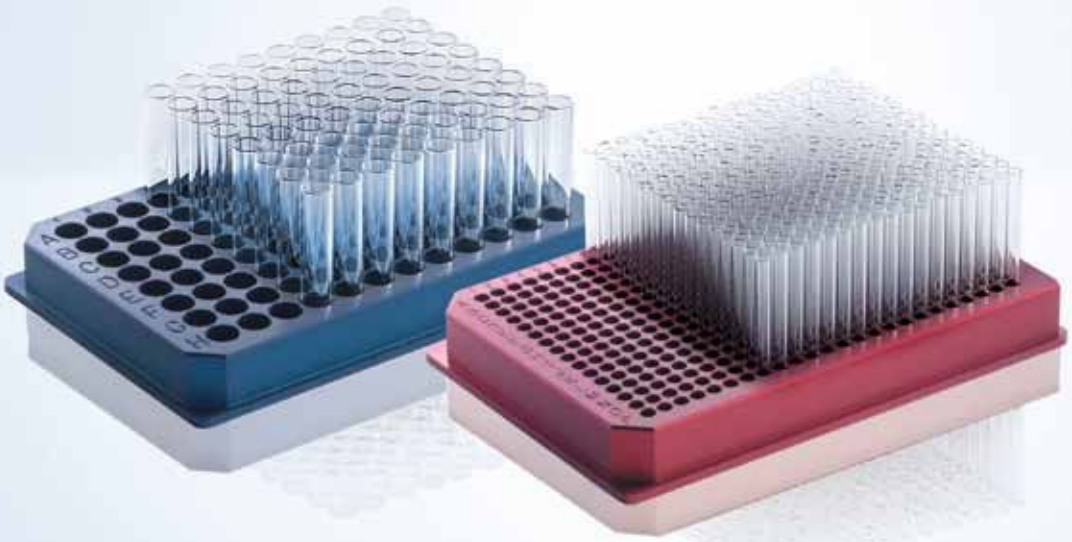
HIRSCHMANN®



Hirschmann-plates

High-class in throughput screening

High throughput screening – easy, reliable and efficient

Hirschmann precision glass capillary know-how can also be exploited in HTS with Hirschmann plates. These disposable microtiter plates are made of plastic with glass inserts and combine the advantages of plastic plates with those of glass. Hirschmann plates have a standard size and a lower weight than full glass plates. The glass inserts are characterised by high purity and are chemically inert. The 384 and 1536 plates are ideal for tempering, as rinsing of cavity walls is practically complete. The application spectrum is expanded with the addition of aluminium Hirschmann plates. The glass inserts can be removed individually.

Hirschmann plates made of plastic are available with permanently fixed glass inserts (96 - 384 - 1536) or individually removable glass inserts (96 - 384).

Microtiter plates with an aluminium plate and individually removable glass inserts are also available (96 or 384 glass inserts).

HTS with system

Hirschmann plates and liquid handling devices from Hirschmann represent the perfect combination for efficient HTS. The opus® dispenser thus combines functionality and user-friendliness with functional reliability and efficiency during electronic dispensing. Serial dispensing procedures with consistent reliability of results can also be realised through electronic control - up to 9999 times if required.

Overview of details

- Glass inserts, removable or fixed
- High purity, chemically inert
- Carrier plate made of PP or aluminium
- Lighter weight than full glass plates
- Sealable with lid or film
- Use on liquid handling platforms possible
- Certified in compliance with DIN EN ISO 9001

Hirschmann-plates
The new quality standard for your laboratory

safe
High purity and chemically inert

innovative
Glass inserts made of plastic or aluminium plate

versatile
Available as 96, 384 or
1536 deepwell, fixed or loose

certified
pursuant to DIN EN ISO 9001

light
Lower weight than full glass plates

suitable
Standardised plate dimensions 124 x 81 mm

flexible
Use on liquid handling platforms
presents no problem

quality
High-quality material and strict testing

High-class in HTS

Hirschmann-plates – the new quality in HTS

High Throughput Screening (HTS) - that means several 1000 specimens per day. Each of these must produce reliable and accurate results. The right microtiter plate material plays a significant role in this respect. Due to poor resistance to solvents, PS plates are unsuitable for use in most cases. Additives such as softeners can be released in the case of PP plates. Full glass plates are too heavy for some robot systems, too expensive for single instances of use, and cleaning in the case of a 384 or 1536 deepwell is extremely critical or even impossible.

