

Parallel Evaporator Assists Metabolomics Research

BioChromato Inc. has published an interview with the Institute of Analytical Sciences, Faculty of Pharmaceutical Sciences at the **University of Fukuoka** (Fukuoka, Japan) that explains how a **Smart Evaporator C10** has enabled them to concentrate amino acids, without denaturation, such that they can be detected by LC/MS/MS.



Researchers at the Institute of Analytical Sciences

conducting fundamental metabolomics research on the state of cultured cells, wished to measure amino acids produced in their cell culture medium. Unfortunately, these low molecular weight metabolites were at very low concentrations that could not be detected by LC-MS / MS. Therefore, in order to increase the concentration and make the amino acids detectable, the samples had to be concentrated.

Ms. Ryoko Tomita,

Assistant Professor in the Institute of Analytical Sciences said "In order to measure change in intracellular metabolite concentration over time, we have to collect 4 to 6 samples each day, extract the amino acids into aqueous solution and then concentrate the samples. Previously, I was using a nitrogen blowdown evaporator for drying the samples completely. The evaporation process was slow, typically taking 2-3 hours per sample. As I could process only 1 or 2 samples at a time, it took me a very long time to finish all the samples. As a result, **I used to feel reluctant** to carry out the evaporation process as a sample pre-treatment. prior to LC/MS/MS analysis.

Assistant Professor Tomita

added "Introducing the Smart Evaporator C10 into our laboratory has transformed our sample preparation as we can now safely process 6 samples simultaneously. It is really advantageous that I can concentrate all my samples at the same time and under the same conditions. Using the new C10 evaporation protocol we've been able to detect about 20 different amino acids in our cell culture medium by LC-MS/MS after evaporation. **Though** we have changed the evaporation method, using our C10 evaporator we have been able to process our aqueous samples much more quickly and safely without sample denaturation".

Drawing upon patented Vacuum Vortex Concentration technology, the BioChromato Smart Evaporator C10 offers fast and effective evaporation of up to 10 vial samples in parallel. The system is proven to be an ideal lab tool for fast and simple removal of even high boiling point solvents such as DMSO, DMF and water. The Smart Evaporator C10 also excels at safe drying of temperature sensitive compounds and efficient drying of solvent volumes as low as 0.1ml.



To read the interview

in full please visit <https://biochromato.com/testimonials/smart-evaporator/18>. For further information on the Smart Evaporator C10 please visit <https://biochromato.com/smart-evaporator/smart-evaporator-c10/> or contact BioChromato Inc. on +81-466-23-8382 / europa@bica.co.jp / northamerica@bica.co.jp and enquiries@bica.co.jp.

BioChromato Inc

Founded in 1983, BioChromato Inc is a respected Japanese manufacturer of unique high-quality products for chemical laboratories. Through its team of experienced technical experts and network of specialist distributors - BioChromato's aim is to enhance the efficiency of research and development through its development of problem-solving laboratory instruments and consumables.

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