MN Bead Tubes

1. Contents

Product	REF
MN Bead Tubes Type A (DNA and nuclease free) (0.6 – 0.8 mm ceramic beads, can be used for soil, sediments, and stool)*	740786.50
MN Bead Tubes Type A (5 mL) (0.6 – 0.8 mm ceramic beads, can be used for 47 mm round filters*)	740799.50
MN Bead Tubes Type B (40 – 400 µm glass beads, can be used for bacteria*)	740812.50
MN Bead Tubes Type C (1 – 3 mm corundum, can be used for yeast)	740813.50
MN Bead Tubes Type D (3 mm steel beads, can be used for insects, crustaceans, and lipid rich tissue*)	740814.50
MN Bead Tubes Type E (40 – 400 µm glass and 3 mm steel beads, can be used for hard to lyse bacteria within insect or tissue samples*)	740815.50
MN Bead Tubes Type F (1 – 3 mm corundum + 3 mm steel beads, can be used for for challenging tissues, e.g., spleen, or lung tissue*) - use only with MN Bead Tube Holder	740816.50
MN Bead Tubes Type G (5 mm steel beads, can be used for plant material*)	740817.50

* Recommendations refer to the isolation of DNA and may differ for RNA isolation from different sample materials. We recommend optimizing the bead beating for the respective sample material and the mixer mill used.

2. Product description

MN Bead Tubes (5 mL) are 2 mL (5 mL) screw cap plastic tubes containing different types of beads (glass, ceramic, steel, or corundum). They are intended for the disruption of biological sample material and subsequent nucleic acid purification. For researche use only.

The MN Bead Tubes are recommended to be used in combination with the MN Bead Tube Holder (REF 740469) or with a swing mill (mixer mill MM200, MM300, MM400 (Retsch®)), depending on Bead Tube type (see following comments). (MN Bead Tubes Type A (5 mL) has not been evaluated)

For more information about the MN Bead Tubes please visit *www.mn-net.com/beadtubeoverview*.

WARNING: The use of other disruption devices like FastPrep® System (MP-Biomedicals), Precellys® (Bertin Technologies), MagNA Lyser (Roche), TissueLyser (QIAGEN), Bullet Blender® (Next Advance), Mini-Beadbeater (Biospec Products), Speed Mill (Analytik Jena), or similar devices might cause bead tube damage. Such disruption devices can cause high mechanical stress on the bead tubes. Depending on bead tube type and content (liquid volume, sample type), high frequency of shaking and/or long shaking duration can cause damage of the bead tubes. If using such a disruption device, it is the responsibility of the user to perform initial stability tests to ensure stability of MN Bead Tubes during the individual experimental setup (e.g., intensity of agitation). This is especially important for MN Bead Tubes that contain steel beads. These tests should be performed with water instead of lysis buffer in order to avoid spillage of chaotropic lysis buffer in case of tube breakage. Integrity and tightness of the tube need to be controlled after every run.

<u>Warning Note for Type F:</u> This type of Bead Tube is intended to be used with the MN Bead Tube Holder only! It is not to be used with other disruption devices! Due to the combination of corundum and steel beads, disruption forces with this tube are very high, causing risk of tube rupture and DNA disintegration if disruption devices other than the MN Bead Tube Holder are used.

<u>Note for Type D + E + G:</u> Stability testing has been performed with the MN Bead Tubes Types D + E + G and the MN Bead Tube Holder on a Vortex-Genie® 2 and with a mixer mill MM300 (Retsch®) at highest frequency (30 Hertz). MN Bead Tubes Type D + E + G withstand shaking for several hours in the MN Bead Tube Holder on a Vortex-Genie® 2 and for up to 30 minutes on a mixer mill MM300 (Retsch®) at highest frequency (30 Hertz).

Please note that the position of the tube within the machine (mixer mill, Retsch®) is important for optimal performance. Please refer to the user manual of the disruption device.

<u>Note:</u> The use of MN Bead Tubes containing steel beads with buffers based on thiocyanate may cause a darkening of steel beads and/or a slight yellow or brownish coloration of lysate, especially if:

- *the incubation of thiocyanate containing buffer with steel beads is very long, e.g., several hours.*
- *the agitation of the MN Bead Tube is very strong / long, e.g., on a mixer-mill or a similar device.*

3. Storage conditions

The product can be stored at 15 – 25 °C and is stable until: see package label.

4. Safety Instructions

MN Bead Tubes do not contain hazardous material. Respect warning in section 2 for proper usage of the tubes.

5. Protocol

Add biological sample material and lysis buffer from a suitable nucleic acid purification kit to the tube, close the tube with the screw cap and insert the tube into the MN Bead Tube Holder or swing mill according to the respective user manual.

After sample disruption, recover the lysate for further nucleic acid purification.

6. Product use restrictions / warranty

All MACHEREY-NAGEL products are designed for their intended use only. They are not intended to be used for any other purpose. The description of the intended use of the products can be found in the original MACHEREY-NAGEL product leaflets. Before using our products, please observe the instructions for use and the safety instructions from the respective Material Safety Data Sheet of the product.

This MACHEREY-NAGEL product is carrying documentation stating specifications and other technical information. MACHEREY-NAGEL warrants to meet the stated specifications. The provided warranty is limited to the data specifications and descriptions as given in the original MACHEREY-NAGEL literature. No other statements or representations, written or oral, by MACHEREY-NAGELS employees, agents or representatives, except written statements signed by a duly authorized officer of MACHEREY-NAGEL are authorized. They should not be relied upon by the costumerand are not a part of a contract of sale or of this warranty.

Liability for all possible damages that occur in any connection with our products is limited to the utmost minimum as stated in the general business terms and conditions of MACHEREY-NAGEL in their latest edition which can be taken from the company's website. MACHEREY-NAGEL does not assume any further warranty.

Products and their application are subject to change. Therefore, please contact our Technical Service Team for the latest information on MACHEREY-NAGEL products. You may also contact your local distributor for general scientific information. Descriptions in MACHEREY-NAGEL literature are provided for informational purposes only.

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