FDA COMBATING COVID-19 WITH MEDICAL DEVICES

Since the beginning of the COVID-19 pandemic, FDA has been working to facilitate the development and availability of medical products and equipment for use by patients, physicians and healthcare systems as expeditiously and safely as possible. All of FDA’s latest actions around COVID-19 are available on our [website](https://www.fda.gov). During public health emergencies, FDA can use emergency authorities, including Emergency Use Authorizations (EUAs), to help make medical products available as quickly as possible by allowing unapproved medical products to reach patients in need when there are no adequate, FDA-approved and available alternatives. These products may include tests to help diagnose diseases, critical medical devices needed by patients or healthcare personnel in the context of a public health crisis, and drugs to be used in an emergency to diagnose, treat, or prevent serious or life-threatening diseases or conditions.

During this pandemic, there have been a number of supply issues that have made it challenging to obtain access to diagnostic tests and test supplies (like swabs), and medical equipment. We are updating FAQs on our webpage regularly to provide information on diagnostic testing, including alternative test supplies and ways to conduct testing when necessary. If test developers or labs are having any issues developing or running tests, and for difficulties obtaining medical devices such as personal protective equipment (PPE) and other medical equipment shortages, please see [Contacts for Medical Devices During the COVID-19 Pandemic](https://www.fda.gov). Testing is one of the pillars of our nation’s response to COVID-19 and the FDA continues to take actions to help make these critical products available, including by issuing EUAs. During this pandemic, FDA has issued EUAs for different types of COVID-19 tests. One type are polymerase chain reaction (PCR) tests, a molecular diagnostic testing technique that detects the genetic material from the virus and can help diagnose an active COVID-19 infection. Another type of authorized COVID-19 tests are antigen diagnostic tests, designed for the rapid detection of proteins from the virus that causes COVID-19. A third type are serological tests which can help identify individuals who have developed an adaptive immune response to the virus, indicating recent or prior infection, by detecting antibodies to SARS-CoV-2 in human blood specimens (serological, or antibody, tests should not be used to diagnose active infection).

The molecular diagnostic tests are generally authorized for qualitative detection of nucleic acid from SARS-CoV-2 in specific upper and lower respiratory specimens from individuals suspected of COVID-19 by their healthcare provider. The specific specimen types for each test can be found in the authorization letter. Some molecular diagnostic tests may require a highly trained operator to manually perform the test (e.g., perform an RNA extraction step usually using specific extraction platforms and kits), while other tests are automated and require only limited training to perform. Typically, manually performed tests are authorized for use by laboratories certified to perform high-complexity tests, while automated tests are authorized for use by laboratories certified to perform moderate complexity tests and/or at the point-of-care by facilities operating under a Clinical Laboratory Improvement Amendments (CLIA) Certificate of Waiver.

Antigen tests quickly detect fragments of proteins found on or within the virus by testing samples collected from the nasal cavity using swabs. One of the main advantages of an antigen test is the speed of the test, which can provide results in minutes. However, antigen tests may not detect all active infections, as they do not work the same way as a PCR test. Antigen tests are very specific for the virus but are not as sensitive as molecular PCR tests. This means that positive results...
from antigen tests are highly accurate, but there is a higher chance of false negatives, so negative results do not rule out infection.

The serological (antibody) tests are generally authorized for the qualitative detection of antibodies to SARS-CoV-2 in blood, serum, and/or plasma, and are intended for use as an aid in identifying individuals with an adaptive immune response to SARS-CoV-2, indicating recent or prior infection. The specific specimen types for each test can be found in the authorization letter. These tests should not be used to diagnose active infection.

Beyond tests that diagnose or detect SARS-CoV-2 virus or detect antibodies, there are also tests that are authorized for use in the management of patients with COVID-19, such as to detect biomarkers related to inflammation. Once patients are diagnosed with COVID-19 disease, these additional tests can be used to inform patient management decisions.

In addition to COVID-19 tests, the FDA has issued EUAs for other devices, such as ventilators, respirators, face shields, and decontamination systems to treat COVID-19 patients and to protect healthcare workers. The list below includes the device EUAs that FDA has issued to date to diagnose, treat and prevent the spread of COVID-19.

Additional Resources

- **Policy for Coronavirus Disease-2019 Tests During the Public Health Emergency (Revised)** Immediately in Effect Guidance for Clinical Laboratories, Commercial Manufacturers, and Food and Drug Administration Staff
- **Insight into FDA's Revised Policy on Antibody Tests: Prioritizing Access and Accuracy**
- **FAQs on Testing for SARS-CoV-2**
- **EUA Authorized Serology Test Performance**
- **Hospital Beds, Stretcher, and Mattresses During the COVID-19 Public Health Emergency**
- **Emergency Use Authorization--Archived Information**

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- Continuous Renal Replacement Therapy and hemodialysis Devices EUAs
- **In Vitro Diagnostics EUAs**
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  - Umbrella EUA for Molecular Diagnostic Tests for SARS-CoV-2 Developed And Performed By Laboratories Certified Under CLIA To Perform High Complexity Tests
  - Individual EUA for Antigen Diagnostic Tests for SARS-CoV-2
  - Individual EUAs for Serology Tests for SARS-CoV-2
  - Individual EUAs for IVDs for Management of COVID-19 Patients
- Decontamination Systems for Personal Protective Equipment EUAs
- Infusion Pump EUAs
- Personal Protective Equipment EUAs
  - N95 and Other Respirators EUAs (including EUAs for NIOSH-approved N95s and imported respirators)
  - Umbrella EUA for Non-NIOSH-Approved Disposable Filtering Facepiece Respirators (FFRs) Manufactured in China
  - Umbrella EUA for Imported, Non-NIOSH-Approved Disposable Filtering Facepiece Respirators (FFRs)
  - Face Shields and Other Barrier EUAs
- Remote or Wearable Patient Monitoring Devices EUAs
- Respiratory Assist Devices EUAs
- Ventilators and Ventilator Accessories EUAs
- Other Medical Device EUAs
### BLOOD PURIFICATION DEVICES

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT (link to authorization letter)</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>Terumo BCT Inc. and Market Therapeutics AG</td>
<td>Spectra Optia Apheresis System with the Depuro D2000 Adsorption Cartridge</td>
<td>• Blood purification system to treat patients 18 years older with confirmed COVID-19 diagnosis admitted to the intensive care unit with confirmed or imminent respiratory failure</td>
</tr>
<tr>
<td>CytoSorbents, Inc.</td>
<td>CytoSorb Device (Extracorporeal Blood Purification (EBP) Device)</td>
<td>• Blood purification system to treat patients 18 years older with confirmed COVID-19 diagnosis admitted to the intensive care unit with confirmed or imminent respiratory failure</td>
</tr>
<tr>
<td>ExThera Medical Corporation</td>
<td>Seraph 100 Microbind Affinity Blood Filter Device</td>
<td>• Blood purification system to treat patients 18 years older with confirmed COVID-19 diagnosis admitted to the intensive care unit with confirmed or imminent respiratory failure</td>
</tr>
<tr>
<td>Baxter Healthcare Corporation</td>
<td>oXiris Set device</td>
<td>• The oXiris Set device is an extracorporeal blood purification device used to treat patients 18 years of age or older with confirmed COVID-19 admitted to the intensive care unit (ICU) with confirmed or imminent respiratory failure in need of blood purification, including use in continuous renal replacement therapy, to reduce pro-inflammatory cytokines levels</td>
</tr>
</tbody>
</table>

### CONTINUOUS RENAL REPLACEMENT THERAPY AND HEMODIALYSIS DEVICES

<table>
<thead>
<tr>
<th>SPONSOR</th>
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<tbody>
<tr>
<td>Baxter Health Corporation</td>
<td>Prismaflex HF20 Set</td>
<td>• Continuous renal replacement therapy (CRRT) to treat low weight (8 kilograms (kg) (18 pounds (lbs)) to 20 kg (44 lbs)) and low blood volume patients or patients2 who have acute renal failure, fluid overload, or both, and who cannot tolerate a larger extracorporeal circuit volume in an acute care environment</td>
</tr>
<tr>
<td>Baxter Healthcare Corporation</td>
<td>Prismaflex ST Set</td>
<td>• Continuous renal replacement therapy (CCRT) to treat patients with acute renal failure, fluid overload, or both in an acute care environment during COVID-19</td>
</tr>
<tr>
<td>Fresenius Medical</td>
<td>multiFiltrate PRO System and multiBic/multiPlus Solutions</td>
<td>• Provides continuous renal replacement therapy (CRRT) to treat patients in an acute care environment during the Coronavirus Disease 2019 (COVID-19) pandemic.</td>
</tr>
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IN VITRO DIAGNOSTICS – MOLECULAR

Tests that detect parts of the SARS-CoV-2 virus and can be used to diagnose infection with the SARS-CoV-2 virus. These include molecular tests.

