

SELECTION GUIDE

Cryogenics



ITS PRACTICAL AND ECONOMICAL!



THE ULTIMATE STORAGE VESSEL!



KEEP TRACK OF YOUR SAMPLES—EASILY!

CRYOGENIC STORAGE SYSTEMS (CAN AND CANE)

Product Description	Storage Capacity (Ampules 6/cane)	Vessel Size H x Diam. Inches (cm)	Static Holding Time (Days)	Static Evaporation Rate (Liters/Day)	Working LN ² Capacity (Liters)	Level Monitor Available	Page
<i>ITS PRACTICAL AND ECONOMICAL!</i> Bio-Cane 70	1850	27 x 22 (68.5 x 55.8)	117	0.6	70.7	No	6
Bio-Cane 47	1512	26.5 x 20 (67.3 x 50.8)	128	0.37	47.4	No	6
Bio-Cane 34	720	26.6 x 18.2 (67.6 x 46.2)	204	0.17	34.8	No	6
Bio-Cane 20	180	25.7 x 14.5 (65.3 x 36.8)	224	0.09	20.5	No	6
Bio-Cane 11	180	21.6 x 10.2 (54.8 x 25.9)	78	0.14	11	No	6

CRYOGENIC STORAGE SYSTEMS (RACK AND BOX)

<i>the ultimate storage vessel!</i> Locator 4 Plus	4000	38 x 22 (96.5 x 55.8)	138	0.8	111	Yes	8
Locator 6 Plus	6000	38 x 26 (96.5 x 66)	206	0.8	165	Yes	8
Locator 8 Plus	2000	38 x 22 (96.5 x 55.8)	191	0.58	111	Yes	8
Locator Jr. Plus	2000	27 x 22 (68.5 x 55.8)	63	0.8	51	Yes	8
<i>KEEP TRACK OF YOUR SAMPLES—EASILY!</i> Locator 4	3600	36 x 22 (91.4 x 55.8)	138	0.65	90	Yes	10
Locator 8	1800	36 x 22 (91.4 x 55.8)	225	0.4	90	Yes	10
Locator Jr.	1600	26 x 22 (66 x 55.8)	61	0.65	40	Yes	10

SELECTION GUIDE

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SHIP YOUR SAMPLES WITH CONFIDENCE!



ECONOMICAL, LIGHTWEIGHT AND DURABLE!



BENCHTOP STORAGE!

DRY SHIPPERS

Product Description	Storage Capacity (2 ml Ampules)	Vessel Size H x Diam. Inches (cm)	Static Holding Time (Days)	Shipping Case Included	Shipping Case H x L x W Inches (cm)	Liquid Nitrogen Capacity (Liters)	Shipping Storage System	Shipping Weight Lb. (kg)	Page
<i>SHIP YOUR SAMPLES WITH CONFIDENCE!</i> Arctic Express 5	9	13.5 x 7.25 (34.3 x 18.4)	13	Yes	22 x 12 x 12 (55.9 x 30.5 x 30.5)	1.6	Can/Cane	19 (8.4)	13
Arctic Express 10	48	19.4 x 8.7 (49.3 x 22.1)	21	Yes	27 x 12 x 12 (68.6 x 30.5 x 30.5)	4.3	Can/Cane	26 (11.8)	13

LIQUID NITROGEN TRANSFER VESSELS

Product Description	Liquid Nitrogen Capacity (Liters)	Vessel Size H x Diam. Inches (cm)	Static Holding Time (Days)	Static Evaporation Rate (Liters/Day)	Full Weight Lb. (kg)	Dispensing Options	Page
<i>ECONOMICAL, LIGHTWEIGHT AND DURABLE!</i> Thermo 50	50	35.5 x 16 (90.2 x 40.6)	25	2.0	180 (81.6)	Includes regulating valve Transfer hose/phase Separator optional	14
Thermo 35	35	28.5 x 16 (72.4 x 40.6)	23	1.5	140 (63.5)	Includes regulating valve Transfer hose/phase Separator optional	14
Thermo 30	30	24 x 17 (61 x 43.2)	128	0.25	84 (38.1)	Withdrawal Device	14
Thermo 20	20	24.7 x 14.5 (62.7 x 36.8)	116.7	0.18	56 (25.4)	Withdrawal Device	14
Thermo 10	10	21.5 x 10.3 (54.6 x 26.2)	55.6	0.18	31 (14.1)	Withdrawal Device	14
Thermo 5	5	18.2 x 6.5 (46.2 x 16.5)	33.3	0.15	17 (7.7)		14

THERMO FLASKS/DEWARS

Product Description	Liquid Nitrogen Capacity (Liters)	Inside Diameter Inches (cm)	Outside Diameter Inches (cm)	Height Inches (cm)	Shipping Weight Lb. (kg)	Page
<i>BENCHTOP STORAGE!</i> Thermo Cups	1 - 8	4 (10.2) - 8 (20.3)	7 (17.8) - 11 (17.9)	7.25 (18.4) - 11 (17.9)	6 (2.7) - 14 (6.3)	16
Plastic Wide Mouths	1	3.33 (8.5)	5.75 (14.6)	8.75 (22.2)	6 (2.7)	16
Enameled Steel without lids and handles	0.2 - 3	1.62 (3.8) - 5.25 (13.3)	2.75 (6.9) - 7 (17.8)	8.5 (21.6) - 11.4 (29.2)	4 (1.8) - 9 (4.1)	16
Enameled Steel with lids and handles	1 - 10	3.5 (8.9) - 8 (20.3)	4.62 (11.4) - 9.12 (23.3)	9 (22.9) - 17.12 (43.7)	6 (2.7) - 16 (7.3)	16
Stainless Steel	1 - 7	3.33 (8.5) - 8 (20.3)	4.62 (11.4) - 9.25 (23.5)	9 (22.9) - 13.25 (33.7)	6 (2.7) - 14 (6.3)	16
Shallow Wide Mouths	20 ml - 1900 ml	3 (7.6) - 6 (15.2)	4.12 (10.6) - 7.25 (18.4)	3 (7.6) - 5.5 (14)	4 (1.8) - 10 (14.5)	16

Cryogenics

BIO-CANE™ CAN & CANE SYSTEMS

Thermolyne

Bio-Cane Storage Systems



IT'S PRACTICAL AND ECONOMICAL!

