## DESICCATION

## Desiccators

Desiccators are an economical and reliable way to assure dry, dust-free, and if necessary air-free storage of humidity sensitive products, such as valuable reagents or electronics.

Depending upon what you are storing optimal conditions can be achieved using standard desiccants in a manual or automated format, with gas purge, or by keeping the contents under vacuum.



When choosing a desiccator the following questions should be considered:

#### What storage environment is optimal or required?

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Use this chart for an overview of the environment and benefits each method of desiccation provides.

### **Methods of Desiccation**

Standard Desiccant	Automated, Standard Desiccant	Gas Purge	Vacuum
Manual monitoring and operation. Moisture is absorbed from air in the unit by using a desiccant. Once the desiccant is 'saturated' it must be regenerated through heating, or replaced.	Electric fans and heaters continuously regenerate the desiccant to prevent saturation and to automati- cally maintain a low humidity environment.	A slow steady flow of inert gas (often dry nitrogen) is provided.	Air and moisture are removed from the chamber by use of a vacuum pump.
Flexibility to use any type of desiccant (silica gel beads, activated charcoal, etc.) based on economics and convenience.	Convenience, requires minimal monitoring.	Achieve relative humidity at a much faster rate.	Best for total dry storage or if air could be damaging to material being stored.
Portability.	Precise control of humidity. Operates on a set schedule of desiccation followed by a regeneration period.	Dust free and desirable for many applications including clean room environments.	Dust free and desirable for many applications including clean room environments.
Economical functionality. Most desiccants can be regenerated periodically.	Process uses silica gel beads that last for thousands of regeneration cycles.	Option to close stopcocks and use with regular desiccants.	Option to close stopcocks and use with regular desiccants.

#### What size(s) are the items you need to store and in what quantity?

Interior volume of the desiccator and shelving should be considered. As a visual reference of the interior space we have estimated how many standard 12 oz cans of soda would fit into each unit. Estimates are a guideline based on interior volume and do not take shelving or desiccator shape into consideration.

#### How important are ease and economy of use?

Each method of desiccation has advantages and trade-offs. Each user must determine the method that best serves their purposes. Using standard desiccants and regenerating them as needed is economical, but requires monitoring. There may also be more variability in your environment. An automated desiccator requires much less monitoring but uses electric power. Gas ported desiccators are quick to achieve relative humidity, but if the unit is accessed frequently, proportionately more gas will be needed to keep the desired low humidity level. Vacuum desiccators remove air and moisture and can be brought back to vacuum rather easily after opening, but require a pump.

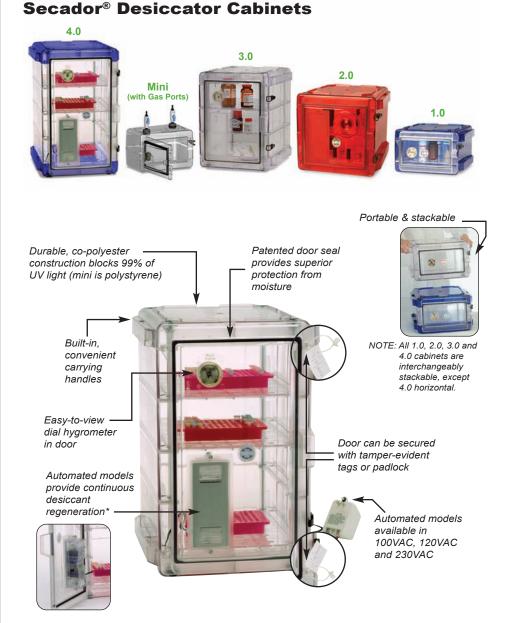
Once you have determined your most desirable method of desiccation, there are a variety of styles and sizes of desiccators to choose from.

Method	Volume (cu.ft.)	Secador®	Space Saver	Techni-Dome®	Dry-Keeper <sup>™</sup>	Scienceware	Pages
Standard Desiccation	Less than 0.50 0.51 – 1.25 1.26 – 1.74 1.75 and up	X X X X	X		X X X	X X	91-96 <sub>.</sub>
Automated, Standard Desiccation	Less than 0.50 0.51 – 1.25 1.26 – 1.74 1.75 and up	X X X			x		97-100
Gas Purge Desiccation	Less than 0.50 0.51 – 1.25 1.26 – 1.74 1.75 and up	X X X X		X	X X		101-104
Vacuum Desiccation	Less than 0.50 0.51 – 1.25 1.26 – 1.74 1.75 and up		X	X		X	105-106

### Scienceware® Desiccator Brands

**Scienceware** 





All sizes are available with optional gas ports to allow gas purging of the cabinet.

\* All non-electric models can be used with any desiccant including Disposable Desiccant Cartridges F42048-0065, -0100, or Desi Can<sup>™</sup> Reusable Desiccant Canister F42046-0000.

Scienceware\*

## **Brand Details**

#### **Secador® Desiccator Cabinets**

A UV Light Blocking, Dry Environment

The attractive design and sturdy construction of the Secador<sup>®</sup> line of desiccator cabinets assures easy and reliable storage of moisture and light sensitive products. Choose from an extensive selection of sizes, styles and colors of desiccator cabinets to meet your specific needs.

• Standard, Automated (100, 120 and 230 VAC) and Gas-ported models available



- Durastar<sup>®</sup> co-polyester construction blocks 99% of UV light\* and is resistant to staining, crazing and chemical attack
- Amber color models reduce visible light penetration by over 50% making it the perfect choice for storing light sensitive materials like reagents, analytical standards and investigational compounds
- Large doors maximize access to interior space and have a patented seal design, tab latches and security loops for a padlock or tamper-evident seals
- 1.0, 2.0, 3.0 and 4.0 vertical units have a compact 34.1W x 41.4cmD footprint for space saving stacking up to 3 units high; 4.0 horizontal has a wider footprint and lower height
- · Perforated shelves facilitate circulation of dry air
- · Easy-to-view dial hygrometer is located in the door front

\*Mini cabinets are molded of polystyrene which does not block UV light.