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</table>
| Center for Disease Control and Prevention | CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel | • Developed by CDC and initially distributed to public health labs across the country  
• Testing is limited to high complexity labs |
| Wadsworth – New York State Public Health | New York SARS-CoV-2 Real-time Reverse Transcriptase (RT)-PCR Diagnostic Panel | • Developed by Wadsworth based on CDC’s published protocol  
• Run in qualified labs across New York State  
• Testing is limited to high complexity labs |
| Roche Molecular Systems, Inc. | cobas® SARS-CoV-2 for use on the cobas® 6800/8800 Systems | • Commercially distributed as a kit to labs  
• Testing is limited to moderate and high complexity labs |
| Life Technologies (a part of Thermo Fisher Scientific, Inc.) | TaqPath™ COVID-19 Combo Kit, 100 Rxn, TaqPath™ COVID-19 Combo Kit, 1,000 Rxn | • Commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| Hologic, Inc. | Panther Fusion SARS-CoV-2 Assay | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| Quidel Corporation | Lyra® SARS-CoV-2 Assay | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| Abbott Molecular, Inc. | Abbott RealTime SARS-CoV-2 assay | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| GenMark Diagnostics, Inc. | ePlex SARS-CoV-2 Test | • Reagents commercially distributed as a kit to labs  
• Can run up to 24 specimens at the same time  
• Testing is limited to moderate and high complexity labs |
| DiaSorin Molecular LLC | Simplexa COVID-19 Direct | • Reagents commercially distributed as a kit to labs  
• Can run 1 specimen at a time  
• Testing is limited to moderate and high complexity labs |
| Primerdesign Ltd. | Primerdesign Ltd COVID-19 genesig Real-Time PCR | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| Cepheid | Xpert Xpress SARS-CoV-2 test | • Reagents commercially distributed as a kit to labs  
• Can run up to 2,000 samples per day  
• Testing is limited to moderate and high complexity labs and Point of Care (POC) settings operating under a CLIA Certificate of Waiver |
| Mesa Biotech Inc | Accula SARS-CoV-2 Test | • Reagents commercially distributed as a kit to labs  
• Runs one specimen at a time  
• Testing is limited to moderate and high complexity labs and Point of Care (POC) settings operating under a CLIA Certificate of Waiver |
<table>
<thead>
<tr>
<th>SPONSOR</th>
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<tbody>
<tr>
<td>BioFire Defense, LLC</td>
<td>BioFire COVID-19 Test</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td></td>
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<td>• Can run up to 264 tests per day</td>
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<td>• Can be run in moderate or high complexity labs</td>
</tr>
<tr>
<td>PerkinElmer, Inc.</td>
<td>PerkinElmer New Coronavirus Nucleic Acid Detection kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td></td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Avellino Labs USA</td>
<td>AvellinoCoV2 test</td>
<td>• Testing is limited to Avellino lab USA, Inc., which is a high complexity lab</td>
</tr>
<tr>
<td>BGI Genomics Co. Ltd.</td>
<td>Real-Time Fluorescent RT-PCR Kit for Detecting SARS-2019-nCov</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Luminex Molecular Diagnostics, Inc.</td>
<td>NxTAG CoV Extended Panel Assay</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
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<tr>
<td>Abbott Diagnostics Scarborough, Inc.</td>
<td>ID NOW™ COVID-19</td>
<td>• Reagents commercially distributed as a kit</td>
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<td></td>
<td></td>
<td>• Requires a specific platform (ID NOW)</td>
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<td>• Runs one specimen at a time; each takes &lt;13 minutes</td>
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<tr>
<td></td>
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<td>• Testing is limited to moderate and high complexity labs and Point of Care (POC) settings operating under a CLIA Certificate of Waiver</td>
</tr>
<tr>
<td>NeuMoDx Molecular, Inc.</td>
<td>NeuMoDx SARS-CoV-2 Assay</td>
<td>• Reagents commercially distributed as a kit</td>
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<td></td>
<td>• Can run 288 or 96 samples at once, depending on the instrument, and takes 80 minutes per sample</td>
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<td>• Testing is limited to moderate and high complexity labs</td>
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<tr>
<td>QIAGEN GmbH</td>
<td>QIAstat-Dx Respiratory SARS-CoV-2 Panel</td>
<td>• Detects multiple other respiratory viral (17) and bacterial (3) organisms</td>
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<td></td>
<td></td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td></td>
<td></td>
<td>• Runs one specimen at a time and takes one hour</td>
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<td>• Testing is limited to moderate and high complexity labs</td>
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<tr>
<td>Ipsum Diagnostics</td>
<td>COV-19 IDx Assay</td>
<td>• Uses commercially available reagents</td>
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<td></td>
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<td>• Testing is limited to high complexity labs by Ipsum</td>
</tr>
<tr>
<td>Becton, Dickinson &amp; Company (BD)</td>
<td>BioGX SARS-CoV-2 Reagents for BD MAX System</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<tr>
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<td>• Fully automated, 8 samples per hour</td>
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<td></td>
<td>• Testing is limited to moderate and high complexity labs</td>
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<tr>
<td>Luminex Corporation</td>
<td>ARIES SARS-CoV-2 Assay</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td>• Testing is limited to moderate and high complexity labs</td>
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<tr>
<td>ScienCell Research Laboratories</td>
<td>ScienCell SARS-CoV-2 Coronavirus Real-time RT-PCR (RT-qPCR) Detection Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td>• Testing is limited to high complexity labs</td>
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Newest authorizations are in bold
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<tr>
<td>Co-Diagnostics, Inc.</td>
<td>Logix Smart Coronavirus Disease 2019 (COVID-19) kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td></td>
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<td>• Testing is limited to high complexity labs</td>
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<tr>
<td>Gnomegen LLC</td>
<td>Gnomegen COVID-19 RT-Digital PCR Detection Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td>• Testing is limited to high complexity labs</td>
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<tr>
<td>InBios International, Inc</td>
<td>Smart Detect SARS-CoV-2 rRT-PCR Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<tr>
<td></td>
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<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>DiaCarta, Inc.</td>
<td>QuantiVirus SARS-CoV-2 Test kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Becton, Dickinson &amp; Company (BD)</td>
<td>BD SARS-CoV Reagents for BD MAX System</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td>• Testing is limited to moderate and high complexity labs</td>
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<tr>
<td>Atila BioSystems, Inc.</td>
<td>iAMP COVID-19 Detection Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td>• Testing is limited to high complexity labs</td>
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| Maccura Biotechnology (USA) LLC                               | SARS-CoV-2 Fluorescent PCR Kit                                                                    | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| GenoSensor, LLC.                                              | GS™ COVID-19 RT-PCR KIT                                                                          | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| Korva Labs Inc.                                               | Curative-Korva SARS-Cov-2 Assay                                                                   | •  Laboratory Developed Test  
•  Testing is limited to Korva Labs, Inc., a certified high complexity laboratory                                                                                                                   |
| Fosum Pharma USA Inc.                                         | Fosun COVID-19 RT-PCR Detection Kit                                                                | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| OSANG Healthcare                                              | GeneFinder COVID-19 Plus RealAmp Kit                                                              | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| Trax Management Services Inc.                                | PhoenixDx 2019-CoV                                                                               | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| Seegene, Inc.                                                 | Allplex 2019-nCoV Assay                                                                          | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| altona Diagnostics GmbH                                        | RealStar SARS-CoV02 RT-PCR Kits U.S.                                                               | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| SD Biosensor, Inc.                                            | STANDARD M nCoV Real-Time Detection Kit                                                           | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| SEASUN BIOMATERIALS                                           | U-TOP COVID-19 Detection Kit                                                                     | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| Rheonix, Inc.                                                 | Rheonix COVID-19 MDxAssay                                                                         | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| LabGenomics Co., Ltd.                                         | LabGunCOVID-19 RT-PCR Kit                                                                         | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| Bio-Rad Laboratories, Inc.                                   | Bio-Rad SARS-CoV-2 ddPCR Test                                                                     | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| BioFire Diagnostics, LLC                                      | BioFire Respiratory Panel 2.1 (RP2.1)                                                             | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to moderate and high complexity labs                                                                                          |
| Sansure BioTech Inc.                                          | Novel Coronavirus (2019-nCoV) Nucleic Acid Diagnostic Kit (PCR-Fluorescence Probing)             | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| Fast Track Diagnostics Luxembourg S.à.r.l. (a Siemens Healthineers Company) | FTD SARS-CoV-2                                                                                    | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| Sherlock Biosciences, Inc.                                   | Sherlock CRISPR SARS-CoV-2 Kit                                                                    | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
| OPTI Medical Systems, Inc.                                   | OPTI SARS-CoV-2 RT PCR Test                                                                       | •  Reagents commercially distributed as a kit to labs  
•  Testing is limited to high complexity labs                                                                                                          |
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<tr>
<td>BioMérieux SA</td>
<td>SARS-COV-2 R-GENE</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Zymo Research Corporation</td>
<td>Quick SARS-CoV-2rRT-PCR Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
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<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Gnomegen LLC</td>
<td>Gnomegen COVID-19-RT-qPCR Detection Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Abbott Molecular Inc.</td>
<td>Alinity m SARS-CoV-2 assay</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/11/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>1drop Inc.</td>
<td>1copy COVID-19 qPCR Multi Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/11/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Applied DNA Sciences, Inc.</td>
<td>Linea COVID-19 Assay Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
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<td>5/13/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>GeneMatrix, Inc.</td>
<td>NeoPlex COVID-19 Detection Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/14/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Hologic, Inc.</td>
<td>Aptima SARS-CoV-2 assay</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/14/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Quidel Corporation</td>
<td>Lyra Direct SARS-CoV-2 Assay</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/18/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Seasun Biomaterials, Inc.</td>
<td>AQ-TOP COVID-19 Rapid Detection Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/21/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>SolGent Co., Ltd</td>
<td>DiaPlexQ Novel Coronavirus (2019-nCoV) Detection Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/21/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>BioCore Co., Ltd</td>
<td>BioCore 2019-nCoV Real Time PCR Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/21/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Dba SpectronRx</td>
<td>Hymon SARS-CoV-2 Test Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>5/22/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Genetron Health (Beijing) Co., Ltd.</td>
<td>Genetron SARS-CoV-2 RNA Test</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>6/5/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Euroimmun US, Inc.</td>
<td>EURORealTime SARS-Cov-2</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>6/8/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>ChromaCode Inc.</td>
<td>HDPCR SARS-CoV-2 Assay</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>6/9/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Illumina, Inc.</td>
<td>Illumina COVIDSeq Test</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>6/9/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
</tr>
<tr>
<td>Cue Health Inc.</td>
<td>Cue COVID-19 Test</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>6/10/2020</td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs and Point of Care (POC) settings operating under a CLIA Certificate of Waiver</td>
</tr>
<tr>
<td>TBG Biotechnology Corp.</td>
<td>ExProbe SARS-CoV-2 Testing Kit</td>
<td>• Reagents commercially distributed as a kit to labs</td>
</tr>
<tr>
<td>6/10/2020</td>
<td></td>
<td>• Testing is limited to high complexity labs</td>
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</table>
| Tide Laboratories, LLC                                                 | DTPM COVID-19 RT-PCR Test             | • Developed and run at Tide Laboratories; not distributed to other labs  
• Testing is limited to authorized high complexity labs |
| RTA Laboratories Biological Products Pharmaceutical and Machinery Industry | Diagnovital SARS-CoV-2 Real-Time PCR Kit | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| Applied BioCode, Inc.                                                  | BioCode SARS-CoV-2 Assay               | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| The Ohio State University Wexner Medical Center                       | OSUWMC COVID-19 RT-PCR test           | • Laboratory developed test.  
• Testing is limited to The Ohio State University Wexner Medical Center in Columbus, OH, which is a high complexity lab. |
| Omnipathology Solutions Medical Corporation                           | Omni COVID-19 Assay by RT-PCR          | • Laboratory developed test.  
• Testing is limited to the Omnipathology Solutions Medical Corporation in Pasadena, CA, which is a high complexity lab. |
| Jiangsu Bioperfectus Technologies Co., Ltd.                            | COVID-19 Coronavirus Real Time PCR Kit | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| 3B Blackbio Biotech India Ltd., a subsidiary of Kilpest India Ltd.     | TRUPCR SARS-CoV-2 Kit                  | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| Gencurix, Inc.                                                         | GenePro SARS-CoV-2 Test                | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs |
| University of Alabama at Birmingham Fungal Reference Lab              | FRL SARS CoV-2 Test                    | • Laboratory developed test.  
• Testing is limited to the UAB Fungal Reference Lab, which is a high complexity lab. |
| HealthQuest Esoterics                                                  | HealthQuest Esoterics TaqPath SARS-CoV-2 Assay | • Laboratory developed test.  
• Testing is limited to HealthQuest Esoterics, which is a high complexity lab. |
| University of Texas MD Anderson Cancer Center, Molecular Diagnostics Laboratory | MD Anderson High-throughput SARS-CoV-2 RT-PCR Assay | • Laboratory developed test.  
• Testing is limited to the University of Texas MD Anderson Cancer Center, Molecular Diagnostics Laboratory, which is a high complexity lab. |
| Diagnostic Solutions Laboratory, LLC                                  | DSL COVID-19 Assay                     | • Laboratory developed test.  
• Testing is limited to the Diagnostic Solutions Laboratory, LLC in Alpharetta, GA, which is a high complexity lab. |
| PlexBio Co., Ltd.                                                      | IntelliPlex SARS-CoV-2 Detection Kit   | • Reagents commercially distributed as a kit to labs.  
• Testing is limited to high complexity labs. |

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| PreciGenome LLC                             | FastPlex Triplex SARS-CoV-2 detection kit (RT-Digital PCR)                  | • Reagents commercially distributed as a kit to labs.  
• Testing is limited to high complexity labs. |
| Inform Diagnostic, Inc.                     | Inform Diagnostics SARS-CoV-2 RT-PCR Assay                                  | • Laboratory developed test.  
• Testing is limited to Informed Diagnostics, Inc. in Phoenix, AZ, which is a high complexity lab. |
| Acupath Laboratories, Inc.                  | Acupath COVID-19 Real-Time (RT-PCR) Assay                                  | • Laboratory developed test.  
• Testing is limited to Acupath Laboratories, Inc. in Plainview, NY, which is a high complexity lab. |
| LifeHope Labs                               | LifeHope 2019-nCoV Real-Time RT-PCR Diagnostic Panel                       | • Laboratory developed test.  
• Testing is limited to LifeHope Labs in Plainview, NY which is a high complexity lab. |
| TNS Co., Ltd (BioTNS)                       | COVID-19 RT-PCR Peptide Nucleic Acid (PNA) kit                             | • Reagents commercially distributed as a kit to labs  
• Testing is limited to high complexity labs. |
| Psomagen, Inc.                              | Psoma COVID-19 RT Test                                                      | • Laboratory developed test.  
• Testing is limited to Psomagen, Inc. in Rockville, MD, which is a high complexity lab. |
| CENTOGENE US, LLC                           | CentroFast-SARS-CoV-2 RT-PCR Assay                                         | • Laboratory developed test.  
• Testing is limited to CENTOGENE US, LLC, which is a high complexity lab, or other high complexity laboratories designated by CENTOGENE US, LLC. |
| Centers for Disease Control and Prevention (CDC) | Influenza SARS-CoV-2 (Flu SC2) Multiplex Assay                             | • Reagents commercially distributed as a kit to labs.  
• For use in the detection and differentiation of SARS-CoV-2, influenza A, and/or influenza B in upper and lower respiratory specimens.  
• Testing is limited to high complexity labs. |
| Laboratorio Clinico Toledo                  | Laboratorio Clinico Toledo SARS-CoV-2 Assay                                | • Laboratory developed test.  
• Testing is limited to Laboratorio Clinico Toledo, which is a high complexity lab in Arecibo, PR. |
| Gene By Gene                                | Gene By Gene SARS-CoV-2 Detection Test                                      | • Laboratory developed test.  
• Testing is limited to Gene By Gene laboratory, which is a high complexity laboratory in Houston, TX. |
| Access Bio, Inc.                            | CareStart COVID-19 MDx RT-PCR                                               | • Reagents commercially distributed as a kit to labs.  
• Testing is limited to high complexity labs. |
| Enzo Life Sciences, Inc.                    | AMPIPROBE SARS-CoV-2 Test System                                            | • Reagents commercially distributed as a kit to labs.  
• Testing is limited to high complexity labs. |
| Clinical Research Sequencing Platform (CRSP), LLC at the Broad Institute of MIT and Harvard | CRSP SARS-CoV-2 Real-time Reverse Transcriptase (RT)-PCR Diagnostic Assay    | • Laboratory developed test.  
• Testing is limited to the Clinical Research Sequencing Platform (CRSP), LLC at the Broad Institute of MIT and Harvard, which is a high complexity laboratory located in Cambridge, MA. |
| BioSewoom, Inc.                             | Real-Q 2019-nCoV Detection Kit                                              | • Reagents commercially distributed as a kit to labs.  
• Testing is limited to high complexity labs. |

