

NEWSLETTER

January 2021

Dear friends,

Greetings from BioChromato – we hope you have started 2021 smoothly, and that the next 12 months will be full of happiness and good health.

On the BioChromato YouTube channel ([right](#)), you can see our snapshots from the staff, showing them celebrating Japanese New Year.



Happy New Year 2021,
the year of Ox

Publications in 2020

Thanks to all our Smart Evaporator users around the world. Below is a selection of evaporator publications in 2020 which we'd like to share with you (with links):

["In situ formation of photoactive B-ring reduced chlorophyll isomer in photosynthetic protein LH2"](#)

Yoshitaka Saga*, Yuji Otsuka, Daichi Funakoshi, Yuto Masaoka, Yu Kihara, Tsubasa Hidaka, Hiroka Hatano, Hitoshi Asakawa, Yutaka Nagasawa & Hitoshi Tamiaki

["Spatial and Temporal Dynamics of Electrical and Photosynthetic Activity and the Content of Phytohormones Induced by Local Stimulation of Pea Plants"](#)

Maria Ladeynova, Maxim Mudrilov, Ekaterina Berezina, Dmitry Kior, Marina Grinberg, Anna Brilkina, Vladimir Sukhov and Vladimir Vodeneev

Personal benchtop evaporator



Smart Evaporator C1

Did you know?

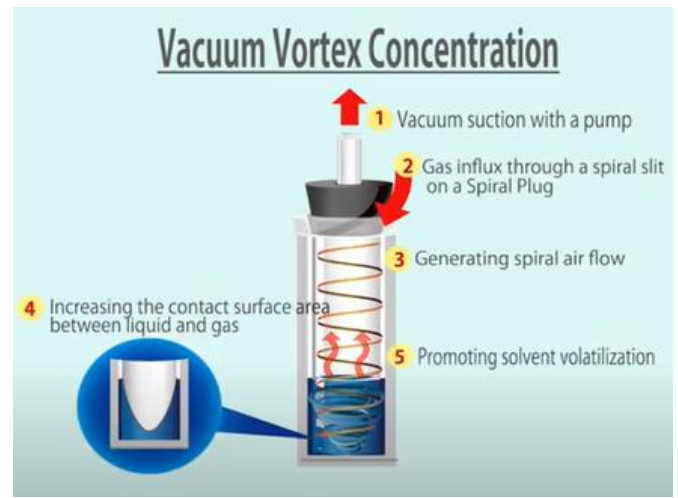
~ What is happening in the Smart Evaporator ~

You may already be using a Smart Evaporator unit, or even if not, might be wondering how the "spiral" movement is generated within tubes and vials?

We often get questions such as “is it magnetic?” “is there a stirrer inside?” - the answer is “NO” .

The spiral movement of the solvent is created just by the power of the air. We call this effect “spiral airflow”.

When the system is in operation, the vacuum suction takes the air out from inside the container, through the center of the Spiral Plug. This movement of the air, at the same time, draws the outer air to come in through the spiral slit of the plug, thus resulting in a spiral movement.



This fast and strong airflow stirs the sample very efficiently, increasing the surface of the liquid and promoting the solvent to evaporate, at the same time as sucking the evaporated solvent vapor out through the pump.

In order to efficiently evaporate your sample, you need to connect an appropriate diaphragm vacuum pump* with sufficient flow rate**.

* the models should operate under atmospheric pressure
** reference as shown on the right

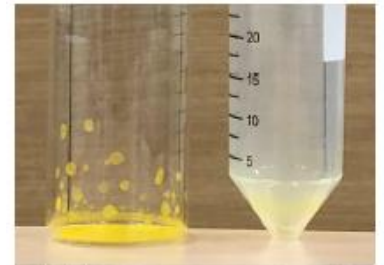
Inner diameter of container	Plug Size	Reference suction flow rate *1
4~7mm	Plug Size : 1	13L/min
7~11mm	Plug Size : 2	15L/min
11~17mm	Plug Size : 3	30L/min~33L/min
15~24mm	Plug Size : 4	50L/min
24~32mm	Plug Size : 5	58L/min

For the pump selection (available models), please consult with your local distributor.

How sample container shape effects evaporation rates

In a recent study we investigated the impact of sample containers of different shape and size on evaporation rates using the Smart Evaporator (model C1 & K4) .

To download the full study, click [here](#).



For labs requiring higher throughput

Our Smart Evaporator C10 is a productivity enhancing system that offers fast and effective evaporation of up to 10 samples in tubes or vials in parallel.

The Smart Evaporator C10 offers significant multi sample drying time savings compared to using a nitrogen blowdown evaporator. Beneficially the C10 is also proven to dry your samples without solvent bumping thereby eliminating risk of sample loss, cross contamination and saving your valuable time. Want to know more: [download brochure](#)

