Universal Viral Particle Concentration Kit

Cat#: VirC50

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GENXP LLC
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USER INSTRUCTION

Univir™

Virus Particle Concentration Kit

(Cat#: VirC50)

Storing the Kit

The virus concentration and Purification Kit should be stored at 4-8°C.

Disclaimer

Genxp LLC disclaims any and all responsibility for any injury or damage which may be caused by the failure of the buyer or any other person to use these products in accordance with the conditions outlined herein or in accordance with NIH guidelines for Biosafety Level 2 or up infectious agents and recombinant DNA material.

Introduction

The Univir™ Virus Particle Concentration Kit contains Virus Particle Concentration Kit (Cat#: VirC50) from cell culture supernatants, cell lysis and body fluids, even environmental liquids, such as water. Current viral concentration kits on market can be categorized as polymer-based and filter device-based methods. Polymer-based method needs overnight incubated at 4°C along with high speed centrifugation (8,000g) for at least 30 min. The concentrated viral particles are always contaminated with protein aggregates and the difficult-suspended materials. Filter device-based method needs the special filter device and equipment. The viral particles easily stick to filter devices and hard to recovery. The resulting viral yield and purity of both methods are unsatisfied. Univir™ Virus Particle Concentration Kit provides a fast, easy, efficient method to concentrate and purify viral particles at any scale from wide liquids including cell culture media, cell lysis, and body fluids. The performance of viral particle concentration has been proven in recombinant retrovirus, lentivirus, rAAV, EBV, HAV, HBV, HCV and rotavirus etc. The concentrated virus are suitable for *in vitro* experiments, *in vivo* animal studies, and even vaccine production.

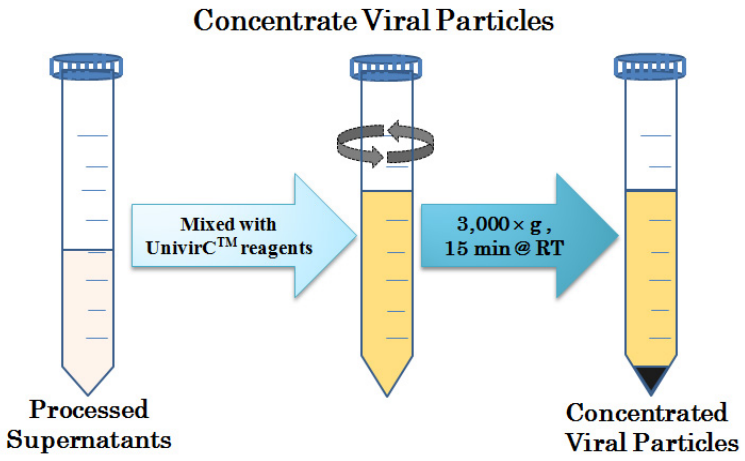
Compared to other kits, our product had the following features:

- **Fast to concentrate virus particles (<30 min),**
- **Easy (Low speed 3,000g; No incubation) to operate,**
- **Efficient (>95% Yield; >95% Purity),**
- **Up to 100 fold concentrated,**
- **Low endotoxin level,**
- **Suitable for all almost natural and recombinant virus particles.**

A brief procedure is outlined below

Univir™
Virus Particle Concentration and Purification Kit
(Cat#: VirC50 and VirP300)

High Yield and Purity of Viral Particles within 30 mins



Kit Components

Univir™ Virus Particle Concentration Kit of Genxp LLC (cat#: VirC50) contains materials for virus particle concentration and purification from 50 ml of cell culture supernatants, body fluids, and environmental liquids.

Components	Volume
Buffer V1	25 ml
Buffer V2	25 ml
Enhancer C	500 µl
Enhancer T	500 µl
User Guide	Available online
Material Safety Data Sheet	Available online

Additional Materials/Equipment

- Crude virus sample to be purified.
- Benchtop centrifuge (3000g) and microcentrifuge
- Final virus suspension buffer (your choice)
- 0.45 μm filter device
- 15~50 mL polypropylene tubes with double-lead threads (leakage may occur if using single-lead tube).

Warning

This kit permits quick concentration and purification of virus particles. The most virus particles are infectious and should be handled at least BSL2 safety level. The special precautions should be followed as your institute IRB and government guideline. Wear hand, eye, face, and body personal protective equipment (PPE) when using this kit. Genxp LLC takes no responsibility for improper use of this kit.

For research use only. Not for use in diagnostic or human clinical procedures.

Protocol for Virus Particle Concentration (Cat#: VirC50)

1. Preparation of Crude Virus Sample

1. Collect cell culture supernatants, or cell lysis, body fluids, even environmental liquids.
2. Centrifuge the raw virus sample at 2,500×g for 15 minutes at 4˚C or room temperature to remove cells and large particles.
3. Carefully transfer supernatants into new tubes and then pass through 0.45 μm filter or centrifuge supernatants at 10,000×g for 10 minutes at 4˚C to remove most of large particles.

2. Virus Particle Concentration

1. Transfer the desired volume of the above raw virus samples to a new tube and add 0.5 volumes of Buffer V1, 0.5 volumes of Buffer V2, and 1/100th volume of Enhancer C and T, respectively. (Refer to the table below for sample volumes)

Supernatants	Buffer V1	Buffer V2	Enhancer C	Enhancer T
5 ml	2.5ml	2.5 ml	50 μl	50 μl
10 ml	5 ml	5 ml	100 μl	100 μl

2. Mix supernatants with the buffers well (Do not vortex), and then centrifuge the samples at 2,500g for 15 min at 4°C or room temperature.

3. After centrifugation, remove supernatants carefully with pipette. Left 200~500 µl of supernatants in bottom! Do not touch this soft pellet in the bottom!
4. Option: Transfer the soft pellet with supernatants (200~500 µl) to a 2 ml dolphin microtube
5. Spin down for 3~5 min at 2,500g.
6. Virus are concentrated on the interface and bottom phases! Remove the extra reagents / supernatants carefully with pipette! Do not touch the interface and bottom phases!
7. Suspend the concentrated virus in PBS or your desired buffer.
8. These concentrated virus are suitable for most of *in vitro* applications, such as RNA isolation (***Do not use classical TRIZOL reagent for RNA isolation***), ELISA and western blot, etc.
9. If trace contaminated proteins, endotoxins and reagents are concerned, or purer virus particles (such as for Protein Mass Spectrometer, and *in vivo* animal study, vaccine production) are desired, the concentrated virus should be further purified by the Virus Particles Purification kit (Cat# VirP300).
10. We recommend to use the fresh isolated virus particle immediately. Otherwise please store at 4˚C for overnight, or freeze at -20˚C or -80˚C for longer periods. Note that repeated thaw and freeze cycles can damage virus structure.

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