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<tr>
<td>UCSF Health Clinical Laboratories, UCSF Clinical Labs at China Basin 7/9/2020</td>
<td>SARS-CoV-2 RNA DETECTR Assay</td>
<td>• Laboratory developed test. • Testing is limited to the UCSF Clinical Labs at China Basin, which is a high complexity laboratory located in San Francisco, CA.</td>
</tr>
<tr>
<td>Boston Medical Center 7/10/2020</td>
<td>BMC-CReM COVID-19 Test</td>
<td>• Laboratory developed test. • Testing is limited to the Boston Medical Center/Department of Pathology and Laboratory Medicine, which is a high complexity laboratory located in Boston, MA.</td>
</tr>
<tr>
<td>KogeneBiotech Co., Ltd. 7/13/2020</td>
<td>PowerChek 2019-nCoV Real-time PCR Kit</td>
<td>• Reagents commercially distributed as a kit to labs. • Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>Trax Management Services Inc. 7/13/2020</td>
<td>PhoenixDx SARS-CoV-2 Multiplex</td>
<td>• Reagents commercially distributed as a kit to labs. • Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>Boston Heart Diagnostics 7/16/2020</td>
<td>Boston Heart COVID-19 RT-PCR Test</td>
<td>• Laboratory developed test. • Testing is limited to Boston Heart Diagnostics, which is a high complexity laboratory located in Framingham, MA.</td>
</tr>
<tr>
<td>Access Genetics, LLC 7/17/2020</td>
<td>OraRisk COVID-19 RT-PCR</td>
<td>• Laboratory developed test. • Testing is limited to Access Genetics, LLC, which is a high complexity laboratory located in Eden Prairie, MN.</td>
</tr>
<tr>
<td>DiaCarta, Inc. 7/21/2020</td>
<td>QuantiVirus SARS-CoV-2 Multiplex Test Kit</td>
<td>• Reagents commercially distributed as a kit to labs. • Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>Helix OpCo LLC (dba Helix) 7/23/2022</td>
<td>Helix COVID-19 Test</td>
<td>• Laboratory developed test. • Testing is limited to the Helix Laboratory, which is a high complexity laboratory located in San Diego, CA.</td>
</tr>
<tr>
<td>Jiangsu CoWin Biotech Co., Ltd. 7/24/2020</td>
<td>Novel Coronavirus (SARS-CoV-2) Fast Nucleic Acid Detection Kit (PCR-Fluorescence Probing)</td>
<td>• Reagents commercially distributed as a kit to labs. • Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>Sandia National Laboratories 7/27/2020</td>
<td>SNL-NM 2019 nCoV Real-Time RT-PCR Diagnostic Assay</td>
<td>• Laboratory developed test. • Testing is limited to Sandia National Laboratories’ laboratory, which is a high complexity laboratory located in Albuquerque, NM.</td>
</tr>
<tr>
<td>Eli Lilly and Company 7/27/2020</td>
<td>Lilly SARS-CoV-2 Assay</td>
<td>• Reagents commercially distributed as a kit to labs. • Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>University of California San Diego Health 7/31/2020</td>
<td>UCSD RC SARS-CoV-2 Assay</td>
<td>• Laboratory developed test. • Testing is limited to the University of California San Diego Health laboratory, which is a high complexity laboratory located in San Diego, CA.</td>
</tr>
<tr>
<td>Xiamen Zeesan Biotech Co., Ltd. 7/31/2020</td>
<td>SARS-CoV-2 Test Kit (Real-time PCR)</td>
<td>• Reagents commercially distributed as a kit to labs. • Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>ISPM Labs, LLC dba Capstone Healthcare 8/03/2020</td>
<td>Genus SARS-CoV-2 Assay</td>
<td>• Laboratory developed test.</td>
</tr>
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| Poplar Healthcare                                                      | Poplar SARS-CoV-2 TMA Pooling assay                                                                   | • Laboratory developed test.  
• Testing is limited to the Poplar Healthcare laboratory, which is a high complexity laboratory located in Memphis, TN. |
| Cleveland Clinic Robert J. Tomsich Pathology and Laboratory Medicine Institute | Cleveland Clinic SARS-CoV-2 Assay                                                                     | • Laboratory developed test.  
• Testing is limited to the Robert J. Tomsich Pathology and Laboratory Medicine Institute, which is a high complexity laboratory located in Cleveland, OH. |
| Ethos Laboratories                                                     | Ethos Laboratories SARS-CoV-2 MALDI-TOF Assay                                                        | • Laboratory developed test.  
• Testing is limited to the Ethos Laboratory, which is a high complexity laboratory located in Newport, KY. |
| Wren Laboratories LLC                                                 | Wren Laboratories COVID-19 PCR Test                                                                 | • Laboratory developed test.  
• Testing is limited to the Ethos Laboratory, which is a high complexity laboratory located in Newport, KY. |
| Vela Operations Singapore Pte Ltd                                      | ViroKey SARS-CoV-2 RT-PCR Test                                                                       | • Reagents commercially distributed as a kit to labs.  
• Testing is limited to high complexity labs. |
| Helix OpCo LLC (dba Helix)                                             | Helix COVID-19 NGS Test                                                                               | • Laboratory developed test.  
• Testing is limited to Helix Laboratory, which is a high complexity laboratory located in San Diego, CA. |
| George Washington University Public Health Laboratory                  | GWU SARS-CoV-2 RT-PCR Test                                                                            | • Laboratory developed test.  
• Testing is limited to the George Washington University Public Health Laboratory, which is a high complexity laboratory located in Washington, DC. |
| Alpha Genomix Laboratories                                             | TaqPath SARS-CoV-2 Combo Assay                                                                       | • Laboratory developed test.  
• Testing is limited to the Alpha Genomix Laboratories, which is a high complexity laboratory located in Peachtree Corners, GA. |
| Solaris Diagnostics                                                    | Solaris Multiplex SARS-CoV-2 Assay                                                                   | • Laboratory developed test.  
• Testing is limited to Solaris Diagnostics, which is a high complexity laboratory located in Nicholasville, KY. |
| LumiraDx UK Ltd.                                                       | SARS-CoV-2 RNA STAR                                                                                   | • Reagents commercially distributed as a kit to labs.  
• Testing is limited to high complexity labs. |
| Biomeme, Inc.                                                          | SARS-CoV-2 Real-Time RT-PCR Test                                                                      | • Reagents commercially distributed as a kit to labs.  
• Testing is limited to high complexity labs. |
| Pro-Lab Diagnostics                                                    | Pro-Amp RT SARS-CoV-2 Test                                                                            | • Laboratory developed test.  
• Testing is limited to Pro-Lab Diagnostics, which is a high complexity laboratory located in Round Rock, TX. |

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<tr>
<td>Yale School of Public Health, Department of Epidemiology of Microbial Diseases</td>
<td>SalivaDirect</td>
<td>• Detection of SARS-CoV-2 virus in saliva collected without preservative.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Instructions for use distributed to labs; components are all commercially available.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity laboratories designated the Yale School of Public Health.</td>
</tr>
<tr>
<td>ZhuHai Sinochips Bioscience Co., Ltd.</td>
<td>COVID-19 Nucleic Acid RT-PCR Test Kit</td>
<td>• Reagents commercially distributed as a kit to labs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>Texas Department of State Health Services, Laboratory Services Section</td>
<td>DHS SARS-CoV-2 Assay</td>
<td>• Laboratory developed test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to Texas Department of State Health Services, which is a high complexity laboratory located in Austin, TX.</td>
</tr>
<tr>
<td>DxTerity Diagnostics, Inc.</td>
<td>SARS-CoV-2 RT-PCR Test</td>
<td>• Detection of SARS-CoV-2 virus in saliva.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Laboratory developed test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to DxTerity Diagnostics, Inc., which is a high complexity laboratory located in Rancho Dominguez, CA.</td>
</tr>
<tr>
<td>Guardant Health, Inc.</td>
<td>Guardant-19</td>
<td>• Laboratory developed test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to Guardant Health Clinical Laboratory, which is a high complexity laboratory located in Redwood City, CA.</td>
</tr>
<tr>
<td>Fluidigm Corporation</td>
<td>Advanta Dx SARS-CoV-2 RT-PCR Assay</td>
<td>• Detection of SARS-CoV-2 virus in saliva.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reagents commercially distributed as a kit to labs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity labs.</td>
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**DIAGNOSTICS – MOLECULAR – HOME COLLECTION**

Can be used with specimens that are self-collected at home with specific collection kits, then sent to the lab for testing.

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<tr>
<td>Laboratory Corporation of America</td>
<td>COVID-19 RT-PCR Test</td>
<td>• Developed and run in high complexity LabCorp labs only; not for broader lab distribution</td>
</tr>
<tr>
<td></td>
<td>COVID-19 RT-PCR Amendment</td>
<td>• Amendment permits use of the Pixel by LabCorp COVID-19 test home collection kit allowing patients to self-collect nasal swab specimens at home</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The kit provides specimen collection materials and materials to safely send specimens to an authorized laboratory</td>
</tr>
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</tbody>
</table>
| Quest Diagnostics Infectious Disease, Inc. 3/17/2020 | SARS-CoV-2 RNA, Qualitative Real-Time RT-PCR | • Developed and run in Quest labs only; not a kit for distribution.  
• Testing is limited to high complexity labs |
| Rutgers Clinical Genomics Laboratory at RUCDR Infinite Biologics - Rutgers University 5/7/2020 | Rutgers Clinical Genomics Laboratory TaqPath SARS-CoV-2-Assay | • Laboratory developed test  
• Testing is limited to Rutgers Clinical Genomics Laboratory at RUCDR Infinite Biologics, which is a high complexity lab  
• First diagnostic test using at-home collection of saliva specimens |
| Everlywell, Inc. 5/15/2020 | Everlywell COVID-19 Test Home Collection Kit | • For use by individuals to self-collect nasal swab specimens at home, when determined by a healthcare provider to be appropriate based on results of a COVID-19 questionnaire, and  
• For use only with in vitro diagnostic (IVD) molecular tests for the detection of SARS-CoV-2 RNA that are indicated for use with the Everlywell COVID-19 Home Collection Kit. |
| Assurances Scientific Laboratories 5/15/2020 | Assurance SARS-CoV-2 Panel | • Laboratory developed test  
• Testing is limited to Assurance Scientific, which is a high complexity lab  
• Can be used with nasal swab specimens that are self-collected at home with the Everlywell home collection kit, then sent to the lab for testing. |
| Fulgent Therapeutics, LLC. 5/15/2020 | Fulgent COVID-19 by RT-PCR Test | • Laboratory developed test  
• Testing is limited to Fulgent Therapeutics high complexity lab  
• Can be used with nasal swab specimens that are self-collected at home with the Everlywell home collection kit, then sent to the lab for testing. |
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</table>
| P23 Labs, LLC.                  | P23 Labs TaqPath SARS-CoV-2 Assay            | • Laboratory developed test  
  • Testing is limited to P23 Labs, LLC, located in Little Rock, AK, which is a high complexity lab  
  • Can be used with saliva specimens that are self-collected at home with the OMNiGene ORAL OM-505 Collection Device, then sent to the lab for testing. |
| PrivaPath Diagnostics, Inc.     | LetsGetChecked Coronavirus (COVID-19) Test   | • Laboratory developed test  
  • Testing is limited to PrivaPath Labs d.b.a. LGC Labs, which is a high complexity lab.  
  • Can only be used with nasal swabs included with the LetsGetChecked COVID-19 Home Collection Kit, then sent to the lab for testing. |
| Phosphorus Diagnostics, LLC.    | Phosphorus COVID-19 RT-qPCR Test              | • Laboratory developed test  
  • Testing is limited to Phosphorus Diagnostics, LLC, located in Secaucus, NJ, which is a high complexity lab.  
  • Can be used with saliva specimens that are collected at home or in a healthcare setting using the Oragene Dx OGD-510 collection device, when determined to be appropriate by a HCP. |
| Kaiser Permanente Mid-Atlantic States | KPMAS COVID-19 Test                          | • Laboratory developed test  
  • Testing is limited to KPMAS Regional Laboratory, Rockville, MD  
  • Can be used with nasal swab specimens self-collected by KPMAS Health Plan members observed at home via telemedicine, using the KPMAS COVID-19 Home Collection Kit, when determined to be appropriate by a healthcare provider. |
| The Kroger Co.                  | Kroger Health COVID-19 Test Home Collection Kit | • Laboratory developed test  
  • Testing is limited to laboratories designated by The Kroger Co. that meet requirements to perform high complexity tests and that run the specimens collected from the Kroger Health COVID-19 Test Home Collection Kit on an in vitro diagnostic (IVD) molecular test that is indicated for use with the Kroger Health COVID-19 Test Home Collection Kit for self-collection of nasal swab specimens  
  • Can be used with nasal swab specimens self-collected at home, video observed by a healthcare provider using the Kroger Health COVID-19 Test Home Collection Kit |
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| Compass Laboratory Services, LLC             | Compass Laboratory Services SARS-CoV2 Assay | • Laboratory developed test  
• Testing is limited to Compass Laboratory Services, LLC, which is a high complexity lab in Memphis, TN.  
• Can be used with nasal swab specimens self-collected at home, video observed by a healthcare provider using an authorized home collection kit specified in the authorized labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Quest Diagnostics Infectious Disease, Inc.   | Quest Diagnostics HA SARS-CoV-2 Assay   | • Laboratory developed test  
• Testing is limited to laboratories designated by Quest Diagnostics that meet the requirements to perform high complexity tests.  
• Can be used with nasal swab specimens self-collected at home under healthcare provider supervision using the Quest Diagnostics Self-Collection Kit for COVID-19.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Quest Diagnostics Infectious Disease, Inc.   | Quest Diagnostics RC SARS-CoV-2 Assay   | • Laboratory developed test  
• Testing is limited to laboratories designated by Quest Diagnostics that meet the requirements to perform high complexity tests.  
• Can be used with nasal swab specimens self-collected at home under healthcare provider supervision using the Quest Diagnostics Self-Collection Kit for COVID-19.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Quest Diagnostics Infectious Disease, Inc.   | Quest Diagnostics PF SARS-CoV-2 Assay   | • Laboratory developed test  
• Testing is limited to laboratories designated by Quest Diagnostics that meet the requirements to perform high complexity tests.  
• Can be used with nasal swab specimens self-collected at home under healthcare provider supervision using the Quest Diagnostics Self-Collection Kit for COVID-19.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Clinical Reference Laboratory, Inc.          | CRL Rapid Response                     | • Laboratory developed test  
• Testing is limited to the Clinical Reference Library lab located in Lenexa, KS, which is a high complexity lab.  
• Can be used with self-collected saliva samples collected at home or under healthcare provider supervision when determined to be appropriate by a healthcare provider using the CRL COVID-19 Self Collection Testing Kit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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| Ethos Laboratories 8/3/2020               | Ethos Laboratories SARS-CoV-2 MALDI-TOF Assay  | • Laboratory developed test  
• Testing is limited to the Ethos Laboratory lab located in Newport, KY, which is a high complexity lab.  
• Can be used with nasal swab specimens self-collected at home when prescribed by a healthcare provider based on the results of an online questionnaire or office visit using the Ethos Laboratories U-Collect At Home Collections kit. |
| QDx Pathology Services 8/25/2020          | QDX SARS-CoV-2 Assay                           | • Laboratory developed test  
• Testing is limited to QDx Pathology Services located in Cranford, NJ, which is a high complexity lab.  
• Can be used with specimens collected at home using the Qdetect home collection kit, or other authorized home-collection kit specified in the authorized labeling, by individuals suspected of COVID-19 when home collection is determined to be appropriate by a healthcare provider. |

