# RVP Sample Handling and Storage

PURPOSE

* This procedure provides instructions for sample acceptability, handling and storage

## SAFETY CONSIDERATIONS

* Standard precautions. Refer to [MB 2.02](http://khan.childrensmn.org/Manuals/Lab/SOP/MolBio/Safety/212201.pdf) Biohazard Containment
* Use of engineering controls: Refer to [MB 3.01](http://khan.childrensmn.org/Manuals/Lab/SOP/MolBio/EngCtl/212209.pdf) Engineering Controls to Prevent Nucleic Acid Contamination
* High Risk Pathogens: Refer to [MB 2.02](http://khan.childrensmn.org/Manuals/Lab/SOP/MolBio/Safety/212201.pdf) Biohazard Containment for specimens suspected to have high risk pathogens such as avian influenza (H5, H7, H9, etc), SARS coronavirus, MERS coronavirus or similar emerging pathogens

#### MATERIALS REQUIRED

|  |  |  |
| --- | --- | --- |
| **Equipment** | **Media** | **Supplies** |
| BioSafety Cabinent (BSC) | Viral Transport Media (VTM) with glass beads | Dispo Pipettes |
| Refrigerator, 2 - 8° C |  | 2 ml cryovials |
| Vortex mixer |  |  |

## SAMPLE

1. Acceptable specimens

|  |  |  |  |
| --- | --- | --- | --- |
| Specimen type | **Specimen code** | **Volume** | **Transport container** |
| Nasopharyngeal swab | **NP** | 2 wire NP swabs or 1 flocked mini-tip swab | * NP CultureSwab™ Rayon wire mini-tip swab in Liquid Stuart’s, green top * Flocked mini-tip swab in VTM |
| Nasopharyngeal aspirate | NASP | 1 – 2 mL (0.5 ml minimum) | Sterile, plastic leak proof container |
| Nasopharyngeal washing | **NW** |
| Bronchoscopy | BR |
| Bronchial alveolar lavage | **BAL** |
| Bronch aspirate | **BASP** |
| Bronch wash | **BRW** |

1. Transport and Storage: For additional information refer to [Specimen Collection Manual](https://www.childrensmn.org/References/Lab/Index.php?view=folder&folder=microbioviral)

|  |  |  |
| --- | --- | --- |
| Temperature | Sample Stability in VTM | Purified Nucleic Acid Stability |
| Room temperature | 1 hr | 1 hr |
| Refrigerated 2 - 8° C | 7 days | 7 days |
| Frozen at ≤ - 70° C | 1 year, thawed up to 2 times | 1 year, thawed up to 2 times |

**PROCEDURE A:** Follow the activity below for sample handling

| Activity | Step | **Action** | **Related Doc** |
| --- | --- | --- | --- |
| **Identification**  Location: Microbiology | 1 | Verify that the patient identification on the primary container corresponds to the accompanying order | [MB 1.01](http://khan.childrensmn.org/Manuals/Lab/SOP/MolBio/SpecMgt/212197.pdf) Specimen Management  [Organizational policy 630.00](http://khan.childrensmn.org/Manuals/Policy/600/033257.asp) Laboratory Specimen Labeling |
| 2 | Receive sample in Sunquest and generate label   * Sunquest location: MC * Sunquest code: RVP |
| Identification | 3 | Confirm the name on the label is the same as the name on primary container |  |
|  | 4 | Affix LIS accession label to corresponding primary container |  |
| Quality | 5 | Evaluate the quality of the sample. | [MB 1.02](http://khan.childrensmn.org/Manuals/Lab/SOP/MolBio/SpecMgt/212198.pdf)  Specimen Rejection Criteria |
|  | 6 | Vortex nasal/bronchial washes to obtain an even suspension |  |
| Process | 7 | Transfer 1 – 2 ml of nasal/ bronch sample or 2 NP swabs into VTM   * Note: If NP swabs are used, leave swabs in VTM; do not discard |  |
|  | 8 | Vortex for 30 – 60 s to break up mucus and release virus from cells |  |
| Store | 9 | Store specimen refrigerator at 2 - 8° C |  |
|  | 10 | Place sample label in molecular designated area |  |
| Aliquots | 11 | If additional testing is necessary, refer to Procedure B: **Sample Aliquots** |  |

**PROCEDURE B:** Follow the activity below for aliquoting samples and preventing cross-contamination

**Sample Aliquots**

| Activity | Step | **Action** | **Related Doc** |
| --- | --- | --- | --- |
| Identification of secondary container | 1 | Sample identification of all aliquots must be traceable to the primary specimen | [Organizational policy 630.00](http://khan.childrensmn.org/Manuals/Policy/600/033257.asp)  Laboratory Specimen Labeling |
| 2 | Confirm the name and accession number on the aliquot label is the same as on the primary container |
| 3 | Affix LIS aliquot label with corresponding accession number on secondary container |
| Avoiding cross-contamination | 4 | Handle specimens to avoid cross contamination of primary sample and aliquots as follows:   |  |  | | --- | --- | | Step | Action | | a | Deliver primary specimens unopened to the molecular laboratory when possible or perform the following steps | | b | Properly label secondary container with patient aliquot label | | c | Verify name on primary and secondary container before transfer | | d | Use sterile pipettes and technique when transferring samples | | e | Aliquot one specimen at a time with only one tube open at a time | | f | Never return the aliquot to the original container | | Refer to assay specific procedures for additional information |

**REFERENCES**

1. eSensor® Respiratory viral Panel, PI1032 REV:D, December 2013, Clinical Micro Sensors, Inc. dba GenMark Diagnostics, Inc., 5964 La Place Court, Carlsbad, CA 92008, 1-800-373-6767, ww.genmarkdx.com

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| Historical Record | | | |  |
|  | **Version** | **Written/Revised by:** | **Effective Date:** | **Summary of Revisions** |
|  | 1 | P. Ackerman | 05.06.2015 | Initial Version |
|  | 2 | P. Ackerman | 08.27.2016 | Reformatted for CMS upload; changed logo |
|  | 2 | J. Laramie | 08.27.2016 | Biennial review: 01.11.2018 |
|  | 3 | J. Laramie | 10/28/2019 | Added flocked mini-tip NP swabs |