



## Innovative Solutions through Partnering

Through its partnership with Primetech, Corp, Data Sciences International (DSI) is pleased to offer the first available programmable and fully implantable infusion pump to researchers using small animal models. Researchers can now control their desired flow rates with confidence and monitor physiologic response all from one company. Receive the same high level of customer support and service that DSI has offered for more than 20 years.

## iPRECIO Features

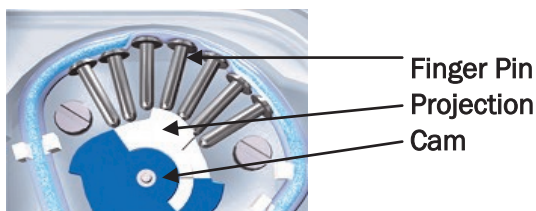
- **Programmable**  
Programmable Infusion protocol up to 10 different steps
- **Implantable**  
Totally implanted in the subcutaneous space
- **Refillable**  
Refillable percutaneously via septum while in vivo
- **Accurate**  
Patented Rotary Finger Method provides highly accurate  $\mu\text{L}$  infusion

## Advantages

iPRECIO is an innovative micro infusion pump that uses patented mechanical pump technology to accurately infuse fluids at the discretion of the investigator rather than the limitations of the technology. In contrast to other commercially available pumps, iPRECIO enables researchers to run chronic infusion studies while assuring subjects are receiving accurate infusion rates at pre-determined schedules. A refillable reservoir can be accessed percutaneously via a septum, enabling researchers to extend protocols and obtain desired endpoints not easily accomplished with other technologies. (Durations dependant on chosen flow rates.)

### Programming

iPRECIO enables investigators to set infusion protocols prior to the start of the study. Start & Stop day/time, Flow rate/mode and infusion duration/mode are all user set.



Advanced technology for various fields of research!



The completed protocol is downloaded to the pump via USB and ready for implant. The maximum total Infusion Volume is 4.5 – 5.6 ml, dependent on flow rates ranging between  $1\mu\text{L/hr}$  -  $30\mu\text{L/hr}$ .

### iPRECIO Flow Rate Options include:

#### Constant Flow Rate Mode:

Configure one constant flow rate for infusion between 1 – 30  $\mu\text{L/hr}$

#### Variable Flow Rate Mode

Configure up to 10 discrete infusion “steps” between 1 – 30  $\mu\text{L/hr}$

#### Recovery Mode

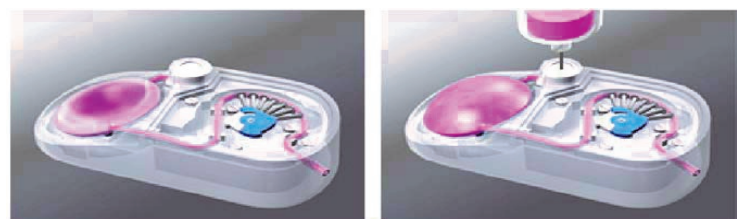
Manage your infusion start time by incorporating post surgical recovery time in your protocol. You can now time initial infusion to meet your needs!

#### Repeat Mode

Program circadian rhythm, multiple dose regimens or studies for dose response curves-only with iPRECIO

### Refill in Vivo!

Run chronic infusion studies without the need to replace empty pumps. Port access to the pump reservoir enables researchers to continue infusions without subjecting the animal to additional surgeries or increasing study subjects. iPRECIO’s proprietary management software calculates refill windows and allows users to adjust volumes to ensure continued article delivery at accurate rates.



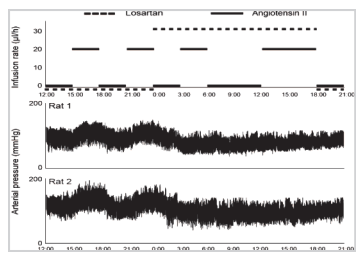
## A Complete Solution

DSI transmitters are designed to collect and transmit chronic data from conscious freely moving animals. Our comprehensive physiologic monitoring platform provides flexibility and accuracy not available from any other vendor. Telemetric monitoring supports the 3R's, by reducing animal numbers, refining study design and replacing labor intensive study methods.

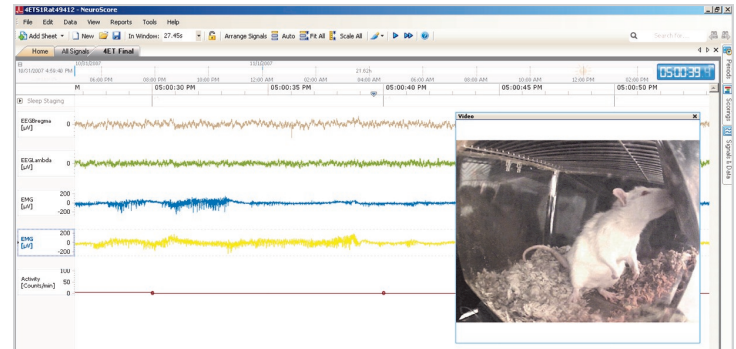
Adding telemetry to a chronic infusion protocol using the iPRECIO infusion pump enables researchers to run better studies and increase the likelihood of new discoveries in research areas such as:

- Neuroscience
- Cardiovascular Disease
- Diabetes
- Drug Discovery
- And many more!

Combining technologies advances infusion applications. Researchers can wirelessly monitor a fully ambulatory infusion model that is chronically delivered test article at accurate rates. The best of both worlds with no wires or tubes.



Blood pressure response to angiotensin II. C. Abe et al. / Journal of Pharmacological and Toxicological Methods xxx (2008) xxx-xxx



CNS study monitored with video and analyzed with DSI's advanced NeuroScore software.

## Analyze

DSI offers a choice of analysis modules appropriate for all applications, including telemetered and non-telemetered signals. Trusted by toxicologists, safety pharmacologists and researchers worldwide, our robust platform offers consistent, reliable and robust results that enable researchers to make confident decisions in shorter periods of time.

Blood pressure analysis modules include:

- Blood Pressure
- PV Loop
- LV Pressure
- Indirect Blood Pressure
- HRV

## Better Data Better Science

The Ponemah system utilizes state-of-the-art digital technology to automate the data analysis routinely performed in physiology, pharmacology and toxicology laboratories. Whether your data is collected in a traditional manner or through telemetry, high performance acquisition and analysis is crucial for optimum study results. The DSI solution is a cost-effective, integrated technology that pioneers superior, real-time acquisition and analysis of physiological signals for a variety of applications. Paired with our unparalleled sales, customer service and technical support, the DSI solution provides customers with the edge they need to make tomorrow's discovery today.



Contact DSI for application support, technology references and pricing information.

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