

# NorLoc™ NMR TUBE CAPS

## NorLoc™

PAT8054080

*The Next Generation of NorLoc™ NMR Tube Caps  
In A Rich Palette of Fresh, Vibrant Colors*

Advance to the next level of sample security, personal safety and time savings. Combine Norell NorLoc™ II Security Caps™ with Norell Secure Series™ NMR tubes and experience the ultimate sample containment system.

The standard 5mm and 3mm NMR tube cap designs have existed for decades. Many users can attest to the significant flaws inherent in the traditional NMR tube caps, especially when faced with the chore of capping numerous sample tubes.

The NorLoc™ II Security Caps™ feature an internal patented design improvement that not only addresses many of the flaws in the traditional NMR tube caps, but the superior design of the NorLoc™ II Security Cap introduces many substantial improvements not found in any other NMR tube caps.

The NorLoc™ II Security Cap™ can be applied much more easily and quickly, thereby increasing personal safety and saving valuable time. It incorporates an advanced dual seal design, conferring superior sealing and holding capabilities, especially when combined with a Secure Series™ or other Norell NMR tube having the Security Band™ which interlocks with the NorLoc™ II Security Cap™.

This interlocking capability results in superior retention of the cap to the NMR tube, forming a “vaulted seal” that not only increases the barrier capability when used with any NMR tube, but the locking interaction prevents the occurrence of NMR tube and cap separation, safeguarding precious or critical samples, even during refrigerated cold storage, variable temperature cycling or repeated cap removals and reapplications.

The patented design of the NorLoc™ II Security Cap™ includes an expanded entryway, or guide section, in the opening of the cap, to help align and start the placement of the cap on the NMR tube. Adjacent to this, a constriction within the cap forms a tight, effective seal against the wall of the NMR tube, followed by a second constriction that functions in a like manner to form a dual seal. Finally, the innermost region expands slightly in diameter, allowing the NMR tube to slip easily through to the end, creating a positive indication of proper placement and “lock”, ensuring a “vaulted seal” every time.

In addition, the upper, straight edge of the patented marking or label area on Secure Series™ or other Norell NMR tubes functions as a clear visual indicator, defining the limit for full and complete closure with the NorLoc II Security Cap™.

**NORELL®**

**E-MAIL:** [customerservice@nmrtubes.com](mailto:customerservice@nmrtubes.com) **WEBSITE:** [nmrtubes.com](http://nmrtubes.com)

**TO ORDER CALL:** 1.828.584.2600 **FAX:** 1.828.584.2604

## NorLoc™ NMR TUBE CAPS

When preparing dozens, or even hundreds, of samples for analysis, tube capping can consume a significant amount of time. The traditional cap must first be held at an angle to the NMR tube to start placement of the cap, and then must be stretched and twisted onto the tube. This becomes a tedious exercise after capping a few dozen tubes, and often results in caps that are tilted and misshapen afterwards, promoting poor seals and split caps. This process also creates significant mechanical stress in the glass NMR tube, and can frequently lead to broken tubes, spilled sample and worse, including cuts or other injuries.

With the NorLoc™ II Security Cap™ however, the NMR tube easily enters the expanded guide section, and thereafter becomes self-aligning, allowing the cap to be simply pushed straight onto the tube. This method takes advantage of the compressive strength of glass, while minimizing the common causes of glass fracture from radial and torsional stresses induced in the glass from stretching and twisting traditional caps onto the NMR tube at an angle.

Proper, trouble-free closure of NMR tubes is ensured by the combination of NorLoc™ II Security Caps™ with Secure Series™ or other Norell NMR tubes, creating a “vaulted seal” that resists tube and cap separation even with troublesome NMR solvents such as chloroform-d, providing precise, uniform cap positioning and seal integrity, safeguarding critical and precious samples against losses caused by evaporation, contamination or degradation due to atmospheric exposure.



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# NorLoc™ NMR TUBE CAPS

## The NORELL® NorLoc™ Generation II Security Cap™ Includes:

- An internal Patented Security Seal™ that provides superior hermetic sealing capability on all 5mm and 3mm NMR tubes.
- The NorLoc II Security Cap™ requires much less force to place on or remove from an NMR tube, thereby greatly advancing the level of safety when capping NMR tubes.
- When combined with a Secure Series™ or other Norell NMR tube, the Security Band™ and Security Seal™ interlock to form a positive physical restraint system, preventing tube and cap separation, especially with troublesome NMR solvents such as chloroform-d.

