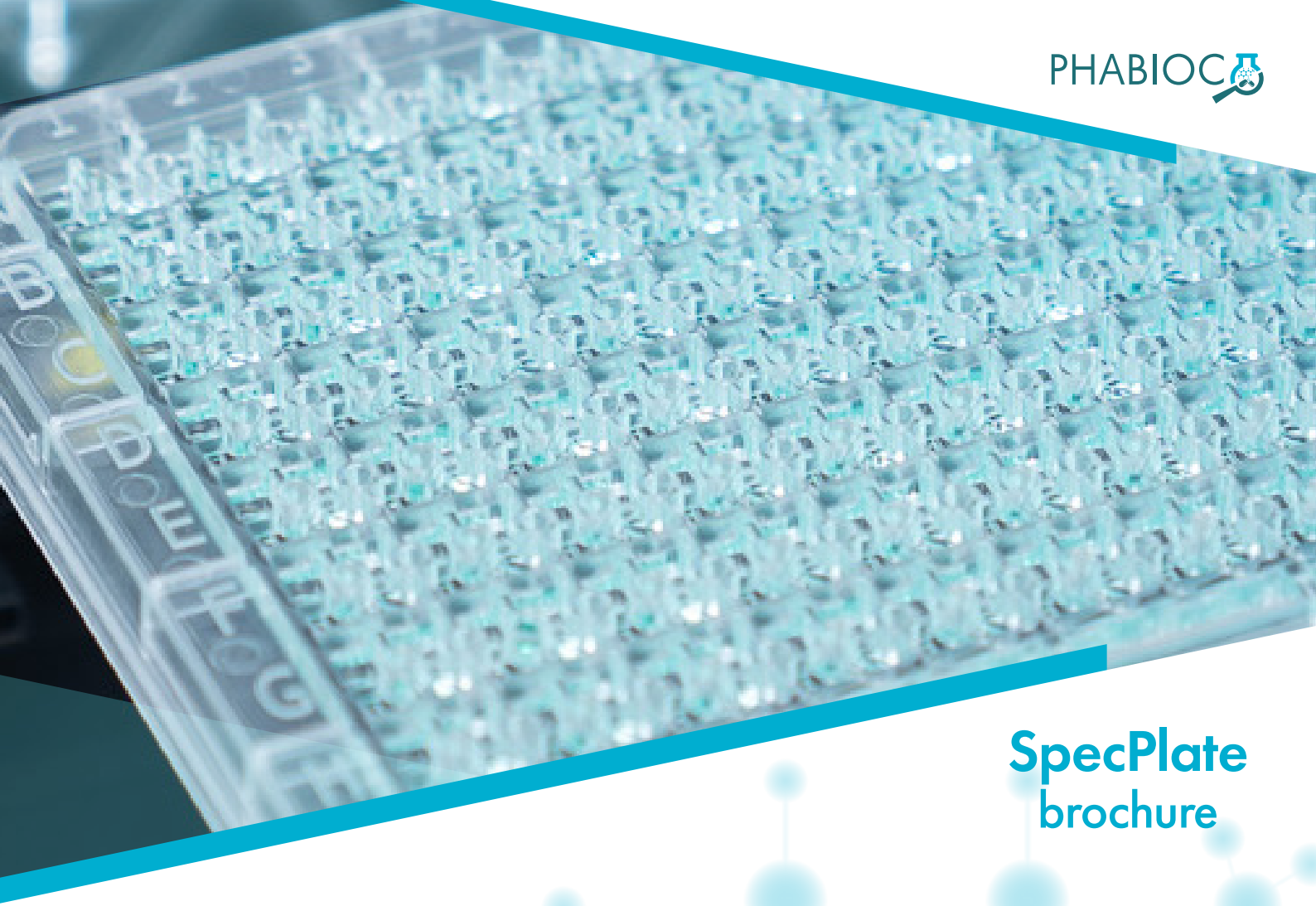
PHABIOC



SpecPlate brochure

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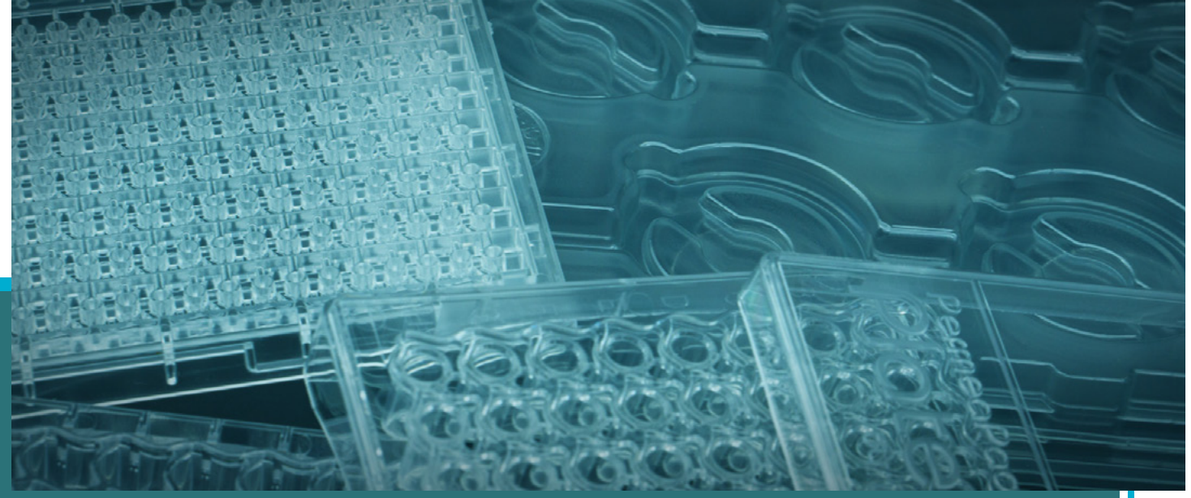
MORE INSIGHTS IN RESEARCH

Consumables and tools for better and more efficient drug discovery and development



About PHABIOC

We at PHABIOC are constantly providing our customers new innovative consumables and analysis tools to improve research and development in the biotechnology, pharmaceutical and chemical industries. On the one hand, with our products we want to make experiments automatable in order to be able to design processes more efficiently. And on the other hand with our products we want to replace, reduce or improve animal testing (3R'S).

By consistently building up our product portfolio, we address a variety of applications. Our ambition is to develop new standards again and again.

Open Innovation

PHABIOC wants to pursue Open Innovation because we believe that more can be achieved by joining forces and working together than by working alone. We want to break down corporate boundaries and realize innovations.

We are always open to new product ideas from academic institutions or industry partners and are happy to enter into cooperations in order to become successful together.