**UMBRELLA EUA FOR MOLECULAR DIAGNOSTIC TESTS FOR SARS-COV-2 DEVELOPED AND PERFORMED BY LABORATORIES CERTIFIED UNDER CLIA TO PERFORM HIGH COMPLEXITY TESTS**

On March 31, 2020, the FDA concluded based on the totality of scientific evidence available that molecular-based laboratory developed tests (LDTs) that are authorized for use by the singular developing laboratory are appropriate to protect the public health or safety (as described under the Scope of Authorization (Section II)) under section 564 of the Federal Food, Drug, and Cosmetic Act (Act) (21 U.S.C. § 360bbb-3). Under this EUA, authorized tests are authorized for use in the single laboratory that developed the authorized test and that is certified under Clinical Laboratory Improvement Amendments of 1988 (CLIA), 42 U.S.C. §263a to perform high complexity tests.

**LABORATORIES (DATE OF AUTHORIZATION)**

- AIT Laboratories (4/24/2020)
- Altru Diagnostics (4/30/2020)
- Aspirus Reference Laboratory (6/1/2020)
- Avera Institute for Human Genetics (5/22/2020)
- Biocerna (4/28/2020)
- Biocollections Worldwide, Inc. (5/07/2020)
- Cedars-Sinai Medical Center, Department of Pathology and Laboratory Medicine (5/13/2020)
- CirrusDx SARS-CoV-2 Assay (4/15/2020)
- Color Genomics, Inc. (5/18/2020)
- Columbia University Laboratory of Personalized Genomic Medicine (5/12/2020)
- Cormeum Laboratory Services (6/12/2020)
- CSI Laboratories (06/02/2020)
- Diagnostic Molecular Laboratory-Northwestern Medicine (4/02/2020)
- Diatherix Eurofins Laboratory (4/22/2020)
- Exact Sciences Laboratories (4/14/2020), Amendment (5/22/2020)

Newest authorizations are in bold
Updated August 25, 2020

- Express Gene LLC (dba Molecular Diagnostics Laboratory) (5/22/2020)
- Gravity Diagnostics, LLC (06/01/2020)
- Hackensack University Medical Center (HUMC) Molecular Pathology Laboratory (4/15/2020)
- Infectious Diseases Diagnostics Laboratory (IDDL), Boston Children’s Hospital (4/14/2020)
- Infectious Disease Diagnostics Laboratory-Children’s Hospital of Philadelphia (4/02/2020)
- Integrity Laboratories (4/13/2020)
- Massachusetts General Hospital (Mass Gen) (4/03/2020)
- Mayo Clinic Laboratories, Rochester, MN (04/20/2020)
- Nationwide Children’s Hospital (4/27/2020)
- Nebraska Medicine Clinical Laboratory (6/4/2020)
- One Health Laboratories (5/13/2020)
- Orig3n, Inc. (4/10/2020)
- Pathology/Laboratory Medicine Lab of Baptist Hospital Miami (4/13/2020)
- Southwest Regional PCR Laboratory LLC. PCR MicroGen DX (4/23/2020)
- Specialty Diagnostic (SDI) Laboratories (4/10/2020)
- Stanford Health Care Clinical Virology Laboratory (4/08/2020)
- Ultimate Dx Laboratory (4/24/2020)
- University of North Carolina Medical Center (4/10/2020)
- UTMG Pathology Laboratory (5/01/2020)
- Viracor Eurofins Clinical Diagnostics (4/06/2020)
- Warrior Diagnostics, Inc. (6/10/2020)
- Yale New Havel Hospital, Clinical Virology Laboratory (3/31/2020)

### INDIVIDUAL EUAS FOR ANTIGEN DIAGNOSTIC TESTS FOR SARS-COV-2

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT (link to authorization letter)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| Abbott Diagnostics Scarborough, Inc. 8/26/2020 | BinaxNOW COVID-19 Ag Card | - Testing is limited to moderate and high complexity labs and POC settings operating under a CLIA Certificate of Waiver  
- Visually read assay that does not require an instrument. |
| LumiraDx UK Ltd. 8/18/2020 | LumiraDx SARS-CoV-2 Ag Test | - Testing is limited to moderate and high complexity labs and POC settings operating under a CLIA Certificate of Waiver |
| Becton, Dickinson and Company (BD) 7/2/2020 | BD Veritor System for Rapid Detection of SARS-CoV-2 | - Testing is limited to moderate and high complexity labs and POC settings operating under a CLIA Certificate of Waiver |
| Quidel Corporation 5/8/2020 | Sofia SARS Antigen FIA | - Testing is limited to moderate and high complexity labs and POC settings operating under a CLIA Certificate of Waiver |

### INDIVIDUAL EUAS FOR SEROLOGY TESTS FOR SARS-COV-2

Newest authorizations are in bold
<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT (link to authorization letter)</th>
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</tr>
</thead>
</table>
| Cellex Inc.                    | Serology Test qSARS-CoV-2 IgG/IgM Rapid Test                                                            | • The first serological test authorized under EUA.  
• Detects SARS-CoV-2 antibodies in blood and differentiates between IgG and IgM antibodies.  
• Rapid test provides results in 15-20 minutes.  
• Testing is limited to moderate and high complexity labs. |
| Ortho-Clinical Diagnostics, Inc.| VITROS Immunodiagnostic Products Anti-SARS-CoV-2 IgG Reagent Pack                                       | • Detects IgG antibodies in serum.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                         |
| Mount Sinai Laboratory          | COVID-19 ELISA IgG Antibody Test                                                                        | • Detects IgG antibodies in serum and plasma.  
• Test is limited to Mount Sinai Laboratory, which is a high complexity lab.                                                                                                                        |
| DiaSorin Inc.                  | LIAISON SARS-CoV-2 S1/S2 IgG                                                                            | • Detects IgG antibodies in serum and plasma.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                         |
| Ortho Clinical Diagnostics, Inc.| VITROS Immunodiagnostic Products Anti-SARS-CoV-2 Total Reagent Pack                                     | • Detects and differentiates IgM and IgG antibodies in serum and plasma  
• Testing is limited to moderate and high complexity labs.                                                                                                                                          |
| Abbott Laboratories Inc.       | SARS-CoV-2 IgG assay                                                                                    | • Detects IgG antibodies in serum and plasma.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                           |
| Bio-Rad Laboratories           | Platelia SARS-CoV-2 Total Ab assay                                                                     | • Detects and differentiates IgM and IgG antibodies in serum and plasma  
• Testing is limited to high complexity labs.                                                                                                                                                   |
• Test is limited to Wadsworth Center, New York State Department of Health, which is a high complexity lab.                                                                                      |
| Roche Diagnostics              | Elecsys Anti-SARS-CoV-2                                                                               | • Detects Anti-SARS-Cov-2 antibodies in serum and plasma.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                 |
| EUROIMMUN US Inc.              | Anti-SARS-CoV-2 ELISA (IgG)                                                                            | • Detects IgG antibodies in serum and plasma.  
• Testing is limited to high complexity labs.                                                                                                                                                     |
| Healgen Scientific LLC         | COVID-19 IgG/IgM Rapid Test Cassette (Whole Blood/Serum/Plasma)                                        | • Detects and differentiates IgM and IgG antibodies in whole blood, plasma and serum.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                         |
| Siemens Healthcare Diagnostics Inc. | Atellica IM SARS-CoV-2 Total (COV2T)                                                                   | • Detects Anti-SARS-CoV-2 antibodies in serum and plasma.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                         |
<table>
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<tr>
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</table>
| Siemens Healthcare Diagnostics Inc.          | ADVIA Centaur SARS-CoV-2 Total (COV2T)                          | • Detects Anti-SARS-Cov-2 antibodies in serum and plasma.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                                                                                                       |
| Vibrant America Clinical Labs                | Vibrant COVID-19 Ab Assay                                       | • Detects IgG and IgM antibodies in serum and dried blood  
• Testing is limited to the Vibrant America Clinical Labs at 1360 Bayport Avenue, San Carlos, CA, which is a high complexity lab                                                                                                                                                                           |
| Hangzhou Biotest Biotech Co., Ltd.          | RightSign COVID-19 IgG/IgM Rapid Test Cassette                  | • Detects IgM and IgG antibodies in serum, plasma, and venous whole blood  
• Testing is limited to moderate and high complexity labs.                                                                                                                                                                                                                   |
| Siemens Healthcare Diagnostics Inc.         | Dimension EXL SARS-CoV-2 Total antibody assay (CV2T)            | • Detects total antibodies in serum and plasma  
• Testing is limited to moderate and high complexity labs.                                                                                                                                                                                                                      |
| Siemens Healthcare Diagnostics Inc.         | Dimension Vista SARS-CoV-2 Total antibody assay (COV2T)         | • Detects total antibodies in serum and plasma  
• Testing is limited to moderate and high complexity labs.                                                                                                                                                                                                                      |
| InBios International, Inc.                  | SCoV-2 Detect IgG ELISA                                         | • Detects IgG antibodies in serum  
• Testing is limited to high complexity labs.                                                                                                                                                                                                                                  |
| Emory Medical Laboratories                   | SARS-CoV-2 RBD IgG test                                         | • Detects IgG antibodies in serum.  
• Testing is limited to high complexity labs.                                                                                                                                                                                                                                    |
| Biohit Healthcare (Hefei) Co. Ltd.           | Biohit SARS-CoV-2 IgM/IgG Antibody Test Kit                    | • Detects IgM and IgG antibodies in serum, plasma, and venipuncture whole blood.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                                                                                                   |
| Hangzhou Laihe Biotech Co., Ltd.            | LYHER Novel Coronavirus (2019-nCoV) IgM/IgG Antibody Combo Test Kit (Colloidal Gold) | • Detects and differentiates IgG and IgM antibodies in serum and plasma.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                                                                                                   |
| Babson Diagnostics, Inc.                    | Babson Diagnostics aC19G1                                       | • Detects IgG antibodies in serum and plasma.  
• Testing is limited to Babson Diagnostics, Inc. at 1205 Sheldon Cove, Suite 2-J, Austin, TX, which is a high complexity lab                                                                                                                                                   |
| Beckman Coulter, Inc.                       | Access SARS-CoV-2 IgG                                          | • Detects IgG antibodies in serum and plasma.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                                                                                                      |
| InBios International, Inc.                  | SCoV-2 Detect IgM ELISA                                         | • Detects IgM antibodies in serum.  
• Testing is limited to high complexity labs.                                                                                                                                                                                                                                |
| Assure Tech. (Hangzhou Co., Ltd)             | Assure COVID-19 IgG/IgM Rapid Test Device                      | • Detects and differentiates IgG and IgM antibodies in venous whole blood, serum and plasma.  
• Testing is limited to moderate and high complexity labs.                                                                                                                                                                                                                   |
<table>
<thead>
<tr>
<th>SPONSOR</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Diazyme Laboratories, Inc. 7/8/2020</td>
<td>Diazyme DZ-Lite SARS-CoV-2 IgG CLIA Kit</td>
<td>• Detects IgG antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Beijing Wantai Biological Pharmacy Enterprise Co., Ltd. 7/10/2020</td>
<td>WANTAI SARS-CoV-2 Ab Rapid Test</td>
<td>• Detects total antibodies in venous whole blood, serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Salofo Oy 7/13/2020</td>
<td>Sienna-Clarity COVIBLOCK COVID-19 IgG/IgM Rapid Test Cassette</td>
<td>• Detects and differentiates IgG and IgM antibodies in venous whole blood, serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Luminex Corporation 7/16/2020</td>
<td>xMAP SARS-CoV-2 Multi-Antigen IgG Assay</td>
<td>• Detects IgG antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>Megna Health, Inc. 7/17/2020</td>
<td>Rapid COVID-19 IgM/IgG Combo Test Kit</td>
<td>• Detects and differentiates IgG and IgM antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Access Bio, Inc. 7/24/2020</td>
<td>CareStart COVID-19 IgM/IgG</td>
<td>• Detects and differentiates IgG and IgM antibodies in whole blood, serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Xiamen Biotime Biotechnology Co., Ltd. 7/24/2020</td>
<td>BIOTIME SARS-CoV-2 IgG/IgM Rapid Qualitative Test</td>
<td>• Detects and differentiates IgG and IgM antibodies in whole blood, serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Siemens Healthcare Diagnostics Inc. 7/31/2020</td>
<td>ADVIA Centaur SARS-CoV-2 IgG (COV2G)</td>
<td>• Detects IgG antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Siemens Healthcare Diagnostics Inc. 7/31/2020</td>
<td>Atellica IM SARS-CoV-2 IgG (COV2G)</td>
<td>• Detects IgG antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Beijing Wantai Biological Pharmacy Enterprise Co., Ltd. 8/05/2020</td>
<td>WANTAI SARS-CoV-2 Ab ELISA</td>
<td>• Detects total antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to high complexity labs.</td>
</tr>
<tr>
<td>bioMérieux SA 08/06/2020</td>
<td>VIDAS SARS-CoV-2 IgG</td>
<td>• Detects IgG antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>bioMérieux SA 08/06/2020</td>
<td>VIDAS SARS-CoV-2 IgM</td>
<td>• Detects IgM antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Diazyme Laboratories, Inc. 08/17/2020</td>
<td>DZ-Lite SARS-CoV-2 IgM CLIA Kit</td>
<td>• Detects IgM antibodies in serum and plasma.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
</tbody>
</table>

