**Q: I am having trouble obtaining viral transport media/universal transport media (VTM/UTM) and a flocked nasopharyngeal swab to collect and transport patient samples. Are there alternatives that I can use?**

A: While VTM/UTM remains the preferred transport media, FDA recommends that, in their absence, the following alternative transport media be used to collect and transport patient samples for molecular RT-PCR SARS-CoV-2 assays. These recommendations apply to collection by healthcare providers. The best available evidence indicates that these transport media will stabilize the SARS-CoV-2 RNA without meaningful degradation.

* Labs can create their own viral transport media.
	+ Supplies: See CDC SOP#: DSR-052-01: Preparation of Viral Transport Media at <https://www.cdc.gov/coronavirus/2019-ncov/downloads/Viral-Transport-Medium.pdf>
	+ Storage: Up to 72 hours at 4℃, or frozen for longer storage.
* Liquid Amies-based transport media.
	+ Supplies: (see below)
	+ Storage: Up to 72 hours at 4℃, or frozen for longer storage.

If the above are not available, FDA recommends that the following be used to collect and transport samples for molecular RT-PCR SARS-CoV-2 assays:

* Dry swab in saline.
	+ Supplies: (see below)
	+ Storage: Up to 72 hours at 4℃, or frozen for longer storage.

FDA believes that for saline, a sterile glass or plastic vial containing between 1mL and 3mL of phosphate buffered saline is appropriate. FDA believes that sample collection with a flocked swab is preferred. When options are limited, collection by a foam swab or spun synthetic swab is also acceptable but may not be sufficient to rule out infection. Collection should be conducted with a sterile swab. If the applicator handle requires additional trimming, the trimming should be performed with a sterile pair of scissors to prevent contamination of the sample. Swab recommendations are based on limited available evidence, and expert opinion suggested further research was needed in this area.

FDA believes that a nasopharyngeal specimen is the preferred choice for swab-based SARS-CoV-2 testing. If a nasopharyngeal specimen is not available, then an oropharyngeal specimen is acceptable. There is currently less evidence to support the use of mid-turbinate nasal specimens. In the absence of nasopharyngeal or oropharyngeal specimens, mid-turbinate nasal specimens may be appropriate, however these specimens may have decreased sensitivity, so caution should be exercised when interpreting negative results. To maximize sensitivity, using both a mid-turbinate nasal specimen and an oropharyngeal specimen together is preferred if a nasopharyngeal swab is not available. Multiple specimens may be taken with a single swab. If a separate swab is used for collecting specimens from two different locations in the same patient, both swabs may be placed in the same vial in order to preserve collection and assay supplies. More data are necessary on the utility of nasal swabs, buccal swabs or saliva specimens alone.

For patients with productive cough, sputum sample is an acceptable lower respiratory specimen.

Please be aware that the CDC does not recommend use of calcium alginate swabs or swabs with wooden shafts, as they may contain substances that inactivate some viruses and inhibit PCR testing.

To avoid specimens being wasted, if a lab is presented with a specimen that was collected or identified in a sub-optimal manner, e.g. with a swab for which there is less evidence of effectiveness, FDA believes that it would still be appropriate for the lab to accept the specimen for analysis and note the circumstances on the report. These specimens may have decreased sensitivity, so caution should be exercised when interpreting negative results.

The above recommendations are made in the context of limited quantities of testing supplies during this public health crisis, based on the best available evidence and in consultation with outside experts.

FDA would like to see your validation data informally through an email to CDRH-EUA-Templates@FDA.HHS.GOV. If FDA's review of validation data indicates that it could be applicable more broadly, and you agree to FDA sharing that information on our website for use by other laboratories, FDA intends to update our FAQs so other laboratories can learn from this validation data.

Below is a list of examples of products referenced above, including recommended catalog numbers for different distributors. Other companies may write to FDA at CDRH-EUA-Templates@FDA.HHS.GOV to request their products be included here. The information provided is not an endorsement of any one product over another of the same type.

Examples of universal transport media for viruses and molecular transport media are listed here. All of the products listed below include a nasopharyngeal (NP) flocked swab unless noted otherwise.

* Copan: 305C, 307C, 360C and 519CS01\*
* Puritan: UT-367, UT-317, UT-302\*, UT-366\*\* and UT-300\*\*\*
* Hardy/Healthlink: 330CHL
* BD: 220526, 220527, 220258\*, 220529, 220531
* DHI/Quidel: 330C.DHI and 503CS01.DHI
* Fisher Healthcare: 23001718, 23600952, 23600956, 23600950 and 23600957\*
* PrimeStore MTM: LH-1-02 and LH-1-03\*\*\*

\*flocked oropharyngeal swab
\*\*Polyester swab
\*\*\*no swab

Liquid Amies media may be used for viral transport when universal transport media is not available. All of the products listed below include a nasopharyngeal (NP) flocked swab unless noted otherwise.

* Copan: 481C, 482C 480C\* and 480CFA\*
* Puritan: LA-117, LA-116-H and LA-100\*\*\*
* BD: 220246, 220532 and 220245\*
* ThermoFisher: R723481, R723482 and R723480\*
* Hardy/Healthlink: 481C, 482C 480C\* and 480CFA\*
* VWR: 89136-656, 89136-658, 89136-654\* and 76181-494\*
* Fisher Healthcare: 23600901, 23600902, 23600900\* and 23600905\*

\*flocked oropharyngeal swab
\*\*\*no swab

Sterile saline can be used if no alternate transport media is available. All the products listed below do not include a swab. Tubes should contain 1-3 mL of saline.

* ThermoFisher: R064430, R064432, R064434, R064436 and R064438
* Hardy/Healthlink: D185, K248, R45 and R55
* Edge Biologicals: T-0625 and T-0110f

See below for a list of individually wrapped swabs. All swabs are flocked unless noted:

* Puritan Nasopharyngeal swabs: 25-3317-H, 25-1406 1PF 50f, 25-800 1PD 50\*\*, 25-3320-U, 25-3320-H EMB 80, 25-3320-U EMB 80, 25-3320-H EMB 100 and 25-3320-U EMB 100
* Copan Nasopharyngeal swabs: 503CS01, 518CS01, and 501CS01, 502CS01
* BD Nasopharyngeal swabs: 220252 and 220251
* DHI/Quidel Nasopharyngeal swabs: 503CS01.DHI
* Fisher Healthcare Nasopharyngeal swabs: 23600952, 23600956 and 23600950 Puritan Oropharyngeal swabs: 25-1506 1PF SOLIDf, 25-1506 1PF 100 f, 25-3206-H, 25-3206-U, 25-3706-H, 25-806 1PD\*\* and 25-806 1PD BT\*\*
* Copan Oropharyngeal swabs: 502CS01, 519CS01, 164KS01\*\*, 167KS01\*\*, 170KS01\*\* and 175KS01\*\*
* BD Oropharyngeal swabs: 220250
* Fisher Healthcare Oropharyngeal swabs: 23600950, 23600957, 1490641\*\*, 1490640\*\* and 1490650\*\*
* Additional sterile flocked swabs from Puritan that may be used: 25-3316-U, 25-3316-H, 25-3317-U, 25-3318-U, 25-3318-H, 25-3320-U, 25-3320-H and 25-3319-H

fFoam swab
\*\*Polyester swab