



GUIDANCE FOR MANAGING FEDERAL DEPOSITORY LIBRARY COLLECTIONS SAFELY DURING COVID-19

March 26, 2021

This updated guidance is to provide the latest information to FDLP library coordinators and their staff on how to safely maintain services to users and safeguard collections during the COVID-19 pandemic. Research continues on how long COVID-19 remains virulent on a variety of library materials. As libraries open to provide needed services to users, each library coordinator should ensure these best practices to avoid spreading the virus or damaging library materials.

COVID-19 and Library Materials

Project REALM (REopening Archives, Libraries, and Museums) continues to test types of library materials and simulated library environments to determine how long the COVID-19 virus remains viable and a potential source of contamination. These findings contribute to the evolving scientific understanding regarding SARS-CoV-2, which still includes uncertainties about: how much virus is shed by an infected person through coughing, sneezing, talking, breathing, etc.; how much virus is needed to infect someone; and the likelihood of a person becoming infected indirectly through contact with contaminated objects and surfaces.

Tests 7 and 8 were conducted to determine how temperature and humidity effect the longevity of the virus on stacked cover materials such as buckram cloth, clay coated paper, polyester film, and polyethylene foam used in shipping containers. All REALM tests 1-6 were conducted under a typical library and museum environment of 68 to 75 degrees Fahrenheit and 30 to 50 % relative humidity. For the purposes of tests 7 and 8, two temperature differences, a cold test and a warm, were performed. In test 7, the same

stacked materials were swabbed with the virus and stored at 34 to 36 degrees Fahrenheit. After 10 days, the amount of active virus was virtually unchanged. In test 8, the same stacked materials were swabbed with the virus and stored at 83 to 84 degrees Fahrenheit. After six days, the virus was undetectable on all of the test materials, with the exception of the polyester film, recommended earlier as a drop cloth to cover book trucks during the quarantine period. The virus was undetectable on the polyester film after eight days. All tests, 1-8, were conducted at 30 to 50 % RH.

Test 6 results tested how long the virus remained detectable on a variety of common surface materials found in libraries, where they are used as counter tops, display cases, railings, metal arm rests on furniture, lockers, and library shelving. The materials were provided by the National Park Service, Metropolitan New York Library Council, the Library of Congress, and from commercial vendors. In test 6, live COVID-19 virus was swabbed onto glass, marble, counter top laminate material, brass, stainless steel, and powder coated steel. The results of the test showed that after two days, the virus was not detectable on the brass and marble. After six days, the virus was no longer detectable on all of the other surface materials.

Test 5 results tested the longevity of the virus on leather, a book cover material not previously tested, and on a variety of upholstery covering materials typically found in library furniture. These are synthetic leather, made of expanded polyvinyl chloride (PVC); polyolefin fabric or 100% polyolefin; and 100% cotton fabric. A nylon webbing typically used in crowd control barriers was also tested. Results showed that after eight days of quarantine, SARS-CoV-2 virus was still detected on leather and synthetic leather materials. For the leather book cover, the virus had dropped below the level of quantitation or the lowest amount of detectable virus, by day four, but the presence of virus was found on three of the five test samples on day eight. For the synthetic leather, the virus dropped below the level of detectable virus by day eight, but was still found on two of the five test samples. For the polyolefin fabric and nylon webbing, only trace amounts of virus after the initial one hour of drying time could be measured. No data for the cotton fabric could be collected or reported. This may be due to a coating or other treatment applied to the material during its manufacturing that retards fire or staining.

In addition to the test results, REALM has published an [updated analysis and summary](#) of the scientific research available on how the COVID-19 virus spreads and the influence of environmental factors such as temperature, humidity, and UV light on the longevity of the virus.

Test 4 results replicate the material types tested in Test 1, with the difference that after contamination, the test samples were stacked together to simulate how library materials are typically handled in book returns and on carts. The results of the test show that stacking materials significantly increases the time that the COVID-19 virus is viable from three to more than six days. These test results suggest a quarantine time of at least seven days for stacked materials.

Test 3 results tested the viability of the COVID-19 virus on plastic surfaces common to libraries. Talking book USB cassettes, DVD cases, storage bags, storage containers, and plexiglass were tested. Results of the test showed that the virus was viable on these surfaces more than five days after exposure. However these non-porous plastic surfaces may be cleaned with disinfectants, unlike paper and film-based collection materials.