Standard models, pages 91-93. Automated models, pages 97-99. Gas-ported models, pages 101-103.

### "SPACE SAVER" Standard and Vacuum Desiccators

Maximize Your Space in the Laboratory or Classroom

In less than 12" of benchtop space, these strong, shatterproof desiccators will store and protect sensitive products.

- 'Flat Dome,' clear polycarbonate top with knob maximizes interior clearances and provides an average of 13% greater interior volume over standard hemispherical domes
- Vacuum models hold a full vacuum (29.9" Hg 75.9cm) at room temperature for 24 hours and will remain airtight even if not under vacuum; non-vacuum models also available
- White polypropylene bottom models can support incandescent crucibles on Minerit HD High Heat Ceramic Desiccator Plates (page 108.)
- · Large ribbed knob for easy lifting; extra heavy walls
- All models include a 0.32 cm (1/6") thick perforated plate

Standard models, page 94. Vacuum models, page 105.



Scienceware

### Techni-Dome<sup>®</sup> 360 Vacuum or Gas-Ported Desiccators

#### View More, Store More, Dry More

Generous quantities of standards, samples, electronics or other sensitive items can be protected in the Techni-Dome® 360 vacuum desiccator. A traditional style domed desiccator, the Techni-Dome® 360 is made from high-grade polycarbonate and offers a clear, unobstructed view of contents, with exceptionally large storage space, portability and ease of use.

- Users will find that this model has a generous 65 liter (4000 cu. in.) internal volume and can hold items up to 45cm (18") tall or wide, including racks, trays and instruments
- Polycarbonate material is resistant to most common chemicals, as well as thermal stress, and wipes clean easily
- Available with one or two gas ports to offer the flexibility of using multiple gases or faster cycle times between vacuum and release
- Holds a full vacuum (29" Hg, 737mm) at room temperature for 24 hours; a high quality silicone gasket ensures that the desiccator will remain airtight even when not under vacuum
- Two removable polypropylene shelves, 36.5cm and 22.5cm (14.5" and 9") in diameter maximize storage capacity
- Side handles provide easy portability and can be used as a place to affix tamper-evident seals
- Top half of the desiccator nests into the bottom for convenient storage when not in use

Vacuum model page 106. Gas-ported model page 104.

### Dry-Keeper<sup>™</sup> Desiccator Cabinets

*Clear View, Cabinet Style Desiccators in Polystyrene or Acrylic* 

This line offers automated and standard units with a variety of choices in size, horizontal or vertical profiles and various materials including crystal clear methyl-methacrylate with sleek black metal trim.

Adjustable shelving with holes for full air circulation

acienceware"

90

- Shelf rails provide flexibility for optimum placement of shelves
- Doors have a foam rubber gasket and latches to assure a tight seal
- Automatic units have a permanent desiccant that lowers relative humidity to 30-40% and a light indicator to signal absorption and regeneration periods

Standard models pages 95-96. Automated models page 100. Gas-ported model page 104.





## **Standard Desiccation**

### **Secador® Desiccator Cabinets**

A UV Light Blocking, Dry Environment

- Durastar<sup>®</sup> co-polyester construction blocks 99% of UV light\* and is resistant to staining, crazing and chemical attack; amber color units also block over 50% visible light
- Use with any desiccant including cans and disposable cartridges. See pages 107-108 for complete Scienceware<sup>®</sup> line of desiccants
- · Desiccants can be placed under the bottom shelf to preserve storage space
- · Different colors are available to suit your needs

For more detailed information on the full Secador® line see page 88.

#### Secador<sup>®</sup> Mini Desiccator Cabinet

The Perfect Choice When Benchtop Space Is at a Premium

- Internal Volume: 0.31 cu. ft.; Holds: 12 cans
- · Clear polystyrene for easy viewing of contents
- Option to mount to the underside of a shelf; kit information below
- Door opens to the left
- Overall Dimensions: 33.8W x 25.4D x 21.6cmH (13.3 x 10 x 8.5")



CATALOG NO.	DESCRIPTION	
F42075-1000	Mini, Clear Polystyrene	

Note: The Mini Desiccator model is molded of polystyrene and does not block UV light. For ultimate UV protection, select a Secador<sup>®</sup> 1.0 model or larger.

#### **Under Shelf Mounting Kit**

For Secador® Mini Desiccator Cabinet

Fittings and instructions for mounting the Secador<sup>®</sup> Mini Desiccator Cabinet – F42075-1000 underneath a shelf with a minimum thickness of 12mm (½").

CATALOG NO.		
F42075-0201		

**Scienceware** 

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## Secador<sup>®</sup> 1.0, 2.0, 3.0 and 4.0 Vertical Desiccator Cabinets

Interchangeably Stackable up to 3 Units High

U.S. Patents: 6,834,920; 7,318,630 and D474,626



4.0

- All units have a compact 34.1W x 41.4cmD (13.4 x 16.3") footprint
- Doors open to the left
- · Different colors are available to suit your needs

Scienceware<sup>®</sup>

#### **Size Specifications**

Model	Internal Volume	Holds (12oz. soda cans)	# of Shelves	Height
1.0	0.74 cu. ft.	20	1 (fixed)	21.3cm (8.4")
2.0	1.16 cu. ft.	40	2	31.4cm (12.4")
3.0	1.55 cu. ft.	60	3	41.7cm (16.4")
4.0	1.87 cu. ft.	70	3	51.8cm (20.4")

### Secador® 1.0, 2.0, 3.0 and 4.0 Desiccator Cabinets

CATALOG NO.	MODEL	DESCRIPTION
F42071-0000	1.0	Clear
F42071-0006	1.0	Clear w/Blue End-caps
F42071-0007	1.0	Blue w/Clear Door
F42071-0008	1.0	Amber (50+% visible light blocking.)
F42072-1000	2.0	Clear
F42072-1008	2.0	Amber (50+% visible light blocking.)
F42073-1000	3.0	Clear
F42073-1008	3.0	Amber (50+% visible light blocking.)
F42074-1000	4.0	Clear
F42074-1006	4.0	Clear, with Blue End-caps
F42074-1007	4.0	Blue with Clear Door
F42074-1008	4.0	Amber (50+% visible light blocking.)

