in vitro data. For example, the data that are shown above were collected only after it was demonstrated that the fluence used affected neither the amplitude of the response to agonist nor the overall impedence of the cell membrane[8].

There are several powerful advantages associated with this new method. Both the bandwidth limit of the data acquisition system and the kinetics of the photolysis of the caged compound can be deconvoluted from the *in vitro* data, yielding the biological response to a temporal step-function of agonist. Furthermore, because the radiation fluence, the absorption cross-section for the caged agonist, and the quantum yield of photolysis[4] are known, it is a simple matter to calculate the concentration of photo-released agonist present at the neuron. The optical configuration allows an extremely broad range of concentrations of caged agonist to be used with the same laser energies. These last two characteristics of the apparatus are important when studying the precise concentration dependence of the kinetics of receptor-mediated reactions over a wide range of ligand concentrations. □

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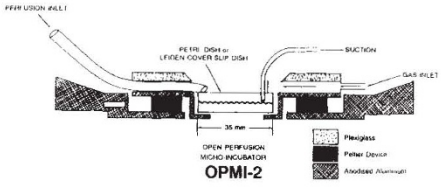
Biophysics sampler

Several of the products to be displayed by the roughly 50 exhibitors at next week's American Biophysical Society meeting in Cincinnati, Ohio, are highlighted below.

Hi-Tech Scientific is out to make the technique of stopped-flow spectrophotometry accessible to every laboratory that has a spectrophotometer or a fluorometer. The company has announced that as of this month its universal **rapid kinetics accessory** will incorporate a new base material with enhanced chemical resistance (*Reader Service No. 101*). The modification makes its model SFA-11 accessory usable with all instruments that employ a 1-cm cuvette. Hi-Tech Scientific says its rapid kinetics accessory can be fitted in seconds and offers the ability to study reactions of less than 10 ms in duration, using only 200 μl of sample.

Medical Systems Corporation has an **open perfusion micro-incubator** which it says can produce culture conditions for cells in a perfused medium on the stage of any inverted microscope (*Reader Service No. 102*). The unit has built-in heating and cooling elements which control temperature by applying a d.c. current. It can maintain temperatures of between 8 °C and 46 °C under static conditions, or with flow rates of up to 2 ml min^{-1}. The company says a gas flow inlet across the

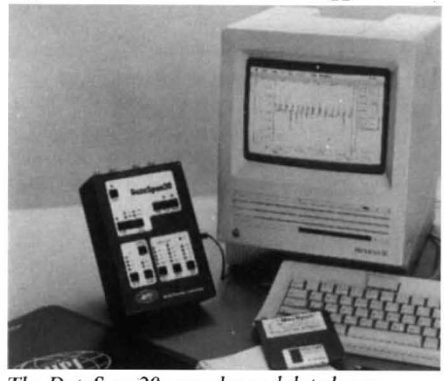


Medical Systems Corp. micro-incubator.

chamber allows for optimal temperature uniformity and pH control, and that optical and micro-mechanical access to the incubator are excellent. The micro-incubator can be used with disposable 35-mm petri dishes or with the company's Leiden oover slip dish, under high-magnification, oil immersion, phase and interference contrast, or fluorescence microscopy.

SLM Instruments is offering a new brochure on its Lifetime series of **spectrofluorometers** (*Reader Service No. 103*). The publication outlines the performance of both the SLM model 4800C scanning Lifetime spectrofluorometer and the SLM model 4800S multiple-frequency Lifetime spectrofluorometer, including use of the T-Optics design — which involves a light-path configuration with two emission paths symmetrically arranged on either side of the sample compartment — and computer-assisted control and data acquisition. It includes optional configurations for the SLM 4800S and a performance comparison chart for both instruments. Two pages of the publication feature scans from a variety of research applications, and the brochure wraps up with a listing of the instruments' specifications and available accessories.

DataSpan20 is the name of a stand-alone **digital recorder and data logger** from



The DataSpan20 recorder and data logger.

World Precision Instruments which can interface with Macintosh and IBM PCs (*Reader Service No.104*). WPI says data which has been digitized and stored in the RAM memory of DataSpan20 can be transferred to a personal computer by connecting the DataSpan20 to the computer's serial port, launching the computer application and selecting "Load". For data logging, the DataSpan20 can digitize and store analogue input at rates from one to 50,000 samples per second.

Narshige has recently launched a **precision microinjector** designed to deliver reproducible injections over periods of time (*Reader Service No. 105*). The model IM-200 has digital settings which allow the user to inject a specific volume of fluid – ranging from microlitres to femtolitres — repetitively through a pipette at variable intervals. The microinjector features adjustable fill and hold suctions, and injection, balance and clearing pressures. The injection can be triggered through a panel push-button, an optional foot switch, or a TTL logic pulse. A gating mode is available for external electrical or optional foot switch control timing. □

These notes are compiled by Carol Ezzell from information provided by the manufacturers. To obtain further information, fill in the reader service card bound inside the journal.