


We love the Smart Evaporator!
The Smart Evaporator Testimonials!


※Benefits using the Smart Evaporator　※Challenges faced before using the Smart Evaporator

Operation time reduced by over 4 hours!

Mr. O, Analysis team in Pharmaceutical products division, Chemical manufacturer

- *"In the past, we had to use numerous instruments to do our work—freeze-dryers, centrifugal evaporators,nitrogen blowers, and rotary evaporators—and we had to use different instruments for different samples. The great thing about the Smart Evaporator is that we can do everything at the pre-processing stage with just this one machine, no matter how much or which types of solvent we want to evaporate! This has allowed us to reduce the time required for a single operation by over 4 hours."*
- *"For liquid-liquid extraction, we sometimes use solvents like chloroform or hexane, and it' s surprising how few instruments out there can handle these substances. That makes the C10 all the more valuable."*
- *"The fact that the vacuum pump requires no oil changes, and that we can perform concentration as is,even with organic solvents, is a particularly attractive feature of the C10."*
- *"After we actually installed the C10, we were able to handle many different samples with just this single instrument, which increased our productivity as we were expecting. In the past, when using a freeze-dryer for solvents such as water, we had to keep an eye on things for an hour or so after starting, to make sure there was no bumping. Then, we would let the evaporation process take place overnight, but in some cases it still wasn' t finished the following morning." (Solvents: water, water mixed with acetonitrile or methanol. Sample volume: from less than 1 ml to as much as 150 mL divided into some operations.)*

Free from bumping!

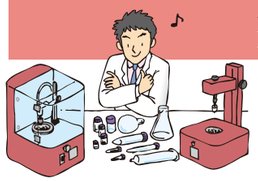
Mr. "K" , Natural product chemistry research, University T

- *" I use the Smart Evaporator mostly for evaporating the extraction liquid from plants and the small amount of synthetic compounds. For evaporating the larger amount with eggplant flask I use the rotary evaporator, but for 10mL evaporation I use the Smart Evaporator."*
- *(Why did the students prefer to use the Smart Evaporator C1?) "I can say that' s because the evaporator is free from bumping. We can hardly collect the fluorescent substance samples once they bump, and also it was too much burden to clean for many times so we had an issue on how to avoid samples to be bumped."*

How easy to dry DMSO!

Associate Prof. "M" , Natural products chemistry, University

- *" I used to use the freeze dryer for DMSO evaporation, but I could never achieve it. Maybe that's because the sample concentration was too high, and the sample is saturated in containers then is dissolved. In that case I added water to dilute to 10%, adsorb in the ODS cartridge, then dissolve with solvents with low boiling points. But with this method I was also concerned of effects of transfer dissolution." "Using the Smart Evaporator which readily evaporates DMSO led to great improvements in our work efficiency."*
- *" I also use this for DMF evaporation. I tried to dry 1mL of DMF in 10cm test tube, 10mL vial and 25mL egg-plant flask, and either one was completed within an hour at 40 Celsius. In parallel I also tested with the rotary evaporator for comparison, but most of solvents were left even after 2 hours."*



Effective to dry samples in vials and centrifuge tubes!

Prof. Takuya Kumamoto, Pharmaceutical Sciences Organic Chemistry, Musashino University

- *" It depends on types of experiments. I use centrifuge tubes for recrystallization. Although I cannot concentrate samples in centrifuge tubes with other concentrators, Smart Evaporator is applicable for them. Because tubes are narrow, samples easily have bumping problems. Furthermore, plastic containers without barotolerance are not applicable for rotary evaporator."*

Powdery samples without the mess!

Prof." U" , Organic chemistry, Sopia University

- *" I have research work on the synthesis and isolation of natural organic compounds. Also I' m researching on biomarkers that quantitatively evaluate the effect of disease diagnosis or medicines. When I tried to store samples in vials, the powdery samples were scattered by using the nitrogen blow down dry evaporator and that was troublesome. The Smart Evaporator actually has good functionality as mentioned in the catalog, and I don' t have scatters of powdery samples anymore. I also applied the Smart Evaporator for drying the final compounds of natural synthesis."*

Not only water, but even solid sample!

Mr. Y, Material application development, Machinery manufacturer

- *I completely dry up the small quantity solvent like 5mL or 10mL, and for synthesis or analysis I use the same sample tubes sized 10mL, 20mL, or 50mL. The Smart Evaporator is a simple system with only a vacuum pump, and also I like its small footprint that saves the working space, which is not easy with a rotary evaporator. And I used to take too long for concentrating water, so I also try the freeze dryer but the water is likely to melt before it' s done. When I retry or use a rotary evaporator, since each instrument is placed separately in the lab, I could not finish the experimental work at one place, which was too much burden for me. Now I don' t need to worry any of these.*

Easy concentration of the viscous surfactant solution!

Dr. I, Material chemistry research, University "C"

- *" Some students used to share one rotary evaporator at my lab. The surfactant solution intricately differs in its condition depending on the density of solution, so it was difficult to simplify the evaporation process, and we used to have the wide result variation in each student. For example, one of the issues was bumping because the sample viscosity is likely to increase drastically during evaporation. Also we had to transfer the samples from egg-plant shaped flasks to 50mL vials for storage. The Smart Evaporator is able to concentrate the surfactant solutions even those with high viscosity and anyone can operate in a short time effectively."*

Shorten the time for pretreatment in photosynthesis pigment analysis!

Prof. Dr.Tatuya Tomo, Faculty of Science, Tokyo University of Science,

- *" With the Smart Evaporator, the process we spent for some hours now requires less than some ten minutes, and now we can implement the greater number of measurements. It is easy for you to understand that we could do only one measurement in a day, but now 6 times. More measurements we can implement, we can have better data with higher reliability. In the past, by the operation error we had sample loss caused by bumping, but the Smart Evaporator is in principal a bumping-free instrument so we can use at ease. Our laboratory now improves the analyze efficiency, and the Smart Evaporator is an invaluable asset."*