- — 5 sizes to choose from
- — Priced right for your budget
- ★ — 60 month extended vacuum warranty

PRODUCT SPECIFICATIONS

Model #	Height Inches (cm)	Outside Diameter Inches (cm)	Neck Tube Opening Inches (cm)	Liquid Nitrogen Capacity (Liters)	System Capacity Static Evaporation Rate (Liters/Day)	Static Holding Time (Days)	Canister Diameter Inches (cm)	1.2 & 2.0 ml Vials (5 per cane/6 per cane)
CK509X1	21.6 (54.8)	10.2 (25.9)	2 (5.0)	11	0.14	78	1.5 (3.8)	150/180
CK509X2	25.7 (65.2)	14.5 (36.8)	2 (5.0)	20.5	0.09	224	1.5 (3.8)	150/180
CK509X3	26.6 (67.5)	18.2 (46.2)	3.5 (8.8)	34.8	0.17	204	2.8 (7.1)	600/720
CK509X4	26.5 (67.3)	20 (50.8)	5 (12.7)	47.4	0.37	128	4 (10.2)	1260/1512
CK509X5	27 (68.5)	22 (55.9)	6.25 (15.8)	70.7	0.60	117	5 (12.7)	1560/1850

PRODUCT DESCRIPTION

- Available in five sizes to fit the requirements and space limitations of research or clinical laboratories.
- Super vacuum insulation, durable construction provide years of trouble-free service.
- Secure locking hasp prevents unauthorized entry.
- Unbeatable temperature uniformity.
- Every vessel includes six cans to accommodate your ampules.
- Includes a five year vacuum warranty.

ORDERING INFORMATION

Model #	Description	US List Price
CK509X1	Bio-Cane 11	\$809.00
CK509X2	Bio-Cane 20	\$831.00
CK509X3	Bio-Cane 34	\$1225.00
CK509X4	Bio-Cane 47	\$1334.00
CK509X5	Bio-cane 70	\$1883.00

ADDITIONAL FEATURES FOR BIO-CANE 20, 34, AND 47

- Polycarbonate lid to withstand the years of rugged use you will receive from your Bio-Cane.
- Color coded canister system provides quick and easy inventory identification.

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Guaranteed!***



*see inside front cover for details

Cryogenics

BIO-CANE ACCESSORIES

Thermolyne



ORDERING INFORMATION

Model #	Description	US List Price
AY509X20	CryoCane(A), case/48, 1.2 and 2.0 ml capacity, 286 mm length	\$43.00
AY509X27	Cryogenic Vials Closure Color Coders (B), pkg/100, White	\$11.00
AY509X28	Cryogenic Vials Closure Color Coders (B), pkg/100, Yellow	\$11.00
AY509X29	Cryogenic Vials Closure Color Coders (B), pkg/100, Blue	\$11.00
AY509X30	Cryogenic Vials Closure Color Coders (B), pkg/100, Green	\$11.00
AY509X31	Cryogenic Vials Closure Color Coders (B), pkg/100, Red	\$11.00
AY509X22	CryoCane Coders(C), case/100, White	\$22.00
AY509X23	CryoCane Coders(C), case/100, Yellow	\$22.00
AY509X24	CryoCane Coders(C), case/100, Blue	\$22.00
AY509X25	CryoCane Coders(C), case/100, Green	\$22.00
AY509X26	CryoCane Coders(C), case/100, Red	\$22.00
AY509X21	CryoSleeve(D), Case/100, 273 mm length	\$60.00
AY509X13	Cryogenic Vials(E), case/500, 1.2 ml, 13.5 mm O.D., 38.1mm H	\$182.00
AY509X12	Cryogenic Vials(E), case/500, 2.0 ml, 13.5 mm O.D., 48.3 mm H	\$182.00
AY509X18	Cryoclave	\$103.00
AY509X19	Replacement suction cups for CryoClaw	\$11.65

CryoClaw



CRYOCANE™ (A)

- Aluminum canes firmly hold five to six 1.2 or 2.0 ml cryovials for storage in Bio-Cane systems. Each cane accommodates most brands of cryovials.

CRYOGENIC VIAL CLOSURE COLOR CODERS (B)

- Colorful polystyrene disks fit into top of cryovial closure (1.2 or 2.0 ml vial). Provide quick visual identification of specific vials to simplify inventory maintenance. Flat surface permits writing on top of vial.

CRYOCANE™ CODER (C)

- Unique, colorful aluminum tabs keep track of your inventory of CryoCanes. Slip one onto the end of a cane to identify a particular batch of vials or specific technician's work. Flat writing surface for additional identification. Conveniently packaged in quantities of 100.

CRYOSLEEVE™ (D)

- Clear polyvinyl chloride sleeve encloses a CryoCane for extra security during handling and storage. Fits over most canes. Will not become brittle during freezing or thawing and unlike cardboard, will not shred or tear after repeated use.

CRYOGENIC VIALS (E)

- These polypropylene vials with high density polyethylene closures perform better than any vials available for storage in vapor phase liquid nitrogen. Screw closure has internal thread; vial has external thread. No risk of contaminating contents of vial. Deep-skirted closure allows single-handed aseptic technique without exposing fingers to vial contents. White marking area and fill line printed on side. Vials and closures are preassembled and radiation-sterilized. Non-cytotoxic and non-pyrogenic.

