

## **Wilmad – Your One Stop NMR Shop**

100% Tested Precision Tools  
Because Nothing is More  
Important Than Your Results



## Wilmad 5mm OD Thin Walled Economy NMR Tubes

Designed for routine use in modern NMR spectrometers, Wilmad Economy NMR Tubes are guaranteed to fit 100% in any spinner turbine and yield zero NMR background.

- Best OD tolerance in the industry; 30% thicker wall than competitive products
- 100% visual and physical inspection ensures quality, including dimensions and surface defects
- For experiments with small organic molecules (Molecular Weight ~500) at ambient temperatures only



Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
WG-1206-7	100	7"	4.947±0.019mm	51µm	50µm	4.1mm	0.43mm
WG-1206-8	100	8"	4.947±0.019mm	51µm	50µm	4.1mm	0.43mm
WG-1208-7	200	7"	4.947±0.019mm	51µm	25µm	4.1mm	0.43mm
WG-1208-8	200	8"	4.947±0.019mm	51µm	25µm	4.1mm	0.43mm
WG-1226-7	300	7"	4.947±0.019mm	51µm	13µm	4.1mm	0.43mm
WG-1226-8	300	8"	4.947±0.019mm	51µm	13µm	4.1mm	0.43mm
WG-1228-7	400	7"	4.947±0.019mm	13µm	13µm	4.1mm	0.43mm
WG-1228-8	400	8"	4.947±0.019mm	13µm	13µm	4.1mm	0.43mm
WG-1235-7	500	7"	4.947±0.019mm	13µm	6µm	4.1mm	0.43mm
WG-1235-8	500	8"	4.947±0.019mm	13µm	6µm	4.1mm	0.43mm
WG-1241-7	600	7"	4.947±0.019mm	3.8µm	3.8µm	4.1mm	0.43mm
WG-1241-8	600	8"	4.947±0.019mm	3.8µm	3.8µm	4.1mm	0.43mm
WG-1242-7	700	7"	4.947±0.019mm	2.5µm	3.8µm	4.1mm	0.43mm
WG-1242-8	700	8"	4.947±0.019mm	2.5µm	3.8µm	4.1mm	0.43mm

## Wilmad Thin Walled High Throughput NMR Tubes

Wilmad Thin Walled High Throughput NMR Tubes have an average camber of 60 microns to guarantee the SNR of the spectrum for small molecule (MW<250) samples up to 600 MHz.

- Best OD tolerances in the industry
- Guaranteed to fit tightly in the spinner turbine
- Designed for routine use in most low to mid field NMR spectrometers
- Catalog numbers ending in "-SJ" come with authentic Bruker SampleJet Caps



Catalog No.	MHz RATING	LENGTH	O.D.	AVERAGE CAMBER	WALL THICKNESS	PACK
WG-1000-4-SJ	600	103.5mm	4.947±0.019mm	60µm	0.43mm	100
WG-1000-7	High-Throughput	178mm	4.947±0.019mm	60µm	0.43mm	100
WG-1000-7-50	High-Throughput	178mm	4.947±0.019mm	60µm	0.43mm	50
WG-1000-7-SJ	600	178mm	4.947±0.019mm	60µm	0.43mm	100
WG-1000-8	High-Throughput	203mm	4.947±0.019mm	60µm	0.43mm	100
WG-1000-8-50	High-Throughput	203mm	4.947±0.019mm	60µm	0.43mm	50

## Precision NMR Tubes

To maximize SNR, Precision NMR Tubes have minimal paramagnetic impurities that would impact shimming.

- Tight ID and OD tolerance as small as 0.0065mm accommodates Wilmad inserts (except catalog no.'s containing "-PS-")
- 10% more filling factor than economy tubes
- For temperatures up to 230°C, and within a temperature step of 120°C
- Ideal for experiments requiring critical shimming quality (high/ultrahigh field, non-spinning, multi-dimensional, multi-nuclei, DNP experiments and studies involving biological samples)



