Double Layered Preservation And Protection System

Background of the invention:

To preserve delicate objects that are sensitive to humidity, air, light and/or any chemicals, e.g. bronze archeological artifacts. Such objects can decay or be damaged if not stored in a controlled and well protected environment. For example, a freshly discovered bronze artifact's surface can react with moisture in the air and cause irreversible damage if not protected.

This invention consists of three layers: 1: inner vacuum sealed layer to hold the object. 2: outer layer that is filled with air to serve as a cushion. 3: a net mesh structure suspension connects the inner and outer layers, and keeps the inner layer suspended/folate within the outer layer, such that it is not protected.

Detailed Description:

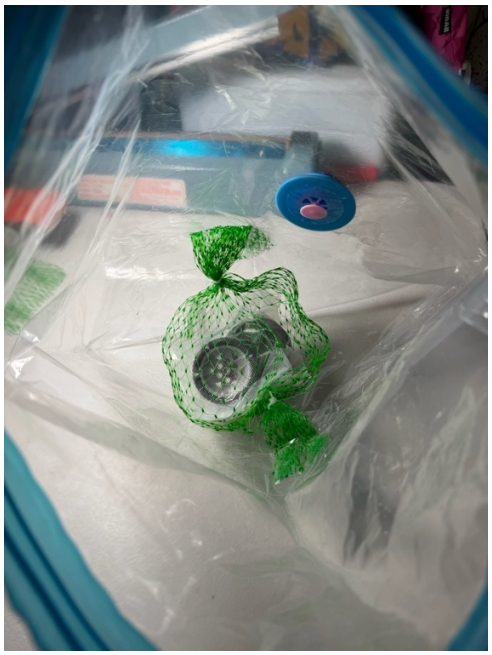
First, the object is put inside the inner layer (airtight material), and then the inner layer is sealed. A pump is then used to remove air from the inner layer through its one-way valve. Desiccant type material can be put inside the inner layer to further remove the moisture / oxygen etc.

Inner layer, not yet vacuumed

Inner layer, vacuumed

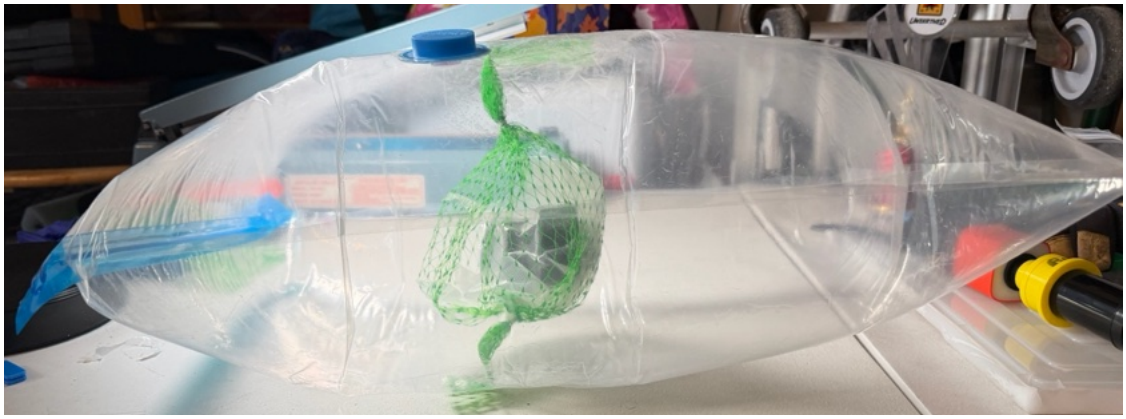
Second, the vacuumed inner layer can be folded than put inside the net mesh structure and secured.

Outer layer, folded, green part is the net mesh structure



Inner layer, put inside the net mesh structure

Third, the outer layer is sealed, and air filled though the one-way valve. During this process, due to the expansion of the outer layer, the net mesh structure stretches out and the artifact is suspended in the middle. When impact happens, the air gap protects the inner layer.



Finished product example