CRYOCLAW™

- CryoClaw is designed to remove ampules and boxes that have fallen from racks and cans in cryogenic vessels. This gripping device removes ampules from vessels having necks as small as two inches in diameter. It can also be used for numerous applications around the lab from reaching overhead items to retrieving fallen objects between benches and behind instruments. You can even safely move radio-isotopes without touching the container.

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Express Shipping
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*see inside front cover for details

Cryogenics

LOCATOR® PLUS RACK & BOX SYSTEMS

Thermolyne

Locator Plus Storage Systems



THE ULTIMATE STORAGE VESSEL!

- — Greatest capacity
- — Stores up to 6000 samples
- — Optional Level Monitor
- ★ — 36 month extended vacuum warranty



PRODUCT DESCRIPTION

- Locator Plus systems available in four sizes with capacities up to 6000 vials to meet your specific needs.
- Unique hanging rack and gridded box design allows for complete tracking and easy retrieval of individually stored samples.
- Suited for both manual and computerized inventory recordkeeping methods.
- Advanced vacuum insulation minimizes liquid nitrogen evaporation and reduces operating costs.
- Unbeatable temperature uniformity with advanced vacuum insulation, assures all samples are stored below -190°C. (Even when less than 2" (5 cm) of liquid nitrogen remains in the vessel.)
- Backed by Thermolyne's exclusive three-year warranty, Locator Plus' durable construction provides years of trouble-free service.
- Compact size allows system to easily fit into any lab.
- Secure locking hasp prevents unauthorized entry.

ULTRASONIC LEVEL MONITORS

- Our liquid nitrogen level monitor is available to safeguard irreplaceable biological specimens.
- Remotable alarm feature allows the system to notify you of low liquid nitrogen levels even at times when no one is in the building.
- LED level indicator panel continuously displays liquid nitrogen volume in 1/8 increments.
- In the event of excessive liquid nitrogen loss due to insulation damage or other problems, an audible alarm sounds continuously.
- Our innovative level monitor design minimizes liquid nitrogen evaporation. Unlike traditional monitoring devices, this ultrasonic device eliminates contact with liquid nitrogen, reducing liquid nitrogen evaporation.

ORDERING INFORMATION

Locator Plus Cryogenic Vessels

Model #	Description	US List Price
CY50925-70	Locator Jr. Plus with 2-inch box racks	\$2641.00
CY50935-70	Locator 4 Plus with 2-inch box racks	\$3102.00
CY50985-70	Locator 6 Plus with 2-inch box racks	\$3400.00
CY50945-70	Locator 8 Plus with 2-inch box racks	\$2838.00
CY50955-70	Locator Jr. Plus with level monitor/120 Volt	\$3507.00
CY50965-70	Locator 4 Plus with level monitor/120 Volt	\$3963.00
CY50995-70	Locator 6 Plus with level monitor/120 Volt	\$4267.00
CY50975-70	Locator 8 Plus with level monitor/120 Volt	\$3816.00

Locator Plus Level Monitors

CN509X3-70	Level monitor for Locator Jr Plus (120V)	\$1004.00
CN509X1-70	Level monitor for Locator Jr. Plus (240V)	\$936.00
CN509X6-70	Level monitor for Locator 4 Plus (120V)	\$965.00
CN509X4-70	Level monitor for Locator 4 Plus (240V)	\$936.00
CN509X10-70	Level monitor for Locator 6 Plus (120V)	\$965.00
CN509X11-70	Level monitor for Locator 6 Plus (240V)	\$936.00
CN509X9-70	Level monitor for Locator 8 Plus (120V)	\$965.00
CN509X7-70	Level monitor for Locator 8 Plus (240V)	\$965.00

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LOCATOR® PLUS RACK & BOX SYSTEMS

