

JASIS 2023, one of the largest exhibitions in Asia for analytical and scientific instruments, was held during the period of September 6-8 at Makuhari Messe, Chiba, Japan. One of our collaborators, [ANVOS Analytics](#), had a booth displaying their product and services. They suggested that we also display our SERS substrates, so we decided to take advantage of their offer. Back in January 2023, we mentioned that we were working on a HPLC-SERS system. At that time, we were exploring many options for the substrate configuration. Since then, our idea has solidified somewhat, and here are two of our approaches which we presented at JASIS:



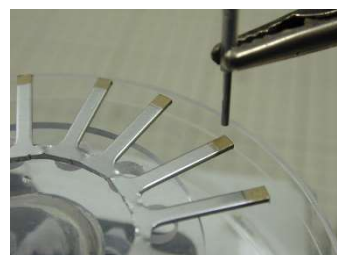
APPROACH A

This is a brute force approach of preparing a SERS substrate in the 96-microwell format. We have managed to form SERS spots at the bottom of the microwell. The photo on the right is our first such attempt whereby 64 wells out of 96 were coated with SERS spots. We are improving our technique, so the uniformity is now better. It is easy to use it; simply drip the effluent from the HPLC into individual wells. Wait for some ten minutes and shine the laser from the bottom of the well. Simple enough, isn't it?



APPROACH B

Here we have prepared a spoke-shaped aluminum plate whereby SERS spots are formed at the end of spokes, measuring some 3 x 3 mm. The effluent is allowed to drip onto the SERS spot while the spoke mounted on a rotary stage is rotated periodically, say every 30 seconds. The reaction time is somewhat limited, but for samples with relatively high concentrations, this approach might be better.



If you are interested to join evaluation of above prototypes just contact us.