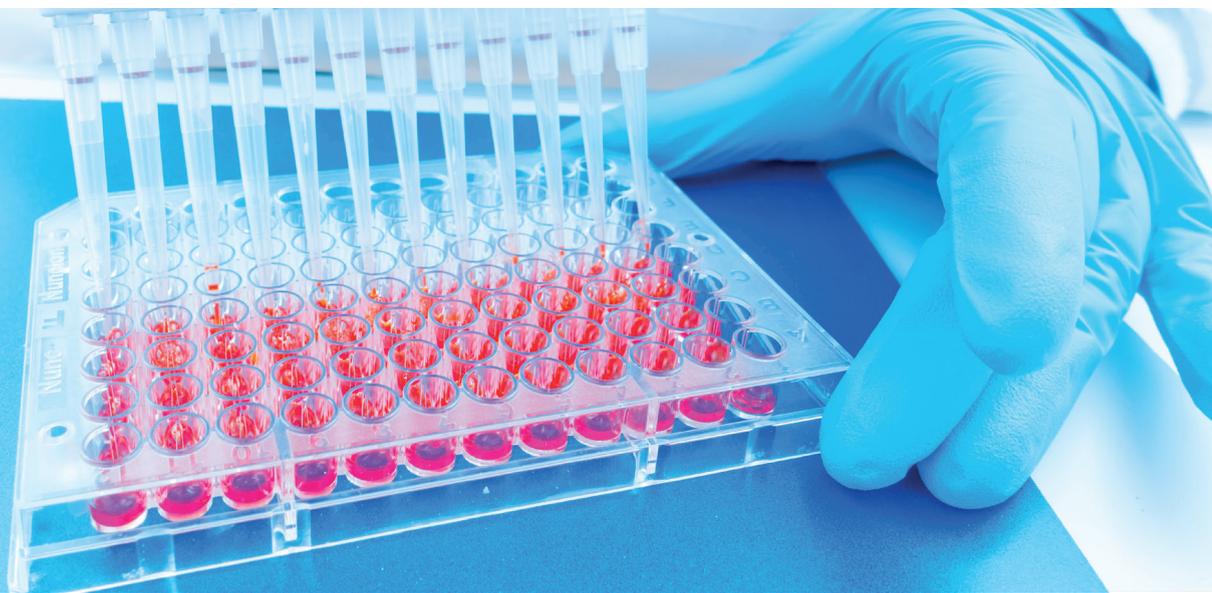




EchoLUTION™

Cell Culture RNA Kit



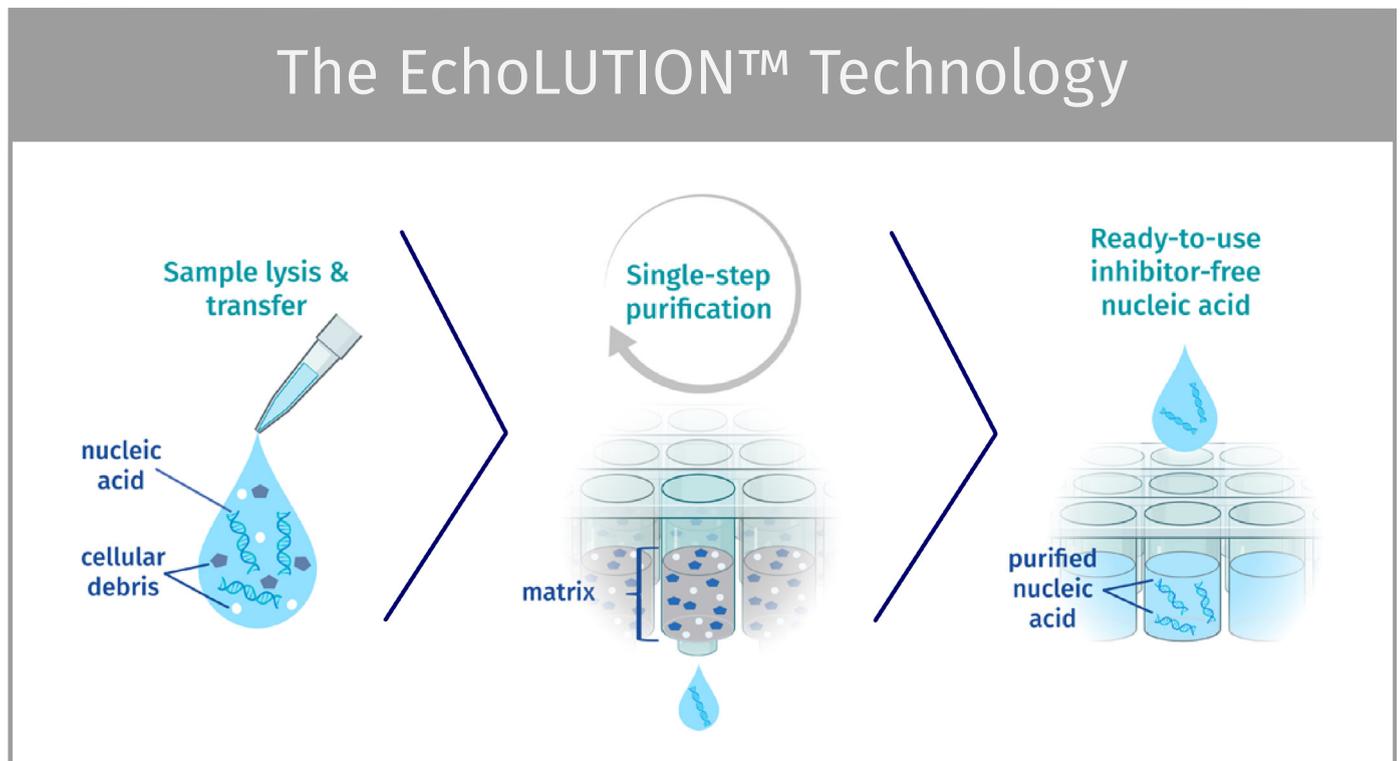
Premium quality RNA extraction in no time!

The Nucleic Acid Experts.

The innovative way to extract premium quality total RNA

The EchoLUTION Cell Culture RNA Kit was developed for efficient RNA extraction from human and animal cultured cells. Our EchoLUTION technology allows extraction of nucleic acids in a single step after an ultra-fast sample lysis. This revolutionary method purifies RNA with high yield and quality, much faster than other methods. The isolated total RNA is ready-to-use in standard downstream applications such as RT-PCR, RT-qPCR, and RNAseq, among others. The product delivers dedicated solutions to anyone committed to drug discovery, sequencing, and/or basic research, such as oncology, immunology, and transcriptomics.

Key steps of the EchoLUTION™ Cell Culture RNA extraction protocol:



1. Lysis and transfer

The ultra-fast non-enzymatic lysis reaction inactivates nucleases, and stabilizes the nucleic acids in a 5-minute incubation period.

