

## MN Bead Tubes

### 1 Contents

Product	REF
MN Bead Tubes Type A (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.

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)

**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.

**Warning Note for Type F:** 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.

*Note for Type D + E + G: 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.

*Note: 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 for at least one year.

### 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

**MN Bead Tubes** are developed, designed, and sold for research purposes only. We offer a one year warranty from date of delivery that our products will conform to applicable specifications set forth in the product specifications if not sold to persons set forth in § 13 of German Civil Code. In such a case, the provisions of the German Civil Code shall be valid. This warranty does not cover defects in or damage to the products which are due to improper installation or maintenance, misuse, neglect or any use other than ordinary commercial application. The seller shall not be liable for the goods being fit for a particular purpose unless otherwise agreed upon, to which the buyer intends to put them. This warranty is strictly exclusive. MACHEREY-NAGEL MAKES no other warranty of any kind whatsoever, and SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES OF ANY KIND OR NATURE WHATSOEVER; DIRECTLY OR INDIRECTLY; EXPRESS OR IMPLIED; INCLUDING; WITHOUT LIMITATION; AS TO THE SUITABILITY; REPRODUCIBILITY; DURABILITY; FITNESS FOR A PARTICULAR PURPOSE OR USE; MERCHANTABILITY; CONDITION; OR ANY OTHER MATTER WITH RESPECT TO MACHEREY-NAGEL PRODUCTS OR THE SALE OF MACHEREY-NAGEL PRODUCTS. If not superseded by these terms the current terms and conditions for the sale of goods (export version) are additionally valid.

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