Secador<sup>®</sup> Cabinet Replacement Shelves p. 109

For more detailed information on the full Secador<sup>®</sup> line see page 88.

### Secador<sup>®</sup> 1.0 **Carrying Case Desiccators**

Built-in Suitcase Style Carrying Handle

U.S. Patents: 6,834,920; 7,318,630 and D474.626

- Internal Volume: 0.74 cu. ft.; Holds: 20 cans
- · One removable shelf
- Pull down 'oven style' door
- · Overall Dimensions: 21.3W x 41.4D x 37.3cmH (8.4 x 16.3 x 13.4")





CATALOG NO.	MODEL	DESCRIPTION	
F42070-0000	1.0	Carrying Case, Clear	
F42070-0001	1.0	Carrying Case, Blue	



#### **Secador® 4.0 Horizontal Profile Desiccator Cabinets**

Large Wide Storage Space U.S. Patents: 6,834,920; 7,318,630 and D474,626

Scienceware

- Internal Volume: 1.87 cu. ft.: Holds: 70 cans
- Two removable shelves
- Pull down 'oven style' door
- · Overall Dimensions: 51.8W x 41.4D x 34.1cmH (20.4 x 16.3 x 13.4")



For more detailed information on the full Secador<sup>®</sup> line see page 88.

www.novatech-usa.com (866) 433-6682

#### "Space Saver" Desiccators

Maximize Your Space in the Laboratory or Classroom



- · Flat-top dome maximizes interior space
- A neoprene O-ring assures a tight seal down to 0°C without the need for grease (ring will not be harmed if grease is used.)
- · Use with disposable or reusable desiccant

**Ecienceware**®

- · Desiccant can be placed on or under the perforated bottom plate
- Incandescent crucibles can be supported on optional high heat Minerit HD desiccator plates, see page 108
- Sold per each, 4 per case



CATALOG NO.	FLANGE O.D	INSIDE DIAMETER	PLATE DIAMETER	OVERALL HEIGHT	CLEARANCE ABOVE PLATE
F42030-0000	17.1cm	14.9cm	14cm	20.6cm	12.1cm
	(6¾")	(5½")	No.3	(8½")	(4¾")
F42031-0000	23cm	19.7cm	19cm	26cm	15.7cm
	<b>(9½6'')</b>	(7¾")	No.4	(10¼")	<b>(6</b> ¾6" <b>)</b>
F42032-0000	27.3cm	24cm	23cm	31.1cm	19.7cm
	(10¾")	<b>(9</b> <sup>7</sup> ⁄16 <b>")</b>	No.5	(12½")	(7¾")

For more detailed information on "Space Saver" Desiccators see page 89.

## Dry-Keeper<sup>™</sup> Desiccator Cabinets

Clear View, Cabinet Style Desiccators in Polystyrene or Acrylic

#### Dry-Keeper<sup>™</sup> Small Stacking Desiccator Cabinet

Small Cabinets Safely Stack Five High

- Interior Volume: 0.14 cu. ft.; Holds: 6 cans
- Clear, polystyrene
- Pull down door slides out of the way into a compartment located underneath the cabinet
- Includes a small tray for desiccant
- Ready to use jar of silica gel is included





## Dry-Keeper<sup>™</sup> Stacking Desiccator Cabinet

Stack up to Five Units

**DIMENSIONS (L x W x H)** 

21 x 18 x 17cm (8¼ x 7 x 6¾)

- Interior Volume: 0.35 cu. ft.; Holds: 13 cans
- Smoke-tinted, polystyrene
- Two removable shelves can be set at four heights

Scienceware

- Pull down door slides out of the way into a compartment located underneath the cabinet
- Includes a small tray for desiccant

DIMENSIONS (L x W x H)

**CATALOG NO.** H42053-0001

CATALOG NO.

25 x 25 x 25cm (10 x 10 x 10")

DIMENSIONS (L × W × H)

32 x 39 x 51cm (12<sup>1</sup>/<sub>2</sub> x 15<sup>1</sup>/<sub>2</sub> x 20")

## Dry-Keeper<sup>™</sup> Vertical Desiccator Cabinet

Large Space

ACRYLIC

CATALOG NO.

H42056-0001

- Interior Volume: 2.01 cu.ft.; Holds: 70 cans
- Three removable shelves can be set in fifteen positions
- · Methyl-methacrylate with sleek black accents
- Door opens to the right and is 25 x 45cm (10 x 17%")
- Includes desiccant tray



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## **DESICCATION -** Standard Desiccators



#### Dry-Keeper<sup>™</sup> Horizontal Desiccator Cabinet

Our Largest Standard Desiccator

- Interior Volume: 2.08 cu. ft.; Holds: 78 cans
- Two movable shelves can be set in eight positions
- Methyl-methacrylate with sleek black accents
- Door opens to the right and is 45 x 25cm (17% x 10")
- Includes desiccant tray

CATALOG NO.	DIMENSIONS (L x W x H)	
H42058-0001	50 x 39 x 33cm (19% x 15½ x 13¾")	

For more detailed information on Dry-Keeper™ Desiccator Cabinets see page 90.

