



Article No.: A46002

Articlename: AZURA Educational system

## **Isocratic HPLC system with variable single wavelength UV/VIS detector and manual injection, especially designed for educational purposes**

### **System Proposal**

The AZURA Compact HPLC isocratic educational system is a small complete analytical isocratic HPLC system. Due to its compact dimensions, the system fits onto every laboratory bench. The AZURA Compact HPLC isocratic is based on the multifunctional AZURA element ASM 2.1L and contains two integrated modules and a manual injection valve, that is fixed to the side of the system. The integrated modules are a pump and a UV/VIS detector with one variable wavelength. A flow cell is included in the package. The system comes with an eluent tray for safe storage of up to six bottles. The column can be attached anywhere to the system via magnetic clip. A leak sensor and the capillary guidance as well as the optional AZURA Mobile Control facilitate the safe and user friendly operation. The stackable elements of AZURA allow to create complex system solutions requiring a only minimum of space. Modern design with completely demountable fronts turn the system into a visual highlight.

### **Key features:**

- Complete isocratic analytical HPLC system that needs very little bench space
- UV/VIS detector with one variable wavelength
- Pump unit with pressure sensor for a low pulsation eluent supply
- Optional AZURA Mobile Control App allows direct control of all integrated modules
- Leakage protection
- Complete software package ClarityChrom® (Educational Licence)
- Notebook
- Capillary scheme
- Application note
- Introduction to operation of software and hardware via short movies

## AZURA Educational system: Video Tutorials

The HPLC software ClarityChrom controls the AZURA Educational system and records chromatograms. It also evaluates data for qualitative and quantitative analyses. The handling of ClarityChrom is explained in the first seven AZURA video tutorials.

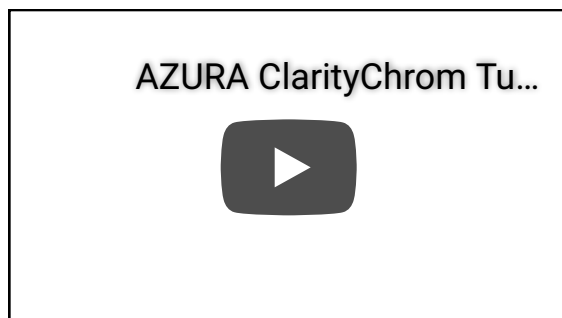
### 1: ClarityChrom Software (in German)



### 2: ClarityChrom main window, configuration, user definition, and project setup (in German)



### 3: Write a method (in German)



### 4: Start an analysis (in German)

AZURA ClarityChrom Tu...



**5: Qualitative analysis (in German)**

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**6: Calibration (in German)**

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**7: Quantitative analysis (in German)**

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## TECHNICAL DATA

### Analytical system

<b>Application area</b>	Educational
<b>Pump system</b>	Isocratic
<b>Gradient</b>	None
<b>Injection</b>	Handinjection
<b>Detector</b>	Variable single wavelength detection UV/VIS
<b>Software</b>	Mobile Control, ClarityChrom
<b>Pressure</b>	400 bar
<b>Column thermostat</b>	no



## SYSTEM COMPONENTS



### AZURA Assistant ASM 2.1L

Article No. AYCALXBQ

UVD 2.1S – Empty module – P 4.1S, 10 ml, stainless steel

Function : **Detection, Eluent delivery**

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### Analytical UV Flow Cell

Article No. A4061XB

10 mm path length, 10  $\mu$ l, 1/16", 300 bar, stainless steel, with heat exchanger one sided inlet and outlet, classical KNAUER flow cell

Flow cell type : **Analytical UV flow cell**

Path length : **10 mm**

Capillary connection : **1/16"**

Max. flow rate : **20 ml/min**

Flow cell volume : **10  $\mu$ l**

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### AZURA Eluent tray E 2.1L

Article No. AZC00

AZURA® Eluent tray E 2.1L for AZURA® devices with a capacity of 6 x 1 l bottles or 4 x 2.5 l bottles or 2 x 5 l bottles, (delivery without bottles)

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### Set of eluent supply bottles for analytical HPG systems

Article No. A5324-1

Set of eluent supply bottles, 2 x 1 L bottles, includes screw caps with holes for eluent tubing