Newest authorizations are in bold
Updated August 25, 2020

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT (link to authorization letter)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BioCheck, Inc.</td>
<td>BioCheck, Inc. [link to authorization letter]</td>
<td>• Detects and differentiates IgG and IgM antibodies in serum.</td>
</tr>
<tr>
<td>08/17/2020</td>
<td>SARS-CoV-2 IgG and IgM Combo Test</td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
<tr>
<td>Biocan Diagnostics, Inc.</td>
<td>Biocan Diagnostics, Inc. [link to authorization letter]</td>
<td>• Detects and differentiates IgG and IgM antibodies in venous whole blood, serum and plasma.</td>
</tr>
<tr>
<td>08/25/2020</td>
<td>Tell Me Fast Novel Coronavirus (COVID-19) IgG/IgM Antibody Test</td>
<td>• Testing is limited to moderate and high complexity labs.</td>
</tr>
</tbody>
</table>

**INDIVIDUAL EUAS FOR IVDS FOR MANAGEMENT OF COVID-19 PATIENTS**

This table includes information about authorized in vitro diagnostic tests that may be used in the management of patients with COVID-19 that have been authorized individually. These EUAs have been issued for each individual test with certain conditions of authorization required of the manufacturer and authorized laboratories.

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT (link to authorization letter)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roche Diagnostics</td>
<td>Elecsys IL-6 [link to authorization letter]</td>
<td>• To assist in identifying severe inflammatory response in patients with confirmed COVID-19 illness to aid in determining the risk of intubation with mechanical ventilation</td>
</tr>
<tr>
<td>6/2/2020</td>
<td></td>
<td>• Testing is limited to moderate and high complexity labs</td>
</tr>
</tbody>
</table>

**DECONTAMINATION SYSTEMS FOR PERSONAL PROTECTIVE EQUIPMENT**

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT (link to authorization letter)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battelle</td>
<td>Battelle Decontamination System [link to authorization letter]</td>
<td>A single compatible respirator to be recycled and reused up to 20 times using the Battelle Decontamination System</td>
</tr>
<tr>
<td>3/29/2020</td>
<td></td>
<td>Battelle is authorized to scale up their operations to decontaminate about 120,000 respirators daily by using all 12 of their satellite facilities once they submit data to FDA</td>
</tr>
<tr>
<td>STERIS</td>
<td>STERIS V-PRO 1 Plus, maX, and maX2 Lower Temperature Systems (STERIS Sterilization Systems) [link to authorization letter]</td>
<td>Decontaminates compatible N95 or N95 equivalent respirators (compatible N95 respirators) for single-user reuse by healthcare personnel</td>
</tr>
<tr>
<td>4/09/2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Authorizing Organization</td>
<td>System/Process Description</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4/11/2020</td>
<td>Advanced Sterilization Products (ASP).</td>
<td>Advanced Sterilization Products (ASP) STERRAD Sterilization System</td>
</tr>
<tr>
<td>4/15/2020</td>
<td>Stryker</td>
<td>Stryker VP4 N95 Respirator Decontamination Cycle</td>
</tr>
<tr>
<td>4/20/2020</td>
<td>Sterilucent, Inc.</td>
<td>Sterilucent, Inc. Sterilization System</td>
</tr>
<tr>
<td>5/7/2020</td>
<td>Duke University Health System</td>
<td>Duke Decontamination System</td>
</tr>
<tr>
<td>5/21/2020</td>
<td>STERIS</td>
<td>STERIS STEAM Decon Cycle in AMSCO Medium Steam Sterilizers</td>
</tr>
<tr>
<td>5/27/2020</td>
<td>Stryker</td>
<td>Stryker Sustainability Solutions VHP Decontamination System</td>
</tr>
<tr>
<td>6/13/2020</td>
<td>Technical Safety Services LLC</td>
<td>Technical Safety Services VHP Decontamination System</td>
</tr>
<tr>
<td>7/24/2020</td>
<td>Michigan State University</td>
<td>Michigan State University Decontamination System</td>
</tr>
<tr>
<td>8/20/2020</td>
<td>NovaSterilis, Inc.</td>
<td>Nova2200</td>
</tr>
</tbody>
</table>

**INFUSION PUMPS AND INFUSION PUMP ACCESSORIES**

Infusion pumps are medical devices that deliver fluids, such as nutrients and medications, into a patient’s body in controlled amounts. The FDA has issued EUAs to increase the availability of infusion pumps and infusion pump accessories, which are integral to treating patients during the COVID-19 pandemic.

**Individual Infusion Pumps**
Umbrella of Infusion Pumps and Accessories

On May 13, 2020, the FDA issued an EUA for infusion pumps and infusion pump accessories that among other things, meet certain safety, performance, and labeling criteria, in response to concerns relating to the insufficient supply and availability of the devices for use by healthcare providers in the continuous infusion of medications, total parenteral nutrition, and/or other fluids into patients during the COVID-19 pandemic. This includes infusion pumps with remote monitoring or remote manual control features or administration sets and other accessories with increased length that help to maintain a safe physical distance between healthcare providers and patients with or suspected of having COVID-19 to reduce healthcare provider exposure. Infusion pumps and accessories that have been confirmed by the FDA to meet the criteria are included in Appendix A below.

A manufacturer may request the addition of any eligible infusion pump and/or infusion pump accessory to Appendix A by submitting a request to CDH-COVID19-InfusionPumps@fda.hhs.gov, as outlined in the EUA.

- EUA Letter of Authorization - Infusion Pumps and Infusion Pump Accessories
- Fact Sheet for Healthcare Providers
- Fact Sheet for Patients
- Appendix A: Authorized Infusion Pumps and Infusion Pump Accessories

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</thead>
<tbody>
<tr>
<td>B.Braun</td>
<td>Space and Outlook Pumps (Infusion Pump)</td>
<td>• An infusion pump for delivery of medications into a nebulizer to treat COVID-19 patients of all ages</td>
</tr>
</tbody>
</table>

PERSONAL PROTECTIVE EQUIPMENT (PPE) EUAS

Newest authorizations are in bold
**Updated August 25, 2020**

**N95 and Other Respirators EUAs (including EUAs for NIOSH-Approved N95s and imported respirators)**

<table>
<thead>
<tr>
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</table>
| Manufacturers and other Stakeholders – Certain Imported Filtering Facepiece Respirators | **Imported, Non-NIOSH-Approved Disposable Filtering Facepiece Respirators**  
- Products from the following countries: Australia, Brazil, Europe, Japan, South Korea, and Mexico; and/or  
- Products authorized in the following regulatory jurisdictions: European CE Mark, Australia Register of Therapeutic Goods (ARTG) Certificate of Inclusion, Health Canada License, or Japan Pharmaceuticals and Medical Device (PMDA)/Ministry of Health and Labour and Welfare (MHLW) | This EUA authorizes certain respirators, including ones that have used a specific decontamination system, to be used in health care settings by healthcare personnel in accordance with CDC’s recommendations. Authorized Respirators are listed in Exhibit 1 and listed below. |

3/28/2020

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**UMBRELLA EUA FOR NON-NIOSH-APPROVED DISPOSABLE FILTERING FACEPIECE RESPIRATORS (FFRS) MANUFACTURED IN CHINA (REISSUED JUNE 6, 2020)**

- EUA Letter of Authorization - Umbrella EUA: Non-NIOSH-Approved Disposable Filtering Facepiece Respirators Manufactured in China (Reissued June 7, 2020)
- Non-NIOSH Approved Disposable Filtering Facepiece Respirators Manufactured in China EUA FAQs
- Respirator Models Removed from Appendix A (Respirator Models No Longer Authorized)

Appendix A: Authorized Imported, Non-NIOSH Approved Respirators Manufactured in China (Updated: July 14, 2020)  
Manufacturer, Model, Location of Manufacturing

- 3M, 9001, 9002, 9501, 9501+, 9501V+, 9502, 9502+, 9502V+, 9505+, 9541, 9541V, 9542, 9542V, 9552, 9552V, Made in China.
- Allmed Medical Products Co., Ltd., LP220002, Made in China
- Anhui Hanxiutang Biotechnology Co., Ltd. HXT-01, Made in China.
- **Anhui JIABAO Protective Equipments Co., Ltd JB-RP001, Made in China.**
- **Anshun Health and Medical Technology Co., Ltd., AKF6002, Made in China.**
- AOK Tooling Ltd. (aka Shenzhonghai Medical), 20130040, 20130045A, 20180021, 20130038, 20190019, 910, 20190029, Made in China.
- Baoding Yinhong Yuhe Medical Device Manufacturing Co., Ltd. YH/KN95-1, Made in China.
- Bei Bei Safety Co Ltd., B702, B702V, B704, B704V, Made in China.

Newest authorizations are in bold
BEIJING TOPNEW IMPORT & EXPORT CO., LTD., ZY95, Made in China.

BG PRECISION CO. LTD, KN95-N, Made in China.

BYD Precision Manufacture Co. Ltd., BYD KN95 Particulate Respirator (Model Number DG3101), Made in China.

Careable Biotechnology Co., Ltd. CARE002, CARE003, Made in China.

Changsha Changjiu Medical Technology Co. Ltd. KN95-05, KN95-08, Made in China.

Changshu Dayi Health Protection Articles Co. Ltd. DY-3, Made in China.

Chengde Technology Co. KN95 (PM2.5) Protective Mask, Made in China.

Chongqing China Nano Technology Co., Ltd., ZN6005, Made in China.


Dongguan Arun Industrial Co., LTD. KN95 N9, Made in China.

Dongguan City Outdoorsy Co., LTD. OD-001, Made in China.

Dongguan Sengtor Plastics Products Co., Ltd., 20182140615 Folded, Made in China.

Donghua Siecom Communication Technology Co., Ltd. Co., Ltd ZGKNM-01, Made in China.

ESound Medical Device Co., Ltd. 02676, Made in China.

FOSHAN FLOCON MEDICAL EQUIPMENTS CO., LTD. M1, Made in China.

Foshan Nanhai Chuanzhishang, CZ-S02, Made in China.

Fujian Leepoch Pharmaceutical Industry, KPM-3, Made in China.

Fuzhou Chunlan Medical Equipment, CL-P1, Made in China.

Guangdong GangRong Medical Technology Co., Ltd., GR200, Made in China.

Guangdong GOLDEN LEAVES TECHNOLOGY DEVELOPMENT CO., LTD., 8862 KN95, Made in China.