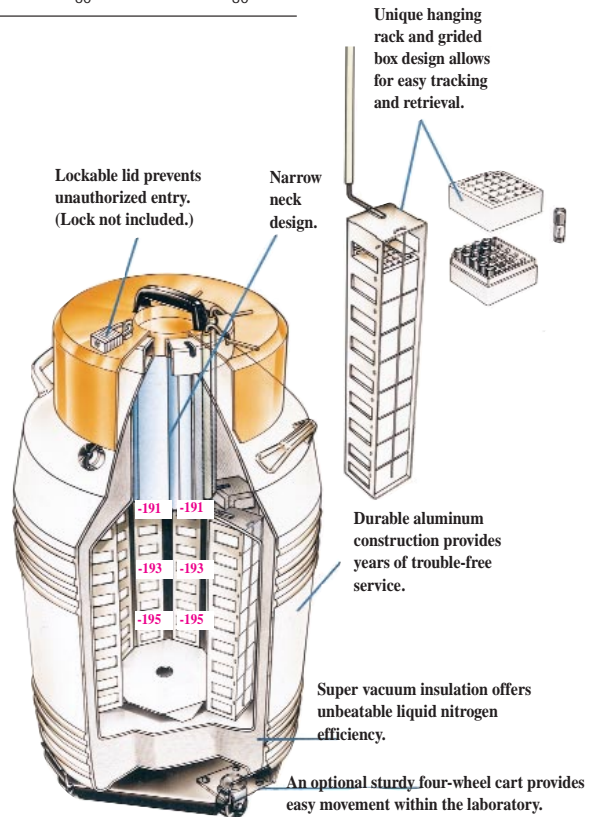
Thermolyne

PRODUCT SPECIFICATIONS

	Locator Jr. Plus	Locator 4 Plus	Locator 6 Plus	Locator 8 Plus
Height: Inches (cm)	27 (68.5)	38 (96.5)	38 (96.5)	38 (96.5)
Diameter: Inches (cm)	22 (55.8)	22 (55.8)	26 (66)	22 (55.8)
Neck Diameter: Inches (cm)	8.5 (21.5)	8.5 (21.5)	8.5 (21.5)	6 (15.2)
Working Liquid Nitrogen Capacity (Liters)	51	111	165	111
Average Static Liquid Nitrogen Consumption Rate (Liters/Day)	0.80	0.80	0.80	0.58
Weight Full: Lb. (kg)	166 (75.3)	311 (141)	419 (190)	311 (141)
Weight Empty: Lb. (kg)	76 (34.4)	114 (51.7)	125 (56.7)	114 (51.7)
Static Holding Time (Days)	63	138	206	191
System Capacity (Ampules)	2000	4000	6000	2000
Racks Included With Vessel	4	4	6	8
Boxes Per Rack	5	10	10	10
Box Capacity (Ampules)	100	100	100	25
Box Dimensions: Inches (cm)	5.25 x 5.25 (13.3 x 13.3)	5.25 x 5.25 (13.3 x 13.3)	5.25 x 5.25 (13.3 x 13.3)	3 x 3 (7.6 x 7.6)
Boxes Needed For System	20	40	60	80

ACCESSORIES

Model #	Description	US List Price
AY509X1-70	Wheeled Accessory Cart (5 inches high) For Locator 6 Plus	\$194.00
AY509X1	Wheeled Accessory Cart (5 inches high) for Locator Jr., 4, 8 Plus and Bio-Cane™ 70	\$194.00
CS509X24	Nalgene® System™ 100-ampule box accommodates most internally threaded 1.0 and 1.5 ml vials (Case of 10)	\$76.85
CS509X3	2 ml Nalgene 25-ampule box (Case of 80)	\$356.00
CS509X4	2 ml Nalgene 81-ampule box (Case of 40)	\$277.00
CS509X5	2 ml Nalgene 81-ampule box (Case of 20)	\$139.00
CS509X10	5 ml Nalgene 81-ampule box (Each)	\$17.00
HR509X19A-70	Locator Jr. Plus 4-inch box rack	\$89.00
HR509X32A-70	Locator 6 Plus 4-inch box rack	\$113.00
HR509X20A-70	Locator 4 Plus 4-inch box rack	\$113.00
AY509X32	Nalgene System 100 Cryogenic Vials–1 ml (Case of 500)	\$179.00
AY509X33	Nalgene System 100 Cryogenic Vials–1.5 ml (Case of 500)	\$179.00
AY509X35	Nalgene System 100 Cryogenic Vial Holder (Package of 4)	\$85.00
LT509X5	Locator 4, 6 or Jr. Plus Logbook	\$134.00
LT509X6	Locator 8 Plus Logbook	\$145.00
AY509X18	CryoClaw	\$103.00
AY509X19	Replacement Suction Cups (2) for CryoClaw	\$11.65



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Cryogenics

LOCATOR[®] RACK & BOX SYSTEMS

Thermolyne

Locator Storage Systems



KEEP TRACK OF YOUR SAMPLES—EASILY!

- — Choose from 3 sizes
- — Stores up to 3600 samples
- — New three year warranty

PRODUCT DESCRIPTION

- Locator systems available in three sizes with capacities up to 3600 vials to meet your particular laboratory needs.
- Unique hanging rack and gridded box design allows for complete tracking and easy retrieval of individually stored samples.
- Suited for both manual and computerized inventory record-keeping methods.
- Advanced vacuum insulation minimizes liquid nitrogen evaporation and reduces operating costs.
- Unbeatable temperature uniformity with advanced vacuum insulation, assures all samples are stored below -190°C. (Even when less than 2" (5 cm) of liquid nitrogen remains in the vessel.)
- Backed by Thermolyne's exclusive three-year warranty, Locator's durable construction provides years of trouble-free service.
- Compact size easily fits into any lab.
- Secure locking hasp prevents unauthorized entry.
- An optional liquid nitrogen level monitor safeguards your valuable samples.

PRODUCT SPECIFICATIONS

	Locator Jr.	Locator 4	Locator 8
Height: Inches (cm)	26 (66)	36 (91.4)	36 (91.4)
Diameter: Inches (cm)	22 (55.8)	22 (55.8)	22 (55.8)
Neck Diameter: Inches (cm)	8.5 (21.5)	8.5 (21.5)	6 (15.2)
Working Liquid Nitrogen Capacity (Liters)	40	90	90
Average Static Liquid Nitrogen Consumption Rate (Liters/Day)	0.65	0.65	0.40
Weight Full	166 (75.3)	311 (141)	311 (141)
Weight Empty	76 (34.4)	114 (51.7)	114 (51.7)
Static Holding Time (Days)	61	138	225
System Capacity (Ampules)	1600	3600	1800
Racks Included With Vessel	4	4	8
Boxes Per Rack	4	9	9
Box Capacity (Ampules)	100	100	25
Box Dimensions Inches (cm)	5.25 x 5.25 (13.3 x 13.3)	5.25 x 5.25 (13.3 x 13.3)	3 x 3 (7.6 x 7.6)
Boxes Needed For System	16	36	72

ORDERING INFORMATION

Model #	Description	US List Price
CY50925	Locator Jr. with 2-inch box racks	\$2457.00
CY50935	Locator 4 with 2-inch box racks	\$2887.00
CY50945	Locator 8 with 2-inch box racks	\$2762.00
CY50955	Locator Jr. with level monitor/120 Volt	\$3365.00
CY50965	Locator 4 with level monitor/120 Volt	\$3848.00
CY50975	Locator 8 with level monitor/120 Volt	\$3693.00
AY509X1	Wheeled Accessory Cart (5 inches high) For all Locators™ and Biocane 70	\$194.00