Individual Lab Consumables and Biomimetic Barriers

Do you need a manufacturer or a development partner for your laboratory consumables (e.g. microwell plate) or biomimetic barriers? Then you will find in us the right partner to realize your products

Scientific Consulting

Our products address the most current scientific topics in research and development. Therefore we offer scientific consulting for the best customer support. This is done by experts in the respective field.

Table of Content

PHABIOC

SpecPlate

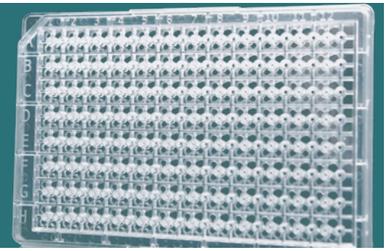
The better standard
for plate-based UV/VIS-spectroscopy

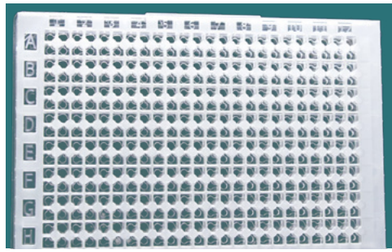
Introducing SpecPlate

Meet SpecPlate, our revolutionary 96-well plate, and launch a new era of absorbance measurement for process development and quality control. Featuring a unique design with 4 measurement chambers in each well, SpecPlate efficiently captures up to 4 data points per well. This not only streamlines your workflow, but also improves reproducibility and reduces consumables costs. Experience the seamless harmony between innovation and best practices as SpecPlate integrates effortlessly into high-throughput workflows using the standardized format of plate reader-based analysis.

