

Advanced Solutions for Cultivation and Exposure

VITROCELL® Spiking System



VITROCELL®
S Y S T E M S

VITROCELL® Spiking System

For the dynamic supply of gas mixtures from volatile solvents and gases in ppm and ppb ranges



The VITROCELL® Spiking System (VSS) offers an excellent possibility to prepare gas mixtures from solvents, gases and vapours. It is a precise solution when the

required concentrations are not available in cylinders.

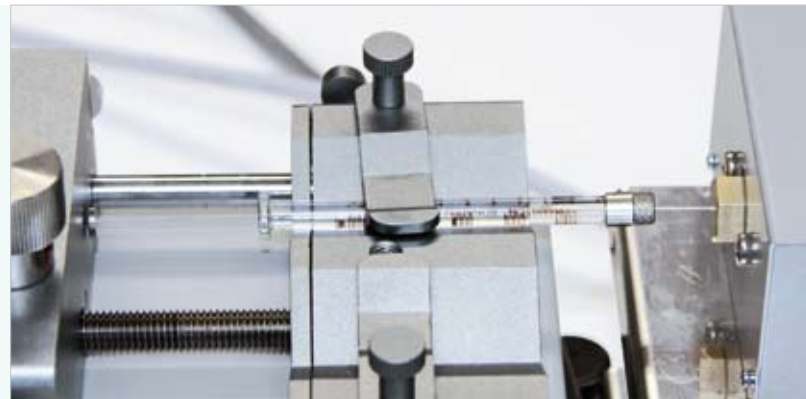
The gas mixture is produced dynamically by means of a digital syringe pump

allowing injections of less than 0.1 µl with high accuracy. The component is introduced into a zero gas. The programmable heating steps, mass flow controllers

and the secondary dilution system allow the production of mixtures in various ppm and ppb concentration ranges.



Syringe drive



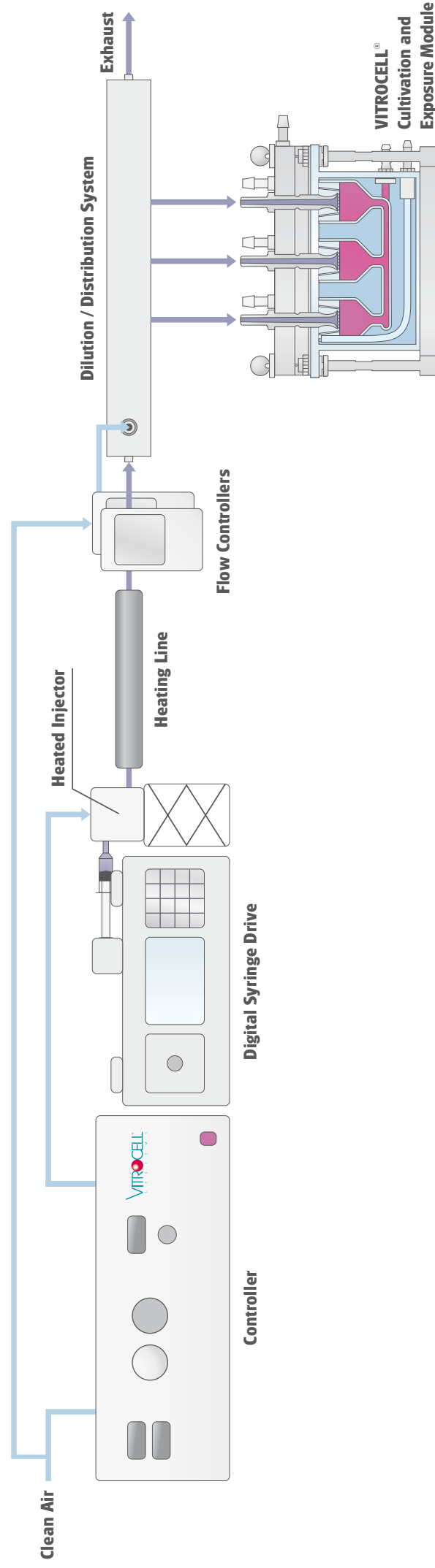
Compatible with various syringe types

Features

- Suitable for solvents, gases and vapours
- Reliable supply of mixtures in the ppm and ppb range
- Turnkey system with calculation program
- Microprocessor controlled syringe drive for syringes from 10 µl to 140 ml
- Accuracy of injection less than 0.1 µl

In Vitro Inhalation Toxicology

Flow chart / VITROCELL® Spiking System



Calculation Program

Part of the delivery is a calculation program to choose the syringe type as a function of component, concentration and exposure time.

Controller

The controller adjusts the zero gas flow and controls the temperature of the injector block and heating line.

Digital Syringe Drive

The microprocessor controlled syringe drive is compatible with a large range of commercially available syringes from 10 µl to 140 ml. The selection is made out of an internal syringe library. The flow rate and operation time can be defined. The injector block can be easily adjusted to fit for the diameters of different syringe types. The injector is heated in function of the dew point of the component. Further heating takes place in the subsequent heating line.

Dilution / Distribution System

The system dilutes the mixture to arrive in the ppb range. It works using the proven VITROCELL® double jet technology. It also acts as a distribution system as it is directly connected to the VITROCELL® exposure module.

About VITROCELL®

VITROCELL® Systems has over 10 years of experience in the development, production, installation and training of advanced equipment for in vitro studies.

We deliver turnkey systems with a perfect match of all components. Our team consists of competent specialists in research, design and precision manufacturing.

Our philosophy is to innovate by working very closely with the customer and to install customized solutions.

All equipment is designed using latest state-of-the-art CAD systems in order to allow a realistic judgement of the feasibility prior to the start of manufacturing. The integration of highly qualified workmanship such as boron silicate glass blowing, high-precision engineering components and automation is our strength.

The customers of VITROCELL® are leading medical and environmental research institutes as well as the pharmaceutical and other industries around the world.

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