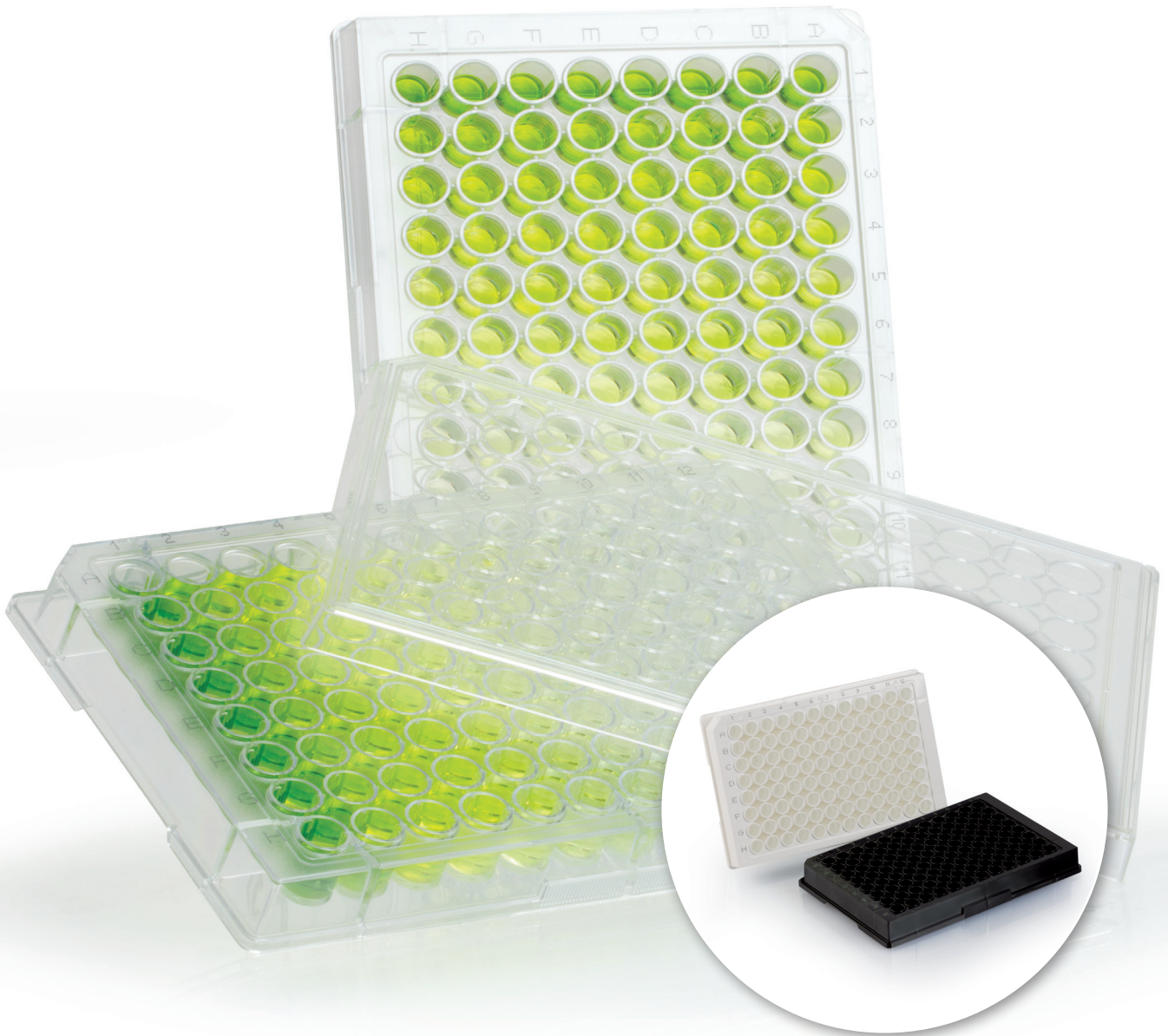


ELISA Plates

Micro Test Plates for Immunoanalytics



SARSTEDT

Micro Test Plates for Immunoanalytics

Complex analyses to detect defined substances have a key role in research, development and diagnostics. One of the most widely used analysis methods is the Enzyme-Linked Immunosorbent Assay (ELISA). This method can be used to detect and quantify even minute concentrations of various substances (proteins, peptides, antibodies, hormones etc.) in complex solutions. ELISAs are often carried out in small volumes in polystyrene micro test plates that can be processed manually or automatically. This utilises the natural adherence of biomolecules to the polystyrene surface by passive adsorption. It should be noted that the strength of the passive adsorption depends on the molecular properties of the analyte, e.g. size and charge.