## Wilmad 5mm OD Thin Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
505-PS-7	100	7"	4.9635±0.0065mm	76µm	51µm	4.21±0.13mm	0.38mm
505-PS-8	100	8"	4.9635±0.0065mm	76µm	51µm	4.21±0.13mm	0.38mm
505-PS-9	100	9"	4.9635±0.0065mm	76µm	51µm	4.21±0.13mm	0.38mm
506-PP-7	200	7"	4.9635±0.0065mm	51µm	51µm	4.2065±0.0065mm	0.38mm
506-PP-8	200	8"	4.9635±0.0065mm	51µm	51µm	4.2065±0.0065mm	0.38mm
506-PP-9	200	9"	4.9635±0.0065mm	51µm	51µm	4.2065±0.0065mm	0.38mm
507-PP-7	300	7"	4.9635±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
507-PP-8	300	8"	4.9635±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
507-PP-9	300	9"	4.9635±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
526-PP-7	350	7"	4.9635±0.0065mm	51µm	13µm	4.2065±0.0065mm	0.38mm
526-PP-8	350	8"	4.9635±0.0065mm	51µm	13µm	4.2065±0.0065mm	0.38mm
526-PP-9	350	9"	4.9635±0.0065mm	51µm	13µm	4.2065±0.0065mm	0.38mm
527-PP-7	400	7"	4.9635±0.0065mm	25µm	25µm	4.2065±0.0065mm	0.38mm
527-PP-8	400	8"	4.9635±0.0065mm	25µm	25µm	4.2065±0.0065mm	0.38mm
527-PP-9	400	9"	4.9635±0.0065mm	25µm	25µm	4.2065±0.0065mm	0.38mm
528-PP-7	500	7"	4.9635±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
528-PP-8	500	8"	4.9635±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
528-PP-9	500	9"	4.9635±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
535-PP-7	600	7"	4.9635±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm
535-PP-8	600	8"	4.9635±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm
535-PP-9	600	9"	4.9635±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm
541-PP-7	800	7"	4.9635±0.0065mm	3.8µm	3.8µm	4.2065±0.0065mm	0.38mm
541-PP-8	800	8"	4.9635±0.0065mm	3.8µm	3.8µm	4.2065±0.0065mm	0.38mm
542-PP-7	1000	7"	4.9635±0.0065mm	2.5µm	3.8µm	4.2065±0.0065mm	0.38mm
542-PP-8	1000	8"	4.9635±0.0065mm	2.5µm	3.8µm	4.2065±0.0065mm	0.38mm

## Wilmad 5mm OD Step-Down Ultra-Thin Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
547-PPT-7	350	7"	4.9635±0.0065mm	51µm	13µm	4.4965±0.0065mm	0.24mm
547-PPT-8	350	8"	4.9635±0.0065mm	51µm	13µm	4.4965±0.0065mm	0.24mm
547-PPT-9	350	9"	4.9635±0.0065mm	51µm	13µm	4.4965±0.0065mm	0.24mm
550-PPT-7	400	7"	4.9635±0.0065mm	38µm	13µm	4.4965±0.0065mm	0.24mm
550-PPT-8	400	8"	4.9635±0.0065mm	38µm	13µm	4.4965±0.0065mm	0.24mm
550-PPT-9	400	9"	4.9635±0.0065mm	38µm	13µm	4.4965±0.0065mm	0.24mm
555-PPT-7	600	7"	4.9635±0.0065mm	13µm	6µm	4.4965±0.0065mm	0.24mm
555-PPT-8	600	8"	4.9635±0.0065mm	13µm	6µm	4.4965±0.0065mm	0.24mm
555-PPT-9	600	9"	4.9635±0.0065mm	13µm	6µm	4.4965±0.0065mm	0.24mm

## Wilmod 3mm OD Thin Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
305-PS-7	200	7"	2.9935±0.0065mm	76µm	51µm	2.413±0.13mm	0.29mm
305-PS-8	200	8"	2.9935±0.0065mm	76µm	51µm	2.413±0.13mm	0.29mm
305-PS-9	200	9"	2.9935±0.0065mm	76µm	51µm	2.413±0.13mm	0.29mm
307-PP-7	300	7"	2.9935±0.0065mm	51µm	25µm	2.4195±0.0065mm	0.29mm
307-PP-8	300	8"	2.9935±0.0065mm	51µm	25µm	2.4195±0.0065mm	0.29mm
307-PP-9	300	9"	2.9935±0.0065mm	51µm	25µm	2.4195±0.0065mm	0.29mm
327-PP-7	400	7"	2.9935±0.0065mm	25µm	25µm	2.4195±0.0065mm	0.29mm
327-PP-8	400	8"	2.9935±0.0065mm	25µm	25µm	2.4195±0.0065mm	0.29mm
327-PP-9	400	9"	2.9935±0.0065mm	25µm	25µm	2.4195±0.0065mm	0.29mm
328-PP-7	500	7"	2.9935±0.0065mm	25µm	13µm	2.4195±0.0065mm	0.29mm
328-PP-8	500	8"	2.9935±0.0065mm	25µm	13µm	2.4195±0.0065mm	0.29mm
328-PP-9	500	9"	2.9935±0.0065mm	25µm	13µm	2.4195±0.0065mm	0.29mm
335-PP-7	600	7"	2.9935±0.0065mm	13µm	6µm	2.4195±0.0065mm	0.29mm
335-PP-8	600	8"	2.9935±0.0065mm	13µm	6µm	2.4195±0.0065mm	0.29mm
335-PP-9	600	9"	2.9935±0.0065mm	13µm	6µm	2.4195±0.0065mm	0.29mm