### AZURA V 2.1S valve

Article No. AVI26BC

Manual 6 Port 2-position valve, stainless steel, 1/16", 400 bar

Operated : **manual**

Port number : **6**

Positions : **2**

Capillary connection : **1/16"**

Max. pressure [bar] : **400 bar**



### 10 µl Sample loop

Article No. A05645

Sample loop, 10 µl, stainless steel, 0.25 mm ID



### Mounting bracket AZURA L

Article No. A9853

Mounting bracket AZURA® L for KNAUER manual injection valves





### Injection syringe

Article No. A0726

Injection syringe 100  $\mu$ l



### Eurosphere II 100-5 C18 with precolumn, Column 125 x 4 mm

Article No. 12WE181E2J

Modification : **C18**

Length [mm] : **125 mm**

Inner diameter [mm] : **4 mm with integrated precolumn**

Brand : **Eurosphere II**

Particle size : **5  $\mu$ m**



### Column holder: Magnetic clip

Article No. A9847

Column holder: Magnetic clip, for all columns with 1/4" OD, for all KNAUER columns with 3, 4 and 4.6 mm ID, compatible with all AZURA® devices



### AZURA Capillary Start-up kit for educational system

Article No. A9849-2

AZURA Capillary Start-up kit for educational system 1/16", stainless steel



**Tool kit AZURA**

Article No. A1033-1

Tool Kit AZURA® for 1/16" systems (stainless steel)



**ClarityChrom 8.1 - Educational license**

Article No. A1672

Educational system license for one system

Software name : **ClarityChrom**



**Laptop**

Article No. A13112

Laptop for PurityChrom® and ClarityChrom®, Windows 10, Intel® Core™ i3, 8 GB RAM, 256 SSD, german edition



**Router 8-Port, EU-version**

Article No. A64809

WLAN Router, 8-port Gigabit RJ-45

## ACCESSORIES & SPARE PARTS



**Eurosphere II 100-5 C18  
with precolumn, Column  
125 x 4 mm**

**Article No.: 12WE181E2J**



**Start-Up Kit for the  
Educational system**  
AZURA Capillary Start-up  
kit for educational system  
1/16", stainless steel

**Article No.: A9849-2**



**Metal capillary cutting  
pliers**  
Metal capillary cutting  
pliers for 1/16" capillaries

**Article No.: A0809**



**Capillary grater**  
Capillary grater for  
degreasing of 1/16"  
stainless steel capillaries,  
can also be used to  
remove column filters

**Article No.: A0137**



**Torque wrench**  
Torque wrench basic tool,  
1-25 Nm, without plug-in  
head

**Article No.: X0219**



**Installation Box Kit**  
Installation Box Kit, Box for  
small parts, KNAUER file  
folder and support sticker

**Article No.: A9862**

## DOCUMENTS AND MORE INFORMATION

### **Preparation of calibration and samples for the quantification of caffeine with the AZURA® Educational system**

caffeine, 4-acetaminophenol (paracetamol), theophylline, VSP0018

Application    English    PDF    1.2 MB

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### **Quantification of caffeine with the AZURA® Educational system and ClarityChrom software**

caffeine, 4-acetaminophenol (paracetamol), theophylline, VSP0017

Application    English    PDF    317.0 KB

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### **Quantification of caffeine with the AZURA Educational system and Mobile Control Software**

caffeine, 4-acetaminophenol (paracetamol), theophylline, VSP0016

Application    English    PDF    1.5 MB

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### **VSP0009N\_A\_D Quantifizierung von Coffein mittels HPLC auf dem KNAUER Ausbildungssystem**

Coffein, Paracetamol, Theophyllin (IS), VSP0009N\_A\_D

Application    English    PDF    2.2 MB

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### **VSP0009N\_A\_E Quantification of caffeine using the KNAUER HPLC educational system**

Caffeine, paracetamol, theophylline (internal standard, IS)

Application    English    PDF    1.6 MB

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### **AZURA Compact HPLC Capillary connection plan EN/DE (V7063)**

Manual    English    PDF    484.4 KB

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### **2014-06-10 recorded webinar azura educational system**

Recording of the webinar about the AZURA Educational HPLC system

video    English    mimetype\_text/html  
707.0 Byte

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### **AZURA Educational HPLC flyer**

Brochure for the AZURA Compact HPLC educational system, V7853-1US

Brochure    English    PDF    478.7 KB

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### **AZURA Ausbildungs-HPLC Faltblatt**

