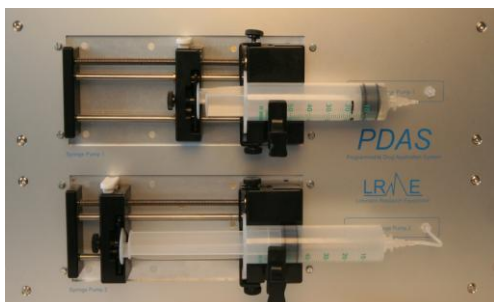


# PDAS

Programmable Drug Application System



## Principle:

Drugs are added to a main stream (e.g. ACSF supported by a peristaltic pump) by use of a precision syringe pump. The end concentration of the applied compounds is only dependent on the flow rate of the main stream and the velocity of the syringe pump. Therefore an integrated flow meter registers all changes of the flow. Thus, different drug concentrations can be achieved only by changing the syringe pump velocity. Only one stock solution of the compound is sufficient, no time consuming preparation of solutions are required.

## System features

- automated computer controlled system via fast USB-2 connection
- full control of experimental time schedules
- trigger input and output available
- manually control of all parameters beside full automation
- 2-channel working mode for application of a single drug per channel
- 1-channel working mode in case of two compounds (e.g. agonist and antagonist)
- special cleaning programs
- refilling of syringes during experimental schedule possible
- applicable for dilution protocols and preparation of stock solutions
- chemically inert; all channels equipped with teflon coated valves and teflon tubings
- mixing of compounds to the main stream by use of microfluidic mixing chambers
- external peristaltic pump controllable in flow rate
- system upgradable to about unlimited channel number
- interface to electrophysiological screening system (e.g. Synchroslice, Roboocyte, etc.)