In the Life Science Market at home
Laboratories around the world rely on our products every day

The development from a specialist in manufacturing plastic disposables for life sciences to an innovative system partner and supplier of ideas has made Greiner Bio-One the number one name in biotechnology, the diagnostics industry and research. Our core competence in plastics manufacturing helps us – in the course of developing ongoing miniaturisation of the analytical procedures – to take a leading position in this field as well.

Biotechnology
With an extensive product programme Greiner Bio-One is one of the most important sources for a diverse range of customers within the field of biotechnology. Products such as CELLSTAR® and CELLMASTERTM etc. belong to the basics of every laboratory.

Diagnostics
The imperative to save on time and costs in diagnostics continually demands ever faster and more precise DNA-analyses. New platforms made of plastic have arisen, such as biochips and HTATM (High-Throughput microArraying), have been developed. With products such as the diagnostic chips ParoCheck® and CarnoCheck® or the HTATMSlides and HTATMPlate, Greiner Bio-One is recognised as one of the most innovative providers.

Drug Discovery
In the pharmaceutical industry today microplates are used in large numbers for active target screening with high-throughput (HTS). Microplates with 96 or 384 wells have long been standard, and 1536 or 3456 wells are no longer a rarity. Greiner Bio-One has one of the largest selections of such products on the market worldwide.

Microstructures at Greiner Bio-One:
From idea to successful product

1. Project management
   A competent and experienced team guides your project. They ensure that from project start-up to project completion, everything proceeds according to plan, from the idea to the finished product.

2. Product development
   Build on our great experience in internal and external collaborative development. We can realise for you an innovative solution, custom-tailored to the market and your requirements and one which can be made a reality quickly and at a favourable price.

3. Hot-embossing and injection-moulding
   Our worldwide market success is due to our reliable laboratory products manufactured from plastics. This knowledge now enables us to meet the most demanding requirements in the automated manufacture of microfluidic products as well.

4. Bonding technology
   Closed microchannel/microcapillary systems allow the handling of the smallest possible sample volumes. With various advanced connection technologies we can create absolutely clean and glue-free microstructure capillary channels.

5. Series production
   All our production locations are professionally set up with the most modern equipment and can guarantee the highest production standards. The strictest quality control measures ensure the necessary reliability in serial production. Greiner Bio-One is certified for the DIN EN ISO 9001 and DIN EN ISO 13485 standards.

6. Coating technology and surface treatments
   We can utilise different surface-treatment procedures in order to create material suited to your requirements.

7. International distribution
   As a global player, we maintain a worldwide distribution network. With our six subsidiaries and numerous distribution partners we are represented in more than 100 countries.

8. Consulting competence
   Experienced scientists from the fields of Physics, Biology and Chemistry stand ready and willing to advise you. In addition, you can profit from the knowledge transfer of our affiliates and external cooperation partners.

Discover the potential of microfluidics

The trend to work with ever smaller amounts of sample material in the Life Sciences field continues unabated. Through the use of modern manufacturing techniques and materials it is now possible to produce microstructured components for the diagnostics, drug discovery and research industries from plastics. Greiner Bio-One can manufacture such components to our customer’s specifications. Parts often made of glass are replaced by parts made of plastics. These parts are biocompatible and non-toxic and can be produced economically and reproducibly at the required quality level. The principal application areas are:

• Analytics/Diagnostics (Electrophoresis, Lab-on-a-chip)
• Chemistry (Micromixers, Reactors, Heat exchangers)
• Microdispensing (Pharmaceuticals, Dosing of medications)

www.gbo.com/bioscience
Example One: Hybrid systems

The use of the injection moulding technique and various manufacturing and connecting techniques from microsystem technology opens up completely new possibilities to combine sensor systems with microplates.

As an example in cell culture technology the plastic lamination and interconnection systems could in the future make possible the direct readout of relevant parameters during cultivation.

Example Two: Tests of crystallisation conditions

An interesting application of microfluidic structures is found in the field of protein crystallisation. With the use of pipetting robots and standardised microplates it is possible to test a large number of crystallisation conditions in a short time and with relatively limited amounts of material.

Here microstructures offer interesting perspectives. Thanks to the very limited dimensions of the microchannels only an extremely small volume of the protein solution is needed.