treated samples. *microHomogenizer*[™] devices have been optimized for small volumes (200-400µL) and for tissue samples up to 50mg. This allows the user to move directly downstream for RNA isolation and has been tested with both RNeasy[®] and TRIzol[®] kits (Figure 2).

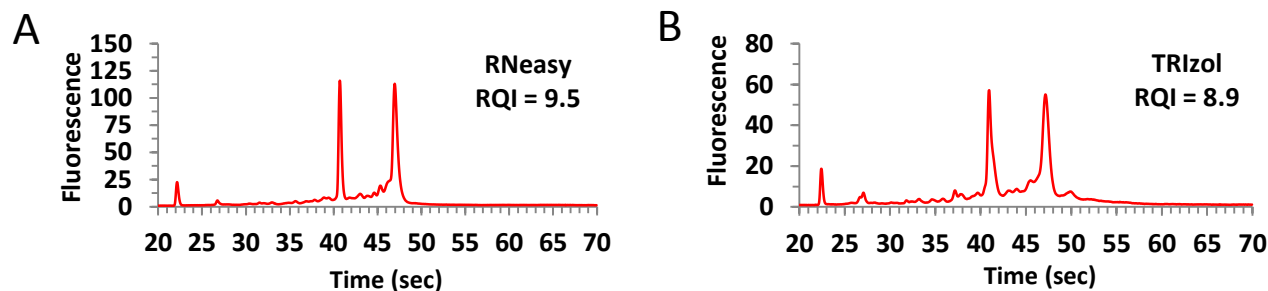
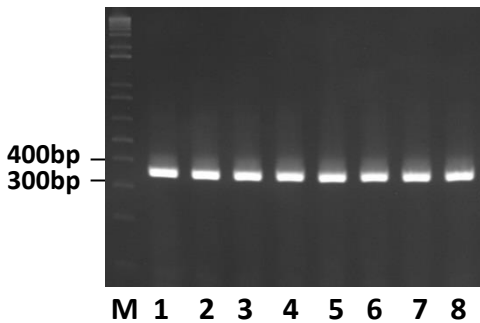


Figure 2. Total RNA isolated from mouse liver after homogenization using *microHomogenizer*[™] devices. RNA samples were analyzed using Bio-Rad Experion[®] system and RNA StdSens Kit. Electropherograms of (A) RNA from liver tissue homogenized in RLT buffer and isolated using the RNeasy[®] Mini Kit (B) RNA from liver tissue homogenized in TRIzol[®] solution using Life Technologies TRIzol[®] Plus RNA Purification Kit. Total RNA yield was (A) 40µg and (B) 105µg.

Quick Protocol – Using microHomogenizer™ Devices with RNeasy® Mini Kit

1. Resuspend tissue in RLT lysis buffer
2. Connect microHomogenizer to battery pack
3. Place microHomogenizer into sample displacing air
4. Turn on battery and homogenize for desired time
5. Turn off microHomogenizer and remove
6. Isolate RNA as per manufacturer’s instructions

Figure 3. PCR amplification of β -actin fragment (356bp). cDNA was amplified from mouse liver tissue RNA isolated using RNeasy® (Lanes 1-4) and TRIzol® (lanes 5-8) after homogenization using microHomogenizer. M = 1Kb Plus marker (Life Technologies)



Mouse Tissue	Sample mg	Yield (mg)	RNA mg/mg	260/280 ratio	RQI
Liver	12	40	3.31	2.10	9.5
Lung	10	11	1.1	2.08	8.5
Brain	11	9	0.82	2.11	9.3
Heart	13	7	0.54	2.09	9.3
Muscle	11	3	0.27	1.98	9.1

Table 1. Mouse tissue RNA Yield and Purity. Tissues were homogenized using microHomogenizer™ devices followed by extraction using the RNeasy® Mini Kit. RNA was analyzed using both the Infinite® M200 PRO NanoQuant and a RNA StdSens kit on Bio-Rad’s Experion® system

microHomogenizer™ Kits					
		w/ Bat-Pac		w/o Bat-Pac	
Kit Size	Cat. #	Price	Cat. #	Price	
6 pk	- 04.270.06	-- \$36	04.271.06	-- \$31	
24 pk	- 04.270.24	-- \$108	04.271.24	-- \$103	
48 pk	- 04.270.48	-- \$180	04.271.48	-- \$175	

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