### STAGE I

#### For all Bruker/Agilent-Varian/Jeol spinner turbine based NMR Spectrometers

Our dual purpose proprietary security band allows safe, reliable and secure placement of the NorLoc II cap.

Simply align the specially enlarged cap opening with the NMR tube and lightly push the cap to the natural stop created by the security band. The ensuing placement and single stage seal is a novel progression in lab safety with enhanced performance and ergonomic feel.



### STAGE II

#### For Bruker Sample Jet Systems

For Bruker Sample Jet use, simply apply additional pressure on the NorLoc II cap to engage the cap's locking mechanism onto the tube's security band. You will know

that the cap is properly engaged when the bottom of the cap touches our exterior tube marking area. Our dual stage mechanism provides superior hermetic sealing and the interlock forms a positive physical restraint system preventing tube and cap separation especially with troublesome NMR solvents such as chloroform-d.



NorLoc II Caps are designed to work with NORELL® Secure Series™ Sample Tubes.

**NORELL®**

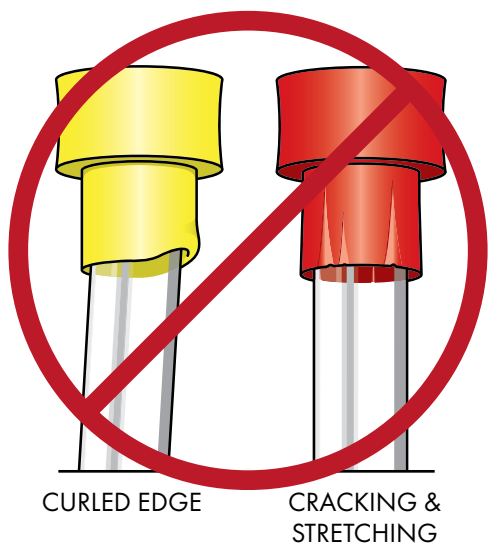
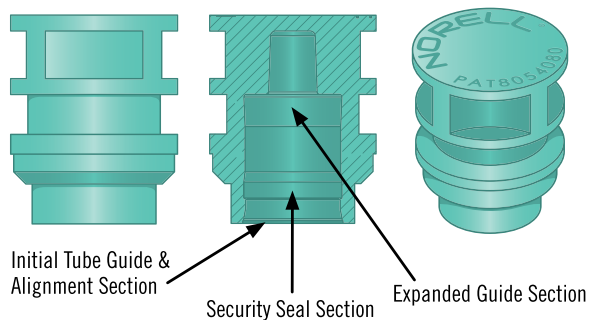
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# NorLoc™ NMR TUBE CAPS

## NorLoc™ Generation II Series... Ingenuity, Precision, Proven Results

*Patented Design with Superior  
Holding & Sealing Capabilities*



## NorLoc™ The New Standard for NMR Tube Caps

Item No.	Cap Color	Size	Available in Lots of
NORLOC2-5-PA	Purple Acai	5mm	100, 500, 1000
NORLOC2-5-GW	Glacier White	5mm	100, 500, 1000
NORLOC2-5-BO	Black Onyx	5mm	100, 500, 1000
NORLOC2-5-MJ	Mint Julep	5mm	100, 500, 1000
NORLOC2-5-LY	Lemon Yellow	5mm	100, 500, 1000
NORLOC2-5-BH	Blue Harbor	5mm	100, 500, 1000
NORLOC2-5-SG	Sea Glass	5mm	100, 500, 1000
NORLOC2-5-RP	Red Poppy	5mm	100, 500, 1000
NORLOC2-5-OT	Orange Tangerine	5mm	100, 500, 1000
NORLOC2-5-PS	Pink Sorbet	5mm	100, 500, 1000
NORLOC2-5-GE	Green Envy	5mm	100, 500, 1000
NORLOC2-5-BR	Blue Royal	5mm	100, 500, 1000
NORLOC2-3-PA	Purple Acai	3mm	100, 500, 1000
NORLOC2-3-GW	Glacier White	3mm	100, 500, 1000
NORLOC2-3-BO	Black Onyx	3mm	100, 500, 1000
NORLOC2-3-MJ	Mint Julep	3mm	100, 500, 1000
NORLOC2-3-LY	Lemon Yellow	3mm	100, 500, 1000
NORLOC2-3-BH	Blue Harbor	3mm	100, 500, 1000
NORLOC2-3-SG	Sea Glass	3mm	100, 500, 1000
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NORLOC2-3-BR	Blue Royal	3mm	100, 500, 1000

## 12 Vibrant Colors!