Guangdong JINGCOS CO., LTD, 95J1, Made in China.

Guangdong KINGFA SCI. & TECH. Co. Ltd. KF-A F01, Made in China.

Guangdong Nuokang Medical Technology Co., Ltd., KN95 Non-Surgical Disposable Particulate FFR, Made in China.

Guangdong Seyouse Technology and Culture CO., LTD., SS-00, Made in China.

Guangdong Tengrui Pharmaceutical Technology Co., Ltd., LSH-201, Made in China.

Guangdong Willing Technology Corporation. WL-01, Made in China.

Guangdong Winsun Personal Care Products Co., Ltd., YS0003. Made in China.

Guangdong Yida Medical, YD-002, Made in China.

Guangdong Zhizhen Biological Medicine Co., Ltd., KN95 Three-Dimensional Protective Face Mask, Made in China.

GUANGZHOU BIOFIL AIR PURIFICATION MATERIALS CO., LTD, MY3D2, Made in China.

Guangzhou Carrot Mall Network Technologies Co., Ltd., IRYS-01, Made in China.

Guangzhou Harley Commodity Company Limited, L-103V, KN95, Made in China.

Guangzhou Nan Qi Xing Non-Woven Co., Ltd. KN-1 Respirator, Made in China.

Guangzhou Powecom Labor Insurance Supplies Co., LTD. KN95, Made in China.


Haishi Hainuo lexiang medical technology (Qingdao) Co., Ltd., LX1001, Made in China.

HANGZHOU FILTECH INTELLIGENT CO., LTD. Filtech Face Mask Model F860. Made in China.

Hangzhou Gang Yu Health Products Co., Ltd., GY2020001, Made in China.


HeiQ Materials AG, HVP-FFP2-01, Made in China.

Henan Akly Filter Engineering Co., Ltd., KZ888E, Made in China.

Henan Bingzun Industrial Co., Ltd. 8410, Made in China.

Henan Yadu Industrial Co., Ltd., Flat Fold, Made in China.

Heyuan COE Communication Technology Co., Ltd., Flat Fold, Made in China.

Hubei Huaiqiang High-Tech Co., Ltd., Flat Fold (Earloop) Non-Sterile, Made in China.


Newest authorizations are in bold
Updated August  25, 2020

- H uizhou Yibaido Medical Device Technology Co., Ltd., YBD-2, Made in China.
- Hunan Hengchang Pharmaceutical Co., LTD, N9501-L (non sterile type), Made in China.
- Hunan Jianyuan Medical Science and Technology Co. Ltd., JYO09A, Made in China.
- Hunan Kangweining Medical Devices Co., Ltd, YH-I (non-sterile) and YH-II (sterile), Made in China.
- JiangSu EverSmart Nano Technology Co., Ltd. HZ-KN95, Made in China.
- JIANGSU HOMCAN MEDICAL TECHNOLOGY CO. LTD, Made in China.
- Jiangsu Jiaoao Medical Technology Co, JA95-1 Filtering half mask, Made in China.
- Jinhua Jiadaifu Medical Supplies Co., Ltd, Disposable Non-Medical Face Mask (KN95), Made in China.
- Lanshan Shendun Technology Co., Ltd., SD-KN95, Made in China.
- ORICH Medical Equipment (Tianjin) Co., Ltd., N95 Folded Form (Non-sterile), Made in China.
- Putian Sisen Technology Co., Ltd. AIBANA 001, Made in China.
- Qingdao Bioforce-aid Technology Co., Ltd., HRKFAM, HRKFBM, Made in China.
- Qingdao Huaren Medical Product Co.,Ltd., HRKFAM, HRKFBM, Made in China.
- Qingdao Miuton Medical Co., Ltd. Stereoscopic type, ear worn KN95 Protective Mask, Made in China.
- Raxwell Industrial Technology (Shanghai) Co., Ltd, RX9501, Made in China.
- Regina Miracle (Shenzhen) Ltd. RM2020 MA-08, Made in China.
- Rizhao Sanqi Medical & Health Articles Co., Ltd. RIZ100CVb, 3Q KN95, 3Q FFP2 NR, RIZQ100Sb, 3Q KN95 9505, Made in China.
- Samding Craftwork Co., Ltd. B13086, Made in China.
- Shaanxi Hongji Pharmaceutical Co., Ltd., HJF-E1, Made in China.
- Shandong Haidike Medical Products Co, Ltd. N95-V1, Made in China.
- Shandong Yuerong Network Technology Co., Ltd. Auben-0598, Made in China.
- Shanghai Dasheng Health Products Manufacture Company, Ltd., DTC3X-1, DTC3C-2, DTC3X-3, DTC3B-1, Made in China.
- Shanghai Gangkai Purifying Products Co. Ltd, 8012, 8013, 8022, Made in China.
- Shanghai Homes Mask Co., Ltd. HMS-801, Made in China.
- Shanghai Tenry Pharmaceutical Co., Ltd, TR-ZD01, Made in China.
- Shanghai Yunqing Industrial Co., Ltd. YQD95 KN95, Made in China.
- Shangxian Minimal Invasive Inc., CD9501, Made in China.
- Shenyang Shengshi Medical Technology Co., Ltd.
- Shenzhen SafeSecure Medical Infection Control Tech Co., Ltd. Made in China
- Shenzhen SanheXing Stickers Products Co., Ltd. SHX01, Made in China.
- Shenzhen Yunyifu Health Technology Co., LTD, PM-P2, Made in China.

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- SPRO Medical Products (Xiamen) Co., Ltd., D918, GL001, GL001A, Made in China.
- Sure-On Industries Ltd. 210-KN95. Made in China.
- Suzhou Bolisi Medical Technology Co., Ltd., BS-9501L, BS-9501FL, BS-9502C, BS-9502FC, Made in China.
- Tianjin TEDA Filters Co., Ltd., TEDA-P0652, Made in China.
- Tongcheng Jixiu Technology Co., Ltd. JX-R950, Made in China.
- UFI Filters (Shanghai) Co., Ltd., 35.005, Made in China.
- Violent Home Textile Technology Co., Ltd. ZLL377, Made in China.
- Weini Technology Development Co., Ltd. FFP2 NR E-300, FFP NR E-680, FFP2 NR 952, FFP2 NR F-820, KN95 958, KN95 951, FFP3 NR E830V, FFP3 NR E340V, Made in China.
- Winner Medical Co., Ltd., WN-N95FW, WN-N95FGIN, Made in China.
- Xiamen Chengchuang Automotive Materials Co., Ltd., XPM2121, Made in China.
- Xiamen Lianyi Industrial & Trading Co., LTD., LY9501, Made in China.
- Xiamen PROBTAIN NONWOVEN INC., MP9011, Made in China.
- Yangzhou Medline Industry Co., Ltd. I 9501, II9501, Made in China.
- Yicheng Dunhou Medical Health Co., Ltd., DHA01, Made in China.
- YuTong Eco-Technology (SuQian) Co., Ltd, YT-07, Made in China.
- ZHEJIANG BOSIQI CASHMERE CO., LTD., KANGJIAYI SS4020, Made in China.
- ZHEJIANG LUYAO ELECTRONICS TECHNOLOGY CO., LTD. LY-N900-N909, Made in China.
- ZHEJIANG MASHANG TECHNOLOGY CO., LTD No., MSNF-01, Made in China.
- ZHEJIANG SHUNFA SAFETY TECHNOLOGY CO., LTD. SF-K01. Made in China.
- Zhende Medical Co. Ltd., N9501F, Made in China.
- Zhengzhou Ruipu Medical Technology Co., Ltd., KN95, Made in China.
- Zhongkang Protective Equipment Technology (Guangzhou) Co., Ltd., ZK601, Made in China.
- ZHONGKANG WEIKANG MEDICAL EQUIPMENT CO., LTD, WJKZ-2, Made in China.

UMBRELLA EUA FOR IMPORTED, NON-NIOSH-APPROVED DISPOSABLE FILTERING FACEPIECE RESPIRATORS (FFRS) (REISSUED JUNE 6, 2020)

On March 24, 2020, the FDA issued an umbrella EUA for certain imported disposable filtering facepiece respirators (FFRs) that are not approved by the National Institute for Occupational Safety and Health (NIOSH) and that meet criteria as described in the EUA. Under this EUA, authorized respirators, which are listed in Exhibit 1, are authorized for use in healthcare settings by healthcare personnel when used in accordance with CDC recommendations to prevent wearer exposure to pathogenic biological airborne particulates during FFR shortages resulting from the Coronavirus Disease 2019 (COVID-19) outbreak.

On March 28, 2020, to further address the shortage of disposable FFRs, the FDA determined it was necessary to reissue the March 24, 2020 letter in order to amend the Scope of Authorization to additionally authorize the use of authorized respirators that have been decontaminated pursuant to the terms and conditions of an authorized decontamination system.

The FDA continues to be vigilant and take prompt action on imported, non-NIOSH approved respirators to ensure healthcare personnel receive adequate protection. On June 6, 2020, the FDA again revised this EUA to revise the

Newest authorizations are in bold
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Scope concerning the decontamination of respirators with exhalation valves, and also revised the Scope of Authorization with respect to which jurisdictions are included in the second criterion for eligibility, among other revisions.

- EUA Letter of Authorization - Umbrella EUA Imported, Non-NIOSH-Approved Disposable Filtering Facepiece Respirators (Reissued 6/6/2020)
- Exhibit 1: Authorized Imported, Non-NIOSH-Approved Disposable Filtering Facepiece Respirators (Updated 4/14/2020)

**Authorized Imported, Non-NIOSH Approved Respirators**
- 3M, Model 8205, Manufactured in Japan
- 3M, Model 8822, Manufactured in South Korea
- 3M, Model 9320+, Manufactured in UK, Singapore, Turkey
- 3M, Model 9322+, Manufactured in UK, Singapore, Turkey
- Ap Mascarillas S.A. de C.V. Model AP M10, AP Z6, Manufactured in Mexico
- BLT Industries, FLAT-FIT Healthcare Respirator, Manufactured in Bulgaria.
- Dromex, Model 1020, Manufactured in South Africa
- Galia Textil S.A. DE C.V, GTN95, Manufactured in Mexico.
- Plastcor Do Brasil LTDA, ECHO PFF2 CA 38.811, Made in Brazil.

**FACE SHIELDS AND OTHER BARRIER EUAS**

Face shields and other barriers are a type of PPE intended to protect the user from bodily fluids, liquid splashes, or potentially infectious materials. Availability of certain PPE are an integral part of routine patient care during the COVID-19 pandemic. The table below includes authorization information about the use of authorized face shields and other barriers for use during the COVID-19 public health emergency.

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT Description</th>
</tr>
</thead>
</table>
| **IkonX, Inc.**  | **Airway Done**  
| 7/24/2020        | A device used by healthcare providers as an extra layer of barrier protection in addition to personal protective equipment to prevent HCP exposure to pathogenic biological airborne particulates by providing isolation of hospitalized patients with suspected or confirmed diagnosis of COVID-19, at the time of definitive airway management, when performing airway related medical procedures or during certain transport of such patients during the COVID-19 pandemic. |
| **Oceanetics, Inc.** | **Negative-pressure Respiratory System with Advanced Ventilation Return (“NRSavr-100”)**  
<p>|                  | A device used by healthcare providers (HCP) as an extra layer of barrier protection in addition to PPE to prevent HCP exposure to pathogenic biological airborne particulates by providing isolation of hospitalized patients with suspected or confirmed diagnosis of COVID-19, at the time of definitive airway management, or |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Agency/Institution</th>
<th>EUA Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/13/2020</td>
<td>Manufacturers of Gowns and Other Apparel</td>
<td>Authorizes limited use of certain gowns and other apparel for use by Health Care Professionals (HCP) as PPE in healthcare settings in accordance with CDC recommendations to protect both HCP and patients from the transfer of COVID-19 in low or minimal risk level situations to prevent the spread of COVID-19. Authorized gowns and other apparel:  - Conductive shoe and shoe cover - Operating-room shoes - Surgical apparel accessory - Non-surgical isolation gown - Operating-room shoe cover - Surgical helmet - Surgical cap</td>
</tr>
<tr>
<td>5/27/2020</td>
<td>Walter Reed National Military Medical Center</td>
<td>Emergency use of the CAMIC within the U.S. Army and MHS by healthcare providers as an extra layer of barrier protection in addition to personal protective equipment to exposure to pathogenic biological airborne particulates during transport of suspected or confirmed COVID-19 patients at the time of definitive airway management, or when performing medical procedures on patients during COVID-19.</td>
</tr>
<tr>
<td>5/19/2020</td>
<td>Comunale</td>
<td>The PITU is for temporary isolation and transport of patients by providing an extra layer of barrier protection in addition to personal protective equipment (PPE)</td>
</tr>
<tr>
<td>5/08/2020</td>
<td>Manufacturers of Face Shields</td>
<td>Face shields for use by HCP as PPE are authorized under this EUA when they are intended for use by HCP as PPE in healthcare settings in accordance with CDC recommendations to cover the front and sides of the face and provide barrier protection and meet the following requirements:  A. The product is labeled accurately to describe the product as a face shield for medical purposes and includes a list of the body contacting materials (which does not include any drugs or biologics);  B. The product is not integrated with any other article of PPE such as a face mask, but rather is for use as a standalone face shield.  C. The product includes labeling that describes the product as intended for either a single-user, single use, or for multiple uses by the same user, and includes instructions for recommended cleaning and/or disinfection materials and processes, if applicable.  D. The face shield does not contain any materials that will cause flammability, or the product meets Class I or Class II flammability requirement per 16 CFR 1610 (unless labeled with a recommendation against use in the presence of high intensity heat source or flammable gas);  E. The product is not intended for any use that would create an undue risk in light of the public health emergency; for example, the labeling does not state that use of the authorized face shield alone will prevent infection from microbes or viruses, or that it is effective against radiation protection. As indicated in Section I, face</td>
</tr>
</tbody>
</table>
shields authorized by this EUA may be effective at preventing HCP exposure to certain particulates during face shield shortages by providing minimal or low barrier HCP protection to the wearer during COVID-19. All manufacturers are reminded that they must comply with all Conditions of Authorization, including those relating to advertising and promotion in Section IV of this letter.

