

Cost-effective PAMPA with Infinite[®] M200

Tecan and pION INC have combined pION's PAMPA Explorer™ with Tecan's microplate readers for drug permeability screening using the Double-Sink™ parallel artificial membrane permeability assay (PAMPA). pION, a biotechnology company located in Woburn near Boston, USA, specializes in developing laboratory products for screening and analysis of pharmaceutical compounds, in particular for determining solubility, dissolution, permeability and human absorption.



The pION team: (left to right) Oksana Tsinman, research chemist, Dima Voloby, scientific programmer, Dr Konstantin Tsinman, HTS group leader, Dr Alex Avdeef, CEO/CSO

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pION's Double-Sink™ permeability assay measures a compound's concentration on either side of the assay membrane, detected with a plate reader, in order to quantify the compound's permeability, which is calculated by the PAMPA system's software. The Double-Sink™ membrane is designed specifically to mimic the absorption characteristics of the human intestinal wall, and has been shown to correlate with actual human jejunal data. pION has since developed a number of products based on the assay, including a blood-brain barrier PAMPA system.

“The PAMPA Explorer™ is an entry-level system that allows customers to use the validated PAMPA software and assay protocols with a microplate reader for fast and robust analysis in a manual setting,” said Dr Cynthia Berger, CFO at pION. The PAMPA Explorer™ now incorporates Tecan's Infinite[®] M200 microplate reader for detection and quantitation of hundreds of compounds per day. The Infinite's advanced quad4 monochromators™ technology provides excellent sensitivity and allows the user to select any wavelength from UV to NIR, and to perform absorbance, excitation and emission scans.

“The PAMPA software has been adapted to be able to take the raw data from the Infinite M200 and process it to generate the assay results,” explained Cynthia. “The Infinite plate reader was an obvious choice for the PAMPA Explorer™, because our market research discovered that this is the most popular detection system among our target customers. It was relatively straightforward to integrate the Infinite into the PAMPA, the development process went smoothly and we have very good communications with Tecan.”

The PAMPA Explorer™ can be upgraded to a fully automated Tecan Freedom EVO[®] platform system when increases in sample throughput are required.

Double-Sink, PAMPA Explorer and pION are trademarks of pION INC.

Research application, not for clinical diagnostic use.

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