Utilizing the DryDisk® Solvent Drying System to Improve Laboratory Productivity

What is the DryDisk® Solvent Drying System?

The DryDisk® Solvent Drying System, also known as the SDS, is a modular instrument designed to remove water from any non-polar solvent extracts when utilizing the Biotage DryDisk-R, a hydrophobic membrane. Phthalates are not a concern since all the materials used in the SDS and the DryDisk-R solution are PTFE and glass. Up to eight SDS can be connected to a single vacuum manifold. The manifold controls the overall vacuum delivered to each system.

Preparation of an SDS with a DryDisk-R

Follow these simple steps to properly prepare the SDS to dry water from extracts:

1. Have a ring stand or lab hood frame kit ready holding the SDS manifold as well as any SDS docking brackets required for drying. Be sure the vacuum lines from the back of the docking brackets are connected to the SDS manifold ports. Using the quick connect, remove each SDS that will be used for drying.
2. Remove the plastic locking ring and lift that and the DryDisk Reservoir from the SDS.
3. Open the package containing the DryDisk-R. Remove the piece of paper separating each DryDisk-R from each other. Place the DryDisk-R (the side that is up does not matter as they are both the same) onto the support screen of the SDS.
4. Replace the DryDisk Reservoir as well as the plastic locking ring. Tighten the locking ring only, leaving the DryDisk Reservoir stationary through the tightening process.
5. Replace the SDS on the docking bracket via the quick connect. Using the retaining clip, attach the collection vessel of choice (19/22 taper or 24/40 taper) to the bottom of the SDS. The SDS is ready for use.
6. Turn on the vacuum source. Adjust the bleed valve on the SDS manifold to read -5" Hg.
7. Pour the extract to be dried into the DryDisk Reservoir and open the stopcock on the SDS. The dried extract will filter into the collection vessel while the water stays above the DryDisk-R.
8. Please note when drying hexane extracts, open the stopcock prior to pouring the extract into the reservoir since residual water may form a barrier, preventing all the hexane from passing through.

The Best Way to Improve Lab Productivity

The SDS is already a huge improvement from using sodium sulfate. However, there is an even better way to further streamline and improve productivity when drying extracts. While the extractions are being carried out, free time can be used to prepare and clean the SDS and collection vessels needed for drying the extracts. Have each one ready and set up on the ring stand or a lab hood frame kit. This way, the extracts can be dried using a fresh SDS without needing to clean in between extracts. Even if there is only one ring stand available, have a clean SDS ready for each extract and swap out the SDS via the quick connect on the docking bracket when moving onto the next extract. With this approach and workflow in place, sample extracts will be dried in no time, further improving the turn-around time for samples in a day.

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