

APHIS DOT Shipping Guide for Non-Infectious Specimens with Preservative Fluid-2025

Who should use the APHIS Shipping Guide?

All APHIS programs who ship with formalin, ethanol, isopropanol or non-regulated substances.

Which guide should I use?

Guide 1 – Vials containing formalin (any concentration), ethanol (80% or less) isopropanol (30% or less). This method may be used whether or not there are any specimens in the sample, for example, when shipping vials of preservatives to field locations.

Guide 2 – Vials containing ethanol (over 80%) or isopropanol (over 30%) without any specimens. This method may be used whether or not there are any specimens in the sample, for example, when shipping vials of preservatives to field locations.

Guide 3 – Vials containing any concentration of non-regulated substances including DMSO, glycerin, and propylene glycol (PPQ prohibits shipping pest identification samples with propylene glycol because cleaning samples containing propylene glycol significantly delays identification).

Guide 4 – Dry Ice.

What are APHIS' general packaging instructions for small quantities of fluid?

In all cases, APHIS package requirements are below:

- Use **highway/rail label** only for ground shipping.
- Use **E-label** only for Air shipping.

1. Maximum 30 ml vials (leave airspace).
2. Use plastic, metal, glass or earthenware vials (if plastic, min. thickness 0.2mm).
3. Secure vial cap with tape, parafilm or other means.
4. Wrap each vial in enough absorbent/cushioning packing to absorb entire contents of vial.
5. Place vial and packing into a plastic bag and seal the bag (heat sealing strongly recommended).
6. Put sealed bags in a 200-pound burst test or 32-pound edge crush test box.
7. Add packing material to secure sealed bags from shifting during transport.
8. Use the guides to determine the maximum amount of liquid per package and the correct labelling requirements.

Does the shipping guide include De Minimis exception quantities?

Yes, the DOT De Minimis exception quantities, 49 CFR 173.4b requires the shipper follow the same requirements as the small quantity exception requirements 49 CFR 173.4a per the APHIS shipping matrix.

What if I am shipping a dry insect specimen without preservative?

Securely package the specimen in a rigid container and label the box with “exempt animal specimen.”

Who wrote this guide?

Daniel Weissman, APHIS Environmental Protection Manager and Candace Robl, PPQ FO Safety and Health Specialist.

Who are the current contacts?

Elizabeth Roether, APHIS Environmental Protection Manager, and or Candace Robl, PPQ Ops, Safety and Occupational Health Specialist.

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Is the OSHA GHS regulation labelling required with each DOT Shipment?

Each vial, whirly-pak or other container with chemical require each container to be labeled per OSHA-GHS, 29 CFR 1200 and then add an outside label to package (E-code or Highway/Rail label) per the DOT 49 CFR 173.4 regulations. *OMIT due to confusion with shipper vendor.*


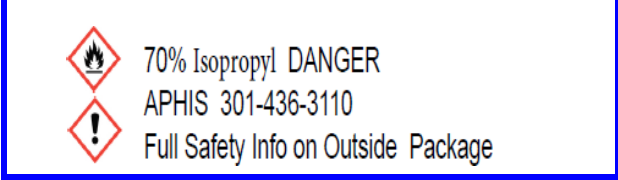

DOT Outer Package Label, Required

- E-code with class 3 on label-air shipping or
- Highway/Rail label- ground shipping

What if I have questions regarding OSHA and DOT shipping?

- DOT-Excepted Small Quantity: Program Safety Management.
- OSHA-GHS Requirement and labelling: Program Safety Management
- Other Hazardous Chemicals: Contact Elizabeth Roether, APHIS Environmental Protection Manager at 301-436-3114 or elizabeth.roether@usda.gov for more information.

EXAMPLE: ISOPROYL ALCOHOL/SAMPLE LABELING FOR SHIPPING

<p>OSHA Label-Required On outside or inside of the individual container with the chemical and sample.</p> 	
<p>DOT Labels-Required to have either air or ground label on outside of shipping package. (Reminder to add Class 3, address/phone to E air label)</p>	 <p style="text-align: center;">OR</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Ground Label: "This package conforms to 49 CFR 173.4 for domestic highway or rail transport only"</p> </div>

