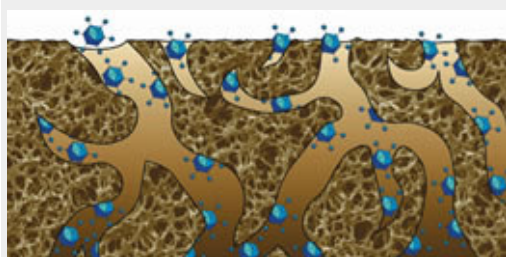


Vivapure AdenoPACK 500

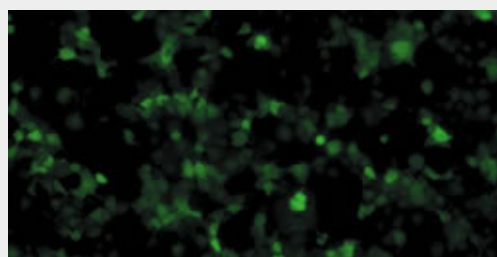
Kit for adenovirus purification and concentration

Vivapure AdenoPACK 500 is the direct upscale kit to the AdenoPACK 100, for adenovirus purification. In only 2 hours up to 3×10^{13} adenovirus particles are purified and concentrated from 500 ml cell culture. This completely ready-to-use kit is conveniently operated by a laboratory pump, offering optimal flow control and minimal hands-on time. This easy to use product replaces lengthy and inefficient cesium chloride density gradient methods.



Membrane adsorber technology:

Membrane adsorbers are ideal for virus purification. Large flow through pores allow unrestricted adenovirus access and convective transport speeds purification.



Fluorescent cell assay

Photography: kindly provided by Dr. Lux, University Hospital and University of Applied Sciences, Mannheim. COS-1 cells infected with Ad5 GFP-constructs after purification and concentration with Vivapure AdenoPACK 500.

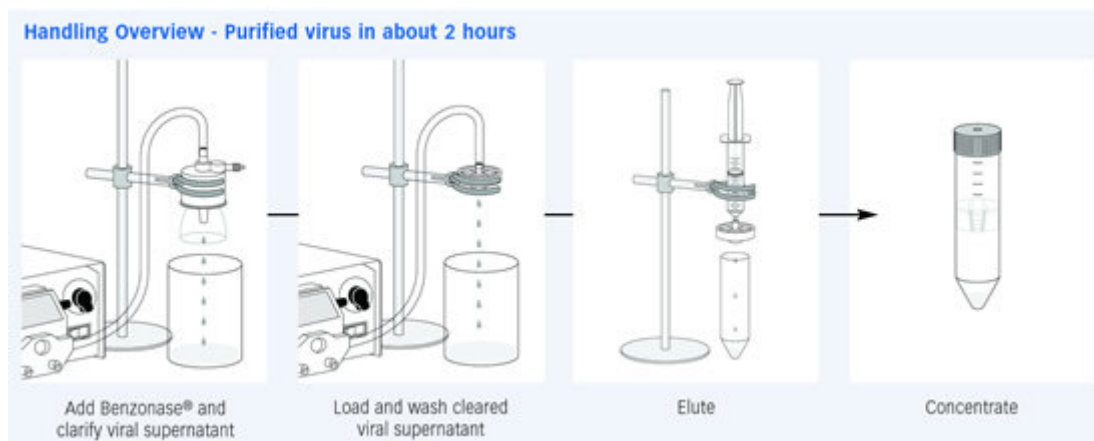
Membrane adsorber technology:

AdenoPACK encompasses the advantages of open structures of membranes with the benefits of classical chromatography. Our membrane adsorbers with porous matrices, high capacities, low differential pressures, high flow rates and low unspecific adsorption show an excellent performance in small scale virus purification. However, they are also scalable and confirm to cGMP facilities to large volume, high performance separation, reducing the processing time by a factor of 10 in the final process.

Cultures should be grown in DMEM + 10% FBS pH 7.0 - 7.4 at 37°C with 5% CO₂

AdenoPACK 500 Adenovirus purification and concentration kit features and benefits

Feature	Benefit
Pump driven kit	» Easy and controlled purification of Adenovirus from large cell culture volumes
Virus purification based on membrane adsorber technology	» High-speed process completed in about 2 hours » Excellent viral access provides quantitative recoveries
Kit contents include Sartopore 2 150, AdenoPACK syringe filter, Vivaspins and all buffers	» Convenient, easy to use alternative
Able to process 10 to 25 plates (up to 500 ml)	» Flexible, most cost-effective kit in the market for purifying $1-3 \times 10^{13}$ viral particles.



Kit Specifications

Sample Size	Up to 500 ml of Adenovirus supernatants
Recovered virus particles (VP)	Typically up to 3×10^{13}
VP/IU	20 - 50
Processing time	Typically 2 hours
Endotoxin level	< 0.025 EU/ml

Materials of construction

AdenoPACK syringe filter housing:	Polysulfon
AdenoPACK syringe filter membrane	Stabilized regenerated cellulose
Sartopore 2 150	Polypropylene
Vivaspin housing	Polycarbonate
Vivaspin membrane	PES
Buffer containers	LDPE

Ordering Information

Kit Contents and ordering information

AdenoPACK 500	VS-AVPQ501
AdenoPACK Membrane Adsorber	1

Benzonase® Nuclease* 12.5 U/μl	500μl
Sartopore 2 150	1
Tubing set	2
10 ml syringe (elution)	1
Loading Buffer (10x)	1 x 60 ml
Washing Buffer	1 x 30 ml
Elution Buffer	1 x 20 ml
Vivaspin 20 concentrator, 100 kDa MWCO	2
Instructions	1 each for Kit and Vivaspin

Purification results from preparations with Ad5 GFP-constructs

Product	Purification method	Process time	Eluate*	Recovery**	Viral Particles
AdenoPACK 500	500 ml culture	1-2 hours	1 ml	80%	1-3 x 10 ¹³
AdenoPACK 100	60 ml culture	1-2 hours	1 ml	65%	1-3 x 10 ¹²
AdenoPACK 100	200 ml culture	2 hours	1 ml	80%	1 x 10 ¹³
	500 ml CsCl	24-48 hours	1-2 ml	60 - 70%	1-5 x 10 ¹¹⁻¹²

*after dialysis **before buffer exchange

Ordering Information for AdenoPACK 500 Accessories

Order number	Product
VFP001	Masterflex Drive Peristaltic Pump 230 V
VFP002	Masterflex Drive Peristaltic Pump 115 V
VFP010	Masterflex Standard Pump Head - Size 16
VFP012	Masterflex Easy Load Pump Head - Size 16

* Benzonase® Nuclease is manufactured by Merck KGaA, Darmstadt, Germany and is covered by US Patent 5,173,418 and EP Patent 0,229,866. Nycomed Pharma A/S (Denmark) claims worldwide patent rights to Benzonase® Nuclease, which are licensed exclusively to Merck KGaA, Darmstadt, Germany. Benzonase® Nuclease is a registered trademark of Merck KGaA, Darmstadt, Germany.



Virus purification tests conducted in cooperation with Progen Biotechnik GmbH, Heidelberg. Providing custom made vector development and production service for Adenovirus and Adeno-associated Virus vector systems.

Warning: The virus purified using this kit is capable of infecting human or animal cells and could, depending on the gene insert, expose the user to potentially hazardous biological material. Adenoviruses have been designated as Level 2 biological agents. All protocols detailed in these operating instructions must be performed under at least Biosafety Level 2 working condition this kit is NOT intended for human or animal diagnostic or therapeutic applications.

