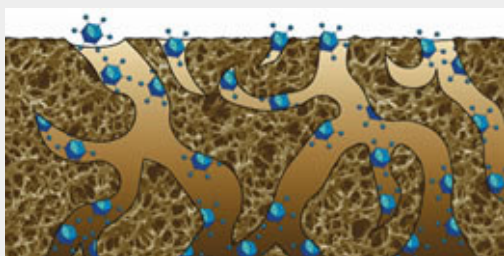


Vivapure AdenoPACK 100

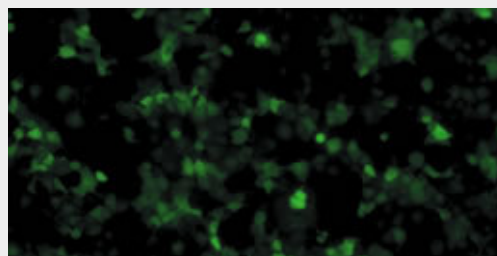
Fast purification of up to 1×10^{13} viral particles

Vivapure AdenoPACK 100 is optimally suited for adenovirus purification from up to 200 ml cell culture for in vitro transfection. This flexible kit contains two AdenoPACK 100 units, which can be either used in tandem for the purification of up to 200 ml cell culture supernatant or individually for purifying virus from up to 60 ml cell culture. The purification is pursued manually with a syringe optimally attached to a retort stand. However, for even more convenience, protocols are provided for optionally running the virus purification with a peristaltic pump or with an infusion pump, in addition to detailed instructions for a manual operation supplied with the Kit. The accessories needed for the operation with a pump are supplied as individual products.



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

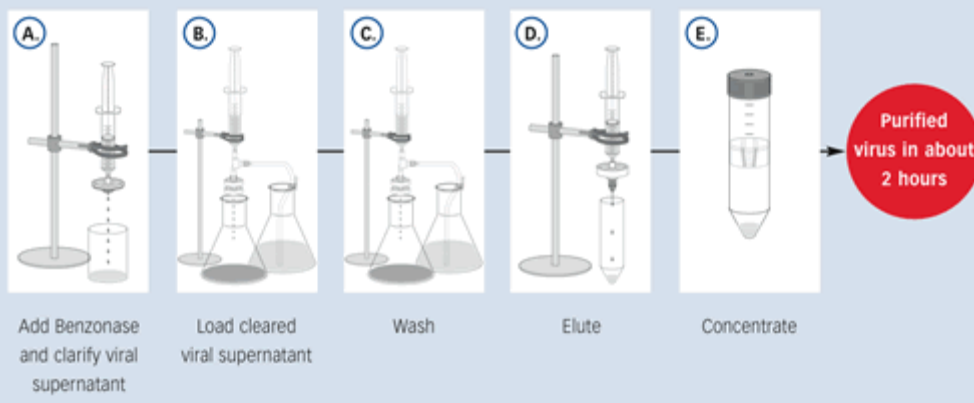
Photography: kindly provided by Dr. Lux, University Hospital and University of Applied Sciences, Mannheim. COS-1 cells infected with Ad5 GFP-constructs after purification and concentration with Vivapure AdenoPACK 100.

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.

Handling Overview - Purified virus in about 2 hours

The AdenoPACK Adenovirus purification and concentration kit contains all materials necessary to obtain a range of $1 - 5 \times 10^{13}$ virus particles in a milliliter.



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

AdenoPACK 100 Adenovirus purification and concentration kit features and benefits

Feature	Benefit
Virus purification based on membrane adsorber technology	» High-speed process completed in about 2 hours » Excellent viral access provides quantitative recoveries
Kit contents include Minisart, AdenoPACK syringe filters, Vivaspin and all buffers	» Convenient, easy to use alternative
Able to process 1 to 10 plates (20 to 200 ml)	» Flexible ,most cost-effective kit in the market for purifying 1×10^{13} viral particles.

Ordering Information for AdenoPACK 100 Accessories

Order number	Product
VS-AVPA001	Pump tubing set for Vivapure AdenoPACK 100
VFP001	Masterflex Drive Peristaltic Pump 230 V
VFP002	Masterflex Drive Peristaltic Pump 115 V
VFA012	Masterflex Easy Load Pump head - Size 16

Kit Specifications

Sample Size 20 to 200 ml of Adenovirus supernatants

Recovered virus particles (VP) Typically up to 1×10^{13}

Sartorius Croatia - Libra elektronik d.o.o.
Savska 45A, 10 290 Zaprešić
Ovlašteno zastupstvo i servis Sartorius RH
Sartorius.Croatia@email.t-com.hr, service@sartorius.hr
www.Sartorius.hr
Tel: 01 3340-290/291/293/295/296, fax: 01 3340-299
P.J. Solin, Zgon 80, 21210 Solin, 091 563 2266

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
Minisart housing	Cryolite
Minisart Plus membrane	Cellulose acetate with glass fiber prefilter
Vivaspin housing	Polycarbonate
Vivaspin membrane	PES
Buffer containers	LDPE

Ordering Information

Kit Contents and ordering information

AdenoPACK 100	VS-AVPQ101
AdenoPACK 100 RT	VS-AVPQ102***
AdenoPACK Membrane Adsorber 2	
Benzonase® Nuclease* 12.5 U/μl	200μl
50 ml Syringe	2
Minisart Plus	4
20 ml Syringe	4
Tubing set	2
10 ml syringe (elution)	2
Elution Tip (Red)	2
Loading Buffer (10x)	1 x 25 ml

Washing Buffer	1 x 120 ml
Elution Buffer	1 x 20 ml
Vivaspin 20 concentrator	4
Instructions	1 each for Kit and Vivaspin

*** AdenoPACK 100 RT does not contain Benzonase - all other contents are identical to AdenoPACK 100.

Purification results from preparations with Ad5 GFP-constructs

Purification method	Process time	Eluate	Recovery**	Viral Particles
60 ml culture	1 - 2 hours	1 ml	65%	1 - 3 x 10 ¹²
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

* 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® 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.