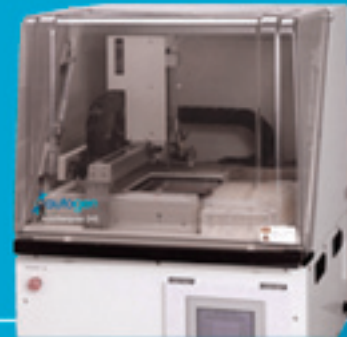


AutoGenprep 245T Application Guide

RNA Tissue



- I. **Purpose:** To extract Total RNA from animal or human tissue.
- II. **Chemical Principal:** Modified AGPC organic extraction method.
- III. **Protocol Parameters:**
 - A. **Sample Volume:** ~ 40mg (liver)
~ 70mg (other types of tissue)
 - B. **Maximum Number of Samples:** 24 samples per run.
 - C. **Processing Time:** 2.0 hours for 12 samples
2.5 hours for 24 samples.
This includes drying and resuspending RNA steps.
 - D. **Yield*:** ~150µg of total RNA / 30mg of mouse liver
~25µg of total RNA / 30mg of mouse heart
**Measured by OD260 value*
Actual yield may vary, depending on the condition and type of tissue sample.
 - E. **Quality:** Typical OD260/280 values in water are 1.85 - 1.95*
The RNA can be used directly in downstream processes such as RT-PCR, real time RT-PCR and Microarray analysis.
** For most commonly used tissue samples.*
- IV. **Running the Protocol:**
 - A. Load Reagents and Samples
 - B. Select a Protocol
 - C. Enter Number of Samples
 - D. Start the Run

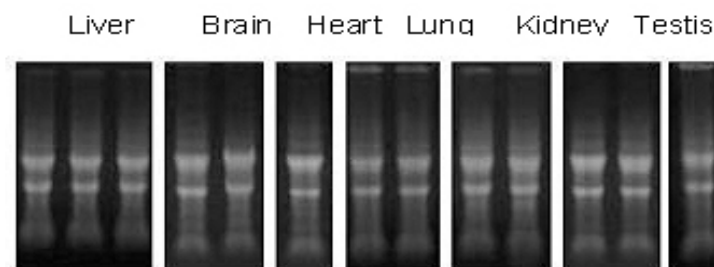
V. Example of extracted Total RNA on 245T:

A. Extracted Total RNA:

Gel Electrophoresis:

Sample: Approx. 3µg of total RNA was denatured at 65C for 10 min., and loaded onto the gel

Gel: Formaldehyde denatured
1% agarose
1 x MOPS, 50V x 1.5hr



B. Typical Yield and Purity

Tissue Type	Liver	Brain	Heart	Lung	Kidney	Testis	Spleen
Sample weight (mg)	45	70	30	70	60	50	40
Yield (µg)	110	50	15	45	80	85	90
OD260/280	1.95	1.90	1.70	1.95	1.85	1.75	1.90

**Actual yield and purity may vary, depending on the condition of tissue sample.*

VI. Extraction and Purification Process

Process Site	Purpose	System Process
1. Manual	Homogenize tissue	Add Reagent TR-S0*, homogenize tissue and transfer to AutoGen 2ml tube.
2. Automated	Remove protein and DNA Part-1	Add Reagent TR-S1* and TR-S2* and mix.
3. Automated	Remove protein and DNA Part-2	Add Reagent TR-S3*, incubate, centrifuge to pellet protein & DNA, and transfer supernatant to new tube.
4. Automated	Precipitate RNA	Add Reagent TR-S4*, mix, centrifuge to precipitate RNA, and discard supernatant.
5. Automated	Wash RNA	Add Reagent TR-S5/6*, mix, centrifuge and discard supernatant. Repeat once.
6. Automated	Dry RNA	Add Reagent TR-S7*, mix, centrifuge, discard supernatant, and centrifuge tube to dry RNA sample.
7. Automated	Resuspend RNA	Add your own resuspension solution.

**All reagents and plastics are sold as a complete extraction kit for Tissue RNA on the AutoGenprep 245T.*

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