

Application range of the new KNAUER diode array detector DAD 6.1L



Accessible | Flexible | Sensitive | Robust

November 25th 2014

Starting time: 9.00 AM CET

Who are your presenters?



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What can you expect?

- ▶ Introduction to the DAD 6.1L
- ▶ Who should use the DAD 6.1L?
- ▶ The right flow cell for the right application
- ▶ Real life applications
- ▶ Summary



Introduction to the DAD 6.1L

Accessible

frontal lamp and flow cell exchange

Flexible

wide flow cell range



Sensitive

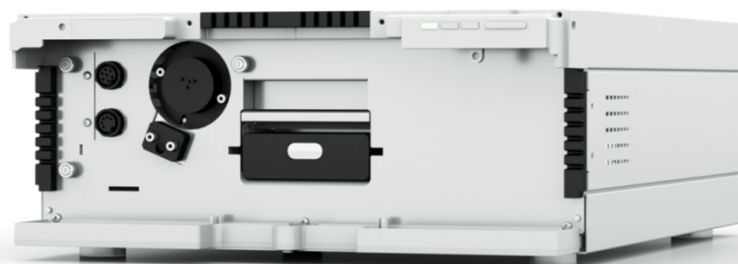
new optical bench

Robust

intelligent temperature control

Introduction to the accessible DAD 6.1L

Lamps



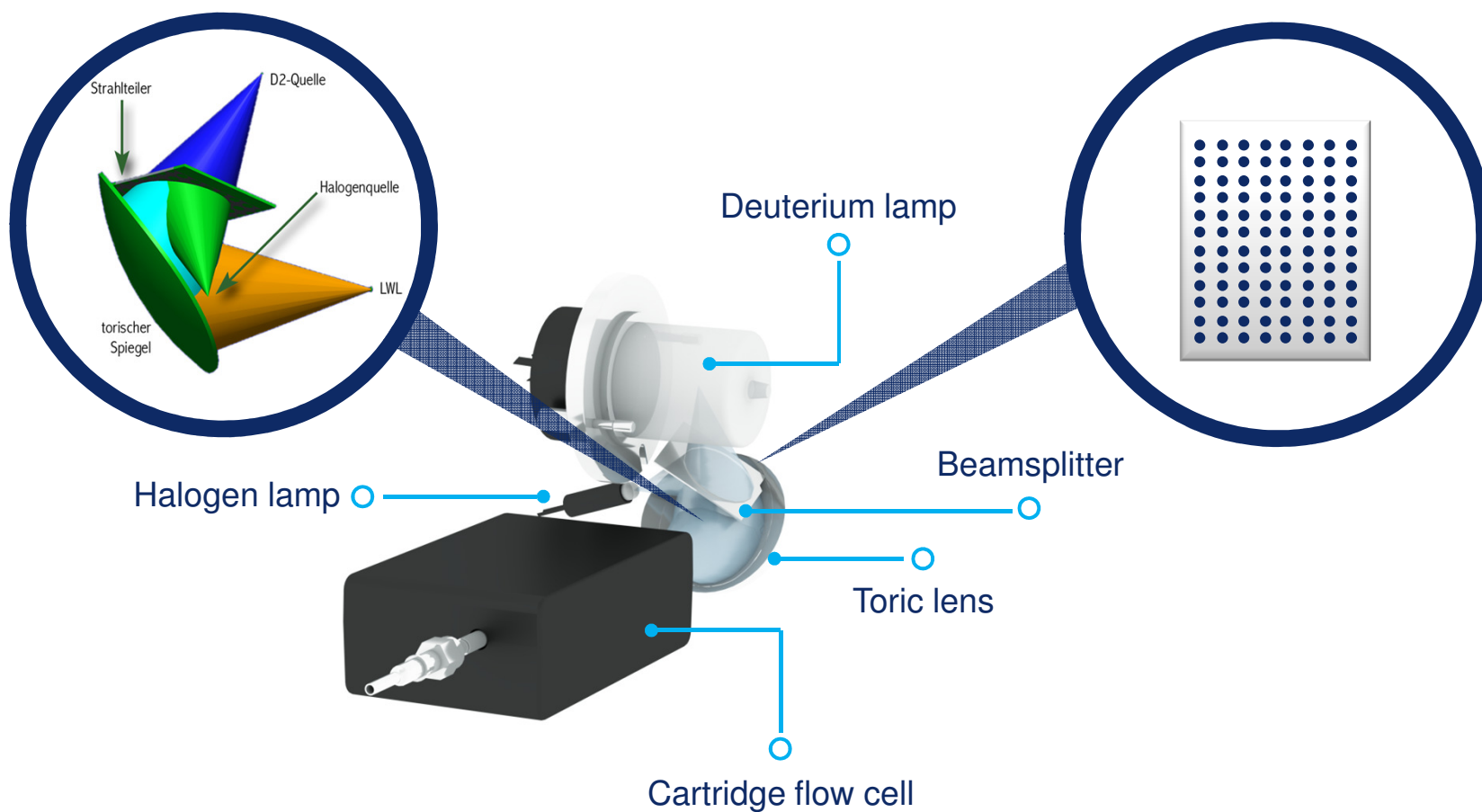
- ▶ Frontal access enables *in situ* lamp changes, assuring short down time
- ▶ Plug and play
- ▶ Safety features allow analysts to perform lamp change autonomously, reducing service costs