## Wilmod 5mm OD Ultra-Thin Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
537-PPT-7	300	7"	4.9635±0.0065mm	51µm	25µm	4.4965±0.0065mm	0.24mm
537-PPT-8	300	8"	4.9635±0.0065mm	51µm	25µm	4.4965±0.0065mm	0.24mm
537-PPT-9	300	9"	4.9635±0.0065mm	51µm	25µm	4.4965±0.0065mm	0.24mm
540-PPT-7	400	7"	4.9635±0.0065mm	25µm	13µm	4.4965±0.0065mm	0.24mm
540-PPT-8	400	8"	4.9635±0.0065mm	25µm	13µm	4.4965±0.0065mm	0.24mm
540-PPT-9	400	9"	4.9635±0.0065mm	25µm	13µm	4.4965±0.0065mm	0.24mm
545-PPT-7	600	7"	4.9635±0.0065mm	13µm	6µm	4.4965±0.0065mm	0.24mm
545-PPT-8	600	8"	4.9635±0.0065mm	13µm	6µm	4.4965±0.0065mm	0.24mm
545-PPT-9	600	9"	4.9635±0.0065mm	13µm	6µm	4.4965±0.0065mm	0.24mm

## Wilmod 5mm OD Medium Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
503-PS-7	100	7"	4.9635±0.0065mm	76µm	51µm	3.43±0.13mm	0.77mm
503-PS-8	100	8"	4.9635±0.0065mm	76µm	51µm	3.43±0.13mm	0.77mm
503-PS-9	100	9"	4.9635±0.0065mm	76µm	51µm	3.43±0.13mm	0.77mm
504-PP-7	300	7"	4.9635±0.0065mm	152µm	51µm	3.43±0.13mm	0.77mm
504-PP-8	300	8"	4.9635±0.0065mm	152µm	51µm	3.43±0.13mm	0.77mm
504-PP-9	300	9"	4.9635±0.0065mm	152µm	51µm	3.43±0.13mm	0.77mm
524-PP-7	400	7"	4.9635±0.0065mm	76µm	51µm	3.43±0.13mm	0.77mm
524-PP-8	400	8"	4.9635±0.0065mm	76µm	51µm	3.43±0.13mm	0.77mm
524-PP-9	400	9"	4.9635±0.0065mm	76µm	51µm	3.43±0.13mm	0.77mm

## Wilmod 5mm OD Heavy Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
501-PS-7	100	7"	4.9635±0.0065mm	152µm	51µm	2.16±0.13mm	1.4mm
501-PS-8	100	8"	4.9635±0.0065mm	152µm	51µm	2.16±0.13mm	1.4mm
501-PS-9	100	9"	4.9635±0.0065mm	152µm	51µm	2.16±0.13mm	1.4mm
502-PP-7	300	7"	4.9635±0.0065mm	152µm	51µm	2.160±0.013mm	1.4mm
502-PP-8	300	8"	4.9635±0.0065mm	152µm	51µm	2.160±0.013mm	1.4mm
502-PP-9	300	9"	4.9635±0.0065mm	152µm	51µm	2.160±0.013mm	1.4mm
522-PP-7	500	7"	4.9635±0.0065mm	51µm	51µm	2.160±0.013mm	1.4mm
522-PP-8	500	8"	4.9635±0.0065mm	51µm	51µm	2.160±0.013mm	1.4mm
522-PP-9	500	9"	4.9635±0.0065mm	51µm	51µm	2.160±0.013mm	1.4mm