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Guide 1 – Excepted Quantities, Packing Group III– 49 CFR 173.4, 49 CFR 173.4a and IATA 2.6					
Vial Contents	Shipping size	Shipping Method	Total per package	Labeling: Ground and Airbill	Packaging Requirements
Ethanol <80%, including alc. base hand sanitizer Isopropanol <30% Formalin any concentration	Small quantities of liquid (total 30 mL or less) each vial or tube.	UPS Ground	29 kilograms (64 pounds) total package weight (approximately 200 full vials plus packaging)	Ground Label: “This package conforms to 49 CFR 173.4 for domestic highway or rail transport only” [Print your own label]	<ol style="list-style-type: none"> 1. Maximum 30 ml vials (leave airspace). 2. Use plastic, metal, glass or earthenware vials (if plastic, min. thickness 0.2mm). 3. Secure vial cap with tape, parafilm or other means. 4. Wrap each vial in enough absorbent/cushioning packing to absorb entire contents of vial. 5. Place vial and packing into a plastic bag and seal the bag (heat sealing strongly recommended). 6. Put sealed bags in a 200-pound burst test or 32-pound edge crush test box. 7. Add packing material to secure sealed bags from shifting during transport. <p>Note: Fed-Ex minimum box size is 7in x 4 x 4in.</p>
		UPS Air Fed Ex. Air		1000 ml/1 L (33x 30 ml full vials)	

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Guide 2 – Excepted Quantities, Packing Group II – 49 CFR 173.4, 49 CFR 173.4a and IATA 2.6

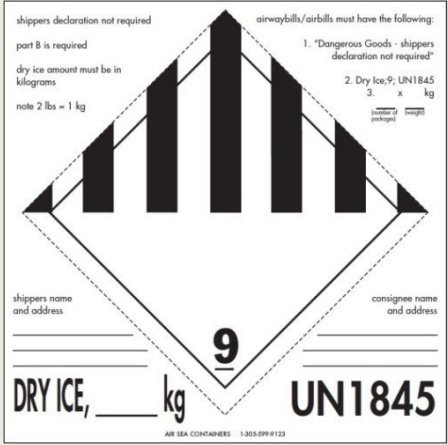
Vial Contents	Shipping size	Shipping Method	Total per package	Labeling: Ground and Airbill	Packaging Requirements
Ethanol \geq 80% Isopropanol \geq 31%	Small quantities of liquid (total 30 mL or less) each vial or tube.	UPS Ground	29 Kilograms (64 pounds) total package weight (approximately 200 full vials plus packaging)	Ground Label: “This package conforms to 49 CFR 173.4 for domestic highway or rail transport only” [Print your own label]	<ol style="list-style-type: none"> Maximum 30 ml vials (leave airspace). Use plastic, metal, glass or earthenware vials (if plastic, min. thickness 0.2mm). Secure vial cap with tape, parafilm or other means. Wrap each vial in enough absorbent/cushioning packing to absorb entire contents of vial. Place vial and packing into a plastic bag and seal the bag (heat sealing strongly recommended). Put sealed bags in a 200-pound burst test or 32-pound edge crush test box. Add packing material to secure sealed bags from shifting during transport. <p>Note: Fed-Ex minimum box size is 7in x 4 x 4in.</p>
		UPS Air USPS Air Fed Ex. Air			

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Guide 3 – Unregulated Materials					
Vial Contents	Shipping size	Shipping Method	Total per package	Labeling and Airbill	Packaging Requirements
DMSO Glycerin Propylene Glycol Note 1: PPQ prohibits shipping pest identification samples with propylene glycol. Cleaning the samples significantly delays identification). Note 2: Even though these substances are unregulated, Spills during transport can be a nuisance for both the shipper and the receiver, therefore APHIS requires that these be packed as if they were regulated substances but without markings or labels on the package.	Small quantities of liquid (total 30 mL or less) each vial or tube.	UPS Ground	29 kilograms (64 pounds) total package weight (this would be approximately 200 full vials plus packaging)	None	<ol style="list-style-type: none"> 1. Maximum 30 ml vials (leave airspace). 2. Use plastic, metal, glass or earthenware vials (if plastic, min. thickness 0.2mm). 3. Secure vial cap with tape, parafilm or other means. 4. Wrap each vial in enough absorbent/cushioning packing to absorb entire contents of vial. 5. Place vial and packing into a plastic bag and seal the bag (heat sealing strongly recommended). 6. Put sealed bags in a 200-pound burst test or 32-pound edge crush test box. 7. Add packing material to secure sealed bags from shifting during transport. <p>Note: Fed-Ex minimum box size is 7in x 4 x 4in.</p>
		Fed Ex Ground UPS Air USPS Air Fed Ex Air			

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Guide 4 – Dry Ice – 49 CFR 173.217 and IATA Instruction 954

Vial Contents	Shipping size	Shipping Method	Labeling and Airbill	Packaging Requirements
<p>Any specimen on Dry Ice</p>	<p>Ground – no limit of dry ice per package</p> <p>Air <2.5 kg (5.5 pounds) dry ice per package</p>	<p>All methods</p>	<p>Ground – No labeling required.</p> <p>Air – Use Dry Ice label</p>  <p>Write amount of dry ice on the label.</p>	<p>1. Package must be vented to allow carbon dioxide to escape.</p> <p>Note: Fed-Ex minimum box size is 7in x 4 x 4in.</p>