#### **Acrylic Desiccator Cabinets**

Use in Refrigerators or at Room Temperature

- Choose from 3 sizes
- Slide-in trays with perforated bottoms
- Gasketed door opens to left and has a stainless steel twist locking latch
- Offered in clear acrylic for easy viewing or bronze for light-sensitive materials

Scienceware\*



CATALOG NO.	COLOR	DIMENSIONS (L x W x H)	# OF TRAYS	HOLDS # OF SODA CANS	INTERNAL VOLUME	
F42064-0000	Clear	17.78 x 17.78 x 25.4cm (7 x 7 x 10")	2	6	.21 cu. ft	
F42064-0001	Bronze	17.78 x 17.78 x 25.4cm (7 x 7 x 10")	2	6	.21 cu. ft	
F42065-0000	Clear	22.86 x 22.86 x 40.64cm (9 x 9 x 16")	2	27	.21 cu. ft	
F42065-0001	Bronze	22.86 x 22.86 x 40.64cm (9 x 9 x 16")	2	27	.21 cu. ft	
F42066-0000	Clear	30.48 x 30.48 x 30.48cm (12 x 12 x 12")	3	32	.21 cu. ft	
F42066-0001	Bronze	30.48 x 30.48 x 30.48cm (12 x 12 x 12")	3	32	.21 cu. ft	

Find "No Fuss" Desiccant Cartridges on Page 107

## **Automated Standard Desiccators**

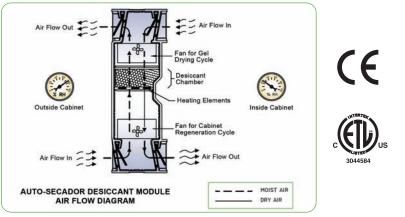
## Secador<sup>®</sup> Auto-Desiccator Cabinets

Protecting valuable humidity-sensitive items, such as reagents or electronics, is easy and fully automatic with Secador<sup>®</sup> Auto-Desiccator Cabinets. The patented electronic dehumidification system will reduce the typical relative humidity of a cabinet, in a 70°F (21°C) air conditioned/heated room with 75% humidity, down to 25% humidity and circulate dry air automatically, freeing users from monitoring or changing desiccants. (See figure below).

- Choice of 100, 120 or 230V (CE approved) models for use worldwide
- DuraStar<sup>®</sup> co-polyester plastic blocks 99% of UV light and is resistant to staining, crazing and chemical attack; amber color models also reduce visible light penetration by over 50%
- Dry air circulates through perforated, clear polystyrene shelves

For more detailed information on the full Secador<sup>®</sup> line see page 88.

#### **Patented Electronic Dehumidification System - How it works:**



Module features color-changing, dustless, silica gel desiccant beads and two fans. Automatic dehumidification and desiccant regeneration cycle operates continuously every 20 minutes as follows:

- 1. One fan operates for 14 minutes to draw interior chamber air across silica gel desiccant beads and dehumidify the chamber. One-way flap valves are open to the chamber and closed to the exterior during this phase.
- 2. Circulation fan is terminated and one (1) minute of resistance heat is applied to silica gel desiccant to initiate regeneration.
- 3. The regeneration fan is started and draws air in an opposite direction to the first fan. This causes one-way flap valves within the chamber to close and flap valves to the exterior environment to open. Four (4) minutes of resistance heat is applied to silica gel desiccant to release the captured moisture to the chamber exterior.
- Resistance heat to silica gel is terminated. Circulation fan continues to operate for one (1) minute with exterior air so that silica gel can return to ambient temperature.

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#### Secador<sup>®</sup> 2.0, 3.0 and 4.0 Auto-Desiccator Cabinets

Interchangeably Stackable up to 3 Units High

U.S. Patents: 6,772,534; 6,834,920; 7,114,266; 7,318,630 and D474,626



4.0

- All units have a compact 34.1W x 41.4cmD (13.4 x 16.3") footprint
- Doors open to the left
- · Different colors are available to suit your needs

Scienceware\*

#### **Size Specifications**

Model	Internal Volume	Holds (12oz. soda cans)	# of Shelves	Height
2.0	1.16 cu. ft.	40	2	31.4cm (12.4")
3.0	1.55 cu. ft.	60	3	41.7cm (16.4")
4.0	1.87 cu. ft.	70	3	51.8cm (20.4")

#### 100V

CATALOG NO.	MODEL	DESCRIPTION	
F42072-1100	2.0	Clear, 100V	
F42073-1100	3.0	Clear, 100V	
F42074-1100	4.0	Vertical Profile Clear, 100V	
F42074-1106	4.0	Vertical Profile Clear, with Blue End-caps, 100V	

#### 120V

CATALOG NO.	MODEL	DESCRIPTION
F42072-1115	2.0	Clear, 120V
F42072-1118	2.0	Amber (50+% visible light blocking), 120V
F42073-1115	3.0	Clear, 120V
F42073-1118	3.0	Amber (50+% visible light blocking),120V
F42074-1115	4.0	Vertical Profile Clear, 120V
F42074-1116	4.0	Vertical Profile Clear, with Blue End-caps, 120V
F42074-1117	4.0	Vertical Profile Blue, with Clear Door, 120 V
F42074-1118	4.0	Vertical Profile Amber (50+% visible light blocking),120V

For more detailed information on the full Secador® line see pages 88 and 97.

