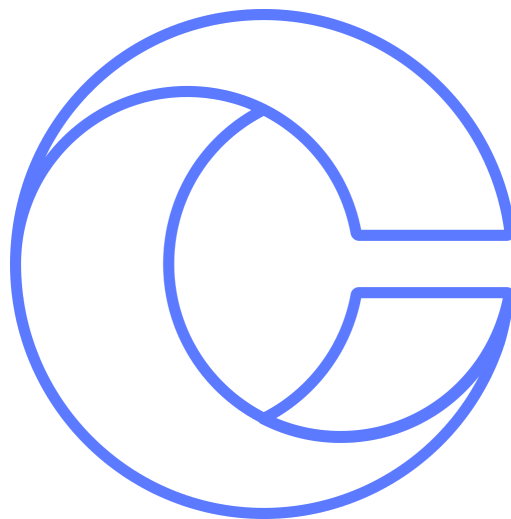


SaliVIR Bead Xtract Viral RNA/DNA Kit



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For In Vitro Diagnostic Use



Store SaliVIR Lysis Buffer at 15-30°C



Store SaliVIR Target Pure Beads at 4°C



Chronomics Protocol Guide v1.0.5

SaliVIR Bead Xtract Viral RNA/DNA Kit

Intended use

The SaliVIR Bead Xtract Viral RNA/DNA Kit is intended to be used for rapid total nucleic acid extraction from various biological specimens, including saliva and nasopharyngeal swabs stored in viral transport medium. The kit has been specifically validated for the extraction of viral RNA from specimens containing the SARS-CoV-2 virus.

Precautionary statements

This product should be handled only by those persons who have been trained in laboratory techniques and it should be used in accordance with the principles of good laboratory practice.

Avoid contact with eyes, skin and clothing. Avoid inhalation and ingestion. See MSDS at www.chronomics.com for more details.

Kit contents

Reagent	Volume (1000 rxns)	Volume (10,000 rxns)	Storage
SaliVIR Lysis Buffer	1 x 100 ml	4 x 250 ml	Room Temperature
SaliVIR Target Pure Beads	1 x 40 ml	2 x 200 ml	4°C

Required equipment

- Class II / III Biological safety cabinet
- Single and/or multichannel pipettes (100, 200, 1000 µl)
- PCR-clean filtered tips
- 96-well deep well plates that can accommodate 1 or 2 ml volume per well
- Magnetic separation rack capable of accommodating 96-well deep well plates (Alpaqua #A000380) or equivalent

Additional user supplied consumables

- 100% isopropanol, molecular biology grade
- 100% ethanol, molecular biology grade
- Buffer EB or equivalent buffer saline solution (10 mM Tris-HCl, pH8.0)
- Water, nuclease free molecular biology grade

Storage and handling

SaliVIR Lysis Buffer is stable at room temperature for 12 months.

Upon receipt, store SaliVIR Target Pure Beads refrigerated at 4°C (do not freeze). SaliVIR Target Pure Beads are stable at 4°C for 12 months.

Pre-processing of biological specimens

Upon receipt, biological specimens should be handled with caution and only following an onsite risk assessment to ensure safe handling.

Saliva collection tubes

1. Samples can be incubated at 60°C for 30 minutes as an optional additional viral inactivation step.
2. Centrifuge collection tube for 1 minute at $\geq 10,000$ g. NOTE: centrifugation at 3,700 g for 5 minutes has also shown to be effective.
3. Aliquot 200 µl of supernatant and transfer to a fresh 1.5ml tube or 96 deep well plate.

Swab in viral transport medium

1. Vortex the tubes containing the swab at maximum speed for 1 minute.

Chronomics Protocol Guide v1.0.5

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2. Aliquot 200 μ l of supernatant and transfer to a fresh 1.5ml tube or 96 deep well plate.

Extraction procedure

Before beginning, remove the SaliVIR Target Pure Beads from storage and place at room temperature for 30 minutes. Prepare a fresh 80% ethanol solution (800 μ l per sample are required).

1. Aliquot 200 μ l of sample into a fresh 1.5 ml tube or well of a 96 deep well plate.
2. Add 100 μ l of SaliVIR Lysis Buffer to each sample.
3. Vortex the tube(s) / plate for 10 seconds and incubate at room temperature for 10 minutes.
4. Add 40 μ l of thoroughly vortexed room-temperature equilibrated SaliVIR Target Pure Beads to each sample.
5. Add 270 μ l of 100% molecular grade isopropanol to each sample and mix gently by pipetting up and down 10 times, taking care to avoid the formation of bubbles.
6. Place the tubes / 96 deep well plate on the magnetic stand for 10 minutes at room temperature to pellet the beads on the side of the tubes/wells.
7. Keeping the tubes / 96 deep well plate on the magnetic stand, slowly remove and discard the supernatant, taking care not to disturb the pelleted beads.
8. Add 400 μ l of 100% molecular grade isopropanol to each tube/well and incubate at room temperature for 30 seconds.
9. Keeping the tubes / 96 deep well plate on the magnetic stand, slowly remove and discard the supernatant, taking care not to disturb the pelleted beads.
10. Add 400 μ l of 80% ethanol to each tube/well and incubate at room temperature for 30 seconds.
11. Repeat steps 9-10 for a total of two 80% ethanol washes.
12. Keeping the tubes / 96 deep well plate on the magnetic stand, slowly remove and discard the supernatant, taking care not to disturb the pelleted beads.
13. Use a 10 μ l multichannel or single channel pipette to remove any residual liquid from the tubes/wells.
14. Keeping the tubes / 96 deep well plate on the magnetic stand, incubate at room temperature with open lids for 3-5 minutes or until the beads are dry.
NOTE: it is important to avoid over-drying of beads, as this can result in a significant loss of RNA/DNA recovered.
15. Remove the tubes / 96 deep well plate from the magnetic stand and resuspend the dried beads in 52 μ l of Buffer EB or equivalent buffer saline solution (10 mM Tris-HCl, pH8.0) by pipetting up and down 10-15 times, taking care to avoid the formation of bubbles.
16. Incubate the tubes / 96 deep well plate for 2 minutes at room temperature.
17. Place the tubes / 96 well plate on the magnetic stand for 3-5 minutes at room temperature to pellet the beads on the side of the tubes/wells.
NOTE: if after 5 minutes the beads have not entirely pelleted to the side of the tube, add 10 μ l of Buffer EB or equivalent and wait 3 more minutes for beads to pellet. Keep incrementing the amount of Buffer EB or equivalent added if beads are still not pelleting to the side of the tube until the solution is entirely clear of beads.
18. Carefully recover 50 μ l of supernatant and transfer it to a fresh 1.5 ml low-bind tube or 96 well plate.

Kit specification and performance

Application	Total nucleic acid extraction, including ribonucleic acid (RNA) of SARS-CoV-2
Sample type	Upper and lower respiratory tract specimens (such as saliva, sputum and nasopharyngeal swabs)
End-to-end* Limit of Detection (LoD)	750 copies/ml

*Used in combination with the SaliVIR Collect Kit and the SaliVIR COVID19 Rapid 1 STEP QRT-PCR Kit or the SaliVIR Collect Kit and the SaliVIR COVID19 Rapid Multiplex qRT-PCR Kit. For more information on the performance of the SaliVIR COVID19 Rapid 1 STEP QRT-PCR Kit or the SaliVIR COVID19 Rapid Multiplex qRT-PCR Kit, please refer to the correspondent protocol guides.

