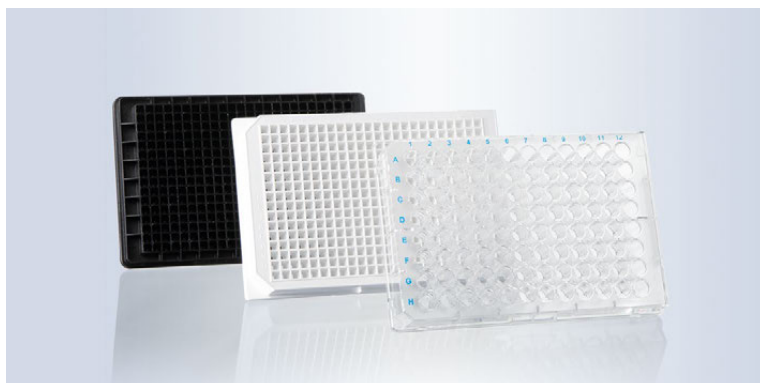


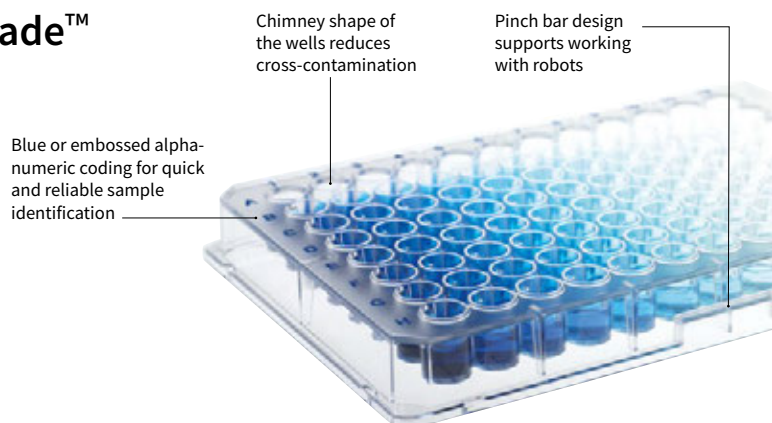
Microplates for Immunoassays



- 4 Three different surfaces for adsorption of different biomolecules
- 4 Low well-to-well variance
- 4 Suitable for direct, indirect and Sandwich ELISA

BRANDplates® microplates immunoGrade™ | hydroGrade™ | lipoGrade™

BRANDplates® for immunoassays are manufactured from pure, newly synthesized polystyrene (PS). Storing large quantities of a raw material batch helps ensure that material-dependent variations in immunological assays can be reduced to a minimum between different assay plate productions.



Applications

- + Solid phase assays
- + Homogeneous assays
- + Fluorescence assays
- + Luminescence assays
- + Radioimmuno-assays (RIA)

Features

- + Three different surfaces
- + Different well bottom shapes
- + Strip plates (F8)
- + Compatible with all ANSI/SLAS conforming analytic equipment

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Астрахань (8512)99-46-04
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Якутск (4112)23-90-97
Ярославль (4852)69-52-93

User information

Comparison of surface properties

High binding (immunoGrade™)

Highly adsorbent surface for peptides and proteins with a molecular weight > 10 kDa. These plates stand out for their hydrophilic and hydrophobic surface properties, and are highly optimized for binding of IgG and IgA.

Non-specific binding of analytes can result in increased background signals. Because of this, saturating free binding sites can be helpful with this type of plate, to increase the sensitivity of the assay.

Hydrophilized (hydroGrade™)

The percentage of hydrophilic groups in the solid phase is higher when compared to standard high binding surfaces. Microplates with highly hydrophilized surfaces preferably immobilize hydrophilic molecules such as glycoproteins, glycopeptides, and nucleic acids

The interaction between molecules and the surface can be easily influenced by pH level. The accessibility and detection of epitopes by specific antibodies can be impacted by surface-induced conformation changes to the bound molecules.