## Wilmod 10mm OD Thin Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
513-1PS-7	100	7"	9.9935±0.0065mm	254µm	51µm	8.90±0.13mm	0.55mm
513-1PS-8	100	8"	9.9935±0.0065mm	254µm	51µm	8.90±0.13mm	0.55mm
513-1PS-9	100	9"	9.9935±0.0065mm	254µm	51µm	8.90±0.13mm	0.55mm
513-1PP-7	200	7"	9.9935±0.0065mm	254µm	51µm	9.070±0.013mm	0.46mm
513-1PP-8	200	8"	9.9935±0.0065mm	254µm	51µm	9.070±0.013mm	0.46mm
513-1PP-9	200	9"	9.9935±0.0065mm	254µm	51µm	9.070±0.013mm	0.46mm
513-3PP-7	300	7"	9.9935±0.0065mm	76µm	38µm	9.070±0.013mm	0.46mm
513-3PP-8	300	8"	9.9935±0.0065mm	76µm	38µm	9.070±0.013mm	0.46mm
513-3PP-9	300	9"	9.9935±0.0065mm	76µm	38µm	9.070±0.013mm	0.46mm
513-5PP-7	400	7"	9.9935±0.0065mm	51µm	25µm	9.070±0.013mm	0.46mm
513-5PP-8	400	8"	9.9935±0.0065mm	51µm	25µm	9.070±0.013mm	0.46mm
513-5PP-9	400	9"	9.9935±0.0065mm	51µm	25µm	9.070±0.013mm	0.46mm
513-7PP-7	500	7"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm
513-7PP-8	500	8"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm
513-7PP-9	500	9"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm

## Wilmod 10mm OD Medium Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
513-7PPM-7	200	7"	9.9935±0.0065mm	38µm	13µm	8.160±0.013mm	0.92mm
513-7PPM-8	200	8"	9.9935±0.0065mm	38µm	13µm	8.160±0.013mm	0.92mm
513-7PPM-9	200	9"	9.9935±0.0065mm	38µm	13µm	8.160±0.013mm	0.92mm

## Wilmod 10mm OD Heavy Walled Precision NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
513-7PPH-7	450	7"	9.9935±0.0065mm	51µm	13µm	7.100±0.013mm	1.45mm
513-7PPH-8	450	8"	9.9935±0.0065mm	51µm	13µm	7.100±0.013mm	1.45mm
513-7PPH-9	450	9"	9.9935±0.0065mm	51µm	13µm	7.100±0.013mm	1.45mm



## Precision Quartz NMR Tubes

Wilma Precision NMR Quartz Tubes have an extremely low thermal expansion rate and high tensile strength which is 14 times more robust during the cooling/heating process than precision glass tubes.

- To maximize SNR, these pure Quartz tubes have minimal paramagnetic impurities that would impact shimming
- Ideal for variable temperature experiments that have a temperature step over 120°C as well as experiments at temperatures up to 1300°C
- 100% inspection with multiple NIST traceable gauges and optical surface defect checks



## Wilma 5mm OD Thin Walled Quartz NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
507-PP-7QTZ	300	7"	4.936±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
507-PP-8QTZ	300	8"	4.936±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
507-PP-9QTZ	300	9"	4.936±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
528-PP-7QTZ	500	7"	4.936±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
528-PP-8QTZ	500	8"	4.936±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
528-PP-9QTZ	500	9"	4.936±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
535-PP-7QTZ	600	7"	4.936±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm
535-PP-8QTZ	600	8"	4.936±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm
535-PP-9QTZ	600	9"	4.936±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm

## Wilma 10mm OD Thin Walled Quartz NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
513-7PP-7QTZ	400	7"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm
513-7PP-8QTZ	400	8"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm
513-7PP-9QTZ	400	9"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm

## Wilma Thin Walled Suprasil® NMR Tubes

Wilma Precision NMR Suprasil® (Synthetic Quartz) Tubes are manufactured from the highest purity synthetic fused silica materials with <0.005ppm Fe<sub>2</sub>O<sub>3</sub> and outstanding optical characteristics in the deep UV to the near IR.