SpecPlate

Product number	Quantity	Price
400100	40 pcs	On request



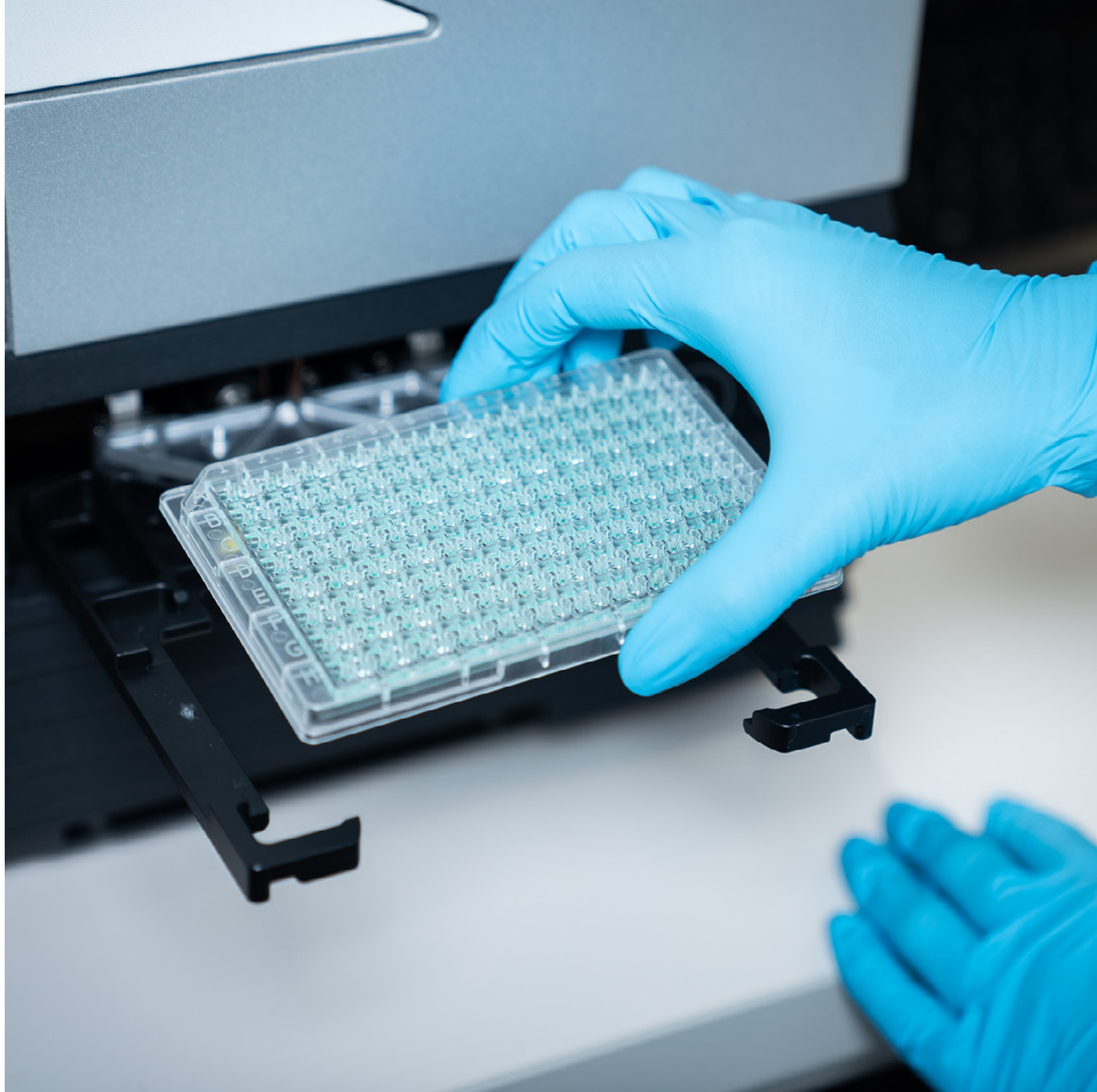


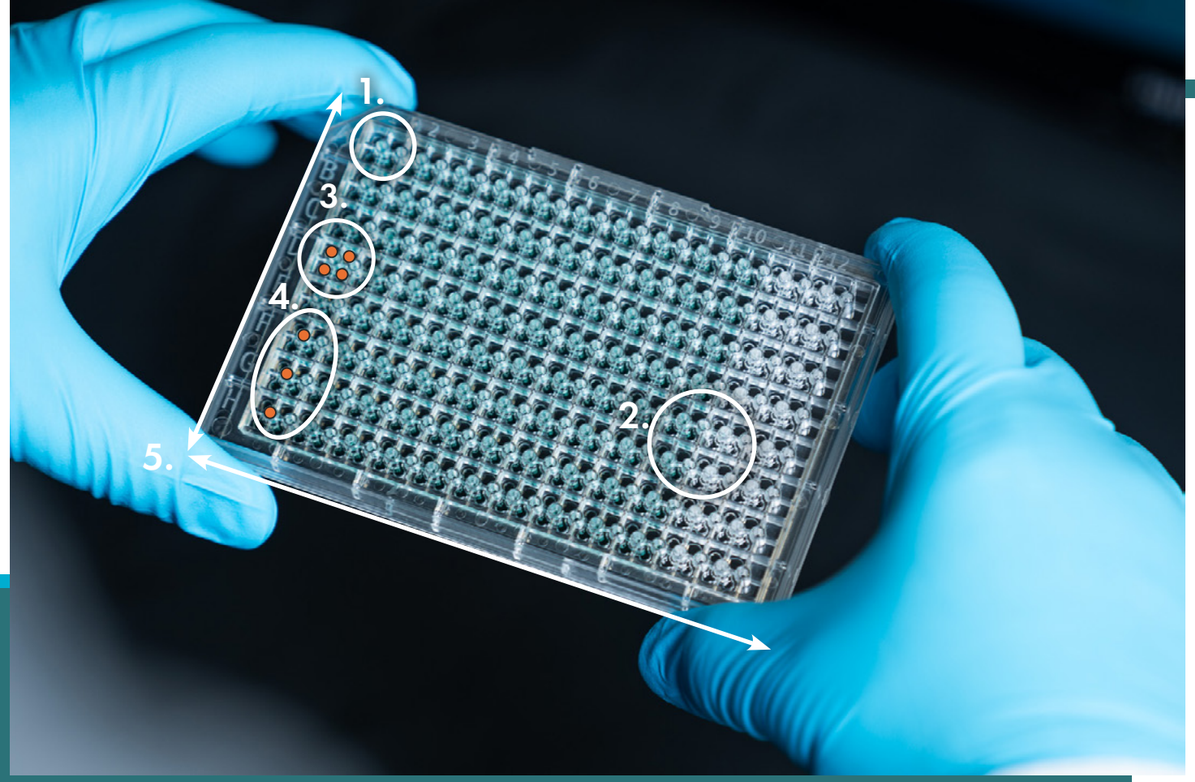
Sealing Foil

Product number	Quantity	Price
400101	40 pcs	On request

Sealing film for handling highly volatile or toxic samples, allows light to pass through without attenuation