Flow cells



- ▶ Lever mechanism ejects the flow cell quickly and easily
- ▶ Internal guidance secures minimum connection dwell volume for optimal resolution
- ▶ Flow cell documentation facility

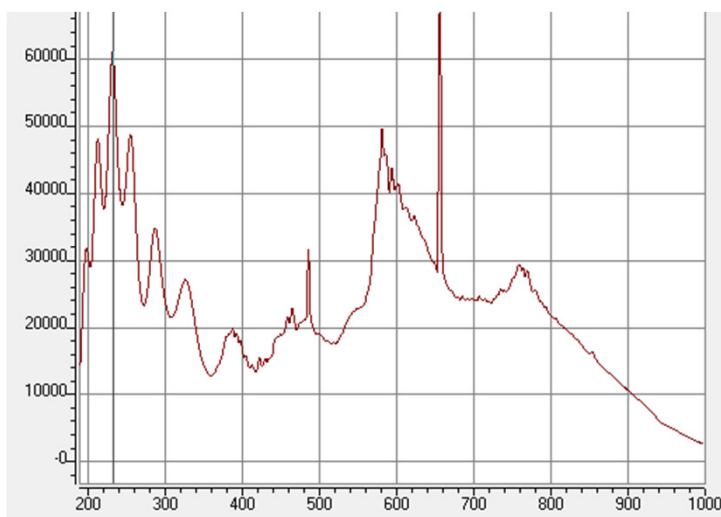
Introduction to the sensitive DAD 6.1L



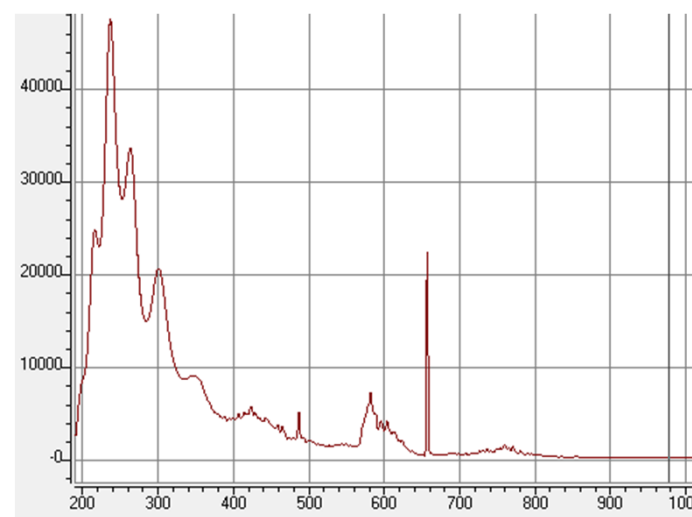
Introduction to the sensitive DAD 6.1L

- ▶ UV and VIS light is blended with the aid of a novel polka dot technology, enabling higher intensities over the whole UV/VIS spectrum (190 - 1020 nm)