Sarstedt produces ELISA plates with two different surfaces to ensure a wide usage range in immunoanalytics:

- **Medium Binding**
The Medium Binding surface is hydrophobic and is generally suited for the adsorption of predominantly hydrophobic and larger/flexible molecules.
- **High Binding**
Sarstedt High Binding ELISA plates have a defined hydrophilic surface that has been optimised for the adsorption of hydrophilic and small/rigid molecules.

As an example of the adsorption of proteins with different properties, Figure 1 shows the evaluations of an insulin ELISA (Fig. 1a) and a human IgG ELISA (Fig. 1b). It is clear that the Sarstedt High Binding ELISA plate is particularly recommended for binding small molecules such as insulin.

By contrast, both ELISA surfaces can be used to detect human IgG depending on the IgG concentration.

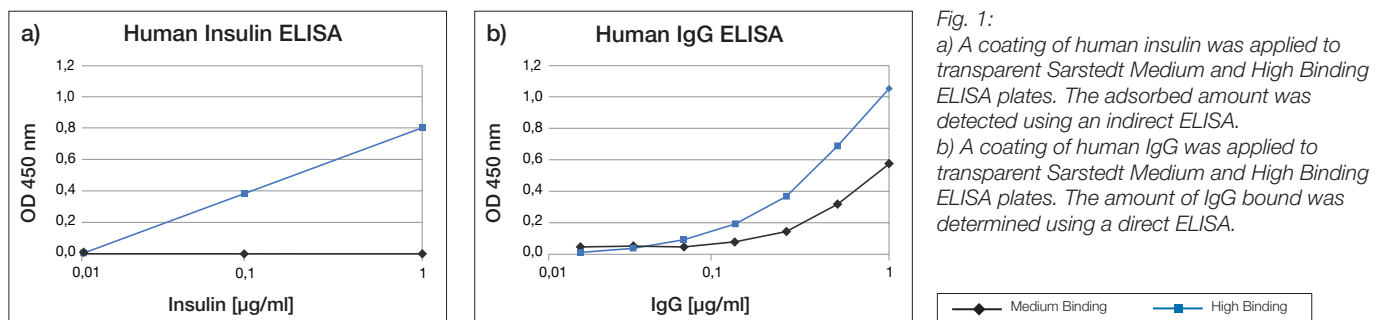


Fig. 1:
a) A coating of human insulin was applied to transparent Sarstedt Medium and High Binding ELISA plates. The adsorbed amount was detected using an indirect ELISA.
b) A coating of human IgG was applied to transparent Sarstedt Medium and High Binding ELISA plates. The amount of IgG bound was determined using a direct ELISA.

Figure 2 shows the result of an IL8 Sandwich ELISA. This shows that the Sarstedt High Binding ELISA plate has comparable adsorption properties to a competitor's High Binding ELISA plate. The results of this Sandwich ELISA also show that the Sarstedt High Binding ELISA plate is more suitable for this application than the Sarstedt Medium Binding ELISA plate.

