



Preservation Tips

Integrated Pest Management - Treatment

Treatment for pest infestations in collections is a necessary part of Integrated Pest Management. If done quickly and correctly, treatment can eradicate all stages of pests and prevent further damage to the collection.

Benefits of integrated pest management:

- Eradication of pests
- Damage prevention
- Employee and patron health

Tools needed:

- Freezer
- Oxygen scavenger
- Air-tight container
- Oxygen indicator
- Plastic bags
- Sticky traps
- HEPA vacuum cleaner

Treatment for pest infestation in historic collections is no longer accomplished with the use of chemical pesticides but is instead carried out through non-chemical methods. Freezing or oxygen replacement/removal are the most common and most effective courses of action to remove pests from infested collection material. No single treatment method is perfect but should be selected based upon financial resources and material types requiring treatment.

Freezing:

If treatment is to be carried out by freezing then the following steps should be taken:

1. Place item/container in appropriately-sized plastic bag.
2. Place bagged item/container in freezer.
3. Freezer should be set at or below -20°C (-3°F).
4. Freeze for one (1) month.
5. Remove bagged item/container from freezer.
6. Allow material to acclimate for 24 hours in the plastic bag.
7. Vacuum thoroughly.
8. Place vacuumed items in sealed container with sticky traps for one (1) month.
9. After one (1) month, check traps for evidence of pest activity.
10. If evidence of pests is found, repeat steps 1 – 9.
11. Treated material(s) should not be placed in permanent storage areas until there is no evidence of pest activity.

It is important to note that not all types of material can be frozen. Petroleum based materials (e.g. plastic, rubber) should never be frozen. Also, animal skins (e.g. leather, taxidermy specimens) should not be treated by freezing.

If you are interested in learning more about USAHEC conservation and preservation practices, or for more information about the organization, please contact us at: 717-245-3972 or visit us at: www.usahec.org or 950 Soldiers Drive, Carlisle, PA 17013.



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Anoxia:

Anoxic environments are created by removing or replacing oxygen, but are difficult to achieve and maintain. Ideally, such treatment should only be carried out by a trained conservator.

If treatment is to be attempted using an anoxic environment then the following steps should be taken:

1. Place item/collection and oxygen indicator in appropriately-sized, clear air-tight container.
2. Utilize enough oxygen scavenger product to adequately remove the oxygen from the air-tight container.
3. Check oxygen indicator after three (3) hours for air-tightness. If oxygen is present, container is not air-tight.
4. Treat for one (1) month.
5. Vacuum thoroughly.
6. Place vacuumed items in sealed container with sticky traps for one (1) month.
7. After one (1) month, check traps for evidence of pest activity.
8. If evidence of pests is found, repeat steps 1 – 6.
9. Treated material(s) should not be placed in permanent storage areas until there is no evidence of pest activity.