Polka dot

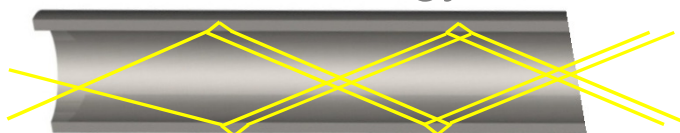


Shine through



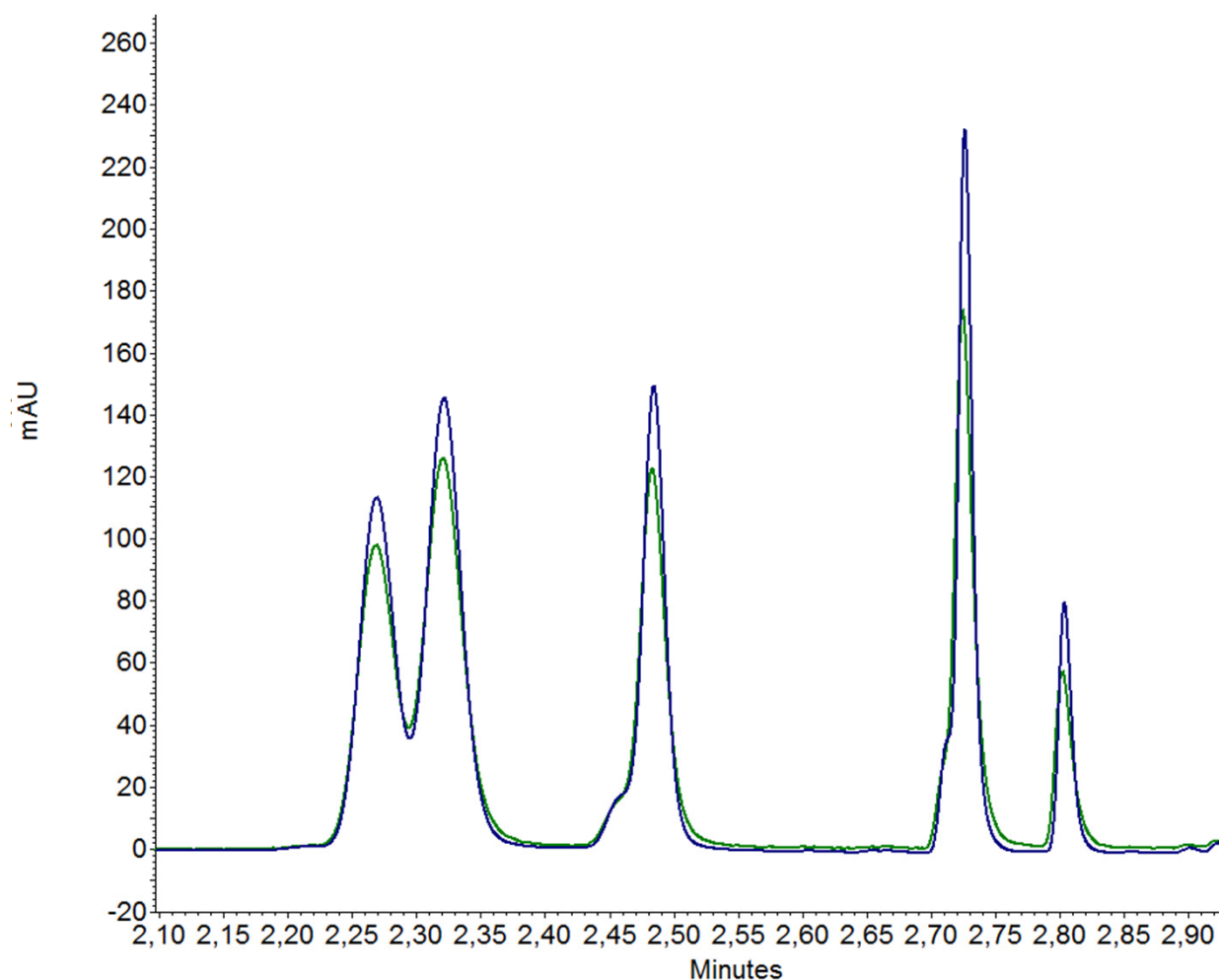
Introduction to the sensitive DAD 6.1L

LightGuide Technology



- ▶ High light transmission due to total internal reflection principle. Highest sensitivity (S/N) with small cell volumes. Optimized for UHPLC