Test 2 results cover library materials not examined during Test 1. These results shows that four days of quarantine are needed for some library materials before the virus was fully undetectable. Testing continues to demonstrate that standard office temperature and relative humidity, conditions typically achievable by any air-conditioned office space, provide an environment that allows for the natural attenuation of SARS-CoV-2 on all of the tested materials after four days of quarantine, rather than three days, previously recommended based on the results of Test 1. Test 2 was conducted by applying the virulent SARS-CoV-2 virus on five typical library materials held at standard room temperature and humidity conditions. The materials tested included the following items, which were provided by the National Library Service for the Blind and Print Disabled, Library of Congress*; Columbus Metropolitan Library**; and the National Archives and Records Administration***:

- Braille paper pages*
- Glossy paper pages**
- Magazine pages**
- Children's board book**

- Archival folders***

The materials examined in **Test 1** included the following items, which were provided by Columbus Metropolitan Library:

- Hardback book cover (buckram cloth)
- Softback book cover
- Plain paper pages inside a closed book
- Plastic book covering (biaxially oriented polyester film)
- DVD case

The COVID-19 virus may be transferred to materials by infected users. Books collected from return book bins, study tables, and tables by copiers should be considered potentially infected. Staff working with these materials should use personal protective equipment such as disposable nitrile gloves and masks that cover their nose and mouth.

Disinfection vs. Quarantine for Library Materials

While alcohol gels, disinfecting wipes, and spray sanitizers are great for removing the virus from your hands, door handles, desks, telephones, and computer keyboards, they should not be used on library materials. The chemicals in them can discolor, bleach, and degrade, book covers, paper, and film emulsions. While ultraviolet radiation (UV) has also been shown to kill coronaviruses, the suggested treatment time is extensive (up to 40 minutes) to destroy the virus on surfaces, and UV surface treatment will not reach the interior pages of a book. UV also degrades cardboard, adhesives, paper, and plastics.

The most cost-effective and sure way of treating infected library materials is to quarantine them for at least eight days and let the virus die by itself.

Setting up a Quarantine Area for Books and Microforms

With a little modification, your normal procedure for sorting and returning books to library shelves can be turned into an effective quarantine area for eliminating the virus from books, fiche and other library materials. Staff collecting or handling returned materials should wear a mask and gloves and follow CDC guidelines for wearing this equipment for their safety. When finished working with the materials, staff should remove the gloves and wash their hands to avoid contaminating other surfaces in the work area.

Quarantined books may be sorted for shelving or simply placed on a book truck. A file card or piece of cardboard can be used as a visible marker with the date in advance written on it to let staff know when those books are safe to shelve.

Microfilm and fiche can be put into a bag or a box marked with the end date of the quarantine period when the items will be safe to handle again.

Accounting for Materials in Quarantine

If you typically charge materials back into the library after users have checked them out and need to track them during the quarantine process, consider creating a pseudo patron card called “quarantine” with a due date at the end of the designated quarantine period. This will account for quarantined materials in the shelving queue for library users and staff. At the end of the quarantine period, the materials may be safely checked-in as they normally would be.

Sources

1. REALM Project Round 7 and 8 Test Results Available:
<https://www.oclc.org/content/dam/realm/documents/test-7-8-report.pdf>
2. REALM Project Round 6 Test Results Available:
<https://www.oclc.org/content/dam/realm/documents/test6-report.pdf>
3. REALM Project Round 5 Test Results Available:
<https://www.oclc.org/realm/research.html#test5>
4. REALM Project Round 4 Test Results Available:
<https://www.webjunction.org/news/webjunction/test4-results.html>
5. REALM Project Round 3 Test Results Available:
<https://www.webjunction.org/news/webjunction/test3-results.html>
6. REALM Project Round 2 Test Results Available:
<https://www.webjunction.org/news/webjunction/test2-results.html>
7. REALM Project Round 1 Test Results Available:
<https://www.webjunction.org/news/webjunction/test1-results.html>
8. Reopening Archives, Libraries, and Museums (REALM) Information Hub: A COVID-19 Research Project <https://www.webjunction.org/explore-topics/COVID-19-research-project.html>
9. Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1. *New England Journal of Medicine*, 2020; DOI: [10.1056/NEJMc2004973](https://doi.org/10.1056/NEJMc2004973)

10. NEDCC, “Disinfecting Books and Other Collections”
https://www.nedcc.org/assets/media/documents/Preservation%20Leaflets/3_5_DisinfectingBooks_2020.pdf
11. ALA. “How to Sanitize Collections in a Pandemic”
<https://americanlibrariesmagazine.org/blogs/the-scoop/how-to-sanitize-collections-covid-19/>
12. Library of Congress. “The Impact of Hand Sanitizers on Collection Materials”
<https://www.loc.gov/preservation/scientists/projects/sanitize.html>
13. Center for Disease Control. “Cleaning and Disinfecting Your Facility”
https://www.cdc.gov/coronavirus/2019-ncov/community/pdf/Reopening_America_Guidance.pdf
14. ALCTS. “Handling Materials and Collections During a Pandemic”
<http://www.ala.org/alcts/preservationweek/resources/pandemic>
15. FDLP-COVID-19 Toolkit: Federal Depository Library Program
<https://www.fdlp.gov/promotion/covid-19-fdlp-toolkit>
16. REALM Project Cleaning and Disinfecting Considerations.
<https://www.oclc.org/content/dam/realms/documents/cleaning-considerations.pdf>