



Regenerating desiccant at sea

We recommend using new desiccant cartridges if the color change of the indicating desiccant (blue to pink) indicates the material is exhausted. Still there might be a need for regeneration at sea when new cartridges are not available. This operation requires an oven in the galley.



Figure 1. Spent cartridges. These have adsorbed as much moisture as they can, turning the indicating desiccant from blue to pink.

Step 1. Preheat oven to 425°F (+/- 25°F)/220°C (+/- 15°C).

The oven temperature is important.

Moisture is chemically joined at room temperature with the desiccant granules to form a hydrate. The water of hydration can be released by heating without changing the composition of the desiccant itself. Lower temperatures, such as a stove top, will not regenerate the desiccant regardless of heating time.

High temperatures can render the desiccant permanently inactive.



Figure 2. Preheat oven to 425°F.



Figure 3. Close-up of oven thermometer.

Step 2. Open the spent cartridges and pour the indicating desiccant onto a metal or glass cookie sheet. Spread to a thin layer.



Figure 4. Empty the granules onto a glass or metal cookie sheet. Spread to a thin layer.



Figure 5. Close-up of the spent desiccant granules, showing many shades of pink.

Step 3. Place cookie sheet in oven and bake for 1 hour.



Figure 6. Place the glass or metal cookie sheet in the oven.

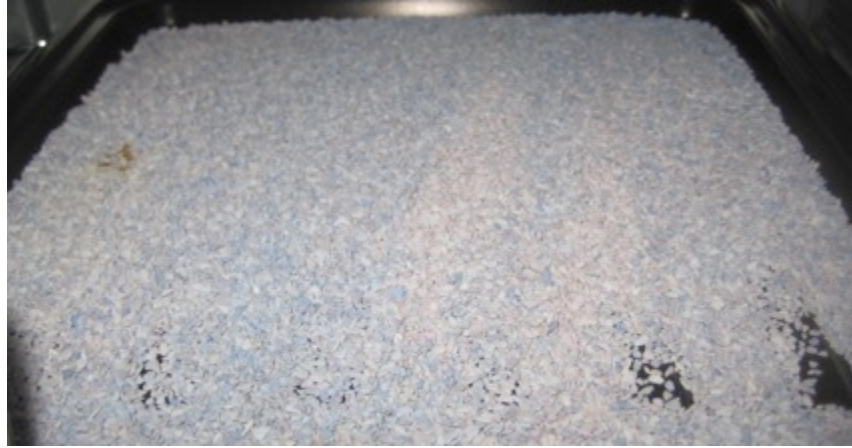


Figure 7. Granules after 1-hour, note the largely blue color.



Figure 8. Close-up of regenerated desiccant granules, now many shades of blue.

Note that the blue color of the indicating desiccant may begin to fade after repeated regenerations.

Step 4. The regenerated indicating desiccant should be placed in a glass or metal container with a lid and sealed while hot.



Figure 9. An example of a resealable glass jar with a metal lid for storage of the fresh desiccant.

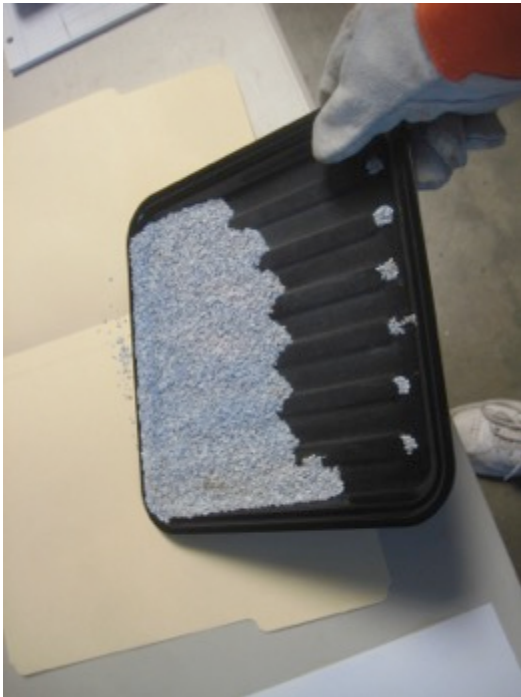


Figure 10. Pour the regenerated desiccant onto a folder.

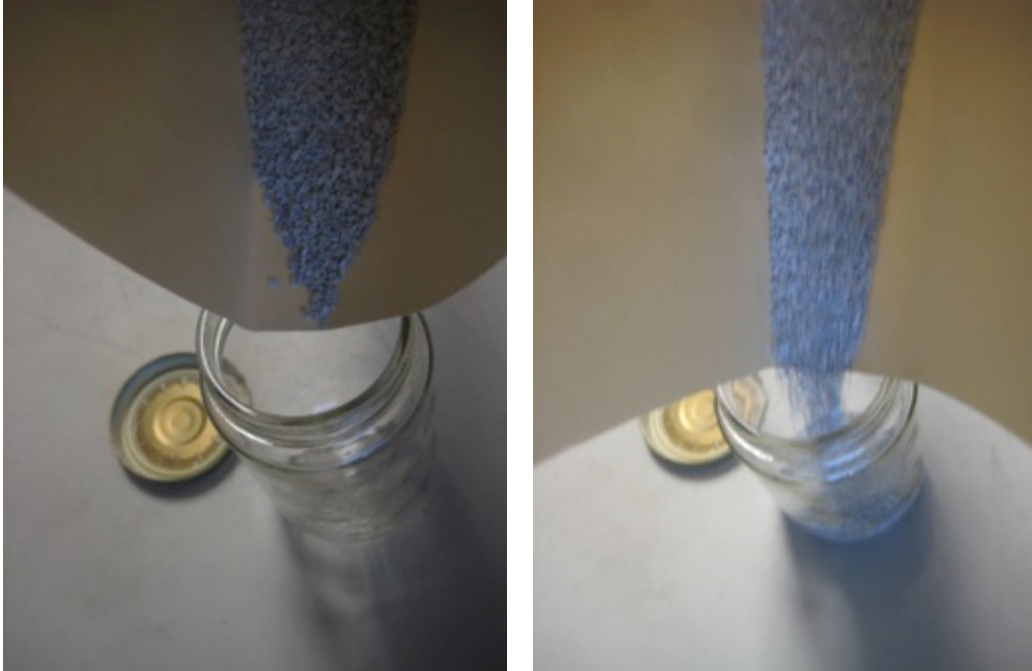


Figure 11. Pour the regenerated desiccant into the glass jar.



Figure 11. Seal the jar.



Figure 12. Indicating desiccant in natural daylight.

Step 5. Once cool, the desiccant may be transferred back into the plastic desiccant cartridge of the Model 120/125 Deck Purge Box. A folded paper plate can make a useful chute to funnel the regenerated indicating desiccant back into the cartridge. Replace the rubber caps on both ends. A home model vacuum food sealer, such as the Seal-A-Meal®, provides a very good means to keep the desiccant cartridge fresh. Alternately, use one or two heavy wall Ziplock bags.

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