Manufacturers of authorized face shields do not need to take any action, other than complying with the Conditions of Authorization (Section IV) in this letter of authorization to be an authorized face shield under this EUA if they are within the Scope of Authorization (Section II) of this EUA.

REMOTE OR WEARABLE PATIENT MONITORING DEVICES EUAS

Remote or wearable patient monitoring devices include (1) non-invasive remote monitoring devices that measure or detect common physiological parameters and, (2) non-invasive monitoring devices that wirelessly transmit patient information to their health care provider or other monitoring entity. The FDA has issued EUAs for certain remote or wearable patient monitoring devices to help increase the availability of monitoring and treatment of patients and to help address reduction of healthcare provider exposure to SARS-CoV-2 during the COVID-19 pandemic.

<table>
<thead>
<tr>
<th>SPONSOR</th>
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</tr>
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<tbody>
<tr>
<td>G Medical Innovations, Ltd.</td>
<td>G Medical VSMS ECG Patch</td>
<td>Allowed for use by healthcare professionals in the hospital setting for remote monitoring of the QT interval of an electrocardiogram (ECG) in general care who are 18 years of age or older and are undergoing treatment for COVID-19 with drugs that can prolong QT intervals and may cause life-threatening arrhythmias.</td>
</tr>
<tr>
<td>Ascorn (US), Inc.</td>
<td>Ascorn teleCARE IP Nurse Call System</td>
<td>A nurse call system for use by healthcare providers and patients in healthcare environments, including temporary hospital facilities, as a powered environmental control system intended for medical purposes with additional hardware and software modifications implementing the capability for remote communication between patients and healthcare providers, and, for those patients utilizing a ventilator, remote monitoring of ventilator status updates to alert the healthcare provider.</td>
</tr>
<tr>
<td>PhysiolGuard Corporation Ltd.</td>
<td>PhysiolGuard, ECQ-QT Analysis System</td>
<td>Remote patient monitoring for healthcare professionals in the hospital setting for remote monitoring and detection of changes in the QT interval of an ECG</td>
</tr>
<tr>
<td>VitalConnect, Inc.</td>
<td>VitalConnect, Inc., VitalPatch</td>
<td>Remote monitoring system used for monitoring and detection of changes in the QT interval of an electrocardiogram (ECG) in adult (&gt;18) patients in general care (not in the intensive care unit) and are undergoing treatment with COVID-19 drugs that may cause life threatening arrhythmias.</td>
</tr>
</tbody>
</table>

RESPIRATORY ASSIST DEVICES EUAS

Newest authorizations are in bold
Respiratory assist devices include devices intended to help patients in need of support for breathing, removal of carbon dioxide, and therapy to reduce disuse atrophy of abdominal wall muscles. The FDA has issued EUAs to help increase the availability of respiratory assist devices, which are integral to treat patients during the COVID-19 pandemic.

The table below lists the respiratory assist devices authorized for use during the COVID-19 public health emergency.

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT (LINK TO AUTHORIZATION LETTER)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>electroCore, Inc.</td>
<td>gammaCore Sapphire CV</td>
<td>Intended for acute use at home or in a healthcare setting to treat patients with known of suspected COVID-19 who are experiencing exacerbation of asthma-related dyspnea and reduced airflow, and for whom approved drug therapies are not tolerated of provide insufficient symptom relief as assessed by their healthcare provider by using non-invasive Vagus Nerve Stimulation (nVNS) on either side of the patient’s neck.</td>
</tr>
<tr>
<td>Liberate Medical, LLC</td>
<td>VentFree Respiratory Muscle Stimulator Device</td>
<td>Intended to be used by healthcare professionals (HCP) in healthcare settings to reduce disuse atrophy of the abdominal wall muscles, which may reduce the number of days of ventilator support in adult patients who require mechanical ventilation.</td>
</tr>
<tr>
<td>ALung Technologies, Inc.,</td>
<td>Hemolung Respiratory Assist System (RAS)</td>
<td>Intended to treat lung failure caused by COVID-19 when used as an adjunct to noninvasive or invasive mechanical ventilation to reduce hypercapnia and hypercapnic acidosis, and/or to maintain normalized levels of partial pressure of carbon dioxide (PCO2) and pH in patients suffering from acute, reversible respiratory failure for whom ventilation of CO2 cannot be adequately, safely, or tolerably achieved.</td>
</tr>
<tr>
<td>Lungpacer Medical, Inc.</td>
<td>Lungpacer Medical, Inc. Diaphragm Pacing Therapy System (DPTS)</td>
<td>A device that assists in weaning patients that are at risk of weaning failure off breathing assistance machines requiring patient intubation</td>
</tr>
<tr>
<td>Synapse Biomedical, Inc.</td>
<td>Synapse Biomedical, Inc. TransAeris Diaphragmatic Pacing Therapy System (DPTS)</td>
<td>A device that assists in weaning patients that are at risk of weaning failure off breathing assistance machines.</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<tbody>
<tr>
<td>CDC</td>
<td>National Institute for Occupational Safety and Health (NIOSH)-Approved Air Purifying Respirators for Use in Health Care Settings During Response to the COVID-19 Public Health Emergency</td>
<td>Decontaminates compatible N95 or N95-equivalent respirators for single user reuse by healthcare personnel to prevent exposure to airborne particulates when there are insufficient supplies of N95 respirators.</td>
</tr>
</tbody>
</table>
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- Non-powered air-purifying particulate Filtering facepiece respirators (FFRs) and reusable respirators such as elastomeric half and full faced facepiece respirators, approved by NIOSH and listed on the NIOSH Certified Equipment list (CEL) for non-powered air purifying respirators with particulate protection;
- Other powered air purifying respirators (PAPRs) approved by NIOSH, and that are listed on the NIOSH CEL for PAPRs with particulate protection;
- FFRs that were NIOSH-approved but have since passed the manufacturers’ recommended shelf-life, are not damaged, and have been held in accordance with manufacturers' storage conditions in strategic stockpiles; and,
- Any authorized respirator that has been decontaminated pursuant to the terms and conditions of an authorized decontamination system.

VENTILATORS AND VENTILATOR ACCESSORIES EUAS

<table>
<thead>
<tr>
<th>SPONSOR</th>
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<tbody>
<tr>
<td>Manufacturers and other stakeholders</td>
<td>Eligible products are new/modified ventilators, anesthesia gas machines modified for use as ventilators, and positive pressure breathing devices modified for use as ventilators (collectively referred to as “ventilators”), ventilator tubing connectors, and ventilator accessories.</td>
<td>Authorizes the use of these products if they meet specific criteria for safety performance, and labeling, (listed in Appendix B) and available here and listed below:</td>
</tr>
</tbody>
</table>

Authorized Ventilators:
Manufacturer, Product Name, (Date of Authorization)
Device Description/Intended Use
- Beijing Aeonmed Co, Ltd. VG70 ventilator (3/25/2020)
  Critical care ventilators for mechanical ventilation of patients in ICU
- Shenzhen Mindray Biomedical Electronics, Mindray SV300/SV600/S800 ventilators (3/28/2020)
  Critical care ventilator intended to provide ventilation assistance and breaking support for adult, pediatric and infant patients
- Vyaire Medical Inc. LTV2 model 2150 (3/28/2020)
  Critical care ventilator that are intended to provide continuous or intermittent ventilatory support for the care of the individuals who require mechanical ventilation
- RESMED, Stellar 150 (3/30/2020)
  Ventilator, Continuous, Minimal Ventilatory Support, Facility Use. The Stellar 150 is intended to provide ventilation for non-dependent spontaneously breathing adult and pediatric patients (30 lb/13 kg and above) with respiratory insufficiency, or respiratory failure, with or without obstructive sleep apnea. The device is for invasive use (with the use of the ResMed Leak Valve)
- RESMED, Lumis 150 VPAP ST (3/30/2020 Amended 4/17/2020)
  Ventilator, Continuous, Minimal Ventilatory Support, Facility Use. The ResMed Lumis 150 VPAP ST devices are indicated to provide non-invasive ventilation for patients weighing more than 30 lbs (13 kg), or more than 66 lbs (30kg) in iVAPS mode, with respiratory insufficiency or obstructive sleep apnea (OSA). They are intended for home and hospital use

Newest authorizations are in bold
RESMED, GA ST (3/31/2020)
Ventilator, Continuous, Minimal Ventilatory Support for patients weighing more than 44lbs, Facility Use

RESMED, Flexo Bi Level ST (3/31/2020)
Ventilator, Continuous, Minimal Ventilatory Support, Facility Use

RESMED, AirCurve ST (3/31/2020 Amended 4/17/2020)
Ventilatory, Continuous, Minimal Ventilatory Support for patients weighing more than 66lbs, Facility Use

Amsino, YUWELL YH-730 Bi-level PAP and YH-830 Bi-level Pap (3/31/2020)
Ventilator for patients weighing more than 66lbs, Non-Continuous

Inovytex, Ventway Sparrow (3/31/2020)
Ventilator, Continuous for pediatric and adult patients

Philips Respironics, VX850 Ventilator (4/1/2020)
Critical Care Ventilator for pediatric (infants) and adults

BMC Medical CO. LTD. Luna G3 BPAP 25A-LG3700 (4/2/2020)
Ventilator, continuous, minimal ventilatory support for adult use, facility use

BMC Medical CO. LTD. Y-30 T (4/2/2020)
Ventilator, continuous, minimal ventilatory support for adult patients, facility use

Dragerwerk AG & CO. KGaA, Evita V800 and Evita V600 (4/2/2020)
Critical Care Ventilator for adults, adolescents, children, infants and neonates

Dragerwerk AG & CO. KGaA, Babylog VN800 and VN600. (4/3/2020)
Critical Care Ventilator intended for neonates and pediatric patients

Ventilator, Continuous, Facility Use

Covidien LLC, Puritan Bennett S60 Ventilator System (4/5/2020)
Ventilator, Continuous for adult and pediatric patients

Colabs. COVID Ventilator (4/6/2020)
Emergency Ventilator for adult patients

MEKICS Co., Ltd., MTV1000 Ventilator (4/6/2020)
Ventilator, Continuous for use on pediatric and adult patients

Dragerwerk AG & Co. KGaA, Atlan A350 and Atlan A350XL (4/7/2020)
Gas-Machine, Anesthesia intended for anesthetizing adults, pediatric patients and neonates

VenTec Life Systems, V+Pro Emergency Ventilator (4/7/2020)
Ventilator for pediatric and adult patients, continuous

Ambulancetech Co., Ltd. Models 6000S, T5, T7 (4/8/2020)
Emergency transport ventilator, children and adults

Philips Respironics, E30 ventilator
Ventilator, Continuous, Minimal Ventilatory Support, facility use

Incoba, LLC., Apogee (4/8/2020)
Oxygen Conserver intended as a delivery device for medical grade oxygen from high-pressure oxygen cylinders. Ambulatory device for use in hospital, healthcare facilities, or home care environments.