Strongly hydrophobic (lipoGrade™)

Microplates with a highly hydrophobic surface have an increased affinity to lipophilic biomolecules, such as lipoproteins and lipids. The plates are especially well-suited for liquid phase assays in which reaction components need to remain in a solution since the majority of hydrophilic biomolecules minimally bind to this surface.

Medium binding (pureGrade™)

Microplates with a medium binding surface are very well suited for immobilizing proteins with a molecular weight > 200 kDa. Typically, at this molecule size there are a large number of hydrophobic amino acids present that determine the strength of the interaction with hydrophobic styrol rings on the microplates.

Types

immunoGrade™	hydroGrade™	lipoGrade™
• High-binding • Optimized for the immobilization of IgG and molecules with hydrophilic and hydrophobic regions • Standard ELISA plate	• Strongly hydrophilic • Increased affinity to biomolecules with primarily hydrophilic regions • Solid phase with hydrophilic molecules, liquid phase with hydrophobic molecules	• Strongly hydrophobic • Increased affinity to hydrophobic biomolecules • Solid phase with hydrophobic molecules, liquid phase with hydrophilic molecules

Technical information & Ordering data

immunoGrade™ microplates

Optimized for the immobilization of IgG

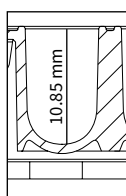
- Optimized for the immobilization of IgG, offering highest binding capacity for molecules with mixed hydrophilic and hydrophobic regions.
- The surface of choice for the majority of standard ELISAs.
- Suitable for solid phase immunoassays.
- Comparable to 'high-binding' plates from other manufacturers.

96-well

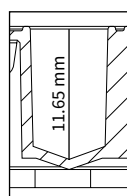
Standard microplates



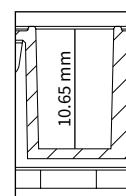
96-well



96-well



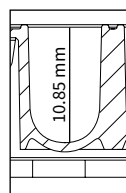
96-well



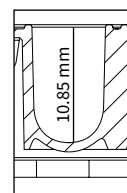
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Color	transparent	transparent	transparent
Well volume [μl]	330	360	350
Working volume [μl]	40-300	40-330	50-320
Bottom thickness [μm]	850	850	850
Well surface [mm ²]	n.a.	33	32
Lid	20 pieces (1 lid/stack)	20 pieces (1 lid/stack)	20 pieces (1 lid/stack)
Pack of	100 pieces (20 stacks of 5 plates)	100 pieces (20 stacks of 5 plates)	100 pieces (20 stacks of 5 plates)
Cat. No.	781720	781721	781722



96-well



96-well



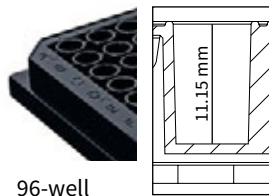
Bottom	U-bottom	U-bottom
Color	white	black
Well volume [μl]	330	330
Working volume [μl]	40-300	40-300
Bottom thickness [μm]	850	850
Well surface [mm ²]	n.a.	n.a.
Lid	20 pieces (1 lid/stack)	20 pieces (1 lid/stack)
Pack of	100 pieces (20 stacks of 5 plates)	100 pieces (20 stacks of 5 plates)
Cat. No.	781724	781727



Stack of 5 with lid and sleeve

96-well

with transparent
bottom



96-well

Bottom	F-bottom	
Color	black	
Well volume [μl]	330	
Working volume [μl]	50-310	
Bottom thickness [μm]	750	
Well surface [mm ²]	31	
Lid	20 pieces (1 lid/stack)	20 pieces (1 lid/stack)
Pack of	100 pieces (20 stacks of 5 plates)	5 pieces (1 stack of 5 plates)
Cat. No.	781731	781732

