

# Uni-Puck Loading and Shipping



The Uni-Puck is compatible with the Berkeley automated sample mounting system and the Stanford automated sample mounting system

# The Uni-Puck

The uni-puck consists of two parts that both contain magnets: The Enclosure and the Base

The cavities in the uni-puck are similar to the cavities in the cassette



The magnets in the base are stronger than the magnets in the enclosure.

# Uni-puck Identification

Do not use stickers or labels on the outside of uni-pucks. These will interfere with insertion into SSRL adaptor cassettes.



4 uni-pucks inserted into adaptor cassette

Uni-pucks are identified by a laser etched serial number



# Follow Proper Handling Procedures for Liquid Nitrogen Use

## Required PPE for Handling Liquid Nitrogen (at SSRL)

	Safety Glasses	Cryogenic Gloves	Goggles or Face Shield	Long Pants without cuffs or Apron	Closed-toe shoes	Insulated tool handles
Filling dewar with close-loop transfer line	X	X				
Filling dewar with open flow delivery line		X	X	X	X	
Dewar to dewar transfer	X	X		X	X	
Removing/storing items in dewars	X	X		X	X	
Transporting open dewars holding less than 0.5 L	X	X				
Disposing of liquid nitrogen by pouring on ground	X	X		X	X	
Disposing of liquid nitrogen by bubbling warm nitrogen gas	X	X				
Manipulating protein crystals in dewars	X					X
Transporting dewars or tanks with lids or closed valves						
Disposing of liquid nitrogen by evaporation						

Note: at the ALS cotton gloves worn underneath latex or nitrile gloves is the required PPE for manipulating protein crystals in dewars.

