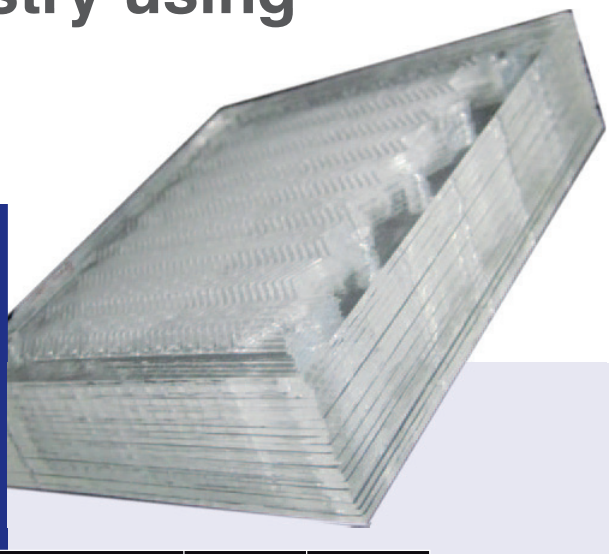
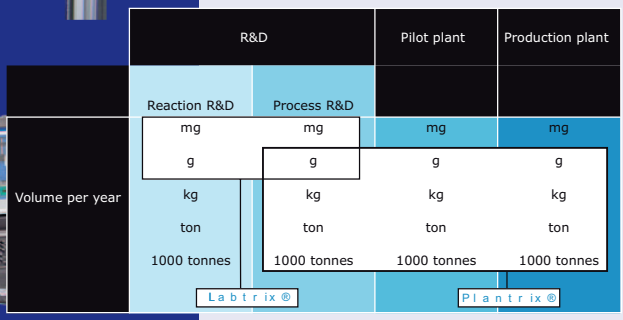
A solution for: CHEMTRIX

Scalable flow chemistry using microreactors





Application

Labtrix® is a laboratory system on which flow chemistry method development is performed prior to using Plantrix® for tonne scale production.
The heart of both systems is a meso scale glass chip reactor. LabtriX® can be used for processes like:

- feasibility studies
- parameter optimization
- validation
- kinetic data generation
- component searches
- small scale production

Labtrix® is a fully automated, standardized, “plug-and-play” platform for the laboratory. It can be used to evaluate many reaction parameters in a short period of time, employing very little raw material. Having found a solution, production scale-up goes linearly using PlantriX®.

Product specifications

- Glass chip micro reactors: made of Schott borosilicate D263 glass, affording excellent chemical compatibility for a wide range of synthetic transformations.
- Extreme conditions: syntheses can be performed in a pressurized system (upto 25 bar), over a wide temperature range (-15°C to +195°C) enabling facile access to extreme reactions conditions.
- Auto-sampling
- Data-logging
- Customer specific reactor design
- GLP and CE qualified

Chip manufacturing by: LionIX

Lionix BV

LioniX BV is a global leading provider in the development and production of innovative and leveraging products based on micro/nano technology. LioniX also provides MEMS foundry services.

Our customers operate in the Data/Telecom, Industrial Process Control, Life Sciences and Space markets, among others. They include innovative OEM's, VC-funded start-up companies, multi-national corporations, and research institutions located around the world.

The core competencies of LioniX include integrated optics, micro/nanofluidics and related surface functionalization. Additionally, LioniX has been successful in combining these core competences in one technology platform, enabling unparalled innovative product concepts for their customers.

LioniX offers design-for-manufacturing and horizontal integration through partnerships with other micro/nanotechnology foundries and suppliers of complementary technologies such as micro electronics, biotech, chemistry/pharma, medical, food, water and space. These relationships are based on subcontracting agreements, licensing of IP and/or joint ventures.

ChemtriX BV

ChemtriX is a new high-tech company based at Chemelot that aims to be the European leader in the field of microreactor technology within five years.

ChemtriX utilizes unique knowledge of chemical processes that is developed at the University of Hull (UK) and of the microreactors that are produced in the form of glass slides by LioniX, which is based at the University of Twente (NL).

ChemtriX develops revolutionary Flow Chemistry systems, which use glass chip technology, at the Chemelot Research & Business Campus in Geleen. As well as being much smaller than conventional batch reactors, the equipment is also safer, more efficient and guarantees a rapid scale up.

ChemtriX develops production units with built-in micro and meso reactors. These reactors, which are the size of a SIM card to an A4 paper, are based on chip technology. In these reactors, small liquid flows produce a continuous chemical reaction. A large number of these chips are combined to form a production unit which is suitable for industrial use.

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