Introduction to the sensitive DAD 6.1L



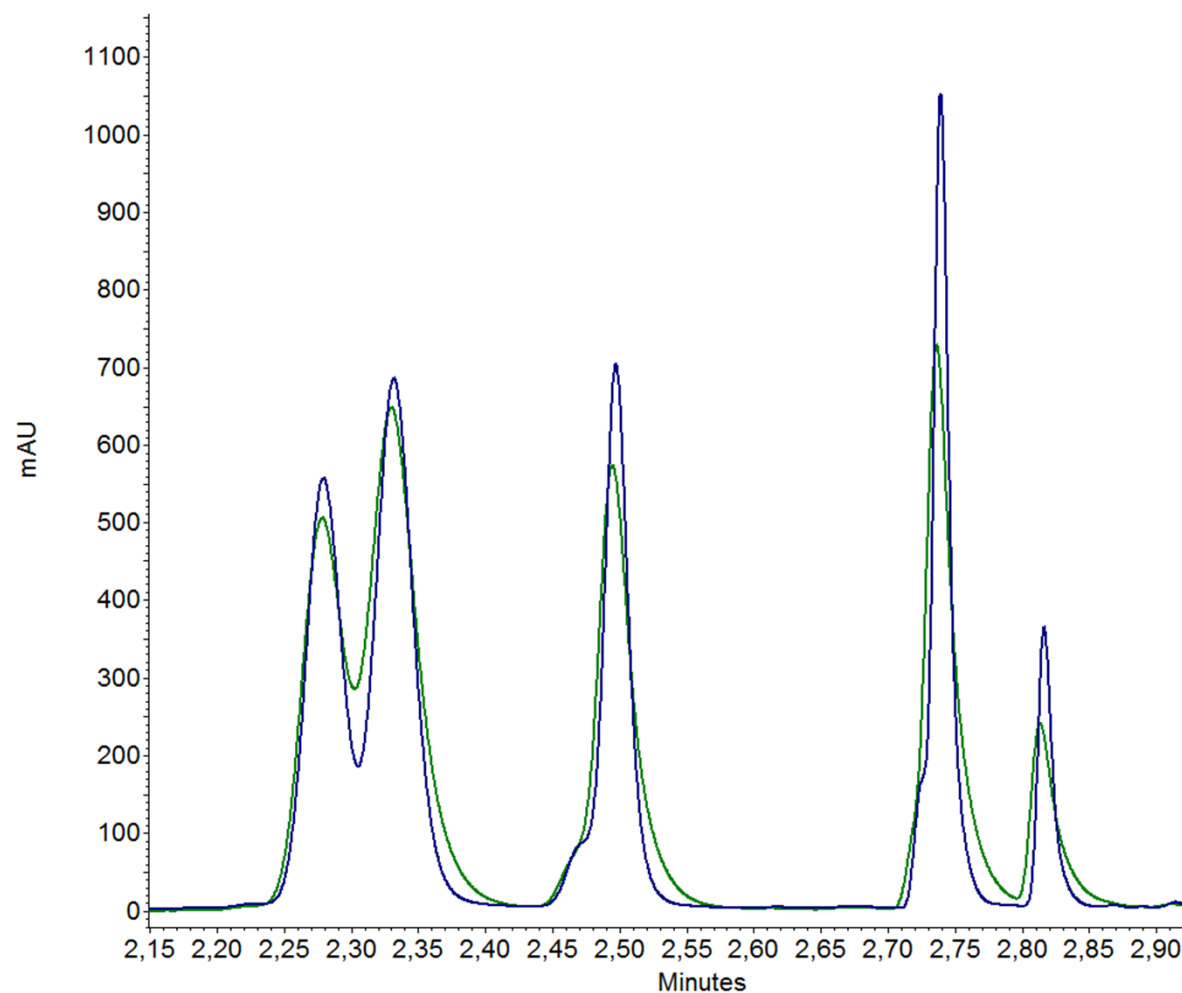
Standard KNAUER

LightGuide Flow Cell

Blue: DAD 6.1L

Green: Previous model

Introduction to the sensitive DAD 6.1L



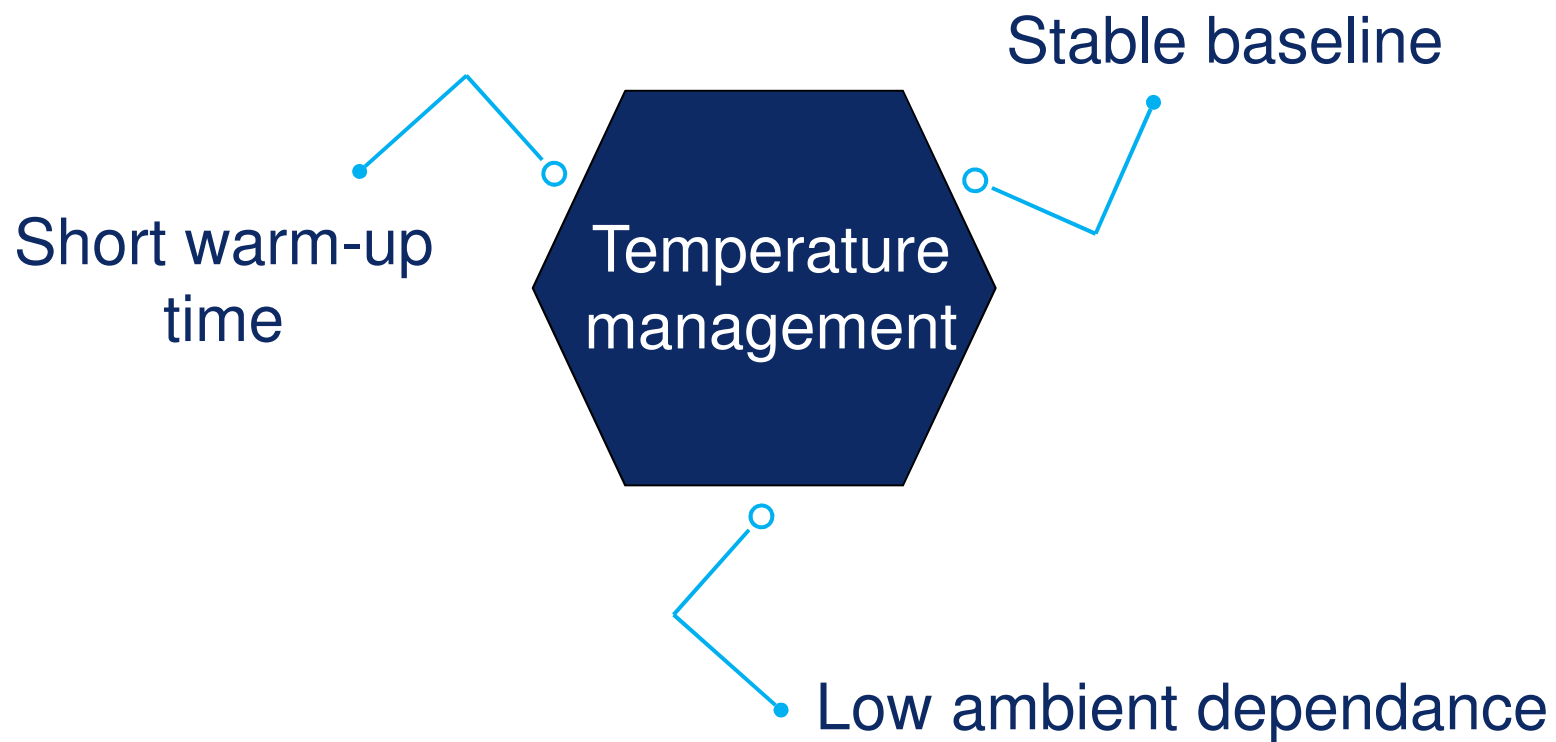
High Sensitivity KNAUER

LightGuide Flow Cell

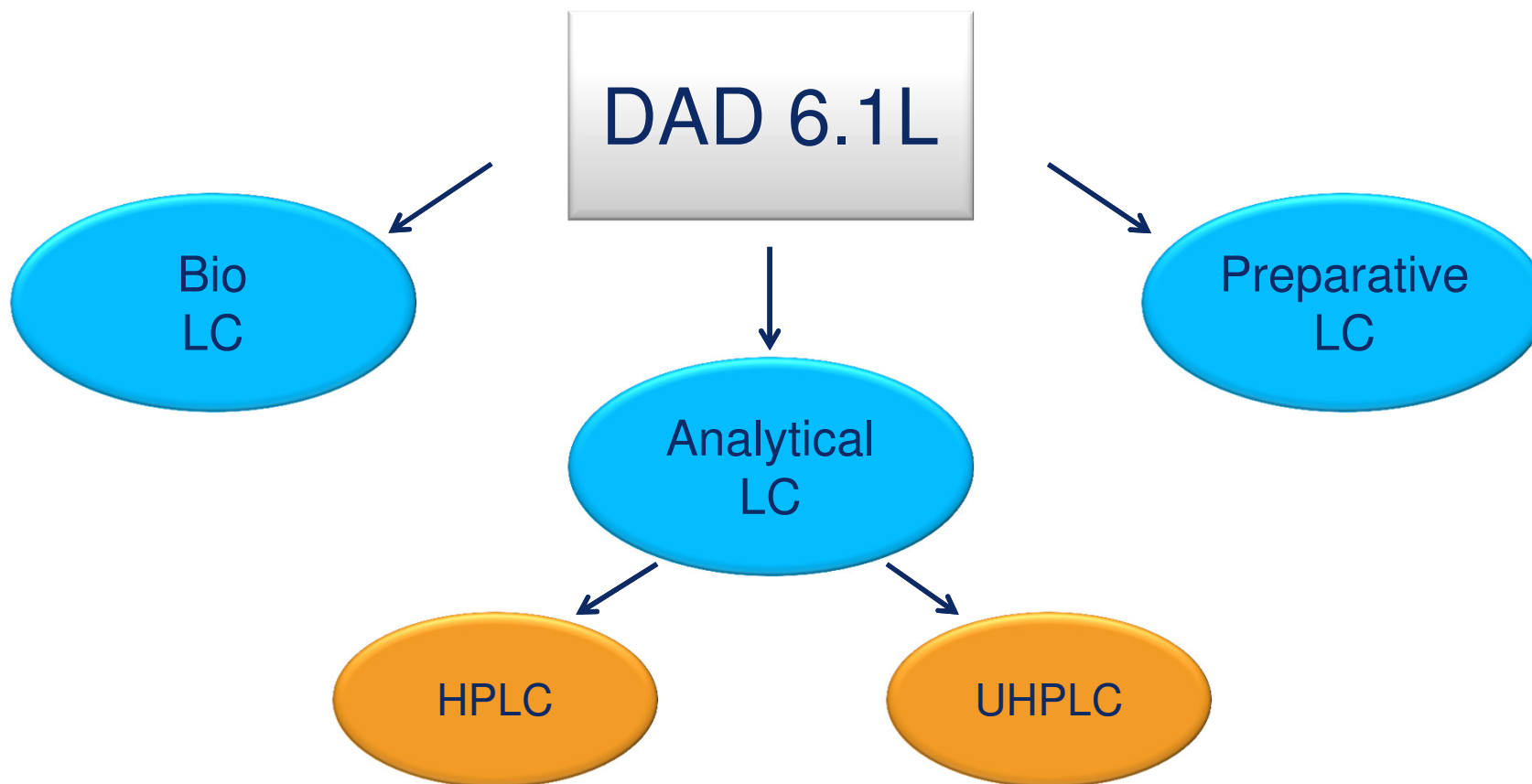
Blue: DAD 6.1L

Green: Previous model

Introduction to the robust DAD 6.1L



Who should use the DAD 6.1L?



Best suited for analytical HPLC

Cap. connection | Max. flow rate | Wetted parts | Max. pressure | Type

LightGuide

High sensitivity
Trace analysis
50 mm, 6 μ l
(AMD59)

1/16"

5 ml/min

PEEK, synthetic
quartz glass, teflon

100 bar

cartridge

LightGuide

High throughput
High resolution
10 mm, 2 μ l
(AMC19)

1/16"

5 ml/min

PEEK, synthetic
quartz glass, teflon

100 bar

cartridge

Standard
Routine analysis
10 mm, 10 μ l
(AMC38)

Coming soon

1/16"

20 ml/min

Stainless steel,
synthetic quartz
glass, PEEK

300 bar

cartridge

Standard remote
Routine analysis
10 mm, 10 μ l
(A4130)

1/16"

20 ml/min