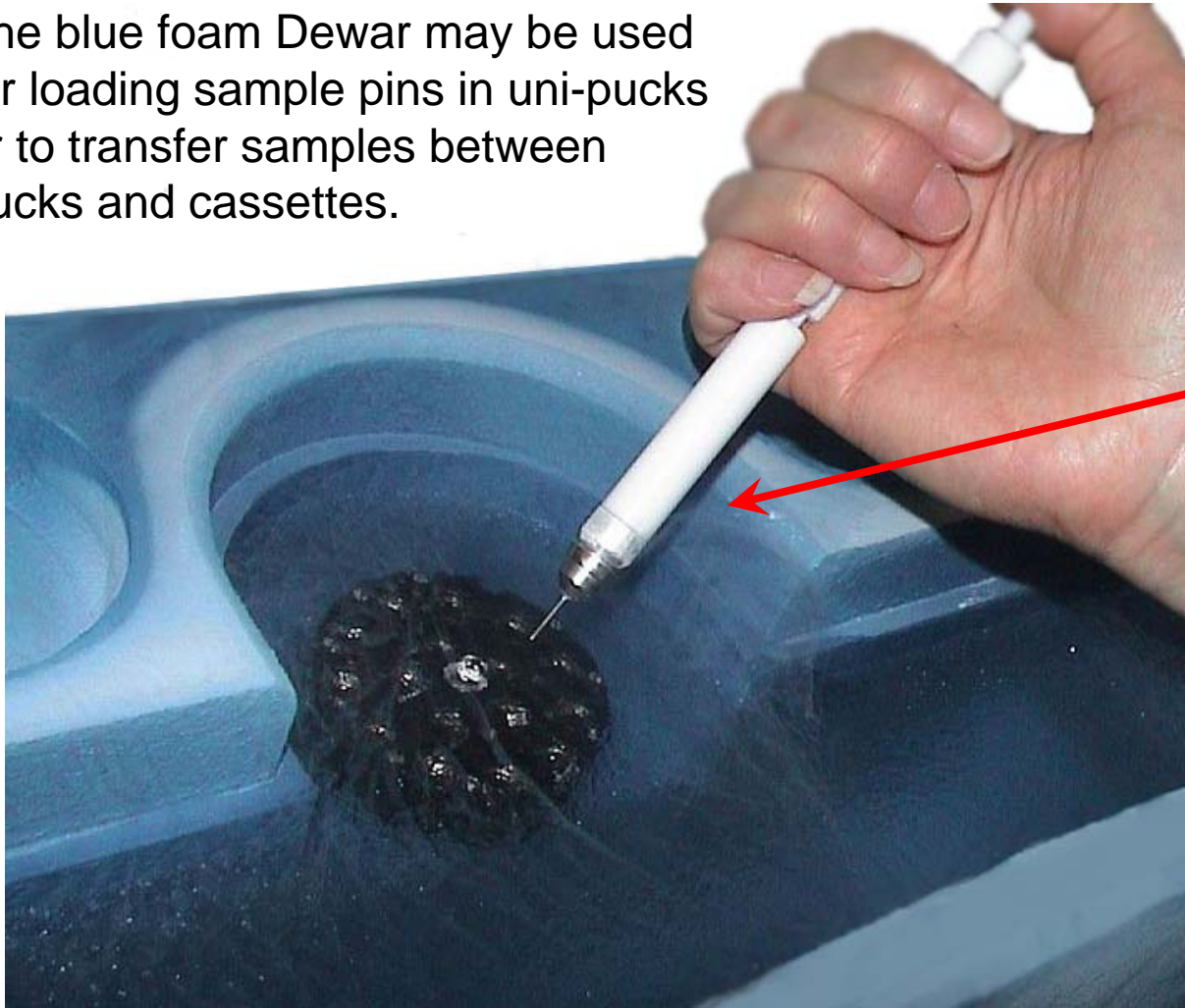
# Watch Out for Ice



During uni-puck loading samples may pickup ice when traveling through frosty liquid nitrogen

# Uni-Puck Loading

The blue foam Dewar may be used for loading sample pins in uni-pucks or to transfer samples between pucks and cassettes.



The push button wand is useful for inserting or removing sample pins

As described for cassette loading, use precautions to avoid frosty liquid nitrogen

# Uni-Puck Loading



1. Use a foam or stainless steel dewar for puck filling. Glass dewars can break if pucks are dropped inside
2. Inspect an empty puck enclosure to make sure the cavities are clean. Then insert the enclosure into a liquid nitrogen filled dewar and wait for the liquid nitrogen to stop boiling
3. Fill the enclosure with samples using a magnetic wand.

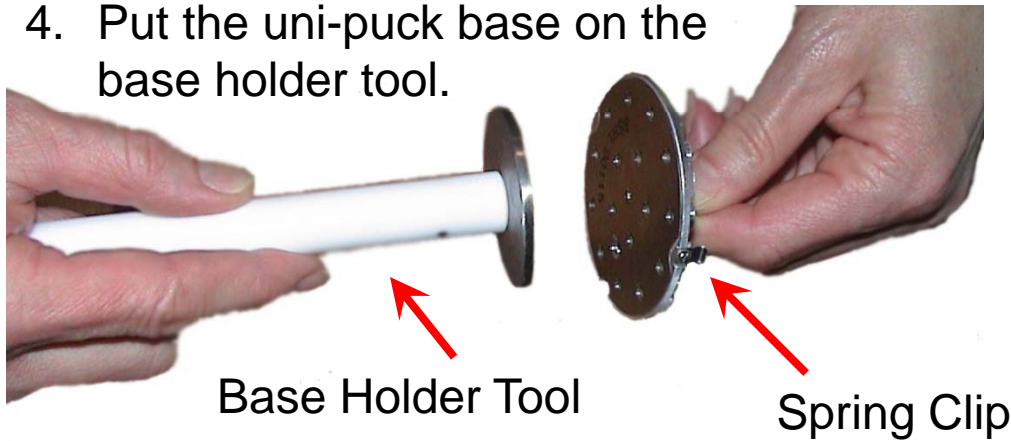


**Follow proper liquid nitrogen handling procedures. Know the requirements of your institution.**



# Uni-Puck Loading

4. Put the uni-puck base on the base holder tool.



6. Orient the base properly before inserting it into the enclosure. Push down inserting the uni-puck base in a single motion.

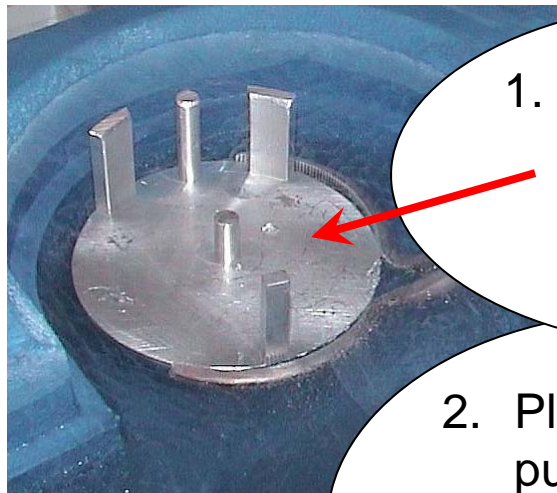


5. Pre-cool the uni-puck base on the base holder tool

Push down strongly enough to ensure the spring clips on the base properly snap around the enclosure



