



BRUKER LABSCAPE CONSUMABLES

Solid State NMR

We've got you covered

Innovation with Integrity

BRUKER LABSCAPE CONSUMABLES

Enhance Your Lab

Quality Bruker Certified Consumables for your Bruker Instruments

Why Bruker consumables?

For over 60 years the Bruker name has been synonymous with innovation and quality, as a result of placing the customer at the center of all activities. When you need the best technological solution to an analytical question, you can count on the experts from Bruker.

This expertise is also extended to the Bruker LabScape® certified line of consumables, which are designed to work seamlessly with our instruments and accessories. Combining Bruker's cutting-edge instruments with the quality and precision of Bruker LabScape consumables is essential to ensuring the optimal results of your experiments as well as the optimum uptime throughout the life of your instrument.



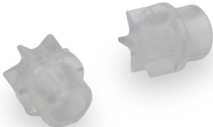


CP MAS Consumables

Solid State NMR

Bruker offers a wide range of consumables for various applications in solid state NMR. Depending on the geometrical properties of the probe, various diameters of the rotors and caps are available.

Rotor diameter [mm]: 0.7, 1.3, 1.9, 2.5, 3.2, 4.0, 7.0

The temperature range of the measurement as well as the compound, which must be detected, require different cap materials to reach the feasible result.

Cap material	Temperature	Features
Kel-F (Chlorofluoropolymer) 1H-free 	from about -10°C to +50°C	Shrinks when cold Softens and deforms when hot Easy to pull-out
VespeI (Polyimide) 19F-free 	from about -30°C to +80°C	Easy to pull out
ZrO2 (Ceramic) 1H- and 19F-free 	complete temperature range	Mechanically durable

The rotors with a smaller diameter, 0.7mm to 2.5mm, are open on both ends (tubes). This is important for the filling of the rotors with the sample as well as for the cleaning of the rotor. For these 'open' rotors, two types of caps are offered: the bottom cap and the top cap called the drive cap.



2.5mm open MAS rotor with drive and bottom vespeI caps

The rotors with a bigger diameter, 3.2mm to 7.0mm, are open on one side only. These rotors only need the drive caps.



7mm closed MAS rotor with drive cap

Each MAS rotor size has its own rotor filling tools. MAS tools have been designed to aid solid state NMR sample preparation. Unbalanced rotors due to improperly positioned caps or a non-homogenous packed sample can cause spinning instability resulting in a rotor crash and probe damage.

The described toolsets are available for all rotor diameters $\geq 1.3\text{mm}$. For our smallest rotor diameter, the 0.7mm rotor, we have a specially designed toolset to support handling of these tiny parts alongside a special preparation video describing the whole procedure. The toolset for the small diameter is also color coded to make it easier to identify the tools for the top and bottom caps.

For more details, please watch our sample preparation video (rotor diameter $\geq 1.3\text{mm}$) on YouTube:

https://youtu.be/VE-raM5o_Yc



Rotor Filling Tools for 4mm Rotors:



Cap removal: removes cap without damage (**HZ05754**)



Filling tool: loads sample into rotor barrel (**HZ3329**)



Packer: compresses sample inside rotor (**H148513**)

