

EMERGENCY MANAGEMENT

3.5 Disinfecting Books and Other Collections

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The advice below is based on the current research available from the medical and scientific communities regarding COVID-19, and as their understanding of the virus evolves, NEDCC's advice for the cultural heritage community will, too.

QUARANTINE

The CDC has stated that the SARS-CoV-2 virus does not transfer readily from surfaces.ⁱ That said, each organization will need to exercise caution in accordance with its risk tolerance, its understanding of the available research, and municipal guidance.

The Northeast Document Conservation Center (NEDCC) recommends quarantining collection items as the most effective way to disinfect them after handling by staff and patrons. The length of the quarantine periods should be based on scientific studies that test the attenuation of the SARS-CoV-2 virus on collection-specific materials, such as paperback books, and on studies that test general material types such as plastic and cardboard. **In particular, we recommend consulting the website of the REopening Archives, Libraries, and Museums (REALM) project, which is conducting scientific research on collection-specific materials: <https://www.webjunction.org/explore-topics/COVID-19-research-project.html>.**

NEDCC recommends a minimum 3-day quarantine of the following collection items: plain paper pages inside a book, paperback and hardback book covers, DVD cases, archival folders, and plastic book coverings. The REALM Project's Round 1 and 2 tests on these collection-specific materials,ⁱⁱ as well as a number of other studies on relevant general material types, document an attenuation of the SARS-CoV-2 virus on these surfaces after up to 3 days.

For items for which REALM has explicitly documented a 4-day attenuation period, NEDCC recommends a 4-day quarantine. These include glossy book pages, magazine pages, children's board books, and braille paper pages.ⁱⁱⁱ

For specific material types, quarantine periods of different lengths may ultimately be found to be appropriate. Research results do not yet agree on the timeframes; however, the SARS-CoV-2 virus appears to lose its viability more quickly on cardboard surfaces^{iv} than on plastic surfaces (e.g. books covered in polyester, Mylar, or other plastics, as well as plastic-based materials such as CD's and DVD's).^{v,vi}

Because some studies testing SARS-CoV-2 on general material types, such as plastic and stainless steel, have found that up to 7 days is required for attenuation—and because of the small number of studies overall—some institutions may opt to continue with a 7-day quarantine, which NEDCC recommended in an earlier version of this publication.

A 7-day quarantine is appropriate for any collection item about which a curator is uncertain.

DISINFECTING

Do not attempt to disinfect archival materials, museum objects, or other valuable collections unless under the guidance of a conservator. Instead of disinfection, NEDCC recommends quarantining collection items (see previous section).

The use of liquid disinfectants and powdered cleaners is damaging to library and archives materials and is **not recommended**. UV ray exposure as a means of sterilization is also **not recommended**. Placing materials in a microwave oven is **not recommended**.

and may result in fire. Additionally, the use of fogging disinfectants of any kind in spaces with collections is **not recommended**.

Disinfection is a strategy that may reduce the spread of COVID-19 in public spaces, and the CDC has a helpful guide on this subject for community facilities in general.^{vii}

COMMUNICATION

NEDCC advises collecting institutions to inform the public about their approaches to disinfecting collection materials and to ensuring staff and patron safety. When customers understand what institutions are doing to mitigate risk, they are less likely to attempt their own, damaging disinfection methods at home.

STAFF SAFETY

Staff should follow CDC guidelines on “How to Protect

Yourself and Others.”^{viii} The CDC has provided additional guidelines for workers who handle and deliver mail and parcels,^{ix} and cultural heritage institutions may find these guidelines applicable to their operations.

Note that for collection safety, hand washing with soap and water is preferred over using hand sanitizer because the former removes dirt and oils and the latter does not.^x Dirt and oils can transfer to collections and stain or damage them. When washing hands, follow CDC guidelines.^{xi}

If a dedicated quarantine space cannot be established, staff can place items in bags until the quarantine period is over so that staff do not accidentally handle the items. It is not advisable to tightly seal the bags because this can create potentially-damaging microclimates.

ADDITIONAL RESOURCES

Department of Homeland Security. *Master Question List for COVID-19 (Caused by SARS-CoV-2)*. The most recently updated edition is available at: <https://www.dhs.gov/publication/st-master-question-list-covid-19>

ENDNOTES

ⁱ Centers for Disease Control and Prevention (CDC). “How COVID-19 Spreads.” <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html>

ⁱⁱ REOpening Archives, Libraries, and Museums (REALM) Project. “REALM Project Round 1 Test Results Available.” <https://www.webjunction.org/news/webjunction/test1-results.html> and “REALM Project Test 2 Results Available.” <https://www.webjunction.org/news/webjunction/test2-results.html>

ⁱⁱⁱ REOpening Archives, Libraries, and Museums (REALM) Project. “Test 2: Natural attenuation as a decontamination approach for SARS-CoV-2 on five paper-based library and archives materials.” <https://www.webjunction.org/content/dam/WebJunction/Documents/webJunction/realms/test2-report.pdf>

^{iv} Neeltje van Doremalen, Dylan H. Morris, Myndi G. Holbrook, et. al. “Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1” (Correspondence). *The New England Journal of Medicine*. March 17, 2020. <https://www.nejm.org/doi/full/10.1056/NEJMc2004973>. PDF version at <https://www.nejm.org/doi/pdf/10.1056/NEJMc2004973>

^v Alex W H Chin, Julie T S Chu, Mahen R A Perera, Kenrie P Y Hui, Hui-Ling Yen, Michael C W Chan, Malik Peiris, Leo M Poon. “Stability of SARS-CoV-2 in different environmental conditions.” *medRxiv*. May 2020. [10.1101/2020.05.14.20101652](https://doi.org/10.1101/2020.05.14.20101652)

^{vi} Yongjian Liu, Tianyi Li, Yongqiang Deng, Siyang Liu, Dong Zhang, Hanping Li, Xiaolin Wang, Lei Jia, Jingwan Han, Zhuchun Bei, Yusen Zhou, Lin Li, Jingyun. “Stability of SARS-CoV-2 on environmental surfaces and in human excreta.” *medRxiv*. May 12, 2020. <https://doi.org/10.1101/2020.05.07.20094805>

^{vii} Centers for Disease Control and Prevention (CDC). “Cleaning and Disinfection for Community Facilities.” <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>

^{viii} Centers for Disease Control and Prevention (CDC). “How to Protect Yourself & Others.” <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

^{ix} Centers for Disease Control and Prevention (CDC). “What Mail and Parcel Delivery Drivers Need to Know about COVID-19.” <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/mail-parcel-drivers.html>

^x Library of Congress, Preservation Directorate. “The Impact of Hand Sanitizer on Collection Materials.” <https://www.loc.gov/preservation/scientists/projects/sanitize.html>

^{xi} Centers for Disease Control and Prevention (CDC). “When and How to Wash Your Hands.” <https://www.cdc.gov/handwashing/when-how-handwashing.html>