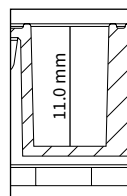


96-well

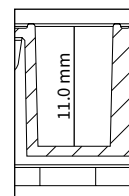
strip plates



96-well



96-well



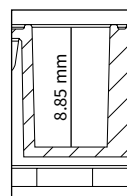
Bottom	F-bottom	F-bottom
Color	transparent, without grid strips of 8 wells, not divisible	transparent, with grid, strips of 8 divisible
Well volume [μl]	360	350
Working volume [μl]	50-320	50-320
Bottom thickness [mm]	1.1	1.1
Well surface [mm ²]	37	37
Lid	-	-
Pack of	100 pieces (4 bags of 25 plates)	100 pieces (4 bags of 25 plates)
Cat. No.	782305	782306

384-well

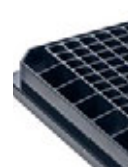
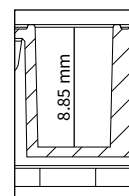
Standard
microplates



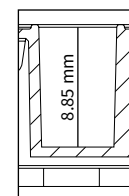
384-well



384-well



384-well



Bottom	F-bottom	F-bottom	F-bottom
Color	transparent	white	black
Well volume [μl]	100	100	100
Working volume [μl]	25-80	25-80	25-80
Bottom thickness [μm]	650	650	650
Well surface [mm ²]	12	12	12
Lid	10 pieces (1 lid/stack)	10 pieces (1 lid/stack)	10 pieces (1 lid/stack)
Pack of	50 pieces (10 stacks of 5 plates)	50 pieces (10 stacks of 5 plates)	50 pieces (10 stacks of 5 plates)
Cat. No.	781740	781741	781742

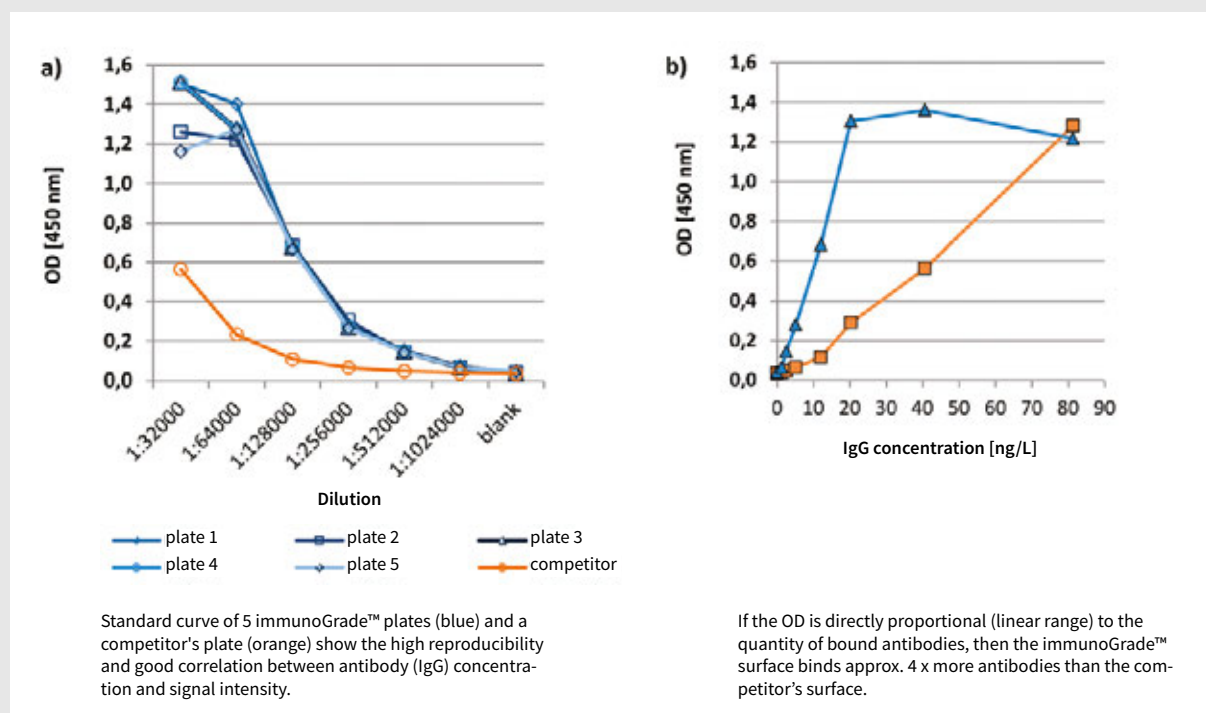
Application Note

Comparison of antibody adsorption of BRANDplates® immunoGrade™ with a high binding variant of the competition