SecondBreath LLC, Pneumatic Resuscitator device (4/13/2020)
Emergency Resuscitator

University of Minnesota Medical School and Boston Scientific Corporation, Coventor Adult Manual Resuscitator Compressor (4/14/2020)
Emergency Resuscitator

Umbulizer, UMV-001 EUA (4/14/2020)
Emergency Resuscitator

Hillrom, MetaNeb 4 (4/16/2020)
Intermittent Positive Pressure Breathing Device for patients 5 years old and above whom can follow verbal instructions in hospitals, subacute and nursing facilities, physician offices, clinics and home settings.
• Spiro Devices, LLC. Spiro Wave (4/17/2020)
  Emergency Resuscitator to support adults when Positive Pressure Ventilation (PPV) is required to manage Acute Respiratory Failure
• RESMED. AirCurve 10 ST-A (4/17/2020)
  Ventilator, Continuous, minimal ventilatory support for facility use in patients weighing more than 30lbs
• PVA, PREVENT (4/17/2020)
  Emergency Resuscitator for emergency resuscitation with appropriate critical care monitoring on adult patients weighing more than 66 lbs
• 3B Medical Inc. Luna G3 B30VT (4/20/2020)
  Ventilator, Continuous Minimal Ventilatory Support
• Resvent, iBreeze PAP (4/20/2020)
  Ventilator, Continuous, Minimal Ventilatory Support, Facility Use
• Virgin Orbit, Virgin Orbit Resuscitator (4/22/2020 Amended 4/23/2020)
  Emergency Resuscitator
• Amisino International Inc’s, YUWELLYH-725 (4/23/2020)
  Ventilator, Non-Continuous
• AutoMedX Inc., SAVe II Series Ventilator (4/24/2020)
  Powered emergency Ventilator
• SLS Medical Technology Corp. Ltd., CP101/CP101S Series (4/24/2020)
  Ventilator, Non-Continuous
  Ventilator, Non-Continuous
• Resvent Medical Technology CO., Ltd’s, iBreeze 20STA device (4/27/2020)
  Ventilator, Non-Continuous
  Ventilator, Non-Continuous
• NASA Jet Propulsion Laboratory, VITAL Ventilator (4/30/2020)
  Emergency ventilator
• Venti-Now, Venti-Now Resuscitator Model JM-P2020A (4/30/2020)
  Emergency Resuscitator
• Wilcox Industries Corp., Wilcox PATRIOT SAVR (5/1/2020)
  Emergency Ventilator
• Elamaster S.p.A. Techolgie Elettroiche, Mechanical Ventilator (5/1/2020)
  Emergency Ventilator
• BMC Medical CO., LTD., China., Luna G3 BPAP S/T-LG3800-G3 B30VT (5/2/2020)
  Ventilator, Continuous, Minimal Ventilatory Support
• ZIBO ZHONGXUN MEDICAL EQUIPMENT CO. LTD., ZXH-550 (5/2/2020)
  Emergency Ventilator
• JIUXIN MEDICAL, JIXI H-100 (5/2/2020)
  Emergency Ventilator
• Vayu Global Health Innovations, Vayu bubble Continuous Positive Airway Pressure Circuit (‘Vayu BCPAP’) (5/5/2020)
  Continuous Positive Airway Pressure Circuit
• Hunan Beyond Medical Technology Co., Ltd. BEYOND C20A CPAP (5/6/2020)
  Ventilator Continuous Minimal Ventilatory Support
• Hunan Beyond Medical Technology Co., Ltd. BEYOND B30P BiPAP (5/6/2020)
  Ventilator Continuous Minimal Ventilatory Support
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- Guangzhou Hypnus Healthcare Co., Ltd. Hypnus ST730. (5/6/2020)  
  Ventilator Continuous Minimal Ventilatory Support
- AutoMedX Inc. SAVe ll+ (M50016, M50017) (5/7/2020)  
  Powered Emergency Resuscitator
- Taiyuan Shanghai Medical, Fabius Plus / Fabius Plus XL (5/8/2020)  
  Gas Machine, Anesthesia
  Ventilator, Non-Continuous
- Lanick Med Systems LLC., Lyra x1 and Lyra x2 Ventilators (5/12/2020)  
  Ventilator, Non-Continuous, Facility Use
- CMI Health Beijing Aeommed Shangrila510S (5/15/2020)  
  Emergency Transport Ventilator
  Ventilator, Continuous, Minimal Ventilatory Support
  Aurora Bi-Level S, Aurora Bi-Level S/T, Bi-Level Auto S (5/20/2020)  
  Ventilator, Continuous, Minimal Ventilatory Support
- Guangzhou Hypnus Healthcare Co., Ltd. BA825W, BA825, ST830W and ST830 (5/22/2020)  
  Ventilator, Continuous, Minimal Ventilatory Support
- Origin Medical Devices, Panther 5 Model PSDLVENT (5/22/2020)  
  Ventilator, Continuous, Facility Use
- NASA Jet Propulsion Laboratory, VITAL Compressor (6/1/2020)  
  Emergency Ventilator
- Fitbit, Fitbit Flow (6/1/2020)  
  Emergency Resuscitator
- BioMedInnovations, LLC. SuppleVent (6/8/2020)  
  Emergency Ventilator
- Nanotronics Imaging, Inc. nHale BiPAP device (6/9/2020)  
  Ventilator, Continuous, Minimal Ventilatory Support
  Emergency Ventilator
- NeoNatal Rescue, AdultLife Pro Ventilator (6/17/2020)  
  Emergency Ventilator
- World Ventilator Foundation (WVF) WorldVent Ventilator (6/19/2020)
- Air Boost, AustinPS1 (6/24/2020)  
  Emergency Resuscitator
- SAIGICO USA, LLC., V2O SAGICO SYSTEM (6/26/2020)  
  Ventilator, Continuous, Facility Use
- Stewart & Stevenson Healthcare Technologies, LLC., Apollo ABVM (6/26/2020)  
  Emergency Resuscitator
- LifeMech, Inc. LifeMech A-VS (7/31/2020)  
  Emergency Resuscitator
- Nanotronics Imaging, Inc, nHale BiPAP device (8/04/2020)  
  Ventilator, Continuous, Minimal Ventilatory Support
- VORTTRAN Medical Technology 1, Inc., GO2VENT with PEEP Valve (8/04/2020)  
  Emergency Ventilator
  Ventilator, Continuous, Facility Use

Newest authorizations are in bold
**Authorized Ventilator Tubing Connectors**
Manufacturer, Product Name, (Date of Authorization)
- Prisma Health, Ventilation Expansion Splitter (VESper) (3/25/2020)
  *VESper allows multiple patients to be treated by a single ventilator*
- Vent Multiplexor, LLC., Vent Multiplexor (4/15/2020)
  *Dual patient circuit connector that is intended to provide temporary rescue mechanical ventilation for dual patient ventilation until an additional ventilator is available*
- MakeMedical, VentMI (4/19/2020)
  *Dual Patient Circuit Connector*
  *Ventilator Tubing Connector*
- Formlabs Inc., Formlabs 3D Printed BiPAP Adaptor (4/29/2020)
  *Ventilator Tubing Connector*
- Covidien LLC., DAR Adult Dual Patient Breathing Circuit 301P14429 (5/05/2020)
  *Dual Patient Circuit Connector*
- Safe Flight Instrument Corporation, Safe Flight 9100-3 Quad Vent (5/7/2020)
  *Patient Circuit Connector*
- Safe Flight Instrument Corporation, Safe Flight 9100-1 Quad Vent (5/7/2020)
  *Patient Circuit Connector*
- Stryker Instruments, Flow Control Valve (5/8/2020)
  *Patient Circuit Connector*
- Valhalla Medical Supply, LLC Single-Use Emergency Ventilator 2-Way Manifold (5/13/2020)
  *Dual Patient Circuit Connector*
- Bloom Energy, Ventilator Sharing and Monitoring System (5/29/2020)
  *Patient Circuit Connector*
  *Dual Patient Circuit Connector*

**Authorized Ventilator Accessories**
Manufacturer, Product Name, (Date of Authorization)
- SMD Manufacturing, LLC. ReddyPort Mini NIV Access Elbow (4/13/2020)
  *Mini NIV Access Elbow is intended to provide an interface for application of CPAP or bi-level therapy. The elbow is for single patient use in the hospital/institutional environment Elbow connector for mask*
- 3B Medical, Inc., 3B Hi-Flow H80, Respiratory Humidifier (4/14/2020)
  *H-80 series humidifier is for the treatment of spontaneously breathing patients who would benefit from receiving high flow warmed and humidified respiratory gases. This device is for patients by prescription in the home or hospital/institutional environment*
- Janisys, Janisys CPAP Flow Generator (4/28/2020)
  *Positive End Expiratory Pressure Breathing Attachment*
- Vincent Medical Manufacturing Co., Ltd., O2FLO High Flow Respiratory Humidifier (VUN-001) Respiratory Humidifier (5/20/2020)
Updated August 25, 2020

- Vincent Medical (Dong Guan) Manufacturing Co., LTD. Heat and Moisture Exchanging Filters (HMEF): HMEF 1000 Straight (Model 504-011, part number 51008027), HMEF 1000 Angled (Model 504-011, part number 51008028), HMEF Midi Straight (Model 504-011, part number 51008029), HMEF Midi Angled (Model 504-011, part number 51008030); and Bacterial/Viral Respirator Filters: BSF103 low resistance (Model 510-014, part number 51008082) and BSF201 High performance (Model 504-011, part number 51008083) (6/23/2020)

Breathing Circuit Filters

- Circadiance, SleepWeaver Prevent Mask (7/8/2020)
  Ventilator, non-continuous, Mask

- Great Group Medical (GGM), GGM Respiratory Humidifier, Models VH-2100, VH2600A, and VH-2600 (7/17/2020)
  Respiratory Humidifier

- Lombardi Undersea LLC, Subsalve Oxygen Treatment Hood (8/04/2020)
  Ventilator, non-continuous, Mask

  Ventilator Tubing Connector

- Covidien, LLC, Puritan Bennett Reusable Pediatric-Adult Expiratory Filter (8/12/2020)
  Breathing Circuit Filters

- Intersurgical, Inc, StarMed CaStar R Hood for NIV (8/14/2020)
  Ventilator, non-continuous, Mask

OTHER MEDICAL DEVICES

<table>
<thead>
<tr>
<th>SPONSOR</th>
<th>PRODUCT (link to authorization letter)</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Left Ventricular Support System</td>
<td>Abiomed, Inc., Impella LV Systems</td>
<td>Intended for use by healthcare providers (HCP) in the hospital setting for providing temporary LV unloading and support to treat critical care patients with confirmed Coronavirus Disease 2019 (COVID-19) infection who are undergoing extracorporeal membrane oxygenation (ECMO) treatment and who develop pulmonary edema while on veno-arterial (V-A) ECMO support or late cardiac decompenation from myocarditis while on veno-venous (V-V) ECMO support.</td>
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<tr>
<td>Abiomed, Inc</td>
<td>Impella RP System</td>
<td>Intended to be used by healthcare providers in the hospital setting for providing temporary right ventricular support for up to 14 days in critical care patients for the treatment of acute right heart failure or decompensation caused by complications related to COVID-19, including pulmonary embolism.</td>
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<tr>
<td>CLEW Medical Ltd.</td>
<td>CLEWICU System</td>
<td>Authorized to be used by healthcare providers in the Intensive Care Unite for adult patients for the computation of proprietary patient status indices reffered to as CLEWRF and CLEWHI an as adjunct to patient monitoring during the COVID-19 outbreak. CLEWRF and the CLEWHI indices provide HCP with predictive screening information to assist with the early identification of patients who are likely be diagnosed with respiratory failure or hemodynamic instability with care common complications associated with COVID-19</td>
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<td>SPONSOR</td>
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<td>Walter Reed National Military Medical Center</td>
<td>COVID-19 Airway Management Isolation Chamber (CAMIC)</td>
<td>Emergency use of the CAMIC within the U.S. Army and MHS by healthcare providers as an extra layer of barrier protection in addition to personal protective equipment to exposure to pathogenic biological airborne particulates during transport of suspected or confirmed COVID-19 patients at the time of definitive airway management, or when performing medical procedures on patients during COVID-19.</td>
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<td>5/19/2020</td>
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<td>Eko Devices, Inc.</td>
<td>LVEF Screen</td>
<td>Allows for emergency use of the Eko electrocardiogram (ECG) Low Ejection Fraction Tool (“ELEFT”) to be used by healthcare professionals to provide an assessment of Left Ventricular Ejection Fraction (LVEF) for use as a diagnostic to screen for potential cardiac complications associated with COVID-19 or underlying cardiac condition that may affect clinical management of COVID-19, in adult patients having or suspected of having COVID-19.</td>
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<td>5/11/2020</td>
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<tr>
<td>Manufacturers of Face Masks (non-surgical)</td>
<td>Face masks are authorized under this umbrella authorization when they are intended for use by members of the general public, which includes HCP (refers to all paid and unpaid persons serving in healthcare settings), to cover their noses and mouths in accordance with <strong>CDC recommendations</strong>. Authorized face masks must meet the following requirements: 1. The product is labeled accurately to describe the product as a face mask and includes a list of the body contacting materials (which does not include any drugs or biologics); 2. The product is labeled accurately so that it does not claim to be intended for use as a surgical mask or to provide liquid barrier protection, and includes recommendations that would reduce the risk of such use; for example, the labeling might include recommendations against: use in any surgical setting or where significant exposure to liquid, bodily or other hazardous fluids, may be expected; use in a clinical setting where the infection risk level through inhalation exposure is high; and use in the presence of a high intensity heat source or flammable gas; or as an alternative example, recommendations for use only by the general public; and 3. The product is not labeled in such a manner that would misrepresent the product’s intended use; for example, the labeling should not state or imply that the product is intended for antimicrobial or antiviral protection or related uses or is for use such as infection prevention or reduction, nor should it be used for particulate filtration. For conditions of authorization for manufacturers and distributors, including conditions related to advertising and promotion, see pages 4-6 of <strong>Letter of Authorization</strong>.</td>
<td></td>
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