

Gaylord Brothers

Small Silica Gel Conditioning System with Hygro-Thermometer

Components:

- A - Outer Container
- B - Outer Container Cover
- C - Extech Hygro-Thermometer
- D - Inner Container
- E - Flow-through filter
- F - Inner Container Cover with Fan
- G - Power Supply



A

B



C



G



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To Condition Silica Gel

- 1 - Weigh your gel (Bulk gel or pouches) to determine how much gel you plan to condition. Note that our calculator is based on grams.
- 2 - Drop the round flow-through filter into the Inner Container (**see fig A**).
- 3 - Arrange the gel evenly inside the Inner Container.
- 4 - Screw the Inner Container Cover on tightly (**see fig B**).
- 5 - Carefully fit the Inner Container inside the Outer Container being careful not to snag or pull on the internal power adaptor (**see fig C**).
- 6 - Plug the fan into the internal power adaptor (**see fig. D**).
- 7 - Using two hands, as shown, plug in the external power cord (**see fig. E**).
- 8 - Run the unit until the hygrometer reading has stabilized, usually 12 to 18 hours. This will tell you the beginning RH% of your silica gel.

Figure A



Figure B



Figure C



Figure D



Figure E



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9 - Visit www.gaylord.com/resources/silica-gel-calculators (see fig. G).

To use the calculator you will need to know:

- Beginning weight of gel (Grams)
- Beginning RH% of gel
- Target RH% of gel

10 - Use the online calculator to determine your next steps. The calculator will indicate whether you need to add water or dry gel, and how much

Figure G

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Silica Gel Calculators

How much Silica Gel do I need?
This tool calculates the weight of Gaylord silica gel required to maintain a microclimate in your case.

To use, simply choose English or SI units, and enter the following:

- 1 - The volume of the case
- 2 - The anticipated difference between the desired case humidity and the average ambient humidity
- 3 - The exchange rate for the case (# exchanges per day)
- 4 - The minimum time period (in days) before the gel will need to be maintained
- 5 - The maximum allowable deviation from the target RH%

English or SI Units

Volume of case (cubic feet)

Differential RH%

Exchange rate/day

Days between maintenance

Tolerance in target RH

Note - the silica gel calculator is also useful in determining how much silica gel you will need to maintain a microclimate in a case

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To Increase the RH% of Silica Gel

- 1 - Add the appropriate amount of water (as determined by the Gaylord.com silica gel calculator) to the Outer Container via syringe (**see fig. H**). Use a wrench to secure the fixture while you twist off the cap with your fingers (**see fig. J**).
- 2 - Run the unit until the hygrometer reading stabilizes, usually about 36 hours.
- 3 - Fine-tune as needed by repeating this process to increase the RH% further or by following the steps below to decrease the RH%.

Figure H



Figure J



To Decrease the RH% of Silica Gel

- 1 - Add the appropriate amount of dry gel (as determined by the Gaylord.com silica gel calculator) to the Inner Container. If you do not have dry gel available, you can dry your gel by baking it in an oven at 240° overnight.
- 2 - Screw the Inner Container Cover on tightly (**see fig B**).
- 3 - Carefully fit the Inner Container inside the Outer Container being careful not to snag or pull on the internal power adaptor (**see fig C**).
- 4 - Plug the fan into the internal power adaptor (**see fig. D**).
- 5 - Using two hands, as shown, plug in the external power cord (**see fig. E**).
- 6 - Run the unit until the hygrometer reading stabilizes, about 36 hours.
- 7 - Fine-tune as needed by repeating this process to decrease the RH% further or by following the steps above to increase the RH%.