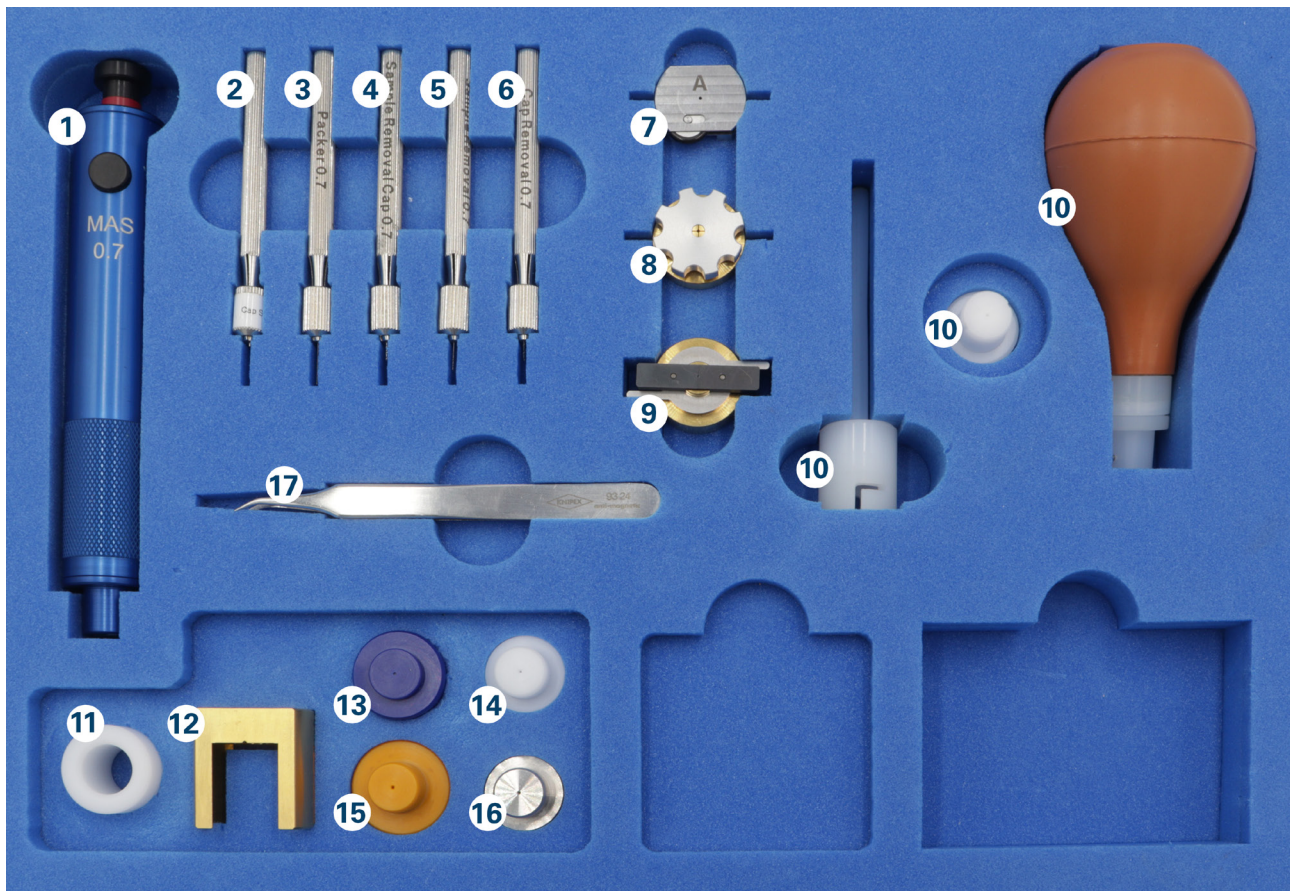


Cap set tool: correctly positions rotor cap (**H148486**)



Marker pen: bespoke rotor marker to enable correct and precise spin rate detection (**88817**)

Toolset for 0.7mm Rotors (mat. H149435)



1. **Grabbing tool:** to safely grab and move the rotor and the caps
2. **Cap space check tool:** checks, if there is enough space to fit the top cap into the rotor
3. **Sample packer 0.7:** compresses the sample in the rotor
4. **Sample removal tool for the cap 0.7:** removes sample excess
5. **Sample removal:** used to remove and clean a already filled rotor
6. **Cap removal:** removes caps
7. **Rotor clamp (Rotor fastener):** holds the rotor
8. **Collet:** holds the rotor for cap and bottom removal process
9. **Rotor cap removal:** toll which is used to open an already closed rotor
10. **Pipette & pipette nozzle:** help to place and remove the rotos into and from the probe
11. **Top cap guidance tool:** helps to correctly position the top cap into the top cap holder
12. **Main guidance tool:** guides the single parts during the sample preparation
13. **Bottom cap holder:** holds the bottom caps
14. **Filling funnel:** helps to fill the sample into the rotor
15. **Top cap holder:** holds the top cap for accurate positioning of it into the rotor
16. **Support for the cleaning tool:** helps to correctly guide the sample removal tool
17. **Twizzers:** emergency handling, if needed

For more details please watch our sample preparation video (rotor diameter =0.7mm) on YouTube:

LINK



Rotor Kits and Spare Caps

For all rotor diameters we offer kits containing a rotor and a set of suitable caps so that the user has everything for a sample measurement.



Open Rotor Kit
(0.7mm Rotor Kit **H153268**)



Open Rotor kit
(1.9mm Rotor Kit **H123832**)



Closed Rotor Kit
(3.2mm Rotor Kit **HZ16916**)

The MAS rotors are made for multiple use. Since the caps do not last as long compared to the rotors and depending on the measurement temperature, different material requirements are needed. We offer a choice of caps as well as cap sets for all rotor diameters. The caps for 0.7mm rotors are recommended for single use only.

For fully unattended sample measurement

For 4 mm rotors Bruker offers a standard bore shuttle for use with SampleCase automation unit.



SB Shuttle for 4mm MAS Rotors (**AH0196**)

This shuttle can be used for unattended measurements with CP MAS and HR MAS rotors. It allows flexible workflows with planned measurements over night and during weekends. The Shuttle can only be used in combination with MAS iProbe.