#### 230V

CATALOG NO.	MODEL	DESCRIPTION
F42072-1220	2.0	Clear, 230V
F42072-1228	2.0	Amber (50+% visible light blocking), 230V
F42073-1220	3.0	Clear, 230V
F42073-1228	3.0	Amber (50+% visible light blocking), 230V
F42074-1220	4.0	Vertical Profile Clear, 230V
F42074-1226	4.0	Vertical Profile Clear, with Blue End-caps, 230V
F42074-1227	4.0	Vertical Profile Blue, with Clear Door, 230V
F42074-1228	4.0	Vertical Profile Amber (50+% visible light blocking), 230V

Secador® Cabinet Replacement Shelves p. 109



### Secador<sup>®</sup> 4.0 Horizontal Auto-Desiccator Cabinets

Large Wide Storage Space

U.S. Patents: 6,772,534, 6,834,920, 7,114,266, 7,318,630 and D474,626

- Internal Volume: 1.87 cu. ft.; Holds: 70 cans
- Two removable shelves
- Pull down 'oven style' door
- Overall Dimensions: 51.8W x 41.4D x 34.1cmH (20.4 x 16.3 x 13.4")

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#### 100V

CATALOG NO.	MODEL	DESCRIPTION
F42074-0100	4.0	Clear, 100V
F42074-0106	4.0	Clear, with Blue End-caps, 100V

#### 120V

CATALOG NO.	MODEL	DESCRIPTION
F42074-0115	4.0	Clear, 120V
F42074-0116	4.0	Clear, with Blue End-caps, 120V
F42074-0117	4.0	Blue, with Clear Door, 120V

#### 230V

CATALOG NO.	MODEL	DESCRIPTION
F42074-0220	4.0	Clear, 230V
F42074-0226	4.0	Clear, with Blue End-caps, 230V
F42074-0227	4.0	Blue, with Clear Door, 230V

For more detailed information on the full Secador® line see pages 88 and 97.

## Dry Keeper<sup>™</sup> Auto-Desiccators

It's Automatic, So You Don't Have To Think About It

120 VAC electronic dehumidification system lowers relative humidity to 30-40%\* and keeps dry air circulating throughout the cabinet. Permanent desiccant is contained in the control unit and has a light indicator:

- A green light indicates operation of the 4½ hour absorption period and a red light indicates operation of the ½ hour regeneration of the desiccant
- · Perforated shelves facilitate full circulation of air; shelf rails offer flexibility in placement
- · Dial hygrometer in door front for easy reference
- \*DryKeeper<sup>™</sup> Plus lowers relative humidity to 20-30%

For additional information on Dry-Keeper™ Desiccators see page 90.

#### Dry-Keeper™ Vertical Auto-Desiccator Cabinet

- · Interior Volume: 2.08 cu. ft.; Holds: 70 cans
- · Clear methyl-methacrylate with sleek black accents
- Two adjustable shelves
- Door opens to the right
- Draws 6 watts, 120VAC, 50/60 Hz

 CATALOG NO.
 DIMENSIONS (L x W x H)

 H42056-1003
 31.8 x 39.4 x 61.6cm (12½ x 15½ x 24½")





#### Dry-Keeper™ Horizontal Auto-Desiccator Cabinet

- Interior Volume: 2.01 cu. ft.; Holds: 87 cans
- · Clear methyl-methacrylate with sleek black accents

ACRYLIC

- · Two adjustable shelves
- Pull down 'oven-style' door
- Draws 6 watts, 120VAC, 50/60 Hz

**CATALOG NO.** *H*42058-0003

### DIMENSIONS (L x W x H)

#### 61.6 x 39.4 x 32.9cm (24¼ x 15½ x 13¾")

#### Dry-Keeper<sup>™</sup> Plus Auto-Desiccator Cabinet

Lowers Relative Humidity to 20-30% in 6 Hours

Scienceware\*

- Interior Volume: 1.2 cu. ft.; Holds: 36 cans
- Insulated, ABS Plastic
- Two, evenly spaced removable shelves
- · Clear door opens to the right
- Draws 10 watts, 120VAC, 60 Hz

**CATALOG NO.** H42061-0000

100

DIMENSIONS (L x W x H) 31 x 35.3 x 43cm (12 x 13% x 17")



ACRYLIC

## **Gas-Ported Desiccators**

Create A Controlled Environment with Dry Nitrogen Desiccation or Other Gases of Choice

#### Secador<sup>®</sup> Gas-Ported Desiccator Cabinets

Wide range of sizes for those who require gas purged desiccation. Rear gas ports (Mini are located on top) accept  $\frac{1}{2}$ " I.D. tubing.

- Durastar<sup>®</sup> co-polyester construction blocks 99% of UV light\* and is resistant to staining, crazing and chemical attack; amber color units also block over 50% visible light
- Large doors maximize access to interior space and have a patented seal design, tab latches and security loops for a padlock or tamper-evident seals
- · Perforated shelves facilitate circulation of dry air
- · Valves can be closed to use standard desiccants

\*Mini cabinets are molded of polystyrene which does not provide light blocking.

For more detailed information on the full Secador® line see page 88.



#### Secador<sup>®</sup> Mini Gas-Ported Desiccator Cabinet

The Perfect Choice When Benchtop Space Is at a Premium

- Internal Volume: 0.31 cu. ft.; Holds: 12 cans
- · Clear polystyrene for easy viewing of contents
- Door opens to the left
- Overall Dimensions:
- 33.8W x 25.4D x 35.6cmH (13.3 x 10 x 14"); Height without gas ports: 21.6cm (8.5")

Scienceware

CATALOG NO.	DESCRIPTION	
F42075-1002	Mini, Clear Polystyrene, with Gas Ports	

Note: The Mini Desiccator model is molded of polystyrene and does not block UV light. For ultimate UV protection, select a Secador<sup>®</sup> 1.0 model or larger.