HIGH QUALITY
MADE IN GERMANY





Unique SpecPlate features

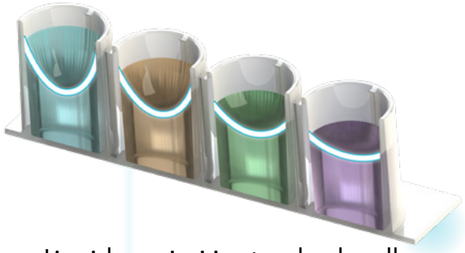
1. Includes **96 unique measurement structures**
2. SpecPlate **made of cycloolefin copolymer** (COC) **for excellent UV/Vis transmission**
3. Measuring chambers of the **structures are arranged** in a circle around the inlet **in 384 well plate format**
4. Inlets of measurement structures are positioned in 96 well format
5. Designed strictly to ANSI/SLAS standards for easy process implementation

Common microtiter-plate problems

Meniscus Influence: In standard wells, the presence of liquid menisci complicates measurements, leading to inaccuracies or even significant errors.

Sample Composition Variations: Changes in sample composition, as seen in dilution series, affect the menisci and further distorting measurements.

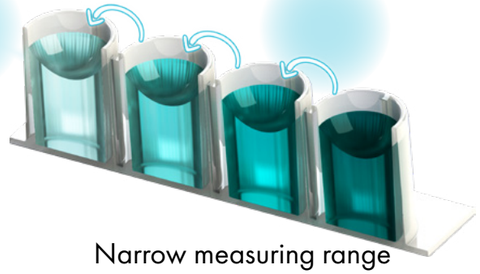
Path Length Disturbance: These variations in liquid menisci change the measured path length, causing errors.



Liquid menisci in standard wells

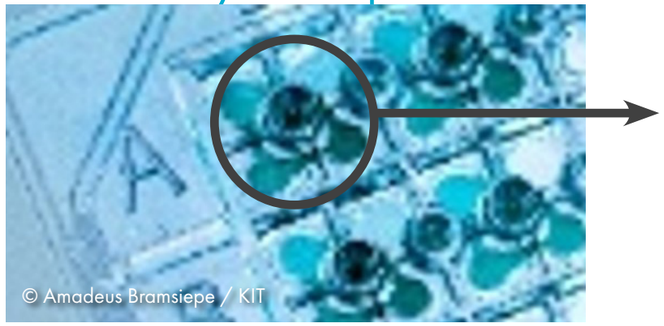
Limited Measurement Range: Standard plates offer only a narrow concentration range, limiting their utility.

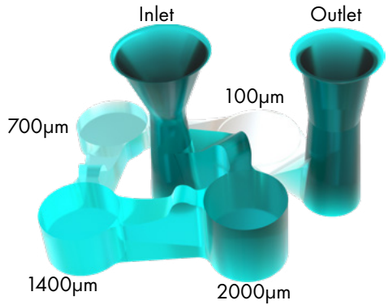
Detector Limit and Dilution Steps: Once the detector limit is reached, dilution steps are required, amplifying errors and increasing measurement challenge.



Narrow measuring range requires dilution steps

Eye on SpecPlate measurement structures





SpecPlate's unique UV-transparent 96-well design features 4 interconnected measurement chambers in each structure, arranged in a slope-like pattern.

The chambers physically define the path length to be measured by varying heights from 100 µm to 2000 µm. With a sample volume of 36 µL, the measurement structure with its four chambers is completely filled.

The integrated bubble traps allow trouble-free measurements. Unlike standard 96-well microplates, the SpecPlate measurement chambers allow simultaneous acquisition of up to 4 data points per structure (384 in total).

The inlets of the measurement structures are arranged in a 96-well pattern, allowing for easy integration into automated processes and systems. The 384-well format allows the SpecPlate to be read with standard plate readers.