Stainless steel,
synthetic quartz
glass, PEEK

300 bar

remote

Best suited for analytical UHPLC

Cap. connection | Max. flow rate | Wetted parts | Max. pressure | Type

LightGuide

High sensitivity
Trace analysis
50 mm, 6* µl
(AMD59)

1/16"

5 ml/min

PEEK, synthetic
quartz glass, teflon

100 bar

cartridge

LightGuide

High throughput
High resolution
10 mm, 2* µl
(AMC19)

1/16"

5 ml/min

PEEK, synthetic
quartz glass, teflon

100 bar

cartridge

Best suited for Bio LC

Cap. connection | Max. flow rate | Wetted parts | Max. pressure | Type

LightGuide

High sensitivity
Trace analysis
50 mm, 6 μ l
(AMD59)

1/16"

5 ml/min

PEEK, synthetic
quartz glass, teflon

100 bar

cartridge

LightGuide

High throughput
High resolution
10 mm, 2 μ l
(AMC19)

1/16"

5 ml/min

PEEK, synthetic
quartz glass, teflon

100 bar

cartridge

Bio inert
Biopurification
tasks
3 mm, 2 μ l
(A4132)

1/16"

50 ml/min

PEEK, synthetic
quartz glass,
PTFE

30 bar

remote

High concentration
Biopurification
tasks
0.5/1.25/2 mm,
1.7/4.3/6.8 μ l
(A4134)

1/8"

