

Product Numbers:

VLB-01

Virolyse™ Cell Lysis Buffer:

Description:

Virolyse™ Cell Lysis Buffer is a universal lysis buffer solution for rapid extraction of DNA, RNA and proteins at room temperature in 10 minutes from mammalian cells, lentiviruses, lentiviral particles, coronaviruses, as well as saliva, nasal and nasopharyngeal swab samples.

In contrast to other nucleic acid or protein extraction buffers such as RIPA, VTMs or VNATs, Virolyse™ Cell Lysis Buffer's unique and proprietary buffer composition does not contain substances that interfere with spectrometric analysis and the amount of DNA, RNA and protein in total lysates can be quickly and easily measured using Nanodrop™ or other forms spectrometric analysis equipment.

Total lysates obtained with Virolyse™ can be used directly in PCR, qPCR, RT-qPCR, agarose gel electrophoresis, western gel electrophoresis and protein chromatography applications (except IMAC) with high efficiency and specificity.

Protocol:

1. Allow Virolyse™ Cell Lysis Buffer to reach room temperature if stored at 4°C or -20°C.
2. **For mammalian cell cultures:** Centrifuge to pellet the cells and remove media. Add 50µl Virolyse™ for up to 200,000 cells. **For viral samples in media:** Add at least 2 volumes of lysis buffer to 1 volume of sample (e.g., 50µl Virolyse™ to 25µl media or buffer) for up to 10¹² viral particles/ml. **For swab samples:** Add enough Virolyse™ to submerge the swab in lysis buffer (0.5ml-2ml).
3. Gently tap or vortex the sample and incubate at room temperature for 10 minutes for lysis.
4. **For mammalian cell culture samples:** Centrifuge the lysate at 10,000g for 1min to precipitate cellular debris. Use the supernatant for your application. **For viral samples or swabs:** Gently tap or vortex the samples before use.
5. Transfer samples to 4 °C or ice. For long term storage, samples can be frozen at -20°C, -80°C or dry ice depending on application and sample type.
6. For Nanodrop™ based measurements, use 3µl Virolyse™ Cell Lysis Buffer as blank and 3µl per sample. Since Virolyse™ Cell Lysis Buffer results in total lysates, samples may contain DNA, RNA and/or protein depending on the source of the sample. For such samples, use corrected values for quantification (e.g. for protein amount determination for western blots, use nucleic acid-subtracted value)

Example applications:

PCR, qPCR or RT-qPCR	Add 1µl Virolyse sample to 15µl reaction
DNA/RNA gel electrophoresis	Add 5µl 6X Loading Buffer to 25µl Virolyse sample
Protein gel electrophoresis	Add 5µl 4X Laemmli Buffer to 15µl Virolyse sample and incubate at 95°C for 5 mins.

Note: Virolyse™ Cell Lysis Buffer is stable for up to 12 months at room temperature. Store at -20°C for long term storage and mix vigorously after thawing. Avoid excessive (>10) freeze-thaw cycles for better performance and aliquot if necessary. Virostem™ products are sold for research purposes only and Virostem Biotechnology™ is not responsible for their use in other third-party applications.