November 2020

Quick-Start Protocol

MaXtract™ High Density

MaXtract High Density Tubes (cat. nos. 129046, 129056, 129065, and 129073) can be stored at room temperature (15–25°C) for up to 12 months if not otherwise stated on label. These products should not be frozen.

Further information

- *MaXtract High Density Handbook*: **www.qiagen.com/HB-1521**
- Safety Data Sheets: **www.qiagen.com/safety**
- Technical assistance: **support.qiagen.com**

Notes before starting

- This protocol enables RNA extraction from tissue using MaXtract High Density and QIAzol® Lysis Reagent. For detailed information, including additional protocols for DNA and RNA extraction, general handling, and QIAGEN® solutions for specific DNA and RNA extraction methods, please refer to the kit handbook online.
- All extraction steps should be carried out at room temperature.
- Do not vortex MaXtract samples or put them into a high-speed shaker for mixing.

  Important: All mixing steps should be performed manually.

- Do not exceed the maximal centrifugal force of 3500 x *g* for 15 ml and 50 ml MaXtract High Density Tubes.
- Text marked with ▲ denotes instructions for 1.5 ml and 2 ml MaXtract High Density Tubes; text marked with ■ denotes instructions for 15 ml and 50 ml MaXtract High Density Tubes.

Procedure

1. Pellet MaXtract High Density by centrifugation at ▲ 12,000–16,000 x *g* for 20–30 s in a microcentrifuge or at ■ 1500 x *g* for 1–2 min in a standard centrifuge.
2. Add the volume of QIAzol homogenate (1 ml QIAzol Lysis Reagent per 100 mg tissue) as indicated in Table 1 directly to the MaXtract High Density Tube prepared in step 1. Additionally, add 0.2 ml chloroform per 1 ml QIAzol Lysis Reagent to the samples.

Table 1. MaXtract High Density Tube sample volumes

Cat. no.	MaXtract high Density Tube	Sample volume	Tube color
129046	▲ 1.5 ml, MaXtract High Density	100–500 µl	Yellow
129056	▲ 2 ml, MaXtract High Density	100–750 µl	Yellow
129065	■ 15 ml, MaXtract High Density	1–6 ml	Clear*
129073	■ 50 ml, MaXtract High Density	5–20 ml	Clear*

* MaXtract High Density is opaque.

3. Mix the organic and aqueous phases thoroughly to form a transiently homogeneous suspension.

   Important: Do not vortex.

4. Place the MaXtract High Density Tube on the benchtop at room temperature for 2–3 min.
5. Centrifuge at ▲ 12,000–16,000 x *g* or at ■ 1500 x *g* for 5 min at 4°C to separate the phases. MaXtract gel will form a barrier between the upper, colorless, aqueous phase containing nucleic acids and the lower, red, organic phase containing protein.
6. Carefully remove the upper phase by decanting or pipetting into a fresh tube.
7. Precipitate RNA by adding 0.5 ml isopropanol per 1 ml QIAzol Lysis Reagent pipetted in step 2. Place the tube on the benchtop at room temperature for 10 min.
8. Centrifuge at 12,000 x *g* for 10 min at 4°C.
9. Carefully aspirate and discard the supernatant. The RNA pellet is often visible as a gel-like or white pellet at the bottom of the tube.
10. Add at least 1 ml of 75% ethanol per 1 ml QIAzol Lysis Reagent (see step 2).
11. Centrifuge at 7500 x *g* for 5 min at 4°C. If the RNA pellet floats or sticks to the side of the tube, bring it to the bottom of the tube by centrifuging at 12,000 x *g* for 5 min at 4°C.
12. Remove the supernatant completely, and then briefly air-dry the RNA pellet.
13. Redissolve the RNA in an appropriate volume of RNase-free water.

Revision History

Date	Changes
04/2019	Corrected cat. no. in introduction, from “12965” to “129065”.
11/2020	Added step 4 from handbook: “Place the MaXtract High Density Tube on the benchtop at room temperature for 2–3 min.”

Scan QR code for handbook.

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

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