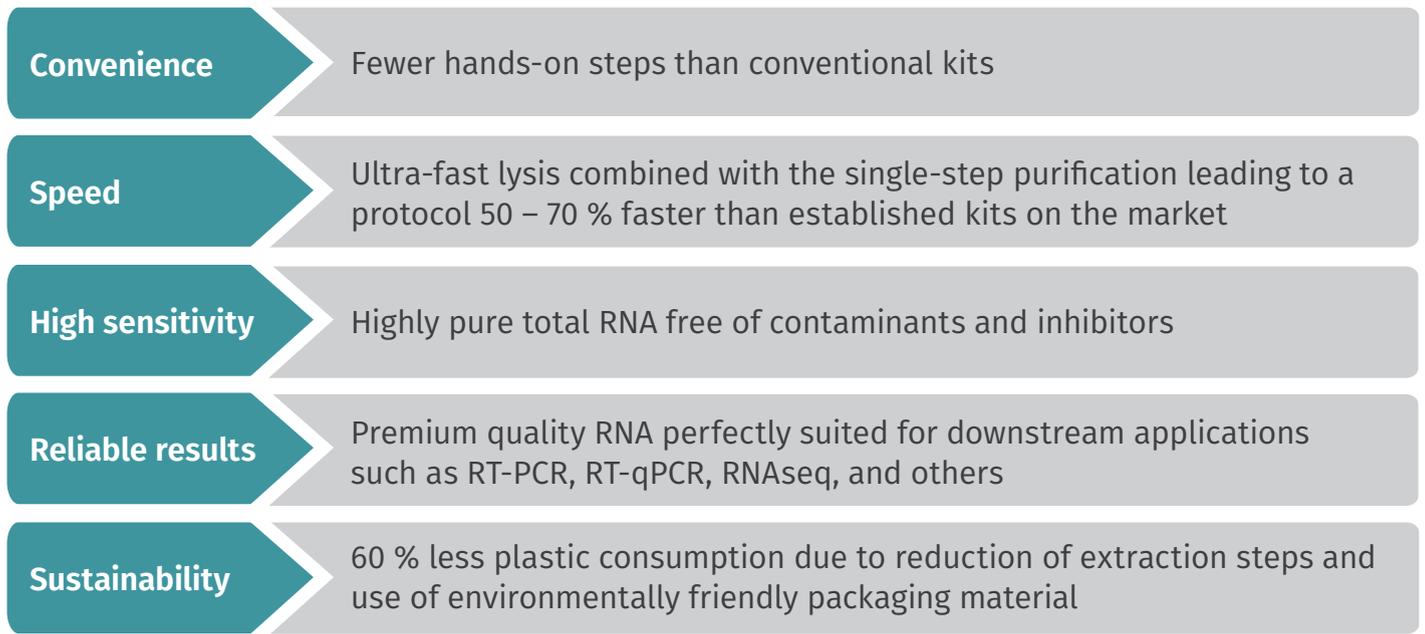
2. Single-step purification

Once the lysate is transferred onto the spin column, it is purified with a one-minute centrifugation step. The RNA passes through the purification matrix without further interaction while impurities and cellular debris are held back and removed.

3. Ready-to-use RNA

This innovative technology provides the isolation of ready-to-use highly pure total RNA with minimum DNA content. For certain sensitive RNA applications an optional gDNA removal step is also available.

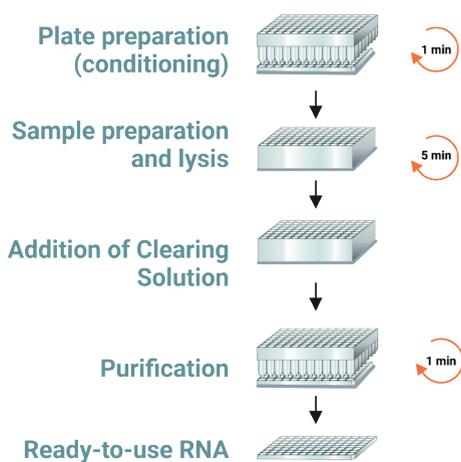
The EchoLUTION™ Cell Culture RNA Kit provides:



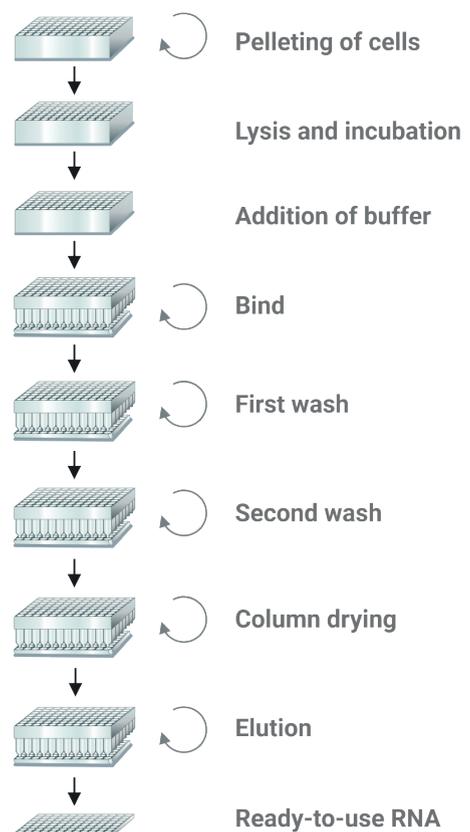
The workflow: faster and fewer steps

The EchoLUTION Cell Culture RNA Kit is intended for easy, rapid, and efficient RNA extraction in only 10 minutes. Excellent yield and purity of total RNA can be obtained in spin column and 96-well formats, providing pure extracted RNA immediately available for downstream applications without further processing.