240 Volt CE marked Level Monitors are available. Contact Barnstead/Thermolyne.

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LOCATOR® ACCESSORIES

Thermolyne

Level Monitor



CryoClaw



Locator Log



LEVEL MONITOR

- Safeguard irreplaceable biological specimens with the most advanced liquid nitrogen level monitor available.
- Remotable alarm notifies you of low liquid nitrogen levels even at times when no one is in the building.
- LED level indicator panel continuously displays liquid nitrogen volume in 1/8 increments.
- Audible and visual alarms provide early warning of low level conditions. Indicator light flashes when approximately 2" (5 cm) of liquid nitrogen remains in the vessel. An audible alarm sounds in unison with flashing low-level indicator light when level drops to about 1" (2.5 cm).
- Unlike traditional monitoring devices, this ultrasonic device eliminates contact with liquid nitrogen reducing liquid nitrogen evaporation.

LOCATOR® LOG

- Designed for quick, reliable identification of your important samples.
- Three section format compliments the Locator and Locator Plus systems and your laboratory recordkeeping.
- Section 1: Serves as a helpful reminder for refilling vessels.
- Section 2: Locates your samples by your identification keys.
- Section 3: Inventories samples and their exact location.

CRYOCLAW™

- Designed to remove ampules and boxes that have fallen from racks and cans in cryogenic vessels having necks as small as two inches in diameter.
- Reach overhead items or retrieve fallen objects between benches and behind instruments.
- Safely move radio-isotopes without touching the container.

ACCESSORIES

Model #	Description	US List Price
AY509X1	Wheeled Accessory Cart, 5 inches high (12.7 cm) For all Locators™ and Biocane 70	\$194.00
CS509X24	Nalgene® System™ 100-ampule box accommodates most internally threaded 1.0 and 1.5 ml vials (Case of 10) Size: 5.25 x 5.25 x 2.06 (13.34 X 13.34 X 5.23 cm)	\$77.00
CS509X3	2 ml Nalgene 25-ampule box (Case of 80)	\$356.00
CS509X4	2 ml Nalgene 81-ampule box (Case of 40)	\$277.00
CS509X5	2 ml Nalgene 81-ampule box (Case of 20)	\$139.00
CS509X10	5 ml Nalgene 81-ampule box (Each)	\$17.00
AY509X32	Nalgene System 100 Cryogenic Vials-1 ml (Case of 500)	\$179.00
AY509X33	Nalgene System 100 Cryogenic Vials-1.5 ml (Case of 500)	\$179.00
AY509X35	Nalgene System 100 Cryogenic Vial Holder (Package of 4) Dimensions 4 x 7.75 x 0.8 (10.16 X 19.7 X 2.2 cm)	\$85.00
HR509X19A	Locator Jr. 4-inch box rack	\$99.00
HR509X20A	Locator 4, 4-inch box rack	\$125.00
LT509X5	Locator 4, Jr. & 4, 6 or Jr. Plus Logbook	\$134.00
LT509X6	Locator 8 & 8 Plus Logbook	\$145.00
AY509X18	CryoClaw	\$103.00
AY509X19	Replacement Suction Cups (2) for CryoClaw	\$11.65
CN509X1	Level monitor for Locator Jr. (240 Volt)	\$965.00
CN509X3	Level monitor for Locator Jr. (120 Volt)	\$965.00
CN509X4	Level monitor for Locator 4 (240 Volt)	\$965.00
CN509X6	Level monitor for Locator 4 (120 Volt)	\$965.00
CN509X7	Level monitor for Locator 8 (240 Volt)	\$965.00
CN509X9	Level monitor for Locator 8 (120 Volt)	\$965.00
CN509X3-70	Level monitor for Locator Jr Plus (120 Volt)	\$1004.00
CN509X6-70	Level monitor for Locator 4 Plus (120 Volt)	\$965.00
CN509X10-70	Level monitor for Locator 6 Plus (120 Volt)	\$965.00
CN509X9-70	Level monitor for Locator 8 Plus (120 Volt)	\$965.00

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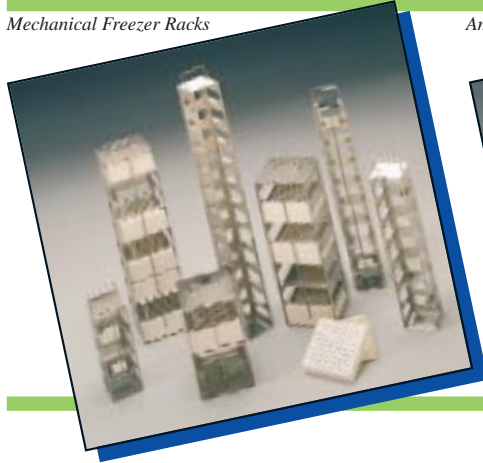
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Cryogenics

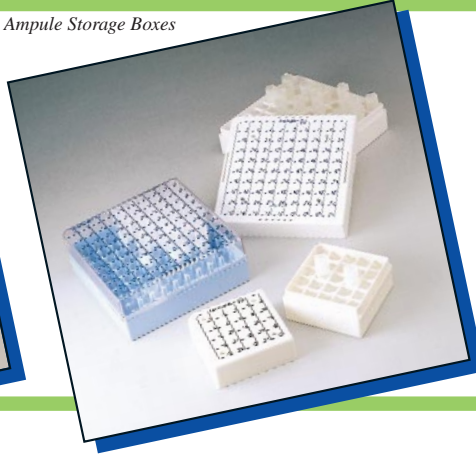
FREEZER RACKS FOR MECHANICAL FREEZERS

Thermolyne

Mechanical Freezer Racks



Ampule Storage Boxes



- — Complete inventory system
- — Choose from a variety of sizes
- — Long-lasting, heavy-duty design

CRYOBOX FREEZER RACKS

- Vertical racks for chest-type freezers are available in 4, 7, 9 or 12-shelf sizes to accommodate 25, 81 or 100 ampule boxes.
- Our racks feature a unique locking rod to hold boxes securely. These racks allow quick retrieval of samples and fast return of rack into the freezer.
- Heavy-duty construction and unique unibody design prevents warping and bending due to temperature stress, while eliminating weld stress points.
- Designed for use with standard 2" high cryogenic freezing boxes. No special boxes are required.
- Offers a unique inventory system for your mechanical freezer when used in conjunction with Nalgene® plastic CryoBoxes.

