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Recommendations on disinfection procedures for
cultural property due to the COVID-19 crisis

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Title:

Recommendations on disinfection procedures for cultural property due to the COVID-19 crisis.

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Recommendations on disinfection procedures for cultural property due to the COVID-19 crisis.

From the point of view of cultural heritage, Spain is extraordinary in terms of wealth, diversity and quantity. Faced with a situation such as the current COVID-19 health crisis, the social appropriation of heritage plays a relevant role with a very important potential as a tool for unity. A heritage with which society identifies, giving rise to culture and knowledge among its individuals (collective memory). This is why it is now essential that cultural managers connect with society through their heritage, using it as a shared tool to promote current strategies (whether they are health guidelines using cultural heritage images, campaigns to offer culture remotely, etc.). They must not only inform the public of the measures adopted by institutions to carry out disinfection procedures, but also how this shared cultural heritage must be protected. These two important aspects are outlined below.

We must not forget that cultural heritage is a non-renewable asset, and therefore every action that may affect its state of conservation must be properly understood, assessed and documented.

In view of the emergency measures implemented by the government with the aim of protecting people and fighting the COVID-19 pandemic – measures backed by the WHO, health authorities and the scientific community – it is worth considering the effect that these measures can have on cultural heritage, and so the following aspects must be taken into account:

- 1) During this state of emergency, where the protection of individuals and society as a whole is a priority, the important role that cultural heritage plays for society must also be considered. The main international organisations, such as ICCROM and ICOM, have expressed their views on this subject, highlighting the social and economic importance and the identity value that cultural heritage represents.
- 2) In view of the above, it is necessary to critically think of the impact of the measures established, the overall situation generated by the pandemic, and the effect on cultural heritage. In particular, the impact of lockdown measures on the population, the closing of institutions that manage cultural heritage, the disinfection measures that are being carried out in the field of immovable and movable cultural property, not to mention the economic impact on institutions in an environment of uncertainty.
- 3) Lockdown and social distancing measures, both locally and around the world – which seek to minimise infections among people – mean that it is currently impossible for the public to visit these places, and society is temporarily separated from its cultural heritage. Given this situation, and in line with various existing initiatives, it is a good idea for public authorities in particular to encourage virtual and remote access to heritage via channels that are already being used and to promote their use in other fields during this state of emergency. With this in mind, the Ministry of Culture and Sport has launched a campaign called #laculturaentucasa to encourage the use of the cultural resources that can be found on the internet.

4) With regard to the closing of museums, libraries, monuments, etc. as a result of current lockdown measures, the implementation of essential measures for the inspection and supervision of cultural property, installations and buildings of these institutions are recommended. The supervision means offering minimum services regarding security, maintenance and heritage conservation staff who must carry out these services with the personal protection and safety measures pertinent to each area of work and as stipulated by the health authorities. This is what is being done at the museums and archives linked to the Directorate General of Fine Arts, as well as at the IPCE itself, under the umbrella of the same Directorate General.

5) With regard to disinfection measures, it is necessary to consider their effectiveness and the impact they have, both on people and on cultural heritage, as well as on the environment. In particular, and with regard to cultural property, the use of corrosive products, such as bleach, ammonia and detergents can also leave very harmful residues. They are, therefore, not recommended and should not be used on monumental complexes, historical buildings, archaeological sites, objects, etc. Where necessary, and in line with the recommendations of the health authorities, diluted hydro-alcoholic solutions or neutral soap can be used but must always be applied with controlled pressure and following the advice of a cultural heritage conservator. There is even less justification for these practices to be applied inside museums, exhibition rooms, historical buildings, churches, etc., which have been closed for several weeks and have received no visitors. This means, according to scientific evidence, that there cannot be any remaining viral contamination from before they closed. In any case, and similarly to those cases of biodeterioration on cultural properties, direct application of any disinfectant or biocide is discouraged – especially rubbing by hand –without the technical direction and supervision of a professional in the conservation of cultural property.

