

RNAprotect[®] Tissue Reagent, RNAprotect Tissue Tubes, and RNeasy[®] Protect Mini Kit

The RNAprotect Tissue Reagent and RNAprotect Tissue Tubes (cat. nos. 76104, 76106, 76154, and 76163) can be stored at room temperature (15–25°C) for at least 12 months if not otherwise stated on label. The RNeasy Protect Mini Kit (cat. nos. 74124 and 74126) can be stored at room temperature (15–25°C) for at least 9 months if not otherwise stated on label.

Further information

- *RNAprotect Handbook*: www.qiagen.com/HB-2716
- *RNeasy Mini Handbook*: www.qiagen.com/HB-0435
- Safety Data Sheets: www.qiagen.com/safety
- Technical assistance: support.qiagen.com

Notes before starting

- RNAprotect Tissue Reagent may form a precipitate during storage below room temperature (15–25°C). Before using the reagent, redissolve the precipitate by heating to 37°C with agitation.
 - RNAprotect should not be autoclaved, as it becomes unstable when heated.
 - RNAprotect Tissue Tubes are for single use only. Do not reuse.
 - Only fresh, unfrozen tissues can be stabilized using RNAprotect Tissue Reagent. Previously frozen tissues thaw too slowly in the reagent, preventing the reagent from diffusing into the tissues quickly enough to prevent RNA degradation.
 - If you purchased an RNeasy Protect Mini Kit (cat. nos. 74124 and 74126), please proceed to the respective Quick-Start Protocol for RNA purification included in the kit after step 6 of this protocol.
1. Before excising the tissue sample, estimate the volume (or weight) of the sample to be stabilized in RNAprotect Tissue Reagent.
 2. Determine the appropriate volume of RNAprotect Tissue Reagent for preserving the tissue. At least 10 volumes of the reagent (or approximately 10 µl reagent per 1 mg of tissue) is required.

- Pipet the correct amount of reagent into an appropriate collection vessel, or choose the appropriate sized RNAprotect Tissue Tube.
- Excise the tissue sample from the animal and, if necessary, cut it into slices less than 0.5 cm thick as quickly as possible. Proceed immediately to step 5.
- Completely submerge the tissue piece(s) in the collection vessel containing RNAprotect Tissue Reagent from step 3.
- Store the tissue submerged in RNAprotect Tissue Reagent for up to 4 weeks at 2–8°C, up to 7 days at 15–25°C, or up to 1 day at 37°C. For archival storage at –30 to –15°C or –90 to –65°C, first incubate the tissue overnight in the reagent at 2–8°C. Then transfer the tissue for storage at –30 to –15°C in the reagent, or remove the tissue from the reagent and transfer it to –90 to –65°C.

Note: Lower temperatures are recommended for longer storage. Tissues stored in RNAprotect Tissue Reagent at –30 to –15°C may not freeze. The low temperature may cause the formation of crystals or a precipitate in the reagent. This will not affect subsequent RNA purification. RNAprotect stabilized tissues stored at –30 to –15°C or –90 to –65°C can be thawed at room temperature and frozen again for up to 20 freeze–thaw cycles without affecting RNA quality or yield.

Table 1. Tissue weights and amounts of RNAprotect Tissue Reagent

Mouse organ	Weight (mg)	Minimum amount of RNAprotect Tissue Reagent (ml)	Appropriate RNAprotect Tissue Tube
Kidney	180–250	1.8–2.5	5 ml
Spleen	100–160	1–1.6	1.5 ml or 5 ml
Lung	190–210	1.9–2.1	5 ml
Heart	100–170	1–1.7	1.5 or 5 ml
Liver	1000–1800	10–18	Use other container

Revision History

Date	Changes
10/2019	Change in product names. Clarification of temperature ranges for tissue storage.



Scan QR code to view the
RNAprotect Handbook.



Scan QR code to view the
RNeasy Mini Handbook.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual.

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