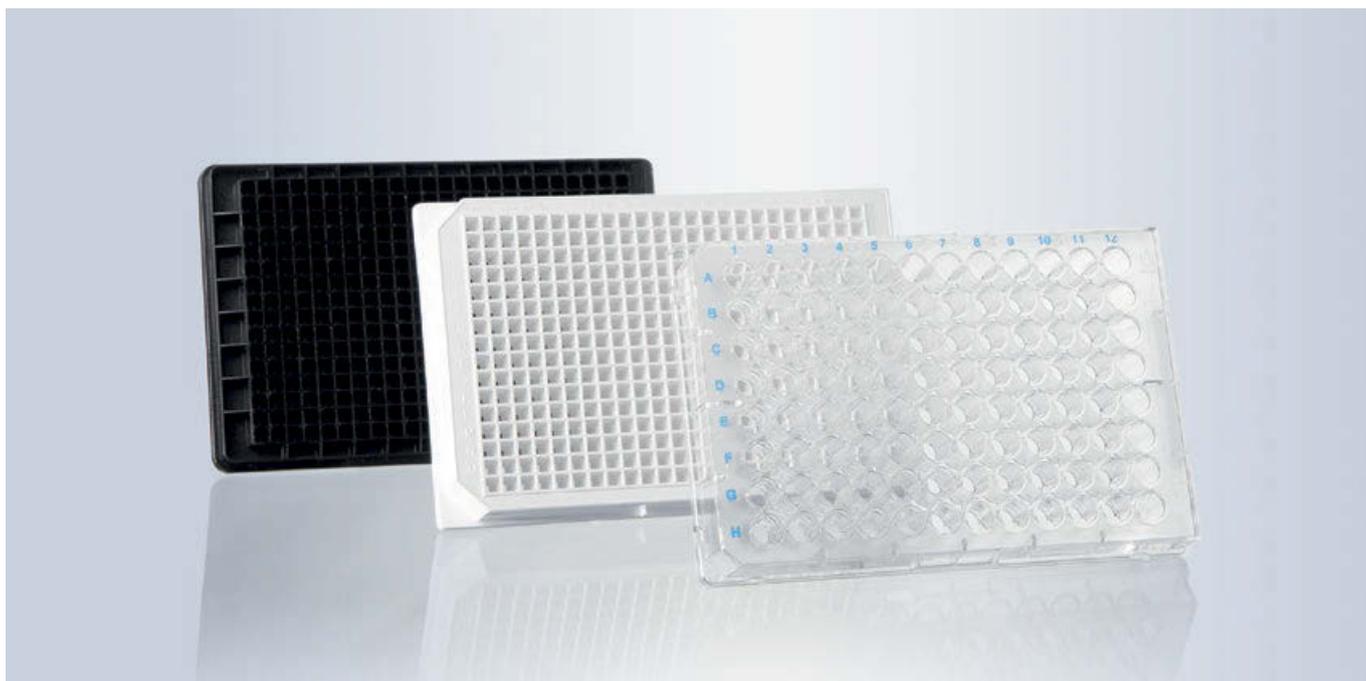


## 4.2 Microplates for Immunoassays



- ✓ Three different surfaces for adsorption of different biomolecules
- ✓ Low well-to-well variance
- ✓ 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.

Blue or embossed alpha-numeric coding for quick and reliable sample identification

Chimney shape of the wells reduces cross-contamination

Pinch bar design supports working with robots



#### 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

## 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™



- High-binding
- Optimized for the immobilization of IgG and molecules with hydrophilic and hydrophobic regions
- Standard ELISA plate

### hydroGrade™



- Strongly hydrophilic
- Increased affinity to biomolecules with primarily hydrophilic regions
- Solid phase with hydrophilic molecules, liquid phase with hydrophobic molecules

### lipoGrade™



- Strongly hydrophobic
- Increased affinity to hydrophobic biomolecules
- Solid phase with hydrophobic molecules, liquid phase with hydrophilic molecules

## Technical information & Ordering data

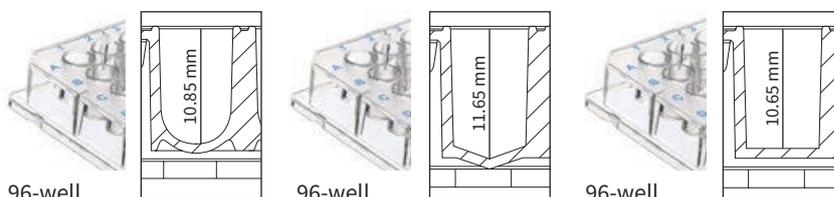
### immunoGrade™ microplates

#### 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.



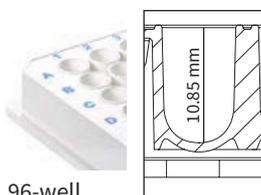
### 96-well Standard microplates



Bottom	U-bottom	V-bottom	F-bottom
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 <sup>2</sup> ]	n.a.	33	32
Lid	-	-	-
Pack of	100 pieces (20 stacks of 5 plates)	100 pieces (20 stacks of 5 plates)	100 pieces (20 stacks of 5 plates)
<b>Cat. No.</b>	<b>781720</b>	<b>781721</b>	<b>781722</b>



### 96-well Standard microplates



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



Stack of 5 with sleeve