

# Azura

► Nano Flow Cell  
Supplement

V6717A



# HPLC

# Table of Contents

Note: For your own safety, read the supplement and always observe the warnings and safety information on the product and in the supplement.

Note: Technical data are subject to change without notice. Please check our website for latest updates and changes.

<b>Product Information</b> . . . . .	<b>4</b>
<b>Installation</b> . . . . .	<b>4</b>
<b>Maintenance</b> . . . . .	<b>5</b>
<b>Cleaning</b> . . . . .	<b>6</b>
Cleaning the flow cell . . . . .	<b>6</b>
Cleaning fiber optic ends . . . . .	<b>6</b>
<b>Troubleshooting.</b> . . . . .	<b>6</b>
<b>Storage.</b> . . . . .	<b>7</b>
<b>Technical Data</b> . . . . .	<b>7</b>
<b>Repeat Orders</b> . . . . .	<b>7</b>

## Product Information

The KNAUER nano flow cell with fiber optic connectors combined with KNAUER AZURA UV detectors is the perfect choice for UV monitoring at low flow rates, particularly in connection with an MS detector.

The flow cell can be located directly behind the column in order to minimize extra column volume and consequently improve peak shape.

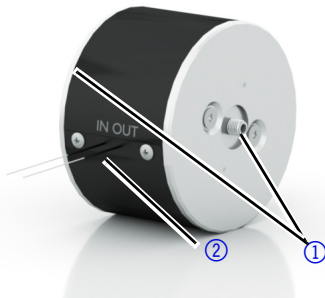
This nano flow cell is compatible with the following KNAUER fiber optic version detectors: AZURA UVD 2.1S, UVD 2.1L, DAD 6.1L, DAD 2.1L, MWD 2.1L and Smartline 2520 and 2600. As all wetted parts are bio-compatible, the flow cells are suitable for LC and Bio LC applications.

## Installation

**Note:** Before connecting the flow cell to your system, flush your column with mobile phase to keep your flow cell clean.

### Process

1. Unpack the flow cell.
2. Remove the protective hoods from the flow cell's fiber optic connectors ① .
3. Remove the protective hoods from the fiber optic cables.
4. Connect the detector and flow cell via fiber optic cables.
5. Connect the capillaries to the flow cell ② .



Store the protective hoods for later use (for storage purposes). The hoods protect the fiber optic connectors from contamination and solarization.

Observe the following regarding the use of fiber optics:

- Do not touch the ends of the fiber optics with your fingers, as this could falsify the measurement and affect the flow cell performance.
- Handle the fiber optics with care, avoid impacts or hard actions.
- Move the fiber optics carefully without using pressure or bending it.

## NOTICE

### Damaged capillaries

The capillaries are brittle and can damage.

- ➔ Handle the capillaries with care.
- ➔ Flow cells with damaged capillaries must be replaced (no repair possible)

## Maintenance

In order to obtain optimal performance, minimal routine maintenance of the flow cell is required. Firstly, it is very important to flush buffered mobile phase out of the flow cell each time the system is shut down. This safeguards the flow cell from clogging.

Secondly, filtered and degassed mobile phase is recommended in order to reduce baseline noise and drift, decrease fluctuations of the system pressure and prolong operating life of the column.

Thirdly, make sure fiber optic ends are clean. Never touch the ends with your fingers as this could lead to contamination which reduces the performance of the flow cell (intensity, wavelength accuracy). Should this occur however, clean with a lens cloth moistened with alcohol or a cotton swab.

Finally, use methanol, ethanol or isopropanol to fill the flow cell to prevent microbial growth when the flow cell is not in use (see "Storage" on page 7).

# Cleaning

## Cleaning the flow cell

The contamination of the flow cell can lead to:

- decreased light intensity
- increased baseline noise and drift
- calibration failure

Therefore, the flow cell should be periodically flushed or cleaned. The following solvents are recommended for cleaning:

- pure water (when using buffers)
- ethanol or methanol

**Note: When the mobile phase is immiscible in water, you can use an intermediary solvent (e.g. isopropanol) before resuming flow.**

## Cleaning fiber optic ends



### Eye damage

Ultraviolet radiation exposure may damage your eye.

→ Turn off the detector power before replacing the flow cell.

Never touch fiber optic ends with your fingers as this could lead to contamination which reduces the performance of the flow cell (intensity, wavelength accuracy). Should this occur however, clean with a lens cloth moistened with alcohol or a cotton swab.

## Troubleshooting

Problem	Possible Cause and Solution
Increased flow cell back pressure	<ul style="list-style-type: none"> <li>▪ Pressure due to dirty flow cell: clean flow cell</li> </ul>
Leak	<ul style="list-style-type: none"> <li>▪ leak due to overpressure: reduce flow</li> <li>▪ leak due to damaged flow cell: flow cell must be replaced (no repair possible)</li> </ul>

Problem	Possible Cause and Solution
Increased baseline noise/sensitivity	<ul style="list-style-type: none"> <li>▪ contamination due to dirty flow cell: clean flow cell</li> <li>▪ contamination due to dirty fiber optic ends: clean fiber optic ends</li> </ul>

## Storage

**Note:** Never store the flow cell in pure water to prevent microbial growth.

### Process

1. Flush the flow cell with an appropriate solvent.
2. Disconnect the capillaries.
3. Disconnect the fiber optic cables.
4. Seal the fiber optic connectors and cables with hoods.

## Technical Data

Name	Order no.
Path length	3 mm
Capillary connection	375 µm OD
Flow cell volume	6 nl
Inner diameter	50 µm
Maximum flow rate	1 µl/min
Maximum pressure	300 bar
Wetted parts	Fused silica

## Repeat Orders

Name	Order no.
KNAUER Nano Flow Cell, 3 mm, 6 nl	A4104
2 x fiber optic cables, 750 mm	A0740
2 x fiber optic cables, custom made length	A0743

© KNAUER Wissenschaftliche Geräte GmbH

All rights reserved.

Technical data are subject to change without notice. Please check our website for latest updates and changes.

Translation of the original German edition of this manual, version 1.0

Last manual update: 2016-04-12

Printed in Germany on environmentally friendly paper from sustainable forests.

® AZURA are registered trademarks of  
KNAUER Wissenschaftliche Geräte GmbH

► See up-to-date manuals online:  
[www.knauer.net/downloads](http://www.knauer.net/downloads)

**HPLC · SMB · Osmometry**

[www.knauer.net](http://www.knauer.net)

KNAUER  
Wissenschaftliche Geräte GmbH  
Hegauer Weg 38  
14163 Berlin, Germany

Phone: +49 30 809727-0  
Telefax: +49 30 8015010  
E-Mail: [info@knauer.net](mailto:info@knauer.net)  
Internet: [www.knauer.net](http://www.knauer.net)



© KNAUER 2016 V6717A/0.1/07.15/Westkreuz