EchoLUTION™ technology

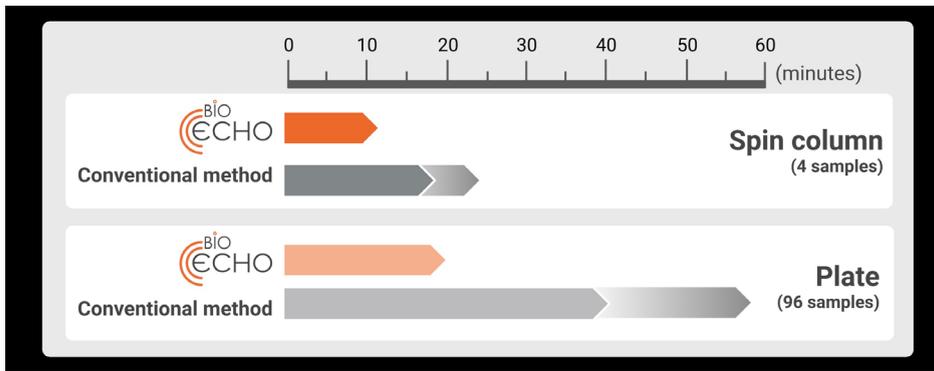


Bind-wash-elute method



- Only 4 steps
- Premium quality RNA
- 50 – 70% faster

Considerably faster compared to conventional methods



Superior RNA integrity

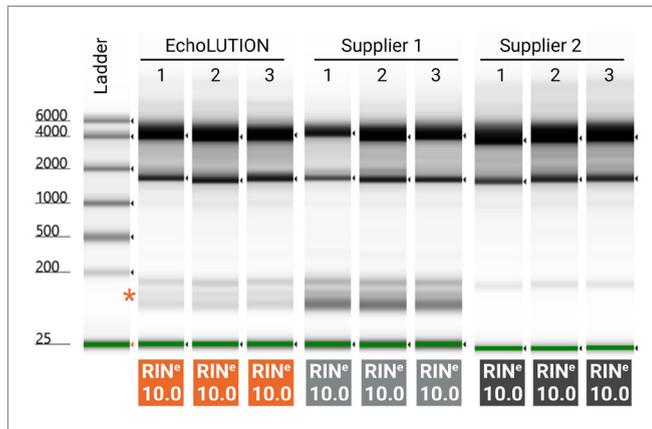


Figure 1. Quality evaluation of the RNA extracted with EchoLUTION Cell Culture RNA Kit compared to two silica-based kits (spin column format). The RIN^e data indicates no degradation and high integrity level for the RNA obtained with EchoLUTION. The RNA was measured with TapeStation[®]. The electrophoretic separation of the RNA indicates that the EchoLUTION Cell Culture RNA Kit allows extraction of small RNAs below 200 nt (*).

