

The ÄKTA ready™ virtual reality operator training experience

Train new operators anywhere at any time

This training is a digital simulation of scenarios for the ÄKTA ready™ single-use liquid chromatography system. Your operators will enter an immersive learning environment where barriers dissolve between virtual and actual hands-on learning.

They will move about freely in a 3D virtual setting, interacting with simulated real-world tools, our products, and teammates and instructors by using a virtual reality (VR) headset and controllers.

Reduce operational costs and increase productivity

Downtime of any duration can significantly disrupt your production schedule and result in missed deadlines. Bottom lines are impacted when your ÄKTA ready™ system is taken out of production for training.

This training experience allows you to onboard new operators — without using consumables or interrupting your production tempo.



Reduce the time needed to onboard new operators

- Speed up operator time to competency
- Improve access to training systems
- Reduce risks and costs associated with in-person training

Allow operators to develop process and muscle memory

- Repeat procedures as often as needed
- Avoid the requirement for a dedicated training system
- Eliminate the use of and potential damage to consumables



Reduce production downtime for training

Maintaining access to a designated training system can be a struggle. The VR Training Academy from Cytiva can provide training for new employees from day one — without tying up an $\ddot{A}KTA\ ready^{\text{\tiny M}}\ system$.

Begin training before your systems are delivered

Training in VR allows your operators to begin getting familiar with the equipment as soon as the purchasing contract is approved. By starting operator training before your system arrives, operators can get familiar with the equipment and procedures ahead of time.

VR training limits downtime after installation and qualification to the hands-on portion of the operator qualification process, allowing production runs can begin sooner.



Operator training includes these common procedures

- Product orientation
- Column connection
- Flow kit installation
- Controlled system shutdown
- pH probe calibration

Headset recommendations

letnered	Standalone	
HP Reverb G2	Oculus Quest 2	Oculus Quest 2
	(Enterprise + Link)	(Enterprise)

Challenges with 100% in-person training	Potential impact on operations	Advantages of VR training
Limited equipment access	Ties up production equipment	Production goes on as scheduled
Limited trainer availability	Lengthy time for operator competency	Flexibility maximizes training opportunities
Employee turnover and onboarding	It takes many production cycles to address operator turnover	Repetitions can be performed in a single session
Global and regional barriers to travel	Limited access to trainers with a common geography and language	People around the world can meet in the VR space

Computer requirements

Component	Recommended specs	Minimum specs	
Processor	Intel i5-4590	Intel i3-6100	
	AMD Ryzen 5 1500X or greater	AMD Ryzen 3 1200	
		FX4350 or greater	
Graphics card	NVIDIA RTX 2070	NVIDIA GTX 1060	
	NVIDIA Quadro RTX 3000	NVIDIA Quadro P5000	
Memory	8GB+ RAM	8GB+ RAM	
Operating system	Windows 10	Windows 10	
USB ports*	1x USB 3.0 ports	1x USB 3.0 ports	
Video output*	Compatible DisplayPort video output	ut Compatible miniDisplayPort video output (miniDisplayPort to DisplayPort adapter included with Rift S) Compatible Thunderbolt video output (Thunderbolt to DisplayPort adapter required)	

cytiva.com/vr

Cytiva and the Drop logo are trademarks of Life Sciences IP Holdings Corporation or an affiliate doing business as Cytiva.

ÄKTA ready, and OptiRUN is a trademarks of Global Life Sciences Solutions USA LLC or an affiliate doing business as Cytiva.

© 2022 Cytiva

For local office contact information, visit cytiva.com/contact