### Secador<sup>®</sup> 1.0, 2.0, 3.0 and 4.0 Gas-Ported Desiccator Cabinets

Interchangeably Stackable up to 3 Units High

U.S. Patents: 6,834,920; 7,318,630 and D474,626





• All units have a compact 34.1W x 41.4cmD (13.4 x 16.3") footprint

4.0

- Doors open to the left
- Different colors are available to suit your needs

Rear Gas Ports

Scienceware<sup>®</sup>

#### **Size Specifications**

Model	Internal Volume	Holds (12oz. soda cans)	# of Shelves	Height
1.0	0.74 cu. ft.	20	1 (fixed)	21.3cm (8.4")
2.0	1.16 cu. ft.	40	2	31.4cm (12.4")
3.0	1.55 cu. ft.	60	3	41.7cm (16.4")
4.0	1.87 cu. ft.	70	3	51.8cm (20.4")

#### Secador<sup>®</sup> 1.0, 2.0, 3.0 and 4.0 Desiccator Cabinets

CATALOG NO.	MODEL	DESCRIPTION
F42071-0002	1.0	Clear, with Gas Ports
F42071-0009	1.0	Amber, with Gas Ports (50+% visible light blocking.)
F42072-1002	2.0	Clear, with Gas Ports
F42072-1009	2.0	Amber, with Gas Ports (50+% visible light blocking.)
F42073-1002	3.0	Clear, with Gas Ports
F42073-1009	3.0	Amber, with Gas Ports (50+% visible light blocking.)
F42074-1002	4.0	Clear, with Gas Ports
F42074-1009	4.0	Amber, with Gas Ports (50+% visible light blocking.)
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Secador® Cabinet Replacement Shelves p. 109

For more detailed information on the full Secador® line see page 88.

#### Secador<sup>®</sup> 4.0 Horizontal Profile Gas-Ported Desiccator Cabinet

Large Wide Storage Space

U.S. Patents: 6,834,920, 7,318,630 and D474,626

- Internal Volume: 1.87 cu. ft.; Holds: 70 cans
- Two removable shelves
- Pull down 'oven style' door
- Interchangeably stackable up to 3 units
- Overall Dimensions: 51.8W x 41.4D x 34.1cmH (20.4 x 16.3 x 13.4")



CATALOG NO.	DESCRIPTION	
F42074-0002	Clear, with Gas Ports	

#### Bundled Secador<sup>®</sup> Gas-Ported Desiccator Cabinets in Amber Color

Save Dollars, Save Space with Bundles

U.S. Patents: 6,834,920, 7,318,630 and D474,626

- Amber color offers increased protection from light sources, reducing visible light penetration by over 50% and blocking 99% of UV light
- Compact 34.1W x 41.4cm D (13.4 x 16.4") footprint
- Save when you purchase bundles of multiple units
- Stackable up to 3 units high
- Doors open to the left

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F42074-0430	3.0, 4.0 - Amber, with Gas Ports	3.42 cu. ft.
F42074-0440	4.0, 4.0 - Amber, with Gas Ports	3.74 cu. ft.
F42074-0442	2.0, 4.0, 4.0 - Amber, with Gas Ports	4.90 cu. ft.
F42074-0443	3.0, 4.0, 4.0 - Amber, with Gas Ports	5.29 cu. ft.
F42074-0444	4.0, 4.0, 4.0 - Amber, with Gas Ports	5.61 cu. ft.

For more detailed information on the full Secador® line see page 88.

**Scienceware** 

#### NEW PRODUCT!

#### Techni-Dome® Gas-Ported Desiccator

U.S. Patents: 7,594,342 and D556,895 S

This large, domed desiccator is made from laboratory grade polycarbonate for a clear, unobstructed view of contents. Users will appreciate the roomy interior, portability and ease of use. Two gas ports accept ¼" I.D. tubing and have easy turning PTFE stopcocks to facilitate the turbulence-free entrance of gases, minimizing disturbance of the contents.

- Interior Volume: 2.29 cu. ft.; Holds: 101 cans
- Two removable polypropylene, 36.5cm and 22.5cm diameter (14.5" and 9") shelves
- Side handles provide easy portability and can be used to affix a lock or tamper-evident seals



- Holds a full vacuum (29" Hg, 737mm) at room temperature for 24 hours; a high quality silicone gasket ensures that the desiccator will remain airtight even when not under vacuum
- · Gas ports can be closed to allow use with standard desiccants



CATALOG NO.	DESCRIPTION	DIMENSIONS (W × H)	
F42029-0001	Techni-Dome <sup>®</sup> Gas-Ported Desiccator (2 gas ports)	60 x 60cm (22 x 22")	

For more detailed information on Techni-Dome® Desiccators, see page 90.

#### Dry-Keeper<sup>™</sup> Gas-Ported Desiccator Cabinet

- Interior Volume: 0.14 cu. ft.; Holds: 6 cans
- Clear polystyrene
- Pull down door slides out of the way into a compartment located underneath the cabinet

**Scienceware** 

- · Includes a small tray for desiccant
- Gas ports accept 1/4" I.D. tubing



CATALOG NO.	DIMENSIONS (L x W x H)	
H42053-0002	21 x 28 x 17cm (8¼ x 11 x 6¾")	

For more detailed information on Dry-Keeper™ Desiccators, see page 90.

## Vacuum Desiccators

#### **"SPACE SAVER"** Vacuum Desiccators

Small Space, Top Performance

'Space Saver' Desiccators will hold a full vacuum (29.9" Hg 75.9cm) at room temperature for 24 hours and remain airtight even if not under vacuum.

- Polypropylene stopcock with PTFE plug accepts 6.4mm (1/4") I.D. tubing and allows a controlled entrance of air preventing unnecessary turbulence
- Flat-top dome maximizes interior space
- A neoprene O-ring assures a tight seal down to 0°C without the need for grease (ring will not be harmed if grease is used.)
- All models include a 0.32 cm (1/8") thick perforated plate.