Author: BRAND GMBH + CO KG

In ELISAs, reproducibility and precision are dependent on the consistent immobilized quantity of coating antibody (ab). If the quantity of coating ab bound in the well varies, this can result in sample-independent differences that may cause results to be misinterpreted. Therefore, the only variable in an ELISA should be the analyte to be measured.

Because of this, we recommend saturating all free binding sites in a well with coating ab, in order to prevent a false positive signal through non-specific immobilized analytes. However, antibodies must be added in excess to saturate the binding sites, making this process very expensive.



Materials and methods

Transparent 96-well microplates with F-bottom (BRANDplates® immunoGrade™ #781722, BRANDplates® pureGrade™ #781602 and competitor) are incubated with a horseradish peroxidase, HRP-coupled, polyclonal rabbit antibody (IgG, P0214, Dako, Denmark) in increasing dilutions (1:16,000 to 1:1,024,000 in PBS) or decreasing concentrations (81.3 ng/l to 1.3 ng/l) for 2 h at 21 °C and washed. The quantity of HRP-marked antibodies adsorbed by the plastic surface was determined indirectly through absorption (at 450 nm) of the converted TMB substrate (# 34028, ThermoScientific, USA), after adding a stop solution (Photometer EL 808, Biotek, Germany).

Conclusion

In comparison to the competitor plate, the immunoGrade™ surface of the solid BRANDplates® has a significantly higher affinity to the antibodies (immunoglobulin class G; IgG). Higher affinity for the coating antibody means less must be used to saturate the free binding sites, resulting in a cost savings.

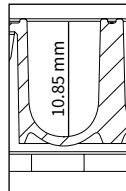
hydroGrade™ microplates

For the immobilization of hydrophilic molecules

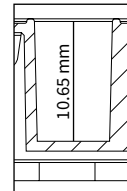
- Strongly hydrophilic, with high affinity to hydrophilic molecules, such as glycoproteins and peptides, antibodies with predominantly hydrophilic regions, and nucleic acids.
- An alternative to the immunoGrade™ surface when performing solid phase assays.
- Alternative for homogeneous assays with hydrophobic molecules, that remain in solution.

96-well

Standard microplates



96-well



96-well

Bottom	U-bottom	F-bottom
Color	transparent	transparent
Well volume [μl]	330	350
Working volume [μl]	40-300	40-300
Bottom thickness [μm]	850	850
Well surface [mm²]	n.a.	33
Lid	20 pieces (1 lid/stack)	20 pieces (1 lid/stack)
Pack of	100 pieces (20 stacks of 5 plates)	100 pieces (20 stacks of 5 plates)
Cat. No.	781780	781782

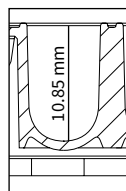
lipoGrade™ microplates

For the immobilization of hydrophobic molecules

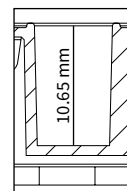
- Strongly hydrophobic (lipophilic), for immobilization of biomolecules with predominantly hydrophobic regions.
- For the immobilization of molecules, such as lipoproteins or peptides.
- Specially suited for liquid phase assays when the reaction component should stay in solution.
(The majority of hydrophilic biomolecules are not immobilized on this surface.)

96-well

Standard microplates



96-well



96-well

Bottom	U-bottom	F-bottom
Color	transparent	transparent
Well volume [μl]	330	350
Working volume [μl]	40-300	350
Bottom thickness [μm]	850	850
Well surface [mm²]	n.a.	32
Lid	20 pieces (1 lid/stack)	20 pieces (1 lid/stack)
Pack of	100 pieces (20 stacks of 5 plates)	100 pieces (20 stacks of 5 plates)
Cat. No.	781840	781842

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