- **4x more data:**
  Up to 12 values instead of 3 values for triplicate measurements
- **4x faster:**
  Up to 4x fewer measurements and reduced pipetting effort
- **4x less working volume:**
  Receive up to 4 values for only 36 µl
- **Less plate consumption**
  Due to the saving of dilution steps

Detect high concentrations and eliminate dilution steps

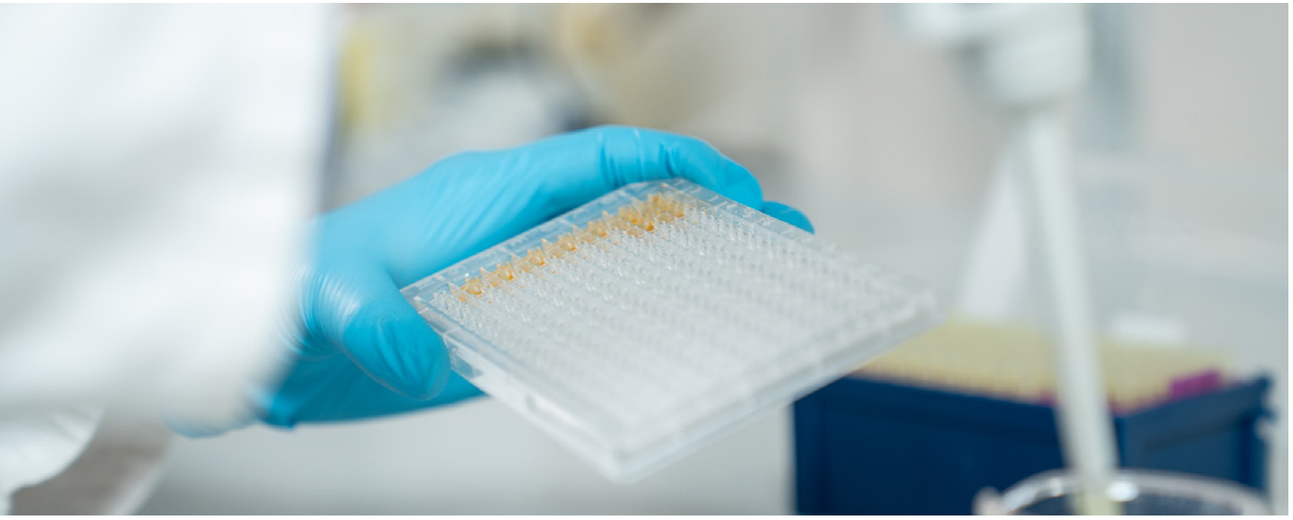
Comparison of dilutions in standard wells and physical dilution in SpecPlate measurement chambers by path length variation (SpecPlate structure rolled out for demonstration purposes)

Four measuring chambers with four distinct heights (100 µm, 700 µm, 1400 µm, 2000 µm) cover broad concentration ranges and facilitate the detection of high concentrations.

- **Eliminate error-prone dilution steps:**
  Diluted in the chambers by defining the path length by the chamber heights.
- **Start measurements immediately:**
  Regardless of the initial concentration
- **Reduce tip and plate consumption:**
  By eliminating dilution steps

Eradicate problems caused by liquid menisci

Closed chamber design increases measurement precision and accuracy:



No liquid menisci:

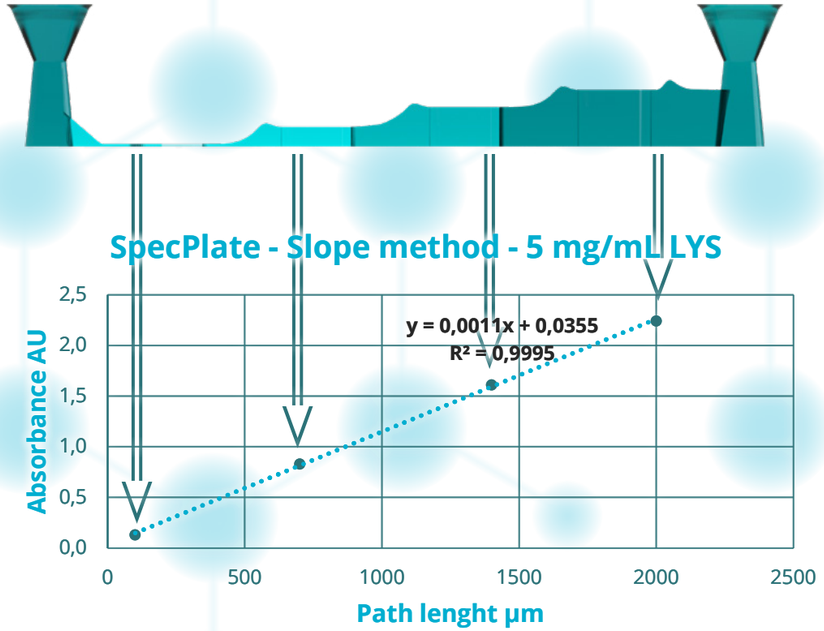
Four measuring chambers with four distinct heights (100 µm, 700 µm, 1400 µm, 2000 µm) cover broad concentration ranges and facilitate the detection of high concentrations.

Insensitive to pipetting errors:

Excess sample is compensated by the liquid levels in the inlet and outlet, making the SpecPlate resistant to pipetting inaccuracies. The liquid levels in the measurement chambers are not affected by pipetting errors, and precise measurements with defined pathlengths are still possible.

Step-by-step to precision

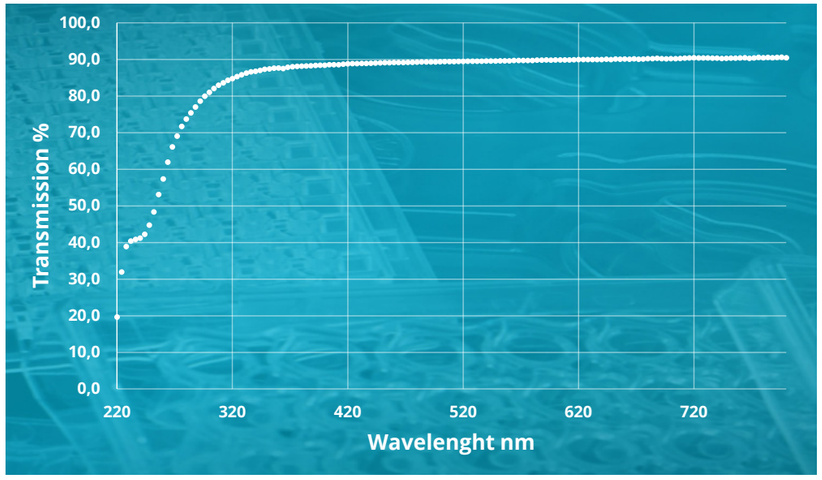
With 3 or 4 data points in the detection limits of your plate reader, recorded with different path lengths of the SpecPlate measurement structures, you can increase the precision of your measurement. By adapting the slope method, the precision of the concentration determination can be increased by the slope of the regression line of your data points.



SpecPlate data points visualize Slope method adaption

Material for the better standard

The entire SpecPlate is made of cycloolefin (COC), a proven material for spectroscopic measurements in the UV-range. The use of COC combines the SpecPlate with its positive properties such as excellent UV transparency and resistance to solvents such as DMSO and acetone. This allows the SpecPlate to be used in a wide range of applications.



Transmission of the SpecPlate (recorded without bottom foil)

What makes the difference

Speed up by factor 4

Boost workflow efficiency with up to 4x more data at 4x the speed with less working volume.

Save time

Reduce hands on time and pipetting effort.

Eliminate dilution steps

Streamline workflows by eliminating error-prone dilution steps for high concentration samples.

Slash consumable costs

Up to 70% reduction in consumable consumption.

Enhance reproducibility

Eradicate common microtiter-plate problems and pipetting errors and increase precision and accuracy.

Seamless integration

No extra equipment! Use standard plate readers and seamlessly integrate SpecPlate into high-throughput workflows.