Hirschmann-plates exploit the advantages of glass in conjunction with carrier plates made of glass or aluminium. This makes them light and flexible to handle. Their low weight when compared to full glass plates is clearly noticeable and enables problem-free use on the majority of liquid handling platforms.

Production is subject to the highest quality standards to ensure continuously reproducible results without deviations. Hirschmann-plates undergo testing in compliance with several criteria prior to delivery. Both visual and functional characteristics are tested 100 per cent in a quality process. In addition to the high degree of product purity (borosilicate glass 3.3), tolerances play a significant role.

Perfect tempering
The 96 and 384 plates are ideal for tempering, as rinsing of cavity walls is practically complete.

Suitable for every task
Hirschmann-plates are available in a fixed (96, 384, 1536) or loose (96, 384) version

Broad application spectrum
The application area is considerably broadened by the high thermal conductivity of the aluminium plates and the robust anodised hard-coat surface.

Sealable
96 plates can be sealed with lids (made of silicon, PP or Teflon-coated silicon) or adhesive foil, while a variety of adhesive and covering foils are available for 384 and 1536 plates.

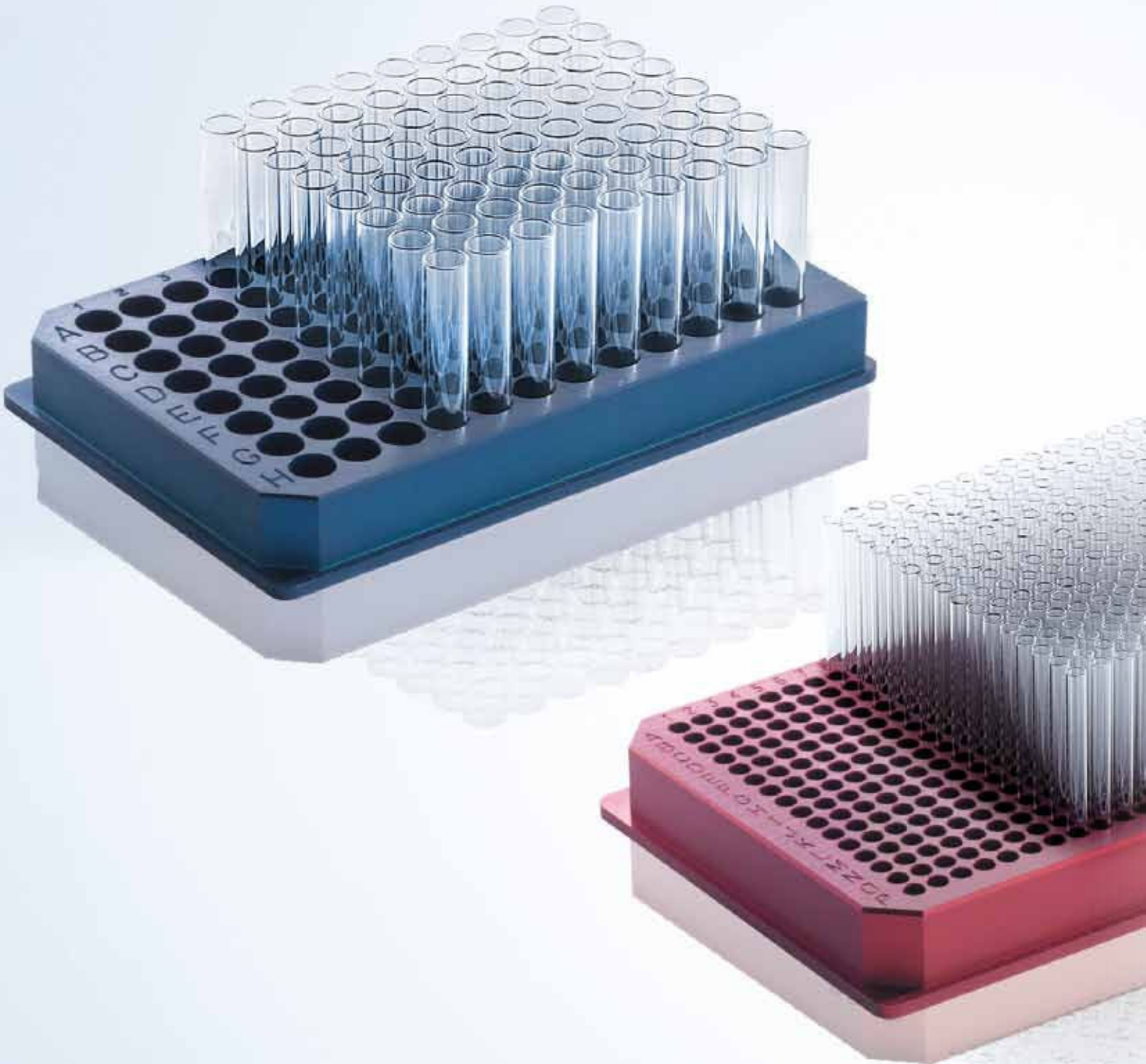
Perfect HTS

Hirschmann-plates are also available in aluminium

Aluminium carrier plates for loose glass cavities also set the Hirschmann standard when it comes to aluminium plates.

The extremely high thermal conductivity of Hirschmann aluminium plates considerably expands the application area in the analytical laboratory. Even long sustained or varying temperatures of -100 °C to +300 °C do not cause any changes to the aluminium plates.

This guarantees consistent quality when used in automatic machine analysis. The hazard posed by chemical influences was further reduced through an anodised hardcoat surface. Hirschmann aluminium plates are available as 96 and 384 deepwell.



Hirschmann-plates High-class in high throughput screening

