KNAUER

Article No.: A29201
Articlename: Cannabis Producer SMB Pilot System for continuous cannabinoid production

Cannabis Producer: SMB Pilot System for continuous cannabinoid production

Efficient purification of cannabinoids from cannabis

To extract high-purity pharmaceutical active ingredients from natural products at high yields is a major challenge. This also applies to the cannabinoid sector. Simulated Moving Bed (SMB) chromatography, as a continuous LC method, sets the standard for productivity, purity and yield.

This AZURA SMB pilot system "Cannabis Producer" is dedicated for the continuous production of cannabinoids from cannabis. The Cannabis Producer allows the continuous separation of mixtures of substances and extraction into two fractions. High purities and simultaneous yields of up to 100% distinguish this process from conventional preparative LC methods.

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The system features four preparative Pump 2.1L and seven multi-position valves integrated into four AZURA Assistans ASM 2.2L

- The three system pumps are equipped with 500 ml/min stainless steel pump heads, enabling volume flows of up to 250 ml/min inside the SMB cycle. The feed pump works with a 100 ml pump head and can thus also precisely dose the feed in the low flow range.

- The seven multi-position valves, operated by the valve unifier VU 4.1, are made of stainless steel and are equipped with connections for 1/8" pipes. The Valve Unifier VU 4.1, integrated in the ASM 2.2L provides the newest technology to our SMB systems. The smart valve drive features automatic valve recognition and adjusts torque and switching speed specifically for each valve. This RFID technology enables to read GLP data, for example the maintenance of the rotor seal exchange is simplified by automatic notifications.

- The new plug-in design of the ASM 2.2L allows the modules to be removed by loosening just four screws, enabling the user to quickly exchange the modules. Especially in production processes the downtime of a system in case of service needs to be minimized.

- The PurityChrom® MCC control software provides an intuitive ⌐d easy operating of the SMB. PurityChrom® MCC offers the

Help ,sibility to independently record, store, monitor, and process error messages, warnings of level meter as well as several

detector signals (UV, RI), flowmeters and other signals via analog inputs. The software complies with 21 CFR Part 11.

- The Pilot SMB system includes four flowmeters. Flow rate accuracy in all SMB zones and the feed stream is recorded for each cycle. The use of four flowmeters allows a complete real-time monitoring of the entire SMB process so that the user can directly react to deviations of the flow rates.

- As a complete system, the Cannabis Producer will be pre-installed on a table with the dimensions 1300 x 870 x 1000 mm (WxDxH). Every device and capillaries are fixed and therefor well structured. Additional components i.e. flowmeters are also integrable. The product streams and the column in and outlets are placed user friendly outside the table ensuring a fast and easy connection via tube fittings. The easy cleanable stainless-steel surface, antistatic wheels and leakage tubs fulfils main requirements for production areas. The AZURA SMB Pilot System can be easily transferred by the customer inside or between different production sides due to the moveable design.

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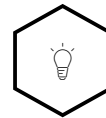*Complete Cannabis Producer SMB Pilot System*

KEY FEATURES

Made in Germany

Certified quality management

Customized solutions

60 years experience

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SYSTEM COMPONENTS

AZURA P 2.1L

Article No. APE20MA

AZURA® Pump P 2.1L with 500 ml pump head (stainless steel)

Max. flow rate : **500 ml/min**

Pump head materials : **Stainless Steel**

Gradient : **Isocratic**

Pump features : **Piston seal wash,   Leak management,   Purge valve (manual),   RFID for automatic pump head detection,   Active pulsation compensation,   Integrated pressure sensor**

Maximum delivery pressure [MPa] : **10 MPa**

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AZURA P 2.1L

Article No. APE20KA

AZURA® Pump P 2.1L with 100 ml pump head (stainless steel)

Max. flow rate : **100 ml/min**

Pump head materials : **Stainless Steel**

Gradient : **Isocratic**

Pump features : **Piston seal wash, Leak management, Purge valve (manual), RFID for automatic pump head detection, Active pulsation compensation, Integrated pressure sensor**