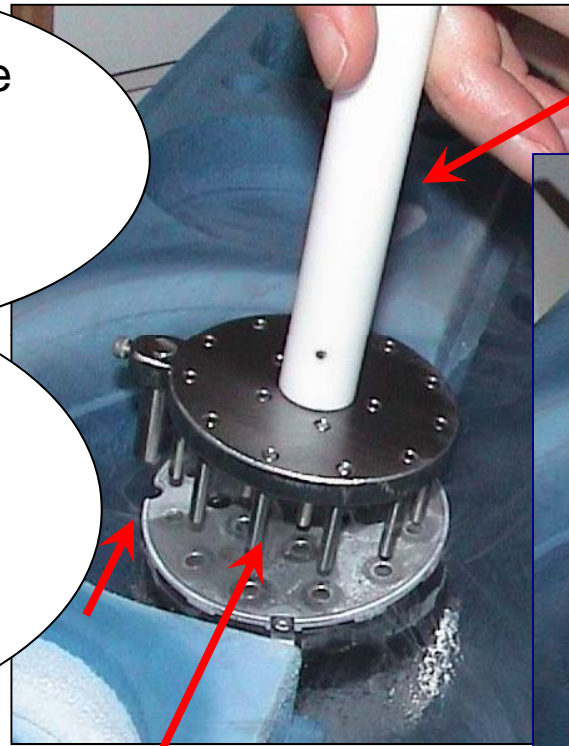
# Uni-Puck Base Removal



1. Place the base removal platform into the dewar.



2. Place the uni-puck on top of the platform in the proper orientation



Push Tool



3. Align the rods of the push tool to the holes of the uni-puck base.

4. Use the push tool to push the puck enclosure down onto the platform and the pins into the enclosure. Push down in a single motion. Remove uni-puck base.