CRYOBOXES

- The unique numbered grid system and one-way lid provides easy ampule identification.
- Durable construction of low temperature plastic keeps ampules secure in and out of liquid nitrogen.
- Choice of several ampule sizes and capacities to maximize your storage requirements.

ORDERING INFORMATION

Model #	# of Shelves	W	Overall Dimensions Inches (cm)		US List Price
			H	D	
Racks for 81-and 100-ampule Boxes*					
HR509X8A	4	5.56 (14.1)	8.75 (22.2)	5.56 (14.1)	\$68.00
HR509X6A	7	5.56 (14.1)	15.25 (38.7)	5.56 (14.1)	\$82.00
HR509X10A	9	5.56 (14.1)	19.75 (50.1)	5.56 (14.1)	\$100.00
HR509X3A	12	5.56 (14.1)	26.5 (67.3)	5.56 (14.1)	\$114.00
Racks for 25-ampule Boxes*					
HR509X7A	4	3.31 (8.4)	8.75 (22.2)	3.31 (8.4)	\$64.00
HR509X5A	7	3.31 (8.4)	15.25 (38.7)	3.31 (8.4)	\$74.00
HR509X9A	9	3.31 (8.4)	19.75 (50.1)	3.31 (8.4)	\$83.00
HR509X4A	12	3.31 (8.4)	26.5 (67.3)	3.31 (8.4)	\$96.00

CryoBoxes and Vials

CS509X17	Nalgene System 100-ampule box accommodates most internally threaded 1.0 and 1.5 ml vials (Case of 20)	\$145.00
CS509X18	Nalgene System 100-ampule box accommodates most internally threaded 1.0 and 1.5 ml vials (Case of 40)	\$319.00
CS509X4	2 ml Nalgene 81-ampule box (Case of 40)	\$277.00
CS509X5	2 ml Nalgene 81-ampule box (Case of 20)	\$139.00
CS509X3	2 ml Nalgene 25-ampule box (Case of 80)	\$356.00
AY509X32	Nalgene System 100 Cryogenic Vials—1 ml (Case of 500)	\$179.00
AY509X33	Nalgene System 100 Cryogenic Vials—1.5 ml (Case of 500)	\$179.00
AY509X34	Nalgene System 100 Cryogenic Vial Holder (Package of 1)	\$22.00
AY509X35	Nalgene System 100 Cryogenic Vial Holder (Package of 4)	\$85.00

* When ordering racks it is important to measure the chamber height of your freezer and choose the rack height which allows for a minimum of 1" clearance between the top of the rack and the freezer lid.

Cryogenics

ARCTIC EXPRESS™ DRY SHIPPERS

Thermolyne

Cryogenic Shipping Containers



SHIP YOUR SAMPLES WITH CONFIDENCE!

- — Transport samples via most common carriers
- — 13 & 21 day holding times
- — Includes durable shipping case

**Includes
FREE
Shipping Case**

PRODUCT DESCRIPTION

- Each dry shipper includes reusable shipping case to prevent damage and keep system upright during transportation.
- Unique material absorbs liquid nitrogen, prohibiting liquid nitrogen spillage. Samples remain at -196°C .
- Lightweight aluminum design and convenient pail-style handle permit easy transport.
- Durable, narrow-neck construction and sturdy base support allows dry shipper to withstand rough handling during shipping.
- 13 and 21 day holding times allow specimens to be shipped almost anywhere.
- Easily transported via most common carriers.
- Lockable lid prevents unauthorized entry to protect samples.
- Two sizes available to fit your specific shipping requirements.

PRODUCT SPECIFICATIONS

	Arctic Express 5	Arctic Express 10
Model #	CY50915	CY50905
Vessel Volume (Liters)	5	10
Liquid Nitrogen Capacity (Liters)	1.6	4.3
Holding Time (Days)	13	21
Ampule Capacity (2 ml Ampules)	9	48
Vessel		
Height: Inches (cm)	13.5 (34.3)	19.4 (49.2)
Diameter: Inches (cm)	7.25 (18.4)	8.7 (22.2)
Neck Opening: Inches (cm)	1.4 (3.5)	2 (5)
Shipping Case		
Height: Inches (cm)	22 (56)	27 (69)
Length: Inches (cm)	12 (31)	12 (31)
Width: Inches (cm)	12 (31)	12 (31)
Weight		
Empty: Lb. (kg)	6 (2.7)	13 (5.9)
Full: Lb. (kg)	9.5 (4.3)	20 (9.1)
Shipping: Lb. (kg)	18.5 (8.5)	26 (11.8)
US List Price	\$1150.00	\$1365.00

48 Hour or Sooner
Express Shipping
Guaranteed!*



*see inside front cover for details

Cryogenics

LIQUID NITROGEN TRANSFER VESSELS

Thermolyne

Liquid Nitrogen Transfer Vessels



ECONOMICAL, LIGHTWEIGHT AND DURABLE!