Technical data	
Plate dimensions	Standardised plate size 124 x 81 mm. Different glass inserts create deepwell plates with heights between 40 and 45 mm.
Layout	In the case of plates with fixed glass inserts, these are arranged to correspond to the usual grid of pipetting robots.
Cover	Lids made of silicon, PP or Teflon are available for 96 plates. If necessary, 384 and 1536 plates can be sealed with aluminium adhesive foil.
Resistance to solvents	The glass inserts are sealed on the underside and, consequently, resistant to solvents. This is absolutely necessary where organic solvents are used.

Physical properties & chemical composition		
Module type	**Physical properties**	**Chemical composition**
96	Linear coefficient of expansion α 9.1 · 10^{-3} · K^{-1} Density 2.5 g · cm^{-3}	SiO_2 69.0% | Al_2O_3 4.0% | CaO 5.0% | MgO 3.0% | Na_2O 13.0% | BaO 2.0% | K_2O 3.0% | B_2O_3 1.0% |
384	Linear coefficient of expansion α 8.7 · 10^{-6} · K^{-1} Density ρ (20°C) 2.48 g · cm^{-3}	SiO_2 69.0% | Na_2O 16.0% | Al_2O_3 7.0% | CaO 3.0% | B_2O_3 2.0% | MgO 1.0% | ZnO 1.0%
1536	Linear coefficient of expansion α 3.3 · 10^{-6} · K^{-1} Density r (20°C) 2.23 g · cm^{-3}	SiO_2 81.0% | B_2O_3 13.0% | Na_2O + K_2O 4.0% | Al_2O_3 2.0%

Physical properties & chemical composition				
Art. no.	**Designation**	**Glass inserts | Volume**	**Plate**	**Overall weight**
924 01 96	Hirschmann-plates (96 deepwell)	fixed | 1200 µl	PP	289g
924 01 36	Hirschmann-plates (384 deepwell)	fixed | 250 µl	PP	223g
924 01 36	Hirschmann-plates (1536 deepwell)	fixed | 50 µl	PP	168g
924 11 96	Hirschmann-plates (96 deepwell)	loose | 1200 µl	PP	289g
924 11 84	Hirschmann-plates (384 deepwell)	loose | 250 µl	PP	233g
924 21 96	Hirschmann-plates (96 deepwell)	none | 1200 µl	Aluminium	277g
924 21 84	Hirschmann-plates (384 deepwell)	none | 250 µl	Aluminium	286g

Accessories	
Art. no.	**Designation**
924 05 84	Glass inserts for 384 Hirschmann-plates
924 05 96	Glass inserts for 96 Hirschmann-plates
924 07 96	Lid for 96 Hirschmann-plates

Hirschmann-plates

HIRSCHMANN®

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