- Transmission rate from 190 nm to 2600 nm is well over 95% (10mm thickness) excluding reflection
- Similar thermal expansion rate and tensile strength as natural quartz
- Safe for experiments at temperatures up to 1300°C



## Wilma 5mm OD Thin Walled Suprasil® NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
507-PP-7SUP	300	7"	4.9635±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
507-PP-8SUP	300	8"	4.9635±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
507-PP-9SUP	300	9"	4.9635±0.0065mm	51µm	25µm	4.2065±0.0065mm	0.38mm
528-PP-7SUP	500	7"	4.9635±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
528-PP-8SUP	500	8"	4.9635±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
528-PP-9SUP	500	9"	4.9635±0.0065mm	25µm	13µm	4.2065±0.0065mm	0.38mm
535-PP-7SUP	600	7"	4.9635±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm
535-PP-8SUP	600	8"	4.9635±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm
535-PP-9SUP	600	9"	4.9635±0.0065mm	13µm	6µm	4.2065±0.0065mm	0.38mm

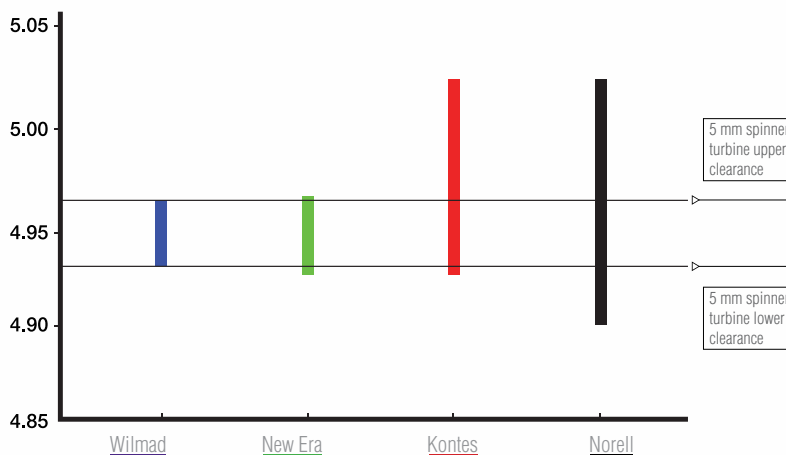
## Wilma 10mm OD Thin Walled Suprasil® NMR Tubes

Catalog No.	MHz RATING	LENGTH	O.D.	CONCENTRICITY	CAMBER	I.D.	WALL THICKNESS
513-7PP-7SUP	400	7"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm
513-7PP-8SUP	400	8"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm
513-7PP-9SUP	400	9"	9.9935±0.0065mm	38µm	13µm	9.070±0.013mm	0.46mm

# Why Wilmad NMR Tubes?

- ISO 9001:2008 certified manufacturer
- Precision tube features unparalleled quality to maximize SNR
- Economy tube has best compatibility with all NMR instruments
- 100% tested for spinner fitting
- 100% inspected for surface defects
- Inventor of the first NMR tube
- Standard-setter for NMR tube MHz frequency rating
- 60 years of experience in serving NMR community
- Most comprehensive offering with over 1000 NMR products

5 mm Economy Tube O.D. Comparison

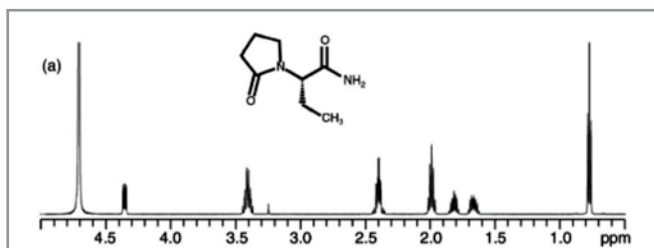


## Levetiracetam

<sup>13</sup>C, 16 scans, 600MHz

5 mm 600 MHz Economy

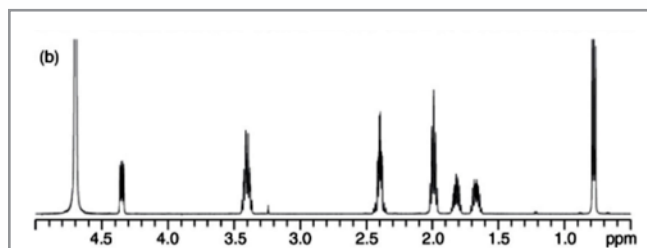
WG-1241-7



VS.