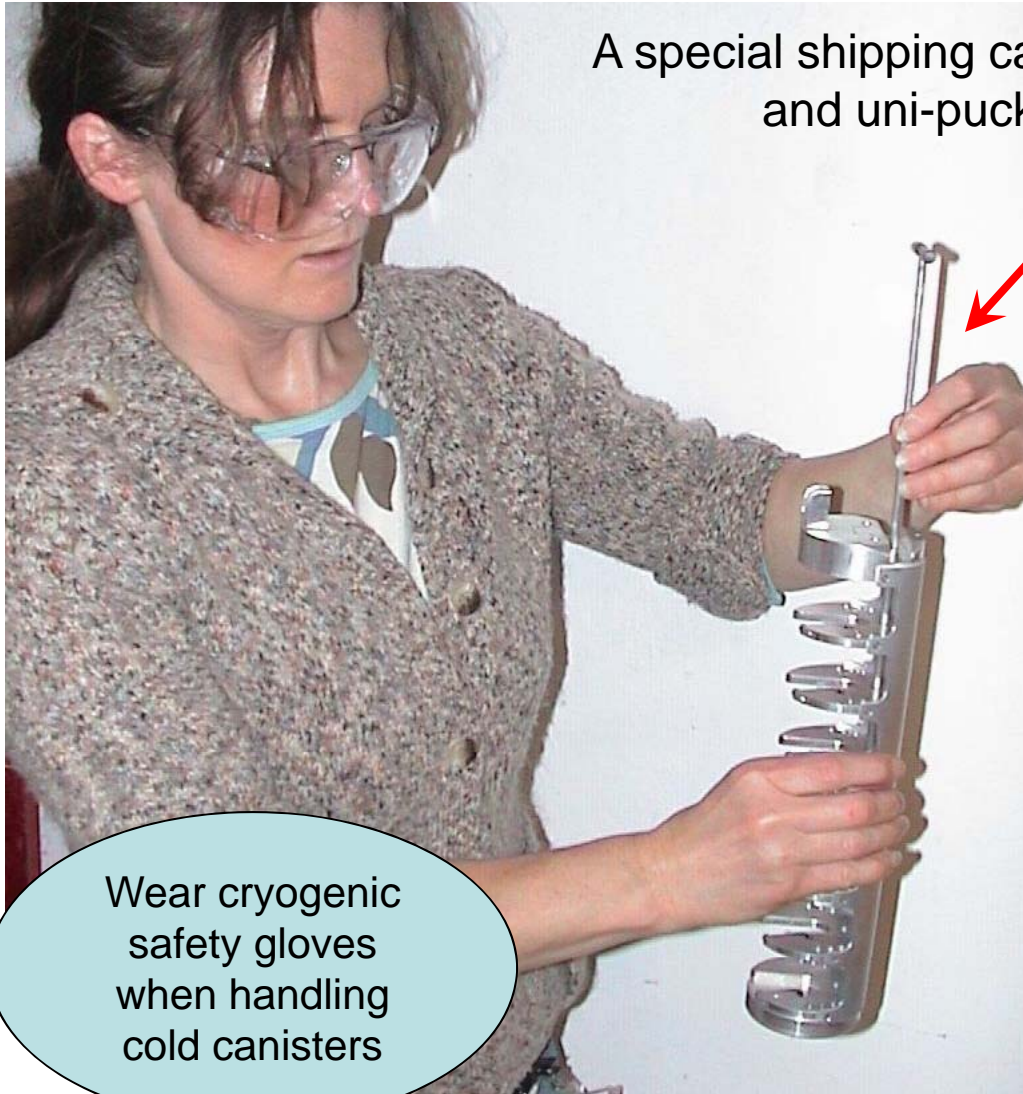
# Transporting Uni-Pucks

A bent cryo-tong is used to transport cold uni-pucks between the loading dewar and shipping canister

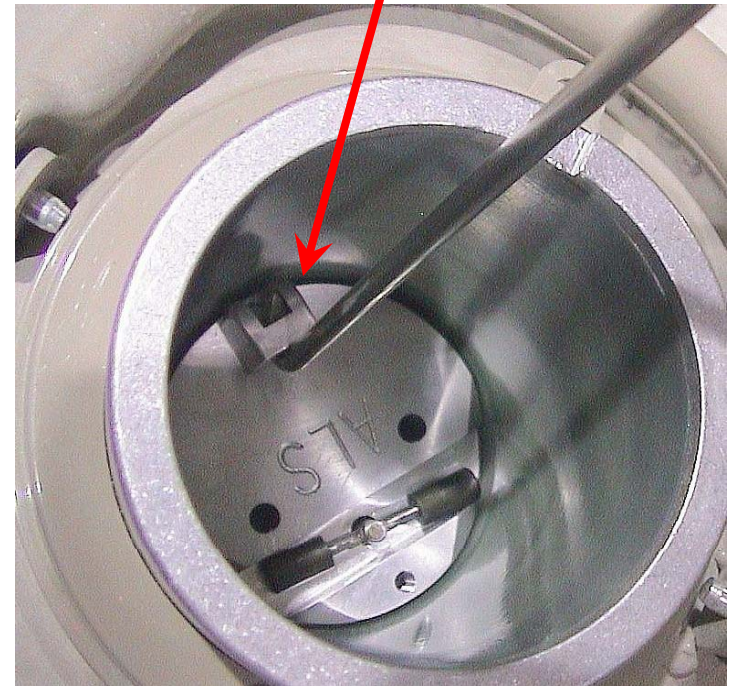


# Shipping Uni-Pucks

A special shipping canister is used for shipping pucks and uni-pucks in dry shipping dewars



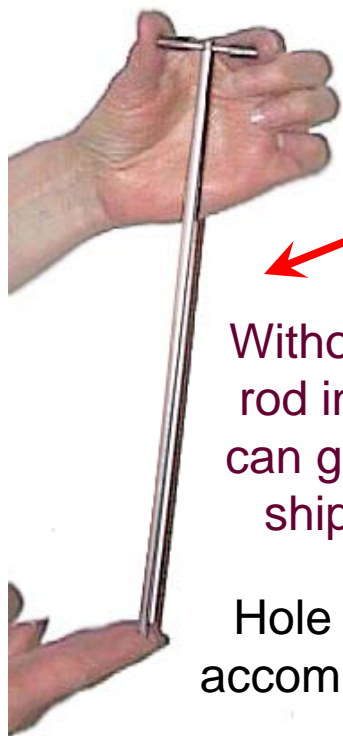
A hooked handle is used for removing this canister from the shipping dewar



Wear cryogenic safety gloves when handling cold canisters

# Shipping Uni-Pucks

The locking rod on the shipping dewar canister holds the uni-pucks in place during shipping



Without the locking rod in place pucks can get stuck in the shipping dewar!