Rotor Kits and Caps for 0.7mm Rotors

Material Number	Product Type	Description
H153268	Rotor Kit	1x Zirconia open MAS Rotor 4x Drive Vespel Caps 4x Bottom Vespel Caps
H162624	Rotor Caps	2x Drive Caps 2x Bottom Caps

Filling Tools for 0.7mm Rotors

Material Number	Product Type
H149435	Rotor filling tools set
H153427	Packer
H153428	Sample Removal
H153429	Sample Removal Cap
H153878	Cap Space
88817	Marker Pen



0.7mm Rotor Kit (**H153268**)

Rotor Kits and Caps for 1.3mm Rotors

Material Number	Product Type	Description
HZ14752	Rotor Kit	1x Zirconia open MAS Rotor 2x Drive Vespel Caps 2x Bottom Vespel Caps
H183242	Rotor Caps	2x Drive Vespel Caps 2x Bottom Vespel Caps

Filling Tools for 1.3mm Rotors

Material Number	Product Type
HZ14706	Cap Removal
HZ14714	Filling Tool
HZ14716	Packer
HZ14744	Cap Set Tool
88817	Marker Pen



1.3mm Rotor Kit (**HZ14752**)

Rotor Kits and Caps for 1.9mm Rotors

Material Number	Product Type	Description
H123832	Rotor Kit	1x Zirconia open MAS Rotor 2x Drive Vespel Caps 2x Bottom Vespel Caps
H183243	Rotor Caps	2x Drive Vespel Caps 2x Bottom Vespel Caps

Filling Tools for 1.9mm Rotors

Material Number	Product Type
HZ16858	Cap Removal
HZ16845	Filling Tool
HZ16850	Packer
HZ16855	Cap Set Tool
88817	Marker Pen



1.9mm Rotor Kit (**H123832**)

Rotor Kits and Caps for 2.5mm Rotors

Material Number	Product Type	Description
HZ15196	Rotor Kit	1x Zirconia open MAS Rotor 2x Drive Vespel Caps 2x Bottom Vespel Caps
HZ06693	Rotor Caps	2x Drive Vespel Caps
HZ06694	Rotor Caps	2x Bottom Vespel Caps



2.5mm Rotor Kit (**HZ15196**)

Filling Tools for 2.5mm Rotors

Material Number	Product Type
H13836	Cap Removal
HZ15199	Filling Tool
HZ15198	Packer
HZ16624	Cap Set Tool
88817	Marker Pen

Rotor Kits and Caps for 3.2mm Rotors

Material Number	Product Type	Description
HZ16916	Rotor Kit	1x Zirconia closed MAS Rotor 2x Drive Vespel Caps
HZ16253	Rotor Caps	2x Drive Vespel Caps



3.2mm Rotor Kit (**HZ16916**)

Filling Tools for 3.2mm Rotors

Material Number	Product Type
HZ16913	Cap Removal
HZ07608	Filling Tool
HZ07607	Packer
HZ16621	Cap Set Tool
88817	Marker Pen

Rotor Kits and Caps for 4mm Rotors

Material Number	Product Type	Description
H14355	Rotor Kit	1x Zirconia closed MAS Rotor 3x Kel-F Caps
K1910	Rotor Kit	1x Zirconia closed MAS Rotor 1x Vespel Cap 2x Kel-F Caps
H14356	Rotor Kit	1x Zirconia closed MAS Rotor 1x Zirconia Cap 1x Kel-F Caps
H6304	Drive caps	1 Kel-F Drive Cap
HZ12360	Drive caps	1 Vespel Drive Cap
HZ05951	Drive caps	1 Zirconia Drive Cap



4mm Rotor Kit (**H14356**)

Filling Tools for 4mm Rotors

Material Number	Product Type
HZ05754	Cap Removal
HZ3329	Filling Tool
H148513	Packer
H148486	Cap Set Tool
88817	Marker Pen

Shuttle 4mm Rotor

Material Number	Product Type
AH0196	Shuttle for use with automation

Rotor Kits and Caps for 7mm Rotors

Material Number	Product Type	Description
H14357	Rotor Kit	1x Zirconia closed MAS Rotor 3x Kel-F Caps
K1921	Rotor Kit	1x Zirconia closed MAS Rotor 2x Kel-F Caps 1x Vespel Cap
H12032	MASCAT Rotor Kit	1x Zirconia closed MAS Rotor 1x Zirconia MASCAT Cap
H6244	Drive caps	1 Kel-F Drive Cap
HZ2717	Drive caps	1 Zirconia Drive cap

Filling Tools for 7mm Rotors

Material Number	Product Type
HZ05755	Cap Removal
HZ3328	Filling Tool
H148514	Packer
H148487	Cap Set Tool
88817	Marker Pen



7mm Rotor Kit (H14357)

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