Don't compromise! Get premium-grade RNA with BioEcho

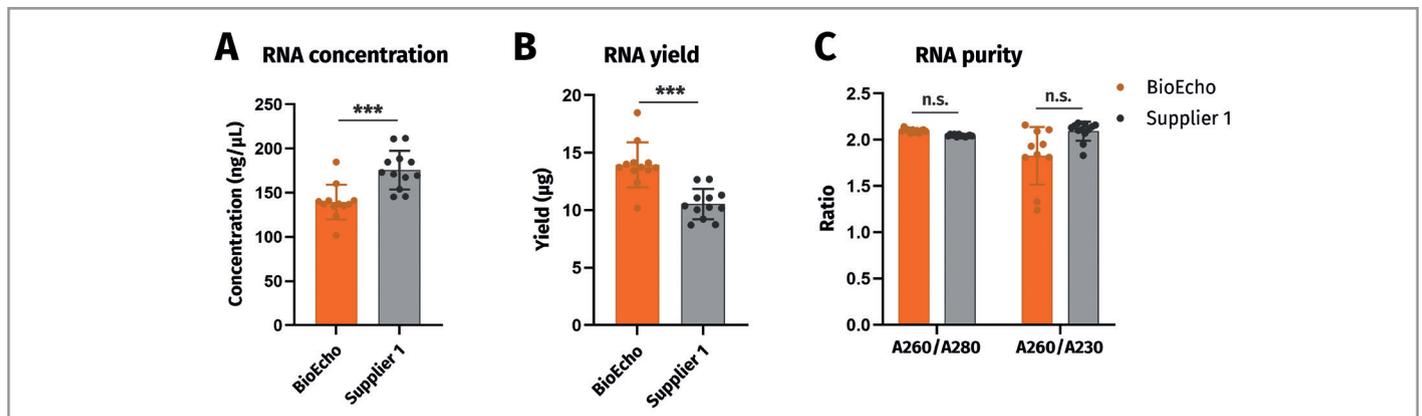


Figure 2. Competitive RNA concentration, yield, and purity with EchoLUTION Cell Culture RNA Kit (spin column format).

A. Analytical evaluation of RNA concentrations. The EchoLUTION Cell Culture RNA Kit shows lower concentration compared to the silica-based kit due to differences on the input volumen (100 μ L with EchoLUTION kit vs. 60 μ L with the competitor kit). **B.** However, RNA yield comparison between RNA samples extracted. The overall RNA yield with EchoLUTION Cell Culture RNA Kit is much higher compared to the silica-based kit. **C.** RNA purity was analyzed with A_{260}/A_{280} and A_{260}/A_{230} ratios. Demonstrating the premium quality of the RNA obtained with the EchoLUTION Cell Culture RNA Kit. All data were calculated from 12 biological replicants. Error bars represent the standard deviation. * $p < 0.05$; ** $p < 0.005$; n.s. non-significant.

Easy to integrate, high compatibility, and premium quality



Sample input:

Cultured cells
(fresh, frozen, and
stabilized adherent or
suspension cells)



Expected yield:

Up to 30 μg (depending
on cell line & input)



Cell input:

1,000 – 2 x 10⁶ cells



Elution volume:

Up to 100 μL



Processing:

Manual through
centrifugation/
(semi)automated with
liquid handler/robot



Premium RNA quality:

Typical RINs of 9 - 10

***Note:** An optional gDNA removal step for highly sensitive downstream analysis is available.

Our institute develops efficient and cost-effective analytical methods for health research. For RNA extraction in cardiovascular research, we compared the EchoLUTION™ Cell Culture RNA Kit to the QIAGEN® RNeasy® Kit and were able to reduce the time needed by over 60 %. The protocol is stunningly easy and truly fun to work with.

Leibniz-Institut für Analytische Wissenschaften –
ISAS – e.V.

Miriam Kleindl
PhD Student



Ordering information

Product	Reactions	Product no.
EchoLUTION™ Cell Culture RNA Kit (50)	50	011-014-050
EchoLUTION™ Cell Culture RNA Kit (250)	250	011-014-250
EchoLUTION™ Cell Culture RNA Kit (2 x 96)	2 x 96	011-114-002
EchoLUTION™ Cell Culture RNA Kit (8 x 96)	8 x 96	011-114-008
gDNA Removal Mix*	50	011-901-050
	250	011-901-250
	2 x 96	011-901-002
	8 x 96	011-901-008
Conditioning Plates**	2 plates	060-001-002
	8 plates	060-001-008
Lysis Plates***	8 plates	060-004-008
Sealing Foils***	50 foils	050-008-050

*gDNA Removal Mix should be additionally purchased if gDNA removal is required. Available soon.

**Conditioning plates are not included in our kits for sustainability reasons. They are reusable and can be separately purchased.

***Lysis plates and sealing foils are not included in the kit. Lysis plates are used for sample lysis step. Sealing foils serve as hermetic seal of the microplates and to store the RNA.



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