Hole in uni-puck to accommodate locking rod

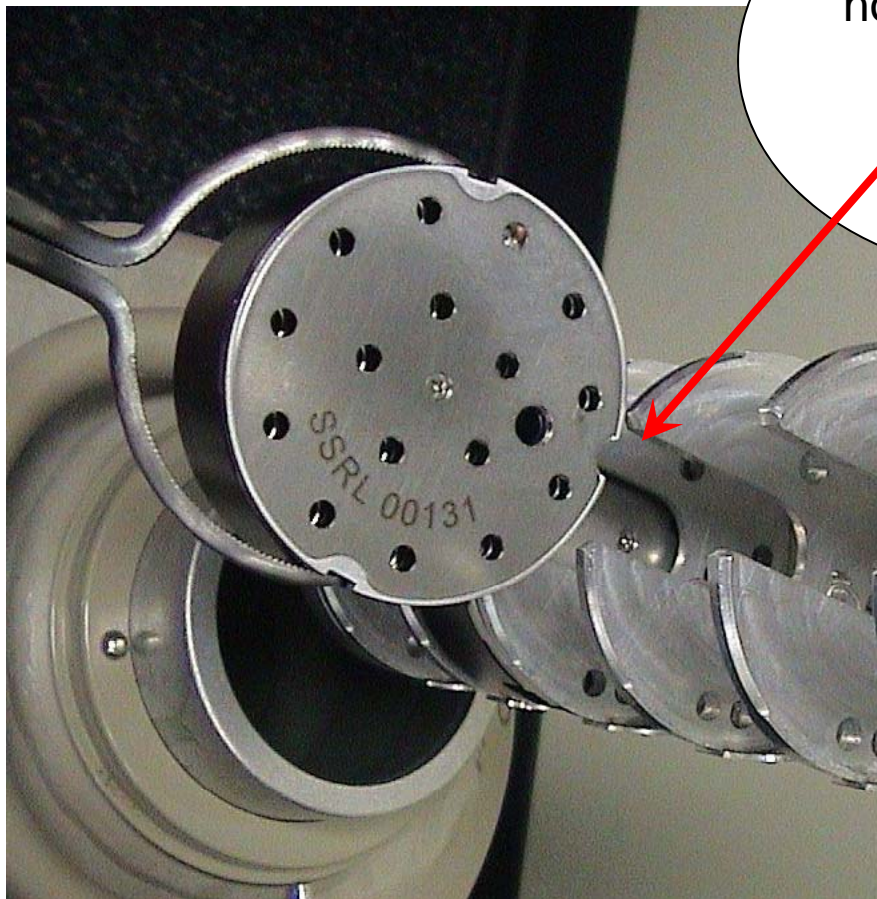


Remove the locking rod only after the canister has been completely removed from the shipping dewar



# Shipping Uni-Pucks

Align the uni-puck properly for insertion into the canister



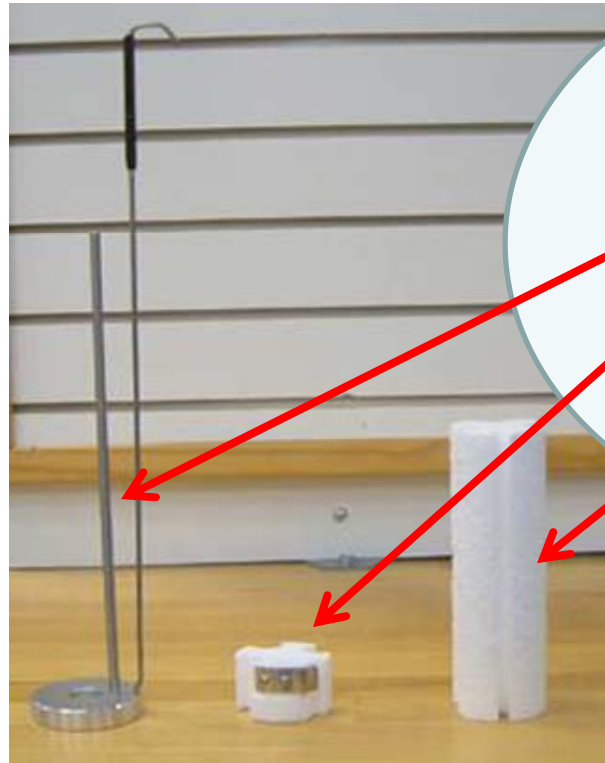
The semi-circle notch on the side of the puck should face forward



Ensure the puck is completely inserted. The puck will click into place. Then insert the locking rod

# SSRL Style Uni-puck Canister

An economical uni-puck shipping canister has been developed at SSRL and is a good choice for shipping uni-pucks to synchrotrons. The design prevents problems with stuck canisters or uni-pucks in shipping dewars.