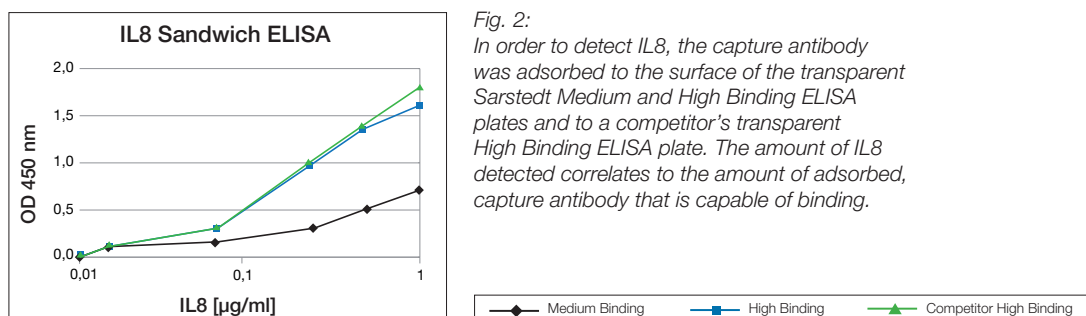


Fig. 2:
In order to detect IL8, the capture antibody was adsorbed to the surface of the transparent Sarstedt Medium and High Binding ELISA plates and to a competitor's transparent High Binding ELISA plate. The amount of IL8 detected correlates to the amount of adsorbed, capture antibody that is capable of binding.

Sarstedt recommends testing both Sarstedt ELISA surfaces when setting up a new ELISA as each analyte will have different properties.

Material, Dimensions and Certification

Manufacturing user-friendly products is one of our key objectives. All SARSTEDT ELISA plates therefore have uniform basic dimensions that are suitable for automated processing and are produced according to the recommendations of the American National Standards Institute (ANSI 1 to 4-2004 and 6-2004).

A consistent surface quality is a fundamental requirement for the reproducibility of your ELISA experiments. The binding properties of the Medium Binding and High Binding surfaces are determined during production based on an ELISA. The limits for our products' coefficient of variation (CV) are as follows:

Surface	CV Well-to-Well	CV Lot-to-Lot
Medium Binding	< 10 %	< 10 %
High Binding	< 5 %	< 5 %

The cleanliness of the ELISA plates also plays an important role in ensuring consistent results. For this reason, SARSTEDT's ELISA plates are made from ultra-pure polystyrene and certified as follows:

- Non-cytotoxic
According to the ISO 10993 series of standards
- Pyrogen-free/endotoxin-free
Based on the LAL test, detection limit < 0.06 EU/ml
- DNA-free
Human DNA < 0.5 pg/μl, bacterial DNA < 0.02 pg/μl
- Free from DNase and RNase
DNase < 7.1*10⁻⁵ U/μl, RNase < 7.1*10⁻⁹ U/μl

Ordering information

Order No	Colour	Surface	Base shape	Max. fill volume	Packaging [item]
82.1581.100	Transparent	Medium Binding	□	0.39 ml	25/bag, 50/case
82.1581.200	Transparent	High Binding	□	0.39 ml	25/bag, 50/case
82.1581.110	White	Medium Binding	□	0.39 ml	25/bag, 50/case
82.1581.210	White	High Binding	□	0.39 ml	25/bag, 50/case
82.1581.120	Black	Medium Binding	□	0.39 ml	25/bag, 50/case
82.1581.220	Black	High Binding	□	0.39 ml	25/bag, 50/case
82.1582.100	Transparent	Medium Binding	U	0.31 ml	25/bag, 50/case
82.1582.200	Transparent	High Binding	U	0.31 ml	25/bag, 50/case
82.1583.100	Transparent	Medium Binding	V	0.29 ml	25/bag, 50/case
82.1583.200	Transparent	High Binding	V	0.29 ml	25/bag, 50/case

Accessories

Order No.	Description	Material	Colour	Packaging [item]
82.1584	Lid for micro test and ELISA plates	Polystyrene	Transparent	25/bag, 100/case
82.1586	Adhesive film (temperature range from -40°C to 100°C)	Acetate	Transparent	100/bag

If you have any questions,
we'd be happy to help!

Visit our website: www.sarstedt.com



Brochure 215



Brochure 362



Brochure 471



Brochure 527



Brochure 537



Brochure 670

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SARSTEDT AG & Co. KG
P.O. Box 12 20
D-51582 Nümbrecht
Phone: +49 2293 305 0
Fax: +49 2293 305 3992
export@sarstedt.com
www.sarstedt.com