Scienceware

A. White Polypropylene Bottom - Can support incandescent crucibles on Minerit HD High Heat Desiccator Plates, available separately, page 108. Per each, 4 per case.

CATALOG NO.	FLANGE O.D.	INSIDE DIAMETER	PLATE DIAMETER	OVERALL HEIGHT	CLEARANCE ABOVE PLATE
F42010-0000	17.1cm	14.9cm	14cm	20.6cm	12.1cm
	(6¾")	(5%")	No.3	(8½")	(4¾")
F42020-0000	23cm	19.7cm	19cm	26cm	15.7cm
	<b>(9½16'')</b>	(7¾")	No.4	(10¼")	<b>(6³⁄</b> 16 <b>")</b>
F42025-0000	27.3cm	24cm	23cm	31.1cm	19.7cm
	(10¾")	(9½6")	No.5	(121/8")	(7¾")

B. All-Clear Polycarbonate Bottom - Offers increased viewing visibility from more angles. Per each.

CATALOG NO.	FLANGE O.D.	INSIDE DIAMETER	PLATE DIAMETER	OVERALL HEIGHT	CLEARANCE ABOVE PLATE
F42012-0000	17.1cm	14.9cm	14cm	20.6cm	12.1cm
	(6¾")	(5%")	No.3	(8½")	(4¾")
F42022-0000	23cm	19.7cm	19cm	26cm	15.7cm
	(91/16")	(7¾")	No.4	(10¼")	(6¾16 ")
F42027-0000	27.3cm	24cm	23cm	31.1cm	19.7cm
	(10¾")	<b>(9</b> <sup>7</sup> ⁄ <sub>16</sub> " <b>)</b>	No.5	(12½")	(7¾")

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#### **NEW PRODUCT!**



#### **Techni-Dome**® Vacuum Desiccator

#### U.S. Patents: 7,594,342 and D556,895 S

This large, domed desiccator is made from laboratory grade polycarbonate for a clear, unobstructed view of contents. Users will appreciate the roomy interior, portability and ease of use. Gas-port accepts 1/4" I.D. tubing and has an easy turning PTFE stopcock which allows for the gentle entrance of air and minimal disturbance to the inside chamber and its contents

- Interior Volume: 2.29 cu. ft.: Holds: 101 cans
- Two removable polypropylene, 36.5cm and 22.5cm diameter (14.5" and 9") shelves
- Side handles provide easy portability and can be used to affix a lock or tamper-evident seals
- Gas port can be closed to allow use with standard desiccants when vacuum is not required

CATALOG NO.	DESCRIPTION	DIMENSIONS (W x H)	
F42029-0000	Techni-Dome <sup>®</sup> Vacuum Desiccator (1 gas port)	60 x 60cm (22 x 22")	

For more detailed information on Techni-Dome® Desiccators, see page 90.

#### Mini Vacuum Desiccator

Ideal for Small Samples

- Interior Volume: 0.015 cu.ft.
- Vacuum rating of 740mm Hg (29")

TEFLON

*acienceware* 

- Clear polycarbonate top; white polypropylene bottom
- Stopcock with 2mm PTFE plug uses 1/4" tubing
- Peripheral flange around the bottom fits into two snap locks and seals the two halves against a Buna-O-Ring.



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CATALOG NO.	DIMENSIONS (DIAM. x H)	
F41099-0000	17.5 x 12.6cm (6¾" x 5")	



#### Vacuum Chamber and Plate

For Vacuum Drying, Degassing and Teaching Demonstrations

- Interior Volume: 0.21 cu. ft.
- Can withstand a full vacuum at room temperature
- Clear polycarbonate top
- · ABS plastic plate and O-ring seals the top against the chamber's flange
- Stopcock with 2mm PTFE plug uses ¼" tubing

CATALOG NO. F42043-0000

# DIMENSIONS (DIAM. x H)

22.8 x 16cm (9" x 6¼")





#### Secador<sup>®</sup> Auto-Desiccator Module Desiccant Replacement Beads

Color-indicating silica gel beads for use in refilling the Secador<sup>®</sup> auto-desiccator module. Silica gel absorbs moisture from the air and is inert, non-toxic and non-corrosive. Unlike other desiccants, silica gel is non-friable and won't disintegrate into powder even after repeated regeneration. Beads contain a color-changing moisture indicator that turns from blue to light pink, indicating that the silica gel is saturated and can not absorb additional moisture.

Secador<sup>®</sup> auto-desiccator modules automatically regenerate the silica gel beads for thousands of cycles; however, when beads turn pink/dark brown, and fail to regain their blue color, it is time to replace the beads with a fresh supply.

CATALOG NO.	DESCRIPTION	
F42074-0020	26g Bottle to fill Secador® Auto-Desiccator Modules	

### **Desiccant in a Cartridge**

Disc Shape Fits Perfectly in "Space-Saver" Desiccators

Convenient, easy-to-handle cartridges with Natrasorb® TI indicating silica gel beads. Beads change color from blue when dry



to pink when moist and are contained in a durable, polyester felt bag with a perforated Mylar® cover sealed in place. Saturated gel can be regenerated in a 150°C (300°F) vented oven for 3 hours or more (depending on size) until blue color returns. May be regenerated repeatedly without degradation. Fits "Space Saver" desiccators (see page 94), in addition to other plastic desiccators of similar size. Individually sealed in moisture proof pouches.