6) In relation to the impact that the absence of visitors causes to institutions that manage cultural heritage, it is essential to promote measures for the dissemination and virtual access to heritage, thus avoiding that society is distanced from its cultural heritage. When the lockdown measures end and cultural institutions are gradually reopened to the public, it should be kept in mind that visitor recovery may take time and that local and national visitor numbers are expected to be the first to recover. It may be necessary to implement, although perhaps temporarily, safety measures for people that will not only affect cultural institutions, but will also extend to many professionals and companies (cultural managers, guides, agencies, transportation companies, hotels and restaurants, etc.), and of course, will affect the professional activity and work of cultural heritage conservation professionals and researchers. Cultural institutions will work to promote every programme that will allow normal levels of activity to be recovered and, if possible, even enhanced.

After these observations, the following recommendations are offered regarding the procedures to be followed for cultural property:

Procedures for movable cultural property

These past days, different institutions of the Directorate General of Fine Arts, including the IPCE, have implemented protocols for the inspection of the cultural property they hold. After the State of Emergency was declared, all of these places were closed to the public, and staff was reduced to essential services, making the risk of contamination of movable cultural property practically nil. However, the most suitable way to disinfect any property in a way that

is compatible with its conservation – always avoiding disinfectants that can damage the materials the property is made of – would always be to isolate it for periods of time that vary from 3 to 9 days according to the bibliography checked. This is easy to achieve in the current situation.

Nevertheless, a planned technical review, with the safety measures guaranteed for all staff involved, is necessary in order to detect possible incidents or risks that could affect the property during quarantine while conservation staff at museums, archives and libraries are not physically at work. The IPCE has designed a procedure which involves the participation of the Sub-directorate General of the Centre, as well as conservation staff and professionals from different specialised fields, security, maintenance and cleaning staff.

For spaces containing cultural property (e.g. museums, archives or religious spaces) the following measures should be taken:

- General fumigation or spraying in spaces such as museum rooms, archives or churches is not recommended. As these institutions closed about a month ago, it is unlikely that the virus is currently present in these spaces.
- Surfaces such as floors, doors and door handles should be cleaned (provided they have no historical or artistic value) with the usual disinfectants suggested by the health authorities, although a solution of 70% ethanol is recommended.
- Cleaning procedures must also include the external surfaces of display cases that may have been touched by visitors. These disinfection measures should already have been part of the cleaning protocols and including them permanently is recommended once things return to normal to avoid the future spread of any pathogen. It is not necessary to take any kind of measure to clean inside the display cases as they are only occasionally opened and only by the institution's specialised staff.
- Once disinfection and cleaning have been carried out, the cleaned spaces should be ventilated to ensure that there is no accumulation of volatile organic compounds (VOCs) created from the evaporation of the disinfectants. This operation is carried out mainly with the safety and health of workers in mind, but also for the proper conservation of the cultural heritage given that the accumulation of VOCs in closed spaces is harmful.
- The same recommendation as above – avoiding direct contact with the property – also applies for museums, archives and religious sites. If the professionals at these institutions see that they must work directly with the property (conducting inspections, moving works of art or carrying out restoration work), they must always wear disposable single-use gloves and also, if possible, a mask¹. This will prevent the infection from any possible trace of the virus on property that may have been left by somebody who may have been close to it.

Procedure for immovable cultural property

¹ From 2020 May the 21st, the use of masks is mandatory in most cases for indoor spaces and outdoor if the distance of 2 meters between people is not guaranteed. In any case, any further indication from Health Authorities must be fulfilled.

During this current health emergency, the effectiveness of the measures to end COVID-19 is up to every citizen. The guidelines set out by health authorities and the World Health Organization should always be followed. Recommendations on hygiene, cleaning and disinfection of both spaces and surfaces should be highlighted. Our rich cultural heritage – found all over the country and present on myriad streets and squares – is not exempt from this.

A series of recommendations are thus listed below on how to treat spaces or surfaces that are part of, close to, or house cultural property. An incorrectly applied measure, or the direct use of a disinfectant can cause irreversible damage to our heritage; this is something that must be avoided so that it can be enjoyed by all of us as well as by future generations.