Broschüre für das AZURA Compact HPLC Ausbildungssystem, V7853-1DE

Brochure    German    PDF    485.3 KB

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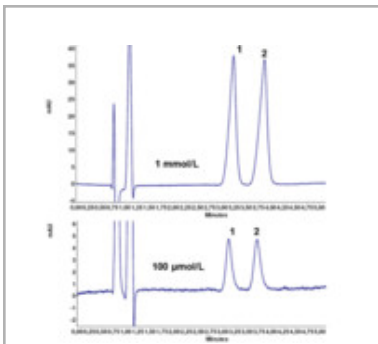
### **AZURA System Selection Guide (V7857US)**

AZURA System Selection Guide, V7857US

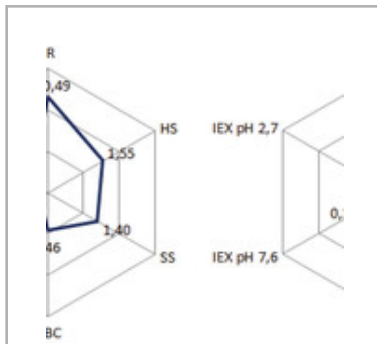
Brochure    English    PDF    1.3 MB

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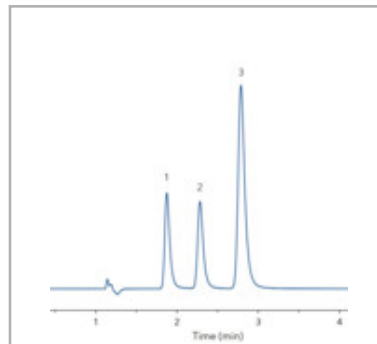
## APPLICATIONS FOR THIS PRODUCT



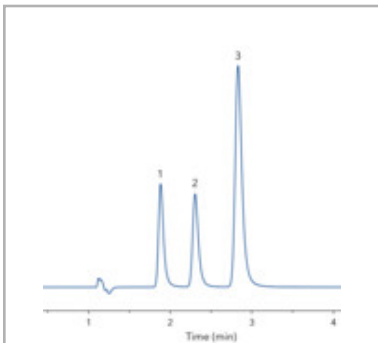
**Separation of Acetate and Formate**



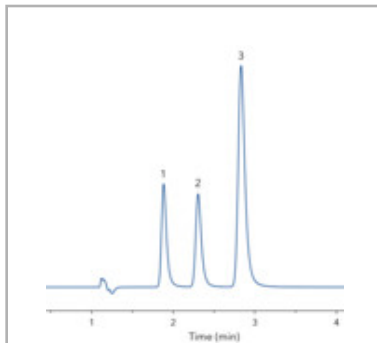
**Column choice based on Tanaka characterization - not all C18 columns are the same**



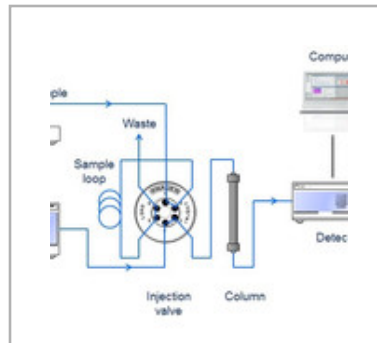
**Quantification of caffeine with the AZURA Educational system and Mobile Control Software**



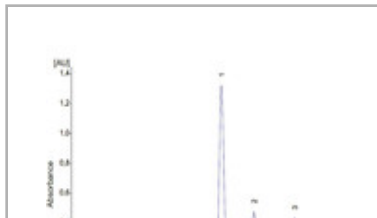
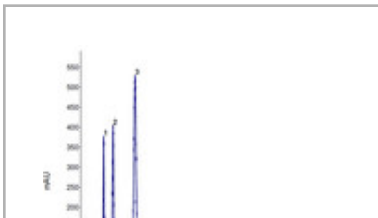
**Quantification of caffeine with the AZURA® Educational system and ClarityChrom software**



**Preparation of calibration and samples for the quantification of caffeine with the AZURA® Educational system**



**HPLC Basics – principles and parameters**







## Do you need more details or a quote?

We are happy to help you



+49 30 809727-0



[sales@knauer.de](mailto:sales@knauer.de)

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