

PACKAGING BIOLOGICAL MATERIALS NOT CLASSIFIED AS HAZARDOUS MATERIALS OR DANGEROUS GOODS* FOR AIR SHIPMENT

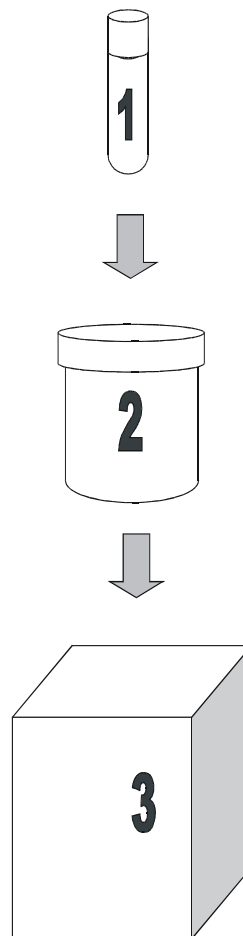
Using the “Triple-Package System”

*This guide reflects the minimum standard to be used for packaging materials that are not regulated as: “exempt human specimens”, “exempt animal specimens”, “Biological substance, Category B”, “Infectious substance, affecting humans”, “Infectious substance, affecting animals”, or “Genetically-modified microorganisms”. Additional packaging requirements (including personnel training) apply to these regulated categories. (Contact VEHS for further information if you think your materials fit in to this class and you have not completed training.)

Examples of biological materials that are not regulated as any of the above include: microbiological agents that are not infectious to humans or animals, mammalian cells other than human or non-human primate origin, biologically-inactivated tissues and body fluids, and purified proteins.

Whether biological materials are regulated for shipment or not, it is prudent for you to package these materials in a manner that will assure they arrive at their destination undamaged and without any potential for environmental release. This can be accomplished by using a triple-package system. The components of this system are outlined below:

1. **Primary container:** This container is your “sample” container. It should be designed for leak-proof or sift-proof containment of the material within. Do not use “makeshift” containers such as food containers, disposable gloves or syringes. When shipping liquids, a secondary seal of the lid is advised (i.e. parafilm). If shipping several primary containers, a means of cushioning or separation (i.e. bubble wrap, etc.) should be used to reduce the possibility of the containers damaging each other. Assure that liquids are oriented in an upright position to further minimize the potential for leakage.
2. **Secondary container:** Your primary container(s) will be placed inside this container. The purpose of this container is to capture any leakage from the primary containers. Therefore, this container should be properly sealed for transport. Additionally, adequate absorbent materials should be placed inside this container to absorb any leakage of liquids from primary containers.
3. **Outer package:** The purpose of this package is to provide protection against physical damage to the inner contents that may occur during the transport process. Mailing envelopes, styrofoam boxes, and lightweight cardboard containers are not likely to withstand the mechanical hazards of manual handling and package processing equipment. Therefore, it is strongly advised that the outer package be a sturdy fiberboard box. Cushioning or spacer material (such as bubble wrap) should be placed in the box to fill up the remaining space and keep the contents from shifting in the box. A list of contents between the secondary container and outer package is also advised. Orientation arrows should also be placed on the outer package if it contains liquids.



Note about the outside of your package: Biological materials that are not regulated should not have any marking on the outer package that could be confused for a biohazard indicator. Don't put descriptive content terms or biohazard symbols on the box. Such terms may result in your materials being returned or trigger unnecessary investigative actions by couriers.

Got dry ice or flammable solvents? These are sometimes found in bio-related shipments, and these materials ARE regulated for air shipment. If you ship non-regulated materials on Dry Ice, you must be currently trained for Dry Ice shipping. This training is available through the Learning Exchange. If shipping in solvents, contact VEHS.

Shipping abroad? You must consult with the Export Compliance group for your entity before shipping any research-related materials abroad.

Further Questions about shipping biological materials?

Contact Robin Trundy, VEHS Biosafety Officer (322-0927 or robin.trundy@vanderbilt.edu) or Richard DiTullio, VEHS Safety Officer (322-1988 or Richard.ditullio@vanderbilt.edu)