

SP005

Operation of the Savant

Materials and Reagents:

1. Containers compatible with Savant Rotor
2. Sample
3. Savant Vacuum
4. Savant Concentrator
5. Savant Rotor
6. Savant Rotor Nut
7. Savant Refrigerator Trap

Protocol:

1. ____ Read the notice above the Savant to make sure sample is compatible with the machine (note 1).
2. ____ Transfer sample into containers suitable for drying (note 2).
3. ____ Remove lids/caps/plate covers from containers.
4. ____ Choose appropriate rotor compatible with container type (note 3).
5. ____ Securely fasten the rotor into the concentrator with the Rotor nut.
6. ____ Place containers in rotor, balancing containers directly across from each other (note 4).
7. ____ Close concentrator lid firmly, making sure lid is completely flush with rubber seal.
8. ____ Turn all blue bleed valves to vacuum position (arrow is perpendicular to vacuum tubing).
9. ____ Confirm that the refrigerator trap is on and running (note 5).
10. ____ Turn vacuum pump on.
11. ____ Turn concentrator on.
12. ____ Monitor the vacuum gauge to make sure the reading falls below 10.0 Torr (note 6).
13. ____ Fill out the Savant sign-up sheet.
14. ____ Inspect the Savant every two hours to see when sample is completely dried (note 7).
15. ____ Turn concentrator off.
16. ____ Turn the blue bleed valve that is in closest proximity to the concentrator being used to the bleed position (arrow is parallel to vacuum tubing).
17. ____ Turn vacuum pump off.
18. ____ Fill out the Savant sign-up sheet.

Notes:

1. No halogenated compounds, phenolic compounds, glycerol, strong acids, strong bases, or radioactivity may be placed on the lyophilizer. Acetonitrile and low concentrations of TFA, methanol and ethanol are acceptable.

2. Many types of containers are compatible with the Savant rotors, including but not limited to cryovials (all sizes), eppendorff tubes (all sizes), 15 ml falcon tubes, 13 x 100 mm glass tubes, 16 x 100 mm glass tubes, HPLC fraction collection tubes, 96-well plates, and 384-well plates.
3. Each of the three concentrators can accept any of the rotors currently available.
4. It is imperative that samples are balanced to prevent breakage. Balance tubes with equal volumes. Some solvents dry faster than water (ex. Acetonitrile), so also balance samples with the same solvent composition.
5. The refrigerator trap should be left on at all times. Check to make sure the trap is cold to the touch.
6. If the Savant does not appear to be operating correctly, or the vacuum will not reach an appropriate level, immediately contact the lab personnel in charge of Savant maintenance.
7. Usually samples dry at the rate of 1 ml per 3 hours. This can vary greatly depending on the number of samples, sample composition and volume, and how well the Savant is performing. For larger sample volumes, the Savant can be run overnight if necessary. Please note that running of the Savant excessively after the sample is dry is hard on the vacuum pump.