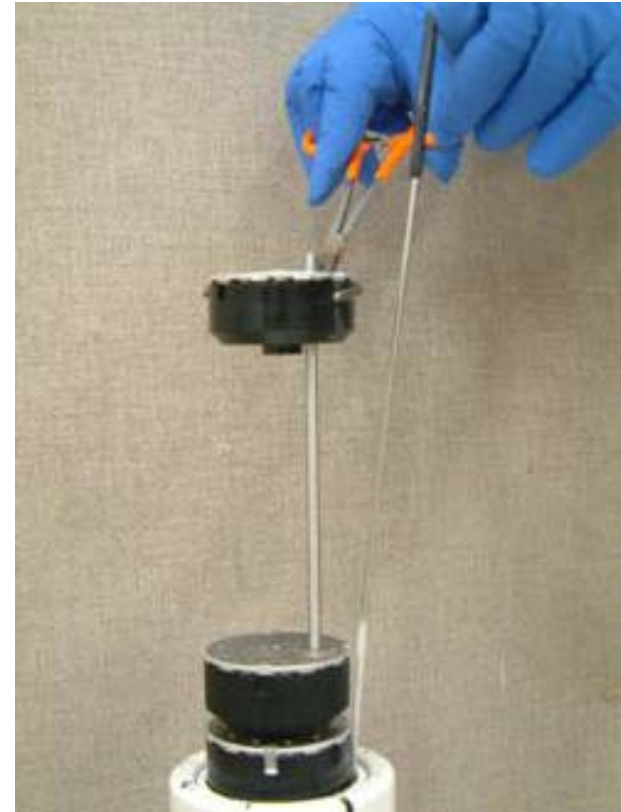


This canister consists of 3 parts:

1. a single-rod support with hooked handle
2. a Teflon clip
3. a styrofoam spacer

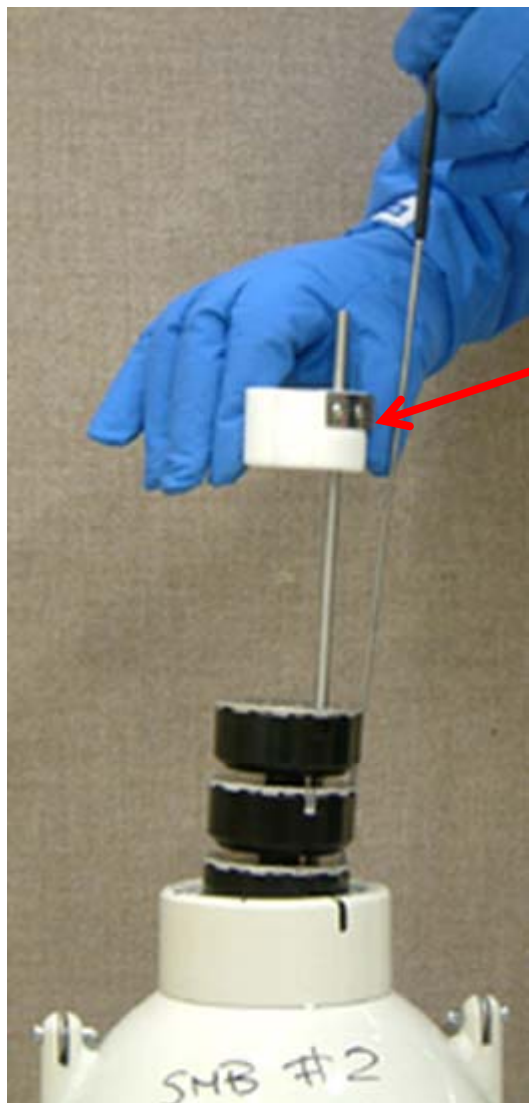
# SSRL Style Uni-puck Canister

To insert uni-pucks, slide the canister rod through the transport hole in the uni-puck body.