1000 ml/min

PEEK, synthetic
quartz glass,
PTFE

100 bar

remote

High concentration
Biopurification
tasks
0.5 mm, 1.7 μ l
(A4137)

1/16"

250 ml/min

PEEK, synthetic
quartz glass,
PTFE

100 bar

remote

Best suited for preparative LC

Cap. connection | Max. flow rate | Wetted parts | Max. pressure | Type

High concentration Purification tasks 3 mm, 2 μ l (AMB18) Coming soon	1/16"	50 ml/min	Stainless steel, synthetic quartz glass, PEEK	300 bar	cartridge
High concentration remote Purification tasks 3 mm, 2 μ l (A4131)	1/16"	5 ml/min	PEEK, synthetic quartz glass, teflon	100 bar	remote
Bio inert Biopurification tasks 3 mm, 2 μ l (A4132)	1/16"	50 ml/min	PEEK, synthetic quartz glass, PTFE	30 bar	remote
High concentration Biopurification tasks 0.5/1.25/2 mm, 1.7/4.3/6.8 μ l (A4133)	1/8"	1000 ml/min	Stainless steel, synthetic quartz glass, PTFE	200 bar	remote

Best suited for preparative LC

Cap. connection | Max. flow rate | Wetted parts | Max. pressure | Type

High concentration Biopurification tasks 0.5/1.25/2 mm, 1.7/4.3/6.8 µl (A4134)	1/8"	1000 ml/min	PEEK, synthetic quartz glass, PTFE	100 bar	remote
High concentration Purification tasks 0.5/1.25/2 mm, 1.7/4.3/6.8 µl (A4135)	1/4"	10000 ml/min	Stainless steel, synthetic quartz glass, PTFE	200 bar	remote
High concentration Purification tasks 0.5 mm, 1.7 µl (A4136)	1/16"	250 ml/min	Stainless steel, synthetic quartz glass, PTFE	200 bar	remote
High concentration Biopurification tasks 0.5 mm, 1.7 µl (A4137)	1/16"	250 ml/min	PEEK, synthetic quartz glass, PTFE	100 bar	remote

The right flow cell for the right application

► Trace analysis

High sensitivity
Trace analysis
50 mm, 6 μ l
(AMD59)

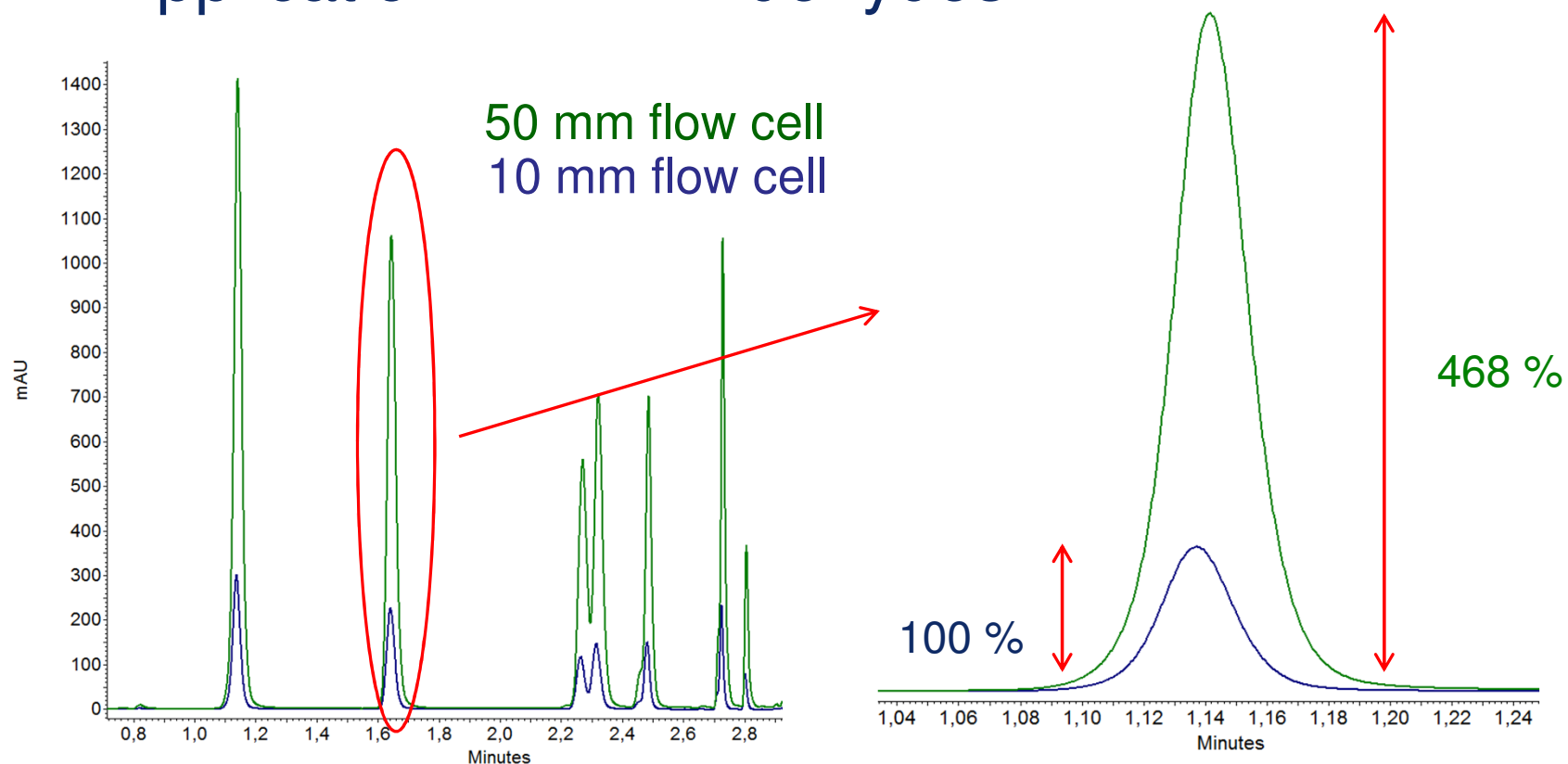
Standard
Routine analysis
10 mm, 10 μ l
(AMC38)