With regard to cultural property in public spaces:

- Direct spraying on objects or buildings of historical and artistic value should be avoided when disinfecting spaces close to cultural property (e.g. historical centres, public squares, parks or streets).
- A solution of 70% ethanol dissolved in water and sprayed at low pressure is recommended in the immediate vicinity of cultural property (less than 1 metre away, such as nearby pavements or the lower sections of buildings). As indicated by the health authorities, this disinfectant solution is effective against the virus and spraying it is less harmful than using sodium hypochlorite (bleach) on materials such as stone, brick, wood and metal.
- Disinfection should always be avoided close to polychromed cultural property (e.g. church doorways or altarpieces) and roping off such areas to avoid people getting close and touching them is much more recommendable.
- Cultural property should never be touched directly, but this premise – in a situation such as the present one – is even more necessary. Viruses can only reproduce inside a living body but viral particles (from direct contact or saliva) can remain on surfaces and be a source of infection. This also means that cleaning products or disinfectants need not be used on cultural property.

Finally, and in general, it is worth remembering a number of common indications:

All cleaning and disinfection must always be carried out by individuals wearing the correct PPE to ensure their safety.

It is essential to know the nature and composition of both the cleaning products to be used and the characteristics of the cultural property to which they will be applied in order to assess their compatibility.

Mixing products without prior knowledge of their compatibility must also be avoided. This is the case of the commonly known reaction caused when bleach (sodium hypochlorite) and ammonia are combined, resulting in highly toxic fumes.

If there is any doubt regarding the cleaning and disinfection processes, it is best not to do anything as an incorrect treatment can cause irreversible damage to cultural property. It is highly recommended that all the professionals in the field of conservation-restoration be in agreement with regard to the measures used.

Cultural heritage is a unique asset; it is a reminder of our past, something to enjoy in the present and a source of knowledge for the future. The best vehicle for its conservation is prevention. It has never been so easy to give our heritage a helping hand – take care of it, take care of yourself, don't touch it.

SUMMARY TABLE.

The best prevention is to avoid all direct contact with cultural property as follows:

- Avoid contact with possible viral particles that could have been left by any person previously.
- The use of disinfectants on cultural property is to be avoided.

Recommendations for handling and disinfecting cultural property and its surroundings during the COVID-19 state of emergency ¹	Cultural property located in public spaces (historical and artistic buildings, fountains, sculptures, etc.).	Cultural property held in closed spaces (museums, archives or religious spaces).
Disinfection of spaces and surfaces close to cultural property (more than 1 metre away).	Disinfectants used in streets and squares should not be sprayed directly on historical and artistic objects or buildings because commonly used products, such as sodium hypochlorite (bleach) or ammonia are highly corrosive and can cause irreversible damage.	General fumigation or spraying of spaces such as museum rooms, archives or churches is not recommended. Due to the closing of these institutions about a month ago, the viral load in these spaces is practically non-existent.
Disinfection of spaces and surfaces in the immediate vicinity of cultural property (less than 1 metre away).	To disinfect nearby pavements, or the lower sections of historical buildings, walls, fountains or historical benches, a solution of 70% ethanol and deionised water should be used. Walls should be disinfected up to a maximum height of 2 metres from the ground (contact at a height higher than this is unlikely, and the virus will not be present) and at a maximum pressure of 2 atm.	Floors, doors, door handles and counters (provided they have no historical or artistic value) should be disinfected with disinfectant solutions (preferably 70% ethanol and deionised water). Following this, ventilation of the spaces is recommended to prevent the accumulation of elements resulting from the evaporation of the disinfectants.
If it is necessary to come into direct contact with cultural property (inspection of its state of conservation, moving artworks, restorations, etc.).	Use disposable single-use gloves and, preferably, also a mask.	Use disposable single-use gloves and masks.
In the event of any doubt about the disinfection processes for cultural property or its surroundings, the best option is not to apply any treatment at all as this may result in irreversible damage. If remains of the virus are suspected, it is best not to touch the cultural property, proceeding, if necessary, to isolate it or to rope it off.		
Procedures for intervening directly on cultural property must always be agreed upon by conservation/restoration experts and carried out by them.		

¹ These recommendations, which must always be followed in conjunction with those provided by the health authorities

(<https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/home.htm>), may be modified according to the epidemiological situation.