5 mm 600 MHz Precision

535-PP-7

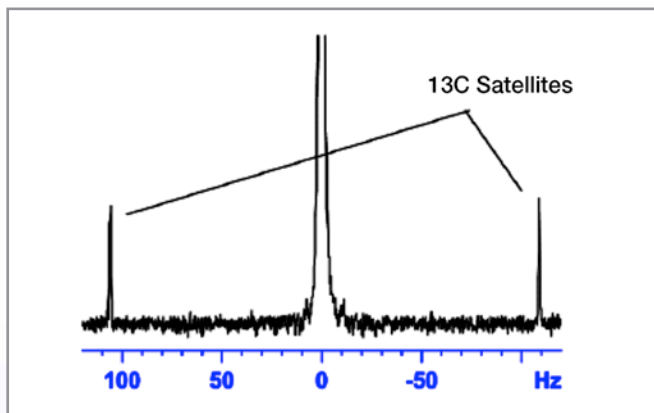


## TMS

<sup>1</sup>H, 16 scans, 600MHz

5 mm 600 MHz Economy

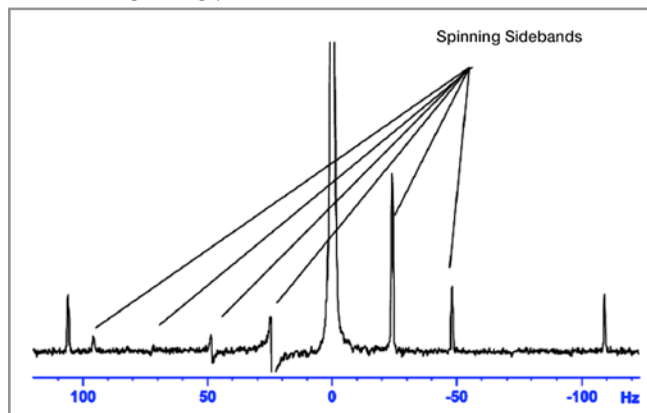
WG-1241-7



VS.

5 mm High Throughput

High Throughput tube with selected max 12 micron camber



## WilmaD-LabGlass at a Glance

With over 60 years of experience in development, engineering and manufacturing, WilmaD-LabGlass is a leading supplier of NMR and EPR consumables and laboratory glassware for academia, industry and healthcare. Our innovative laboratory solutions are manufactured using state of the art processing and inspection equipment, providing you with the highest quality and tolerances available. 7000+ standard items as well as custom fabrication capabilities and technical expertise make us a valuable member of your team for years to come.

- **ISO 9001:2008 Registered**
- **Class A Calibrated Lab Glassware**
- **Broadest Line of NMR Products in the Industry**
- **Precision Engineered Glass**
- **OEM Quartz Components and assemblies**
- **Custom Glass Fabrication**
- **Glass Repair Services Maximize Life of Precious Laboratory Tools**

# WilmaD-LabGlass

## NMR Sample Tubes

### Economy

- Best OD tolerance in the industry; 30% thicker wall than competitive products
- 100% visual and physical inspection ensures quality, including dimensions and surface defects
- For experiments with small organic molecules (Molecular Weight ~500) at ambient temperatures only



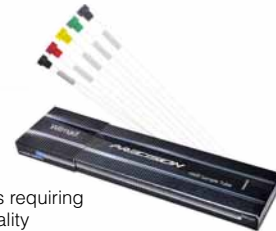
### High Throughput

- One of the best OD tolerances in the industry
- Guaranteed to fit tightly in the spinner turbine
- Designed for routine use in most low to mid field NMR spectrometers



### Precision

- For temperatures up to 230°C, and within a temperature step of 120°C
- Ideal for experiments requiring critical shimming quality (high/ultrahigh field, non-spinning, multi-dimensional, multi-nuclei, DNP experiments and studies involving biological samples)



### Precision Quartz

- To maximize SNR, these pure Quartz tubes have minimal paramagnetic impurities that would impact shimming
- Ideal for variable temperature experiments that have a temperature step over 120°C as well as experiments at temperatures up to 1300°C
- 100% inspection with multiple NIST traceable gauges and optical surface defect checks



### Precision Suprasil®

- Transmission rate from 190nm to 2600nm is well over 95% (10mm thickness) excluding reflection
- Similar thermal expansion rate and tensile strength as natural quartz which is 14 times more robust during the cooling/heating process than Type 1 Class A glass
- Safe for experiments at temperatures up to 1300°C



**Manufactured in  
an ISO 9001:2008 USA facility**

**To learn more, visit  
[www.wilmad-labglass.com](http://www.wilmad-labglass.com)**