Maximum delivery pressure [MPa] : **40 MPa**

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Table AZURA SMB Pilot

Article No. A70018

On Wheels - The Azura SMB Pilot System

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Upgrade-Kit Flowmeter for AZURA Pilot SMB (Set)

Article No. A29803

CORI-Flow M14, monitor your process, maximum security

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Software to control your Simulated Moving Bed Chromatography System

Article No. A2659

Easy to use, user-friendly, 21 CFR part 11 compliant

Software name :   **PurityChrom® MCC**

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PFA tubing, chemically resistant, translucent

Article No. A31891

PFA tubing, 1/4" OD, 4 mm ID, translucent, max. pressure 15.4 bar, variable length

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1 ml Sample loop

Article No. A1043

1 ml sample loop, stainless steel, 2.2 mm ID, incl. M8x1 fittings

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PFA tubing, chemically resistant, translucent, by the meter

Article No. A31892

PFA tubing, 1/8" OD, 1.6 mm ID, translucent, variable length

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Antistatic PTFE Tubing 1/8" for Normalphase

Article No. A3306

1.6 mm ID, variable length, 1/8" OD, black, antistatic

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Antistatic PTFE Tubing 1/4" for Normalphase

Article No. A3307

4.4 mm ID, variable length, 1/4" OD, black, antistatic

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Chromatography Workstation for PurityChrom® and ClarityChrom®, PC with 24" monitor

Article No. A13120

Desktop PC (SFF) for PurityChrom® and ClarityChrom® with 24" monitor, English edition Windows 10 Prof. 64-bit English, Intel® Core™ i5, 8 GB RAM, 256 GB SSD, two network cards

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8-Port GBit Switch for connection of AZURA devices with a PC

Article No. A3119

AN GBit Switch NetGear GS108GE, 8x RJ-45, GBit, Auto MDI-X

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Manual injection valve, 2-position, 6 Port

Article No. AVK25AE

Manual injection valve, 6 Port, DLC stainless steel, PEEK, 1/8", 300 bar, 1.5 mm bore size

Operated : **manual**

Port number : **6**

Positions : **2**

Material : **Stainless Steel**

Capillary connection : **1/8"**

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Universal valve drive for ASM 2.2L

Article No. EWA04

Assistant module VU 4.1 for valves V 4.1

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Empty module SMB for ASM 2.2L

Article No. G2022A

Cover plate for slots without an assistant module

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Customizable docking station for pumps, valves and detectors - ASM 2.2L

Article No. AY00008

Left module: Valve drive VU 4.1 - EWA04 Middle module: Empty module Right module: Valve drive VU 4.1 - EWA04

Left module : **Valve drive VU 4.1 - EWA04**
Middle module : **Empty module**
Right module : **Valve drive VU 4.1 - EWA04**

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Customizable docking station for pumps, valves and detectors - ASM 2.2L

Article No. AY00016

Left module: Valve drive VU 4.1 - EWA04 Middle module: Empty module Right module: Empty module

Left module :   **Valve drive VU 4.1 - EWA04**

Middle module :   **Empty module**

Right module :   **Empty module**

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DOCUMENTS AND MORE INFORMATION

AZURA SMB systems

AZURA SMB systems brochure, V7741US

Brochure   English

Overview of UNF 1/4-28 fittings

Lists all available 1/8" fittings suited for V 4.1 valves

Information   English

General Questionnaire for Purification requests (VQUEST-003)

Other   English

Certified Quality

KNAUER is known for the quality of its products and has been certified several times. We produce high-tech laboratory instruments for research, routine analysis and production for 59 years.

See all Quality certificates

In addition, we have extended documentation about all our

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products, including **CE Declarations of Conformity.**

See all CE Declarations of conformity

Innovation and quality - since 1962. Made in Germany.

Do you need more details or a quote?

We are happy to help you

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