

# Smart Evaporator

The Easy Way To Concentrate Your Samples!



**C1 Model**

**Single Vial**



Evaporate  
10 samples  
at once!

**C10 Model**

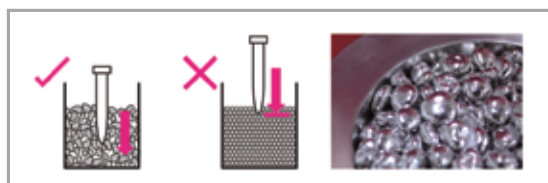
**Up to 10 Vials**

## FEATURES

The Smart Evaporator with its unique **spiral plug** design makes it possible to evaporate solvents **bump free** utilizing our revolutionary vacuum assisted vortex technology. This system is great for evaporating high boiling point solvents, such as **DMSO or DMF**, hands-free by using our **air purging** feature (inert gas required). There is no need for messy and time-consuming nitrogen blowing. **Its small size and easy setup using your own vials saves time and space.**



C1



Aluminum beads included with the C1 can be heated up to 100 °C.

## Concentration Times

C1 Model

Solvent/Capacity	Flow rate	26°C	40°C	70°C
Hexane / 5 ml (20 ml vial)	15 L/min	5 min	3 min	3 min
Acetone / 5 ml (20 ml vial)	15 L/min	7 min	4 min	5 min
Ethyl acetate / 5 ml (20 ml vial)	15 L/min	9 min	6 min	5 min
Acetonitrile / 5 ml (20 ml vial)	15 L/min	18 min	9 min	8 min
Methanol / 5 ml (20 ml vial)	15 L/min	31 min	10 min	6 min
Ethanol / 5 ml (20 ml vial)	15 L/min	31 min	10 min	6 min
*Deionized Water / 5 ml (20 ml vial)	15 L/min	95 min	49 min	28 min
*DMF / 5 ml (20 ml vial)	15 L/min	68 min	43 min	24 min
*DMSO / 5 ml (20 ml vial)	15 L/min	241 min	195 min	69 min
*NMP / 5 ml (20 ml vial)	15 L/min	N/A	N/A	71 min

\* Gas Purge Data

Gas phase chemicals are not considered harmful to the Smart Evaporator. However, if liquid is aspirated by accident, certain types of chemicals can be harmful to the wetted material. Please contact us to check your chemical's compatibility.

## APPLICATIONS

- Concentrating samples after organic synthesis
- Solvent removal after NMR
- Concentrating samples after fractionation and purification
- Research fields: organic chemistry, material science, polymer chemistry, environmental analysis, biochemistry, etc.

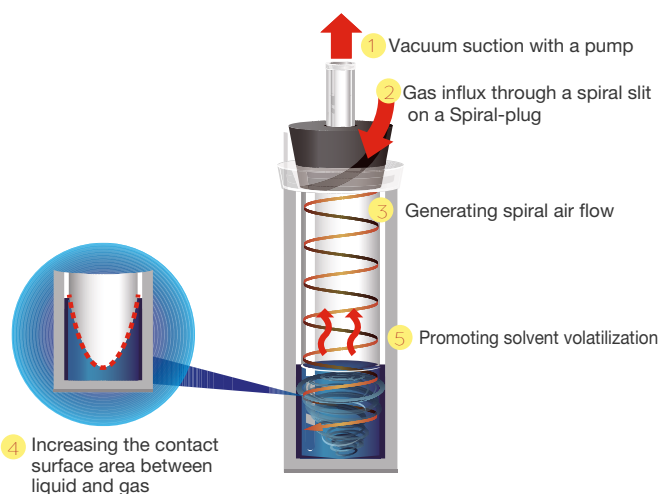


C10



Heating block included with the C10 can be heated up to 100 °C.

## TECHNOLOGY



The Smart Evaporator is fast and easy to setup. The vacuum-assisted vortex concentration technology is based on the generation of spiral air flow as a vacuum pump pulls gas through the sample vial. The air vortex stirs the entire sample without a stir bar. This increases the surface area of the liquid and accelerates the evaporation process, thereby allowing you to evaporate without the worry of bumping or the need to nurse the equipment. The sample stays in the sample tube throughout the evaporation process, minimizing contamination risks.

1



### Bump-Free

Plugs with slits can prevent bumping by eliminating high vacuum state and generating spiral air flow to stir whole samples.



2



### DMSO & DMF Concentrator

The unique concentration principle of spiral air flow enables you to efficiently concentrate high boiling temperature solvents such as DMSO, DMF and water, without heating (keep the temperature of samples higher than that of room temperature to avoid condensation).