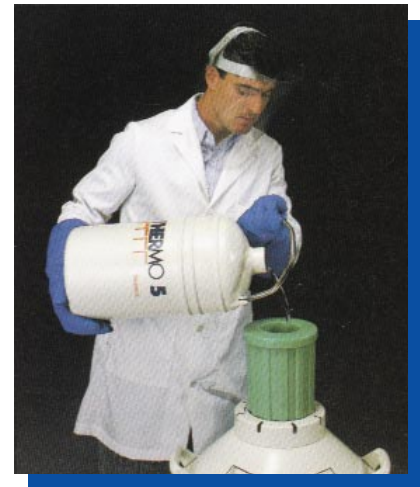
- — Capacities from 5 to 50 liters
- — Compact durable design saves space
- — Full range of accessories



Accessory transfer hose and optional phase separator for Thermo 35 and 50 saves liquid nitrogen and prevents splashing when dispensing liquid nitrogen.



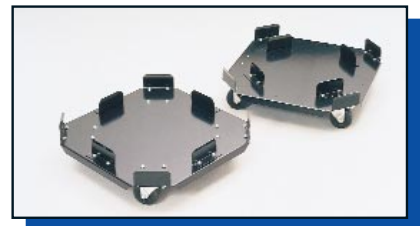
Accessory spout attaches directly to Thermo 35 and 50 for dispensing.



Convenient pail-style handle and lightweight design make the Thermo 5 and 10 ideal for pouring into even the hardest-to-reach places.



Also available is an accessory dipper. This instrument is ideal when 12 ml (or less) of liquid nitrogen is needed.



Accessory transport carts (AY509X9) are available for all Thermo dewars and cylinders.

**48 Hour or Sooner
Express Shipping
Guaranteed!***









*see inside front cover for details

Cryogenics

LIQUID NITROGEN TRANSFER VESSELS

Thermolyne

PRODUCT SPECIFICATIONS AND ORDERING INFORMATION

	Thermo 5 TY509X1	Thermo 10 TY509X2	Thermo 20 TY509X3	Thermo 30 TY509X4	Thermo 35 TY509X5	Thermo 50 TY509X6
						
Diameter: Inches (cm)	6.5 (16.5)	10.3 (26.2)	14.5 (36.8)	17 (43.2)	16 (40.6)	16 (40.6)
Height: Inches (cm)	18.2 (46)	21.5 (55)	24.7 (63)	24 (61)	28.5 (72.4)	35.5 (90.2)
Neck Diameter: Inches (cm)	2.2 (5.6)	2.2 (5.6)	2 (5)	2.5 (6.4)	—	—
Full Weight: Lb. (kg)	17 (7.7)	31 (14)	56 (25.4)	84 (38.1)	140 (63.5)	180 (81.6)
Empty Weight: Lb. (kg)	8 (3.6)	13 (5.9)	19 (8.6)	27 (12.2)	76 (67.2)	90 (40.8)
Static Evaporation Rate (Liters/Day)	0.15	0.18	0.18	0.25	1.5	2.0
Static Holding Time (Days)	33.3	55.6	116.7	128	23	25
Liquid Nitrogen Capacity (Liters)	5	10	20	30	35	50
Relief Valve Setting (psi)	—	—	—	—	22	22
US List Price	\$675.00	\$696.00	\$840.00	\$979.00	\$2421.00	\$2555.00

THERMO DEWARs

- Super vacuum insulation of Thermolyne Thermo 5, 10, 20 and 30 lightweight aluminum dewars assure low-static evaporation rates.
- Thermo 5 and 10's feature a convenient pail-style handle for pouring and for use in applications where only small quantities of liquid nitrogen are needed.
- Thermo 5 and 10's compact design allows easy storage on or underneath a laboratory bench.
- Thermo 10, 20, and 30 can be fitted with self-pressurized withdrawal accessory devices to easily dispense LN2 without need for pouring.

THERMO CYLINDERS

- Thermo 35 and 50's stainless-steel compact design conserves laboratory space.
- Ideal for liquid nitrogen purge and trap applications used in instrumental chemistry.
- Low operating pressure and regulating valve allow for controlled rate and continuous feed, as well as intermittent feed requirements.
- An accessory stainless-steel transfer hose directly links the cylinder to instruments, also to the liquid nitrogen source for filling.
- Optional phase separator attachment for transfer hose available for easy dispensing.
- Casters and a top ring support make maneuvering the unit easy.

ACCESSORIES

Model #	Description	US List Price
AY509X5	Withdrawal device for Thermo 10	\$476.00
AY509X4	Withdrawal device for Thermo 20	\$453.00
AY509X3	Withdrawal device for Thermo 30	\$453.00
AY509X6	12 ml Dipper	\$85.00
AY509X8	Spout for Thermo 35 and 50	\$123.00
AY509X7	6-ft. transfer hose for Thermo 35 and 50	\$270.00
AY509X11	Phase separator for transfer hose	\$123.00
AY509X9	Adjustable Cart for Thermo 20, 30, 35 and 50	\$194.00

Cryogenics

LIQUID NITROGEN TRANSFER VESSELS

Lab-Line

Liquid Nitrogen
Transfer Vessels



BENCHTOP STORAGE!

- — 26 models available with capacity from 200 ml to 10 l
- — Lightweight design is ideal for everyday laboratory use
- ★ — 24 month warranty

PRODUCT DESCRIPTION

- Lab-Line Thermo-Flasks® feature inner vessels of borosilicate glass evacuated to 1×10^{-5} mm Hg to provide maximum coolant retention and excellent extended temperature retention for samples stored in liquid nitrogen or solid CO₂.
- Available in stainless steel, enameled steel or plastic exteriors.
- Select models feature vented, clamped lids, carrying handles and rubber cushioned bases.