High throughput
High resolution
10 mm, 2 μ l
(AMC19)

High concentration
Purification tasks
3 mm, 2 μ l
(AMB18)

The right flow cell for the right application

► Application DNPH Aldehydes



The right flow cell for the right application

► Fast analytical HPLC / UHPLC

High sensitivity
Trace analysis
50 mm, 6 μ l
(AMD59)

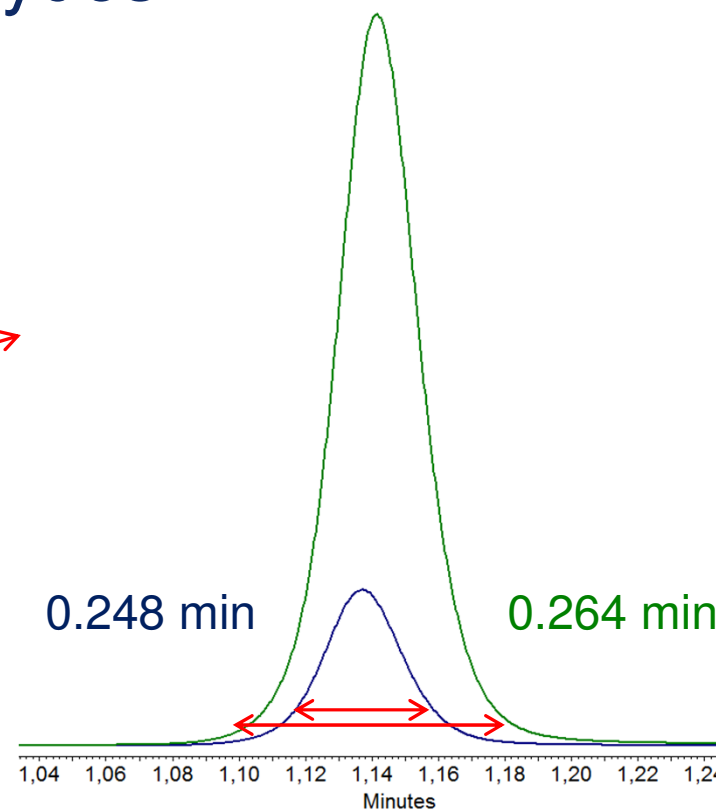
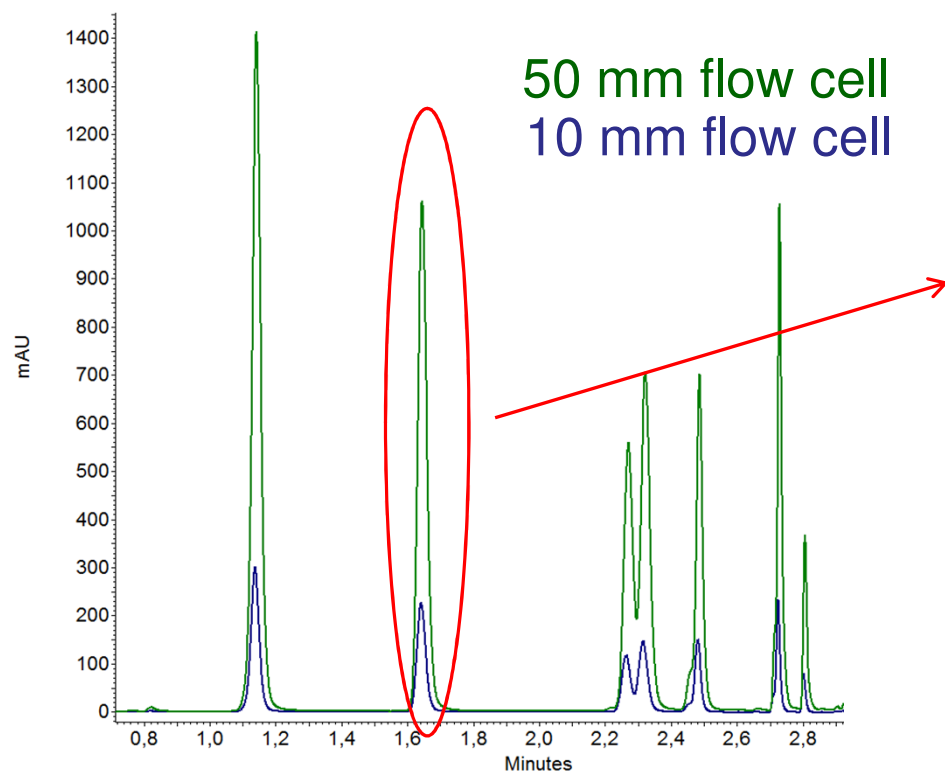
Standard
Routine analysis
10 mm, 10 μ l
(AMC38)

