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## **Testing of the Micro-Reactor System**

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## TESTING OF THE MICRO-REACTOR SYSTEM

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Micro-reactor technology is actually used as a new trend not only in the pharmaceutical industry, but also in the area of chemical processes especially, for a high quality and cleanliness of products. The main advantages of this method are safety of chemical processes, assurance of a temperature stability and a significantly low environmental impact. A micro-reactor system as a continual process seems to be promising as an alternative of the large batch reactors. Time saving, low cost, wide applicability a mainly an easier scale-up belong between another advantages of micro-reactors. From that reason a micro-reactor system is promising also for performing stereo-selective hydrogenations in which mass and heat transfer limits are negligible.

The micro-reactor system (Ehrfeld Mikrotechnik BTS – see Figure) have been chosen for application of stereo-chemical reactions. First, the system was tested with respect to its arrangement, the optimal connection between individual parts, tightness and result reproducibility. As the model reaction the partial oxidation of benzaldehyde catalysed by sulphonate zinc phthalocyanine was used. Obtained results confirmed the high reproducibility of micro-reactor system in various arrangement and perfect data quality.

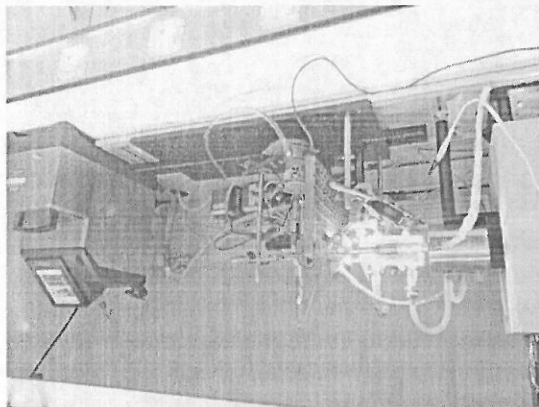


Figure – the micro-reactor system overview

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