STAINLESS STEEL THERMO-FLASKS® WITH HANDLE AND LID

- Durable, corrosion-resistant stainless steel exterior construction with carrying handle and vented lid secured by toggle clamps.
- Recommended for the safe transport of liquid nitrogen.

SHALLOW WIDE MOUTH FLASKS

- Convenient dish-shaped design is ideal for bench top use with crushed ice, dry ice, alcohol or as a hot liquid container.
- Stainless steel jacket and cushioned base provide years of trouble-free use.
- Excellent for use as a cold trap.

INSULATED THERMO-CUPS®

- Unbreakable, even with excessively rough handling.
- Inner liner and outer shell constructed of corrosion-resistant stainless steel with foamed in-place insulation between.
- Should not be used for storage of liquid oxygen or nitrogen.

PLASTIC WIDE MOUTH FLASKS

- Low cost combined with high efficiency.
- Rugged, shock-absorbing plastic exterior with carry handle and "push-fit" insulated lid.
- Vented lid prevents gas pressure build-up.
- Borosilicate glass inner vessel.

ENAMELED STEEL THERMO-FLASKS®

- Safe storage of liquefied gases, temperature retention, and versatility at an economical price.
- Enameled steel exteriors, borosilicate glass liners and cushioned bases.
- Models 2118-2121 include insulated lids and fold-down carrying handles.
- Ideal for cold traps.

Cryogenics

LIQUID NITROGEN TRANSFER VESSELS

Lab-Line

Model 2124



Model 2113



Model 2133



ORDERING INFORMATION

Model #	Description	Capacity	Inside Diameter Inches (cm)	Outside Diameter Inches (cm)	Height Inches (cm)	Shipping weight Lb. (kg)	US List Price
2101	Insulated Thermo-Cup	1.0 /	4(10.2)	7(17.8)	7.25(18.4)	6(2.7)	\$215.00
2102	Insulated Thermo Cup	2.0 /	5(12.7)	8(20.3)	8(20.3)	8(3.6)	\$270.00
2104	Insulated Thermo-Cup	4.0 /	6.75(17.1)	10(25.4)	9.5(24.1)	10(4.5)	\$356.00
2108	Insulated Thermo-Cup	8.0 /	8(20.3)	11(27.9)	11(27.9)	14(6.3)	\$393.00
2110	Plastic Wide Mouth	1.0 /	3.33(8.5)	5.75(14.6)	8.75(22.2)	6(2.7)	\$142.00
2140	Plastic Wide Mouth, Glass lined	1.0 /	3.33(8.5)	5.75(14.6)	8.75(22.2)	6(2.7)	\$80.00
2113	Enameled Steel, w/o lids and handles	0.2 /	1.62(3.8)	2.75(6.9)	8.5(21.6)	4(1.8)	\$107.00
2114	Enameled Steel, w/o lids and handles	0.6 /	2.25(5.7)	3.25(8.3)	13.75(34.9)	5(2.3)	\$142.00
2115	Enameled Steel, w/o lids and handles	0.7 /	2.62(6.4)	3.75(9.5)	11.25(28.6)	5(2.3)	\$177.00
2116	Enameled Steel, w/o lids and handles	1.1 /	3(7.6)	4.25(10.8)	11(27.9)	6(2.7)	\$179.00
2117	Enameled Steel, w/o lids and handles	1.5 /	3.5(8.9)	5(12.7)	11.37(29.2)	7(3.2)	\$202.00
2131	Enameled Steel, w/o lids and handles	1.5 /	4(10.2)	5.37(13.9)	11(27.9)	7(3.2)	\$202.00
2133	Enameled Steel, w/o lids and handles	2.0 /	4(10.2)	5.37(13.9)	13(33.1)	8(3.6)	\$212.00
2135	Enameled Steel, w/o lids and handles	3.0 /	5.25(13.3)	7(17.8)	11.37(29.2)	9(4.1)	\$235.00
2118	Enameled Steel, with lids and handles	1.0 /	3.5(8.9)	4.62(11.4)	9(22.9)	6(2.7)	\$183.00
2119	Enameled Steel, with lids and handles	2.0 /	4.25(10.8)	5.62(13.9)	10.5(26.7)	8(3.6)	\$192.00
2120	Enameled Steel, with lids and handles	4.5 /	6(15.2)	7.25(18.4)	13.75(34.9)	10(4.5)	\$276.00
2121	Enameled Steel, with lids and handles	10.0 /	8(20.3)	9.12(23.3)	17.12(43.7)	16(7.3)	\$726.00
2122	Stainless Steel, with lids and handles	1.0 /	3.33(8.5)	4.62(11.6)	9(22.9)	6(2.7)	\$192.00
2123	Stainless Steel, with lids and handles	2.0 /	4.25(10.8)	5.62(13.9)	10.5(26.7)	8(3.6)	\$224.00
2124	Stainless Steel, with lids and handles	4.5 /	6(15.2)	7.25(18.4)	13.75(34.9)	10(4.5)	\$321.00
2125	Stainless Steel, with lids and handles	7.0 /	8(20.3)	9.25(23.5)	13.25(33.7)	14(6.4)	\$766.00
2126	Shallow Wide Mouth	20 ml	3(7.6)	4.12(10.6)	3(7.6)	4(1.8)	\$177.00
2127	Shallow Wide Mouth	30 ml	4(10.2)	5.12(13.2)	3.5(8.9)	6(2.7)	\$192.00
2128	Shallow Wide Mouth	500 ml	4.5(11.4)	6(15.2)	3.75(9.5)	6(2.7)	\$212.00
2129	Shallow Wide Mouth	1000 ml	5.37(13.6)	7(17.8)	4.12(10.7)	8(3.6)	\$235.00
2130	Shallow Wide Mouth	1900 ml	6(15.2)	7.25(18.4)	5.5(14.0)	10(4.5)	\$202.00