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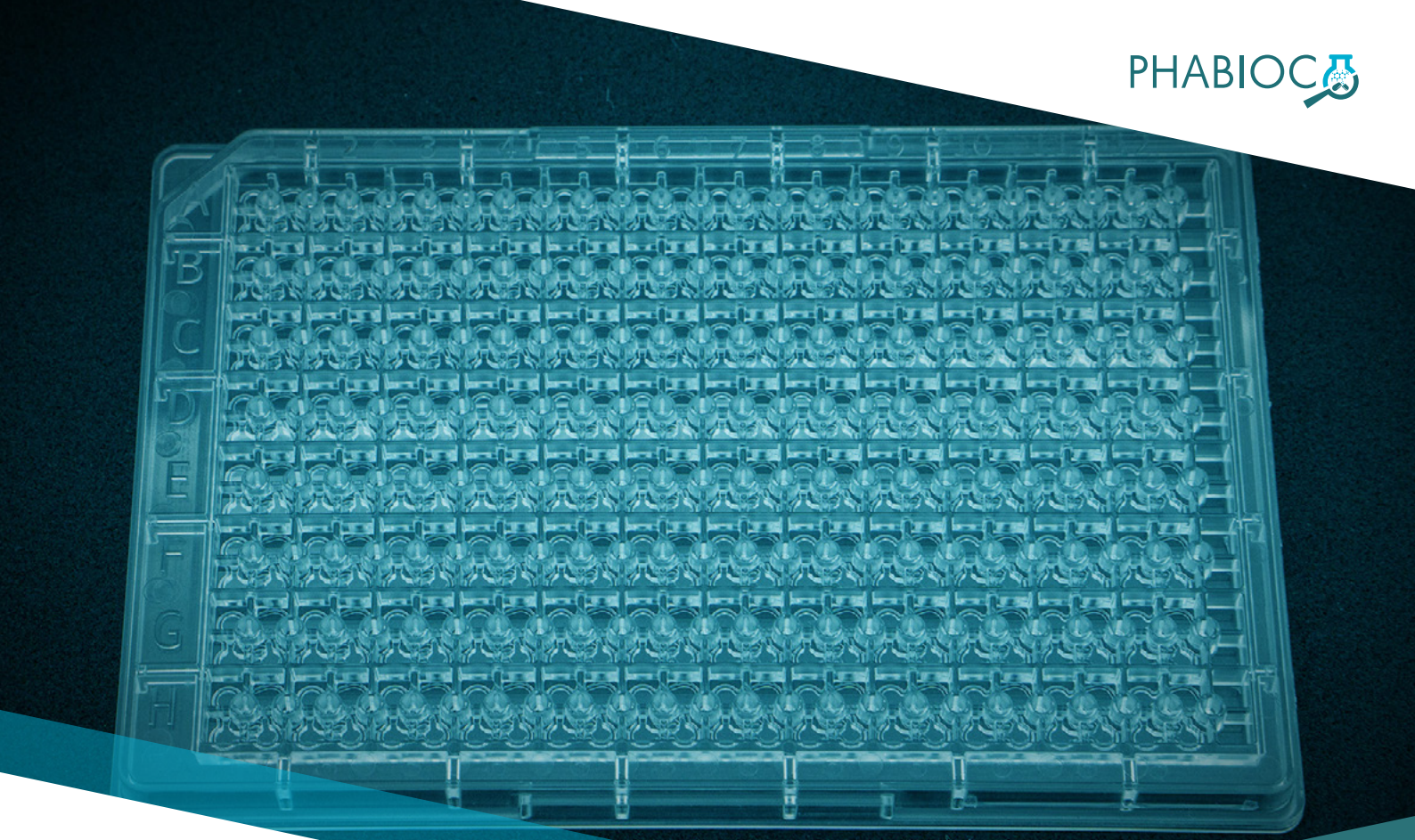

SpecPlate brochure

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MORE INSIGHTS
IN RESEARCH

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