3



### No Sample Transfer Required- Minimized Sample Loss

No requirement of sample transfers eliminates the risk of cross-contamination or sample loss and saves time.



4



### Compatible With Various Sample Tubes

C1: Tapered spiral plugs are compatible with many different sample tubes under 12 cm tall and with an inner mouth diameter of 4-32 mm.  
C10: See specifications on back for vial compatibility.



## CUSTOMER REVIEWS

“The Smart Evaporator allows me to concentrate my samples into vials in less time with no mess—even DMSO and DMF. Very convenient!”

- Researcher, Novartis

“I appreciate the Smart Evaporator’s ability to concentrate directly in my 2 mL sample vials bump free.”

- Takeo Kurata, Researcher, Meiji University, Science and Engineering Applied Chemistry

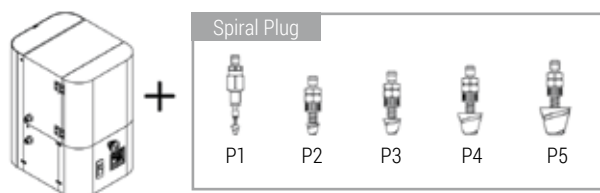
“The Smart Evaporator achieves fast evaporation and is very useful when working with small volumes.”

- Mrs. Higashi, Researcher, Biological and Mechanical Engineering, SATREPS

“The Smart Evaporator has been useful for evaporating NMP. It is small and space-saving, so we can put it in a hot cell. I’m fully satisfied with the evaporation speed.”

- Mr. Hiroshi Yamaguchi, Radiology Research Department, Akita Prefectural Hospital

## How to select your Smart Evaporator C1



1. Choose Your Color  
*Sun (Red) or Sky (Blue)*
2. Choose Your Spiral Plug Sizes  
*Each Sold Separately*

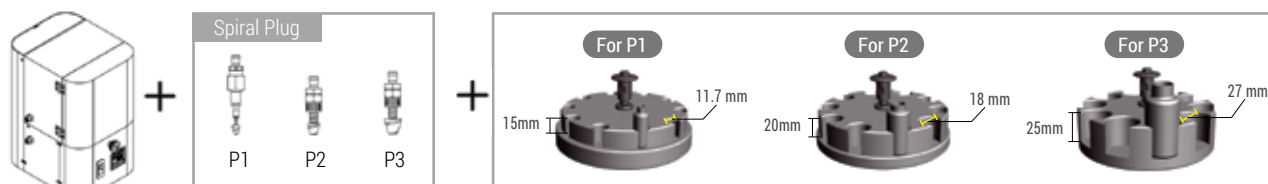
### Spiral plug sizes and corresponding flow rate

Spiral plug #	Inner diameter of sample tube's mouth (mm)	Pump Flow Rate*
1	4-7	13 L/min
2	7-11	15 L/min
3	11-17	30-33 L/min
4	15-24	50 L/min
5	24-32	58 L/min

\* The indicated flow rates are estimated values

Product Name	Smart Evaporator C1 - 1 vial
Product Code	R80.900.01 (Sun) R80.900.02 (Sky)
Size	(W) 220 x (D) 270 x (H) 389 mm
Weight	8.5 kg
Temperature Range	Room temperature to 100°C

## How to select your Smart Evaporator C10



1. Choose Your Color  
*Sun (Red) or Sky (Blue)*
2. Choose Your Spiral Plug Sizes  
*Set of 10 Included*
3. Corresponding Heating Block  
*Heating block can be heated up to 100°C*

Heating Block Size	Vial Diameter: (P1) 11.7 mm, (P2) 18 mm, (P3) 27 mm
Vial Holder Size	CEV10L-VH-P1: 1.5 mL, CEV10L-VH-P2: 6 mL, CEV10L-VH-P3: 20 mL
Spiral Plug Size	C10L-P1 Inner diameter of vials (4 - 7 mm) C10L-P2 Inner diameter of vials (7 - 11 mm) C10L-P3 Inner diameter of vials (11 - 17 mm)

Product Name	Smart Evaporator C10 - up to 10 vials
Product Code	R80.910.01 (Sun) R80.910.02 (Sky)
Size	(W) 350 x (D) 300 x (H) 531 mm
Weight	20 kg
Temperature Range	Room temperature to 100°C

**Note: Diaphragm Vacuum Pump is required in order to operate the C1 and C10 and is sold separately. Contact us for more details.**

**Caution!** Do not use cold trap with liquid nitrogen because it could cause an explosion due to the liquefaction of oxygen in the air.

Please note that the product specification is subject to change without notice.

Made in Japan

**BC BioChromato**

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