High throughput
High resolution
10 mm, 2 μ l
(AMC19)

High concentration
Purification tasks
3 mm, 2 μ l
(AMB18)

The right flow cell for the right application

► Application DNPH Aldehydes



The right flow cell for the right application

► Standard separations

High sensitivity
Trace analysis
50 mm, 6 μ l
(AMD59)

Standard
Routine analysis
10 mm, 10 μ l
(AMC38)

High throughput
High resolution
10 mm, 2 μ l
(AMC19)

High concentration
Purification tasks
3 mm, 2 μ l
(AMB18)

The right flow cell for the right application

- ▶ Cartridge flow cells are available with following wetted parts
 - Stainless steel
 - maximum back pressure 300 bar (on low pressure side)
 - stainless steel fittings and capillaries recommended
 - Metal-free (PEEK)
 - maximum back pressure 100 bar (on low pressure side)
 - hand-tight PEEK fittings and capillaries recommended to protect the flow cell

The right flow cell for the right application

- ▶ High concentration purification tasks (semi-preparative)

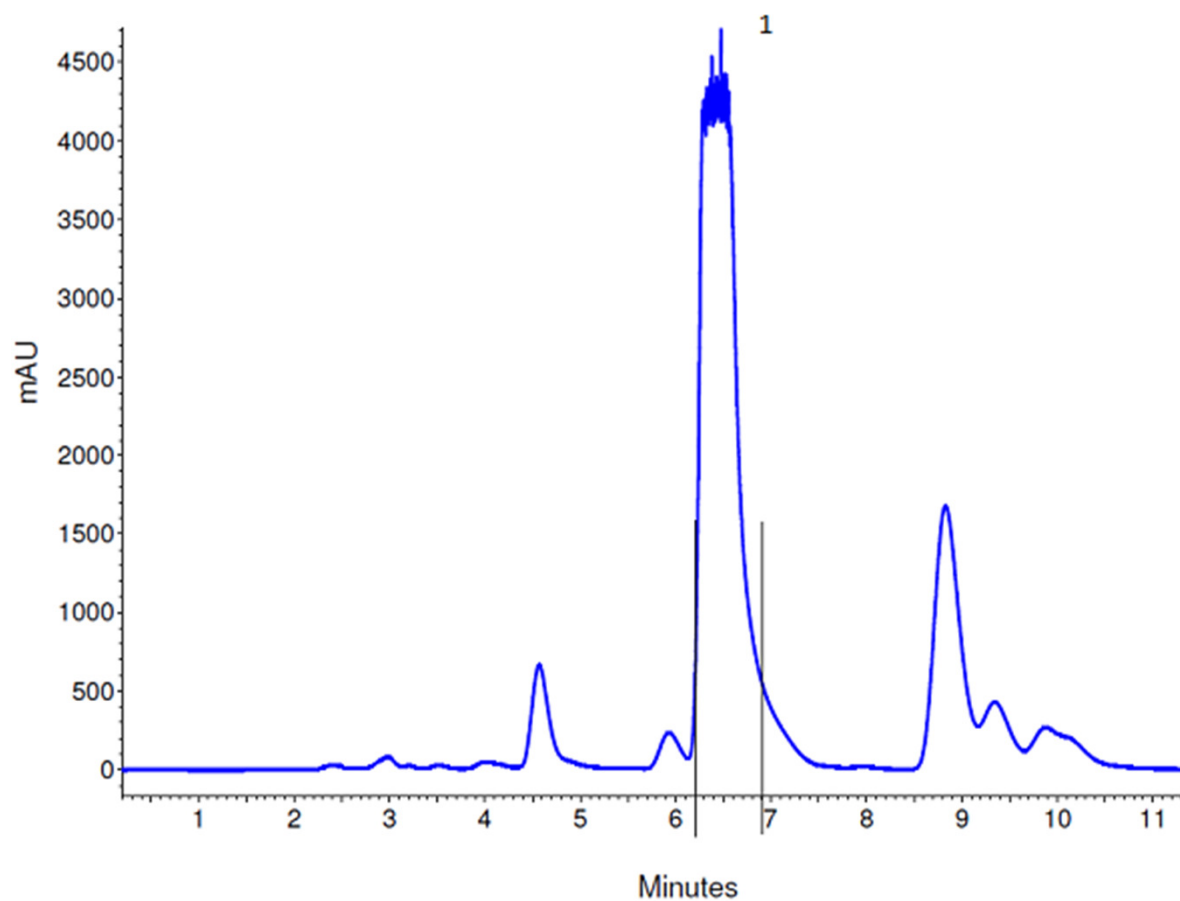
High sensitivity
Trace analysis
50 mm, 6 μ l
(AMD59)

Standard
Routine analysis
10 mm, 10 μ l
(AMC38)

High throughput
High resolution
10 mm, 2 μ l
(AMC19)

High concentration
Purification tasks
3 mm, 2 μ l
(AMB18)

The right flow cell for the right application



The right flow cell for the right application

- ▶ Remote cells



What was important today?

- ▶ The DAD 6.1L is easy to handle and maintain
- ▶ A wide range of applications can be carried out on one device
- ▶ For optimal results, the correct flow cell should be selected



Any questions? Any comments?
Use the Chat Function!



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