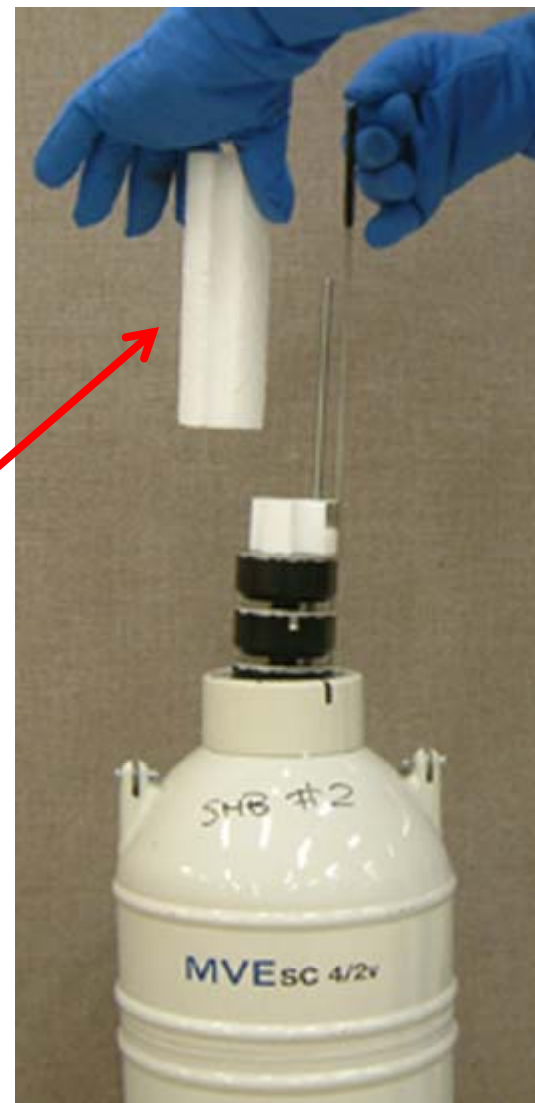


You may stack up to 7 uni-pucks in one canister

# SSRL Style Uni-puck Canister

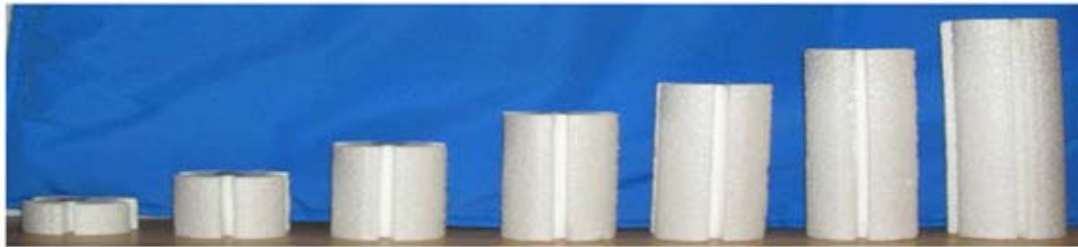


Once the uni-pucks are placed in the canister, a **Telfon clip** is snapped on for security, along with an appropriate **Styrofoam spacer**





# SSRL Style Uni-puck Canister



The number printed on top of the Styrofoam spacer corresponds to the amount of uni-pucks shipped.



A maximum of 7 uni-pucks can be shipped in one dry-shipping dewar

# How do I get more uni-pucks and cryo-tools?

Uni-Pucks and cryo-tools:

[www.crystalpositioningsystems.com](http://www.crystalpositioningsystems.com)



## Crystal Positioning Systems

A division of Elk Valley Enterprises

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### SSRL Cassette Loading Dewar and Lid (Part number: CP-111-002)

Single Cassette Loading Dewar with Lid  
\$ 625.00 [View Cart](#)

**Add to Cart**

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**Volume Discounts:**

Three Cassette Loading Dewars with Lids  
\$1800.00 (or \$600/each)

**Add to Cart**

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Ten Cassette Loading Dewars with Lids  
\$5750.00 (or \$575/each)

**Add to Cart**

For product usage information visit the SSRL protein crystallography group website:  
<http://smb.slac.stanford.edu/hardware>

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Shipping is free in the continental United States.  
For overseas or express shipping further charges will apply.  
For more information please contact  
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