CATALOG NO.	FOR DESICCATOR DIAMETER UP TO	DESICCANT	CARTRIDGE DIAMETER	WEIGHT
F42045-0160	16cm (6.3")	175g	11.4cm (4.5")	0.23kg (½ lbs)
F42045-0200	20cm (7.9")	650g	19.7cm (7.8")	0.68kg (1½ lbs)
F42045-0250	25cm (9.9")	1135g	23.8cm (9.4")	1.36kg (3 lbs)



#### **Reusable/Disposable Desiccant Cartridges**

Use Anywhere Desiccation Is Needed, Including Analytical Balance Cases and Precision Laboratory Instruments

Clear polystyrene dish allows instant visual inspection of silica gel, which changes in color from blue to pale pink as it absorbs moisture. A highly porous membrane covers the dish providing excellent moisture absorption. Desiccant can be easily regenerated by heating

Scienceware

cartridges in a 50°C (122°F) oven overnight. For more rapid drying, cut the membrane, transfer the spent gel crystals into a glass or porcelain dish, and place in a 150°C (300°F) oven for one hour. Silica gel is inert, non-corrosive and non-toxic. Fits "Space Saver" desiccators (see page 94), in addition to other plastic desiccators of similar size. **6 per pack**, individually foil sealed.

CATALOG NO.	DESICCANT	CARTRIDGE DIAMETER	
F42048-0065	16g	6.5cm (2½")	
F42048-0100	38g	10cm (4")	

#### Desi Can<sup>™</sup> Reusable Desiccant Canister

#### Neat and Tidy Desiccant Storage

Silica gel effectively absorbs moisture through perforations in the aluminum case. One canister of Reusable Desi-Can<sup>™</sup> Canister maintains a safe level of humidity in 0.09 cubic meter (3 cubic ft.) of space. Excellent for use in closets, containers, tool boxes,

camera cases and other storage areas to prevent rust and moisture. It can be regenerated in a 150° C (300° F) oven in about 3 hours for unlimited life. A monitor window shows blue when recharged and pink when saturated.

CATALOG NO.	DIMENSIONS (L x W x H)	
F42046-0000	5.1 x 10.2 x 1.3cm (2 x 4 x ½")	



#### Storage Turntable

Keep access to bottles easy, even the ones in the back with this storage turntable. Smooth action bearings facilitate easy turning making it perfect for use inside desiccators, cabinets or on a shelf

**DIMENSIONS (DIAM, X H)** 23 x 1.5cm (9.0 x 0.6")

#### **Replacement Stopcocks**

Polypropylene body has Teflon® TFE plug, washer and bright red handle. Taper fits on desiccator port, and the plug is 3 way for vacuum draw, shut-off and vacuum release. Use on Desiccator Models: F42010, F42012, F42020, F42022, F42025, F42027, F41099, F42029 and F42043. Per each, 24 per case.





CATALOG NO.	DESCRIPTION	
F42040-0000	Side Arm Accepts Tubing ¼ to ¾" I.D.	



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### **High Heat Minerit HD Desiccator Plates**

Three Diameters to fit "Space Saver" Desiccators

These desiccator plates are able to withstand temperatures up to 150°C (300°F), have excellent resistance to thermal shock, are non-combustible, asbestos free, stable, and chemical-resistant. Perforated with 6mm (0.25") diameter holes on 25mm (1") centers in a straight line pattern, they fit "Space Saver" desiccators (see pages 94 and 105), in addition to other plastic desiccators of similar size.

CATALOG NO.	DIAMETER	THICKNESS	
F42038-0140	14cm	4.8mm	
F42038-0190	19cm	4.8mm	
F42038-0230	23cm	4.8mm	

#### Secador<sup>®</sup> Cabinet Replacement Shelves

Perforated, clear polystyrene shelves to fit non-electric and auto-desiccator models. 4.0 units can be converted from vertical to horizontal configuration or vice versa by turning the unit and ordering the appropriate number of shelves.

CATALOG NO.	DESCRIPTION
F42074-1001	Fits 1.0 (non-carrying case), 2.0, 3.0 and 4.0 (vertical) Models
F42074-0001	Fits 4.0 Horizontal Models



#### Brackets for 4.0 Horizontal Secador® Desiccator

Vertically Stack Horizontal Profile Secador® Desiccators

Bracket set permits vertical stacking of horizontal profile Secador<sup>®</sup> desiccators up to three units high. Brackets are made from ½" thick, white, high-density polyethylene for strength and

durability, and can be installed in less than five minutes. Fit a pair of brackets onto each end cap of the horizontal profile Secador<sup>®</sup>, place second Secador<sup>®</sup> on top and then tighten the included bolt. Set includes two bracket pairs to stack two desiccators.

CATALOG NO.	DESCRIPTION	
F42074-1500	Horizontal Secador <sup>®</sup> Stacking Brackets (2)	

#### Vacuum Pressure Indicator

Easy Installation. Know at a Glance Whether Your Desiccator Is Under Vacuum

Fits easily onto the tapered end of the stopcock. The thermoplastic elastomer collapses when there is a negative vacuum pressure in the desiccator and expands when vacuum is absent.



#### CATALOG NO.

H42042-0000



### **Drying Tubes with Tube Fittings**

Can Be Filled with Desiccant of Your Choice

Unbreakable polyethylene straight tubes, 16mm I.D. x 19mm O.D. ( $\frac{1}{2} \times \frac{1}{2}$ "). Each tube is supplied with two polypropylene fittings which accept 6.4 to 9.5mm ( $\frac{1}{2}$  to  $\frac{3}{6}$ ") I.D. tubing. Drying agent not included. **12 per bag.** 

Scienceware

LDPE	PP	

DESCRIPTION	
10.2cm (4")	
15.2cm (6")	
20.3cm (8")	
12 per bag, 12 dozen per case	
Serrated Tapered End	
	10.2cm (4") 15.2cm (6") 20.3cm (8") <b>12 per bag, 12 dozen per case</b>

www.novatech-usa.com (866) 433-6682