

## OSEH Guidance Document for Shipping with Chemical Preservatives

Biological specimens that contain chemical preservatives such as ethanol, formaldehyde or formalin are regulated as hazardous materials by both the U.S. Department of Transportation (DOT) and the International Air Transport Association (IATA). Hazardous materials are generally defined as any substance that could adversely affect the safety of the public, handlers or carriers during transportation. Shipments of hazardous materials must be packaged, marked and accompanied by a dangerous goods declaration.

Certain hazardous materials are exempt from shipping requirements when shipped in small quantities. These materials may be shipped as "Dangerous Goods in Excepted Quantities" with an ["Excepted Quantities" label](#) instead of completion of a Dangerous Goods declaration.

Please review the information below for shipping samples with the following chemical preservatives:

### Ethanol

<b>A solution containing more than 24% ethanol by volume</b>	
<b>Excepted Quantities</b>	Small quantities (inner container less than 30 ml, with a maximum net quantity of 500 ml for the entire package) of ethanol can be sent out in excepted quantities without completion of a Dangerous Goods Declaration. An <a href="#">Excepted Quantities label</a> will need to be completed and attached to the outer package.
<b>Documentation</b>	The "Nature and Quantities of Goods" box on the air waybill (invoice) must be completed with the words: <b>"Dangerous Goods in Excepted Quantities"</b> .
<b>Packaging</b>	Use well-constructed packaging to cushion the inner containers and enough absorbent material to absorb the entire contents of the inner packages should they break open during transport. Inner containers can be glass or plastic with the closure held securely in place (taped closed). The outer container can be a cardboard box.
<b>Label</b>	The following information must be included on the excepted quantity label:  UN number: <b>UN1170</b> Class: <b>Class 3</b>  <b>Note: Instructions for completion of the label must be reviewed prior to completing the label. The label must be printed on a color printer to reflect the red diagonal hatching.</b>

## Formaldehyde/Formalin

<b>Formaldehyde (More than 25%) and Formalin (At least 3.7% but less than 25% formaldehyde) are both considered dangerous goods.</b>	
<b>Excepted Quantities</b>	Small quantities (inner container less than 30 ml, with a maximum net quantity of 1 L for the entire package) of formalin/formaldehyde can be sent out in excepted quantities without completion of a Dangerous Goods Declaration. An <a href="#">Excepted Quantities label</a> will need to be completed and attached to the outer package.
<b>Documentation</b>	The "Nature and Quantities of Goods" box on the air waybill (invoice) must be completed with the words: <b>"Dangerous Goods in Excepted Quantities".</b>
<b>Packaging</b>	Use well-constructed packaging to cushion the inner containers and enough absorbent material to absorb the entire contents of the inner packages should they break open during transport. Inner containers can be glass or plastic with the closure held securely in place (taped closed). The outer container can be a cardboard box.
<b>Label</b>	The following information must be included on the excepted quantity label:  <b>Formalin</b> UN number: <b>UN3334</b> Class: <b>Class 9</b>  <b>Formaldehyde</b> UN number: <b>UN2209</b> Class: <b>Class 8</b>  <b>Note: Instructions for completion of the label must be reviewed prior to completing the label. The label must be printed on a color printer to reflect the red diagonal hatching.</b>

**Acknowledgment of Training – OSEH Guidance Document for Shipping with Chemical Preservatives**

I have reviewed the reference materials included in this guidance document. I understand that I should call Occupational Safety and Environmental Health (OSEH) at 763-6973 if I have any questions about shipping biological samples with chemical preservatives.

UM ID Number \_\_\_\_\_

Signature \_\_\_\_\_

Print Name \_\_\_\_\_

Date Completed \_\_\_\_\_

Please fax acknowledgement of training to:

**OSEH Biosafety**  
**(734) 763-1185**