

# APPLICATION NOTE

## USING THE LSPone FOR EDUCATION

Advanced  
MicroFluidics  
Innovative  
automation solutions



### WHAT ARE WE DOING?

With its plug-and-play setup, the LSPone is very well suited for practical works in education. It is used in Swiss universities.

The aim of this practical work is to learn the technique of rapid prototyping for microfabrication and to test the fabrication by observing the flow of 2 liquids using optical microscopy. The LSPone is used to bring liquids and microbeads in the microchannels that have been fabricated by the students.

## WHO DOES THIS PRACTICAL AND WHAT DO THEY DO?

This practical is taught (at different speeds) to bachelor students in the course “Micro et nanotechnologies appliquées” at the HE-ARC and to master students in the course “Microfluidique” at HES-SO, two Swiss universities of applied science.

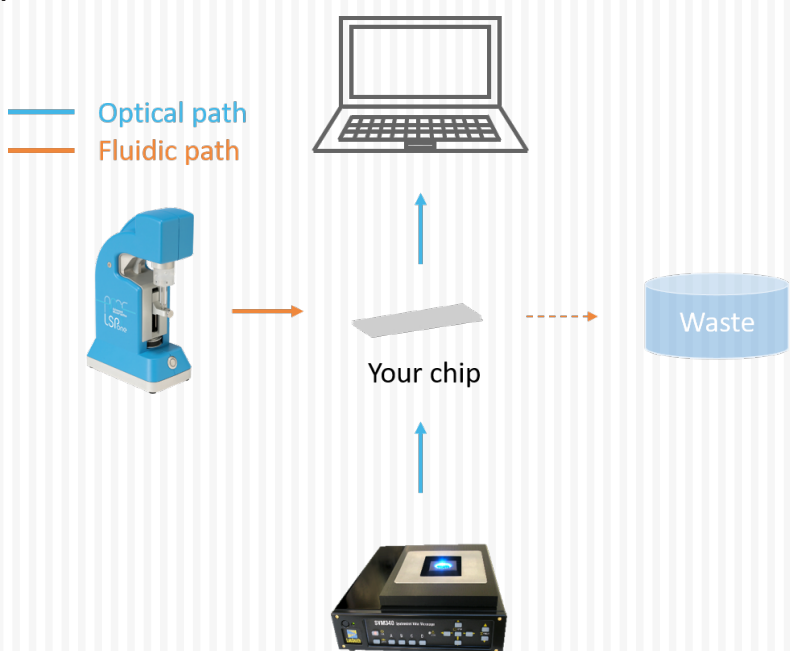
It includes the following steps:

- Fabricating the mould for rapid prototyping
- PDMS moulding
- PDMS-glass bonding
- Measuring using a pump and a microscope
- Video analysis

For more details, please check out the video on our website.

A big thanks to Professor Alexandra Kämpfer-Homsy, from the Micro- and Nanosystems lab at HE-ARC, for sharing this with us.

## SETUP



Optical fluorescence microscope used:  
SVW340 from Labsmith

Computer program used to analyse  
beads passing:  
Tracker

Microbeads used:  
FluoSpheres™ from ThermoFisher  
Scientific

Chip used:  
the one created by the student during  
the practical work

## USER FEEDBACK

“This pump is so easy to use compared to others I have tried. And the software is so simple. It’s a pleasure to use the LSPone.”

*Pr. Alexandra Kämpfer-Homsy*

## WHAT’S IN IT FOR YOU?

- An easy-to-setup pump
- A compact solution
- An intuitive software
- A cost-friendly solution
- A clear and simple example for students

### CONTACT US FOR MORE INFORMATION

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