

Success Story

University of Applied Sciences Jena

thinXXS micropump supplies sensor system.

Within their research efforts in microfluidics and microsensors, the working group “Instrumental Analytics” (University of Applied Sciences in Jena, led by Prof. Feller) has developed a sensor system which combines microfluidics, micro-optics and sensors. The objective was to develop a commercially available analysis device for use in the fields of environmental analysis, process control and medical technology. The core of the analysis system is a mutable, customizable flow cell, that can be easily adapted to any experiment. A colour-sensor, located within the flow cell, interprets an analytic fluid that passes an array of analytic points. The micropumps were used to pump the fluid through the flow cell..

After intensive investigations and comprehensive tests we chose the thinXXS micropumps because these pumps were successful in previous applications and they exhibited superior performance against other competitive products in our extensive testing.



Summary of the results

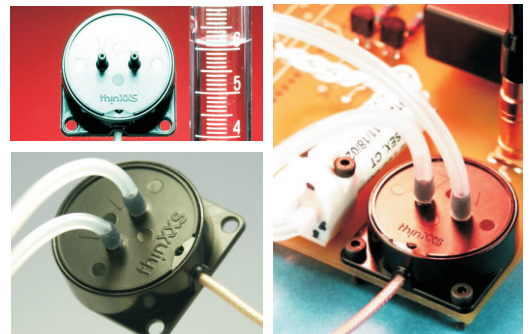
“We tested the MDP2205 and the competitive products under the same conditions: All pumps were tested with the same tubes and tube lengths. DI water was used as pump media. The delivery height and the backpressure was varied. For first evaluation, the DI water was pumped through different microfluidic parts like splitters, valves and mixers. In additional measurements, the backpressure was iteratively increased.

As our final conclusion, the MDP2205 has outmatched all of its competitors in all tested fields. Despite a delivery height of 30 cm, the MDP2205 was able to reach a flow rate of 7 ml/min, which is more than twice the flow rate of the other pumps we tested.”

(Kay Dornbusch, University of Applied Sciences in Jena, Department for Medical- and Biotechnology)

Further advantages:

- ▶ high flow rates against high backpressures
- ▶ low noise
- ▶ self-priming
- ▶ high bubble tolerance



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Another advantage of the thinXXS micropump is the high flowrate against high backpressures. Furthermore the pump is self-priming and bubble tolerant.

Kay Dornbusch
University of Applied Sciences in Jena,
Department for Medical- and Biotechnology