



No-Haz Final Product Analysis™

Getting Started

Below is some basic information concerning ALI's unique **No-Haz Sampling-Shipping Kit™** and accessories for **Final Product CO₂ Quality Testing** applications.

A major advantage to our **No-Haz Kit** is that you do not need hazmat-certified staff to legally and properly ship your samples!

To properly sample your Liquid CO₂ using our **No-Haz Kit** you will need*:

- A Passivated Flash Vaporizer / Pressure Regulator (ex. VPR-HF 120 / 240 models)
- Special Snowmaking Equipment (ex. SnowQuik™ models)
- A rugged 0 – 2 kg top loader balance (ex. DS-2KG) + Safety Gloves (ex. CRYGLV-14L)

Note: These sampling accessories can be rented or purchased from ALI

Our Simple 3-Step CO₂ Test Program Start-Up Process:

1 SURVEY & QUOTE: To better understand your CO₂ Quality Testing needs, we request that you complete a brief application survey so that we can design a quote which will include the recommended kit, accessories and testing program. Once our quote is accepted, a Pro Forma Invoice is generated and sent along with payment information. *Note: For wire-based transactions, ALI ships your order immediately upon bank confirmation of funds receipt.*

2 SAMPLING & SHIPPING: Upon kit delivery, you would perform **CO₂ Product** sampling as per our pictorial instructions and training videos - then repack the sample containers into the shipping case and return them to us as a **NON-HAZMAT**. Two shipping options are offered; Round Trip (RT) pre-paid shipping using ALI's FedEx courier (recommended) or kit return shipping by your courier (an ALI approved courier is required). If the RT-prepaid option is selected, you simply adhere an ALI supplied FedEx return address sticker and contact them for pick up right at your door and delivery right to our door!

3 TESTING & REPORTING: Testing is performed within 3-5* business days after a kit is received. A test report is e-mailed to the contact(s) identified on your "Analysis Authorization" form.

**Expedited service is available upon request and subject to additional fees.*

Purchase of a **No-Haz Kit** is highly recommended for rapid, convenient sampling whenever it is needed.

Thank you for your interest. To get started, please send your exact ship / bill to address, contact name(s), phone number, e-mail address and completed survey to sales@airbornelabs.com for a quotation.

We look forward to being of service to you!

Don Pachuta

Dr. Don Pachuta, President



Non-Hazardous “No-Haz”

Division 2.2 Gas Sample Kit Shipments

by I.A.T.A. Definition

Dear Customer,

This letter concerns shipment of **non-compressed** Division 2.2 (non-flammable, non-toxic) gases including, for example: air, carbon dioxide (CO₂), oxygen (O₂), nitrogen (N₂) argon (Ar) sulfur hexafluoride (SF₆) samples in limited quantities to our laboratory for quality control testing. We have been assured by recognized experts at the International Compliance Center Ltd. and courier HAZMAT specialists that Division 2.2 gas samples that are taken according to supplied directions and shipped in our *No-Haz* Sampling & Shipping Kits (which include gas sampling bags, minicyls and 1L steel NVR container) can be properly labeled and shipped as a **“non-hazardous commodity sample of no commercial value”**. The technical reasons for this non-hazardous classification of Division 2.2 gas samples taken in our “No-HAZ” kits are as follows:

1.) Division 2.2 gases are those that have non-flammable and non-toxic properties. These gases are properly classified as dangerous materials (hazmat) only when they are **compressed** or **liquefied**. A compressed Division 2.2 gas is defined in IATA regulations as one which is “transported under pressure **at or above** 200 kPag (gauge) = 2.97 atm = 43.7 psia (29 psig) @ 20°C”. This means that Division 2.2 gas samples should not be classified as hazmat if it is contained and shipped at a pressure **less** than this “compressed gas” definition value. As the pressure inside of a gas sampling bag is essentially 0 psig (14.7 psia) @ 20°C, it does not meet the conditions necessary for it to be IATA-defined as a hazardous material. Therefore **non-compressed** Division 2.2 gases in a sample bag is not a Div. 2.2 hazmat. The weight of Division 2.2 gas contained within a 2-3 x 2L sample bag is no more than approximately 37 g = 0.037 kg. The maximum acceptable amount of compressed gas meeting Division 2.2 HAZMAT definition requirements for passenger aircraft is 75 kg and 150 kg for cargo aircraft.

2.) The same IATA “exemption” definition descriptions outlined for a gas sampling bag **also** pertain to a non-compressed Division 2.2-defined gas samples stored in our minicyls. A minicyl is a small (ex. 75 – 500 cc [0.075 – 0.5L]) capacity US DOT cylinder that can be charged with **no more than** 25 psig of Div. 2.2 gas (fill-limited by a 25 psig check valve). Because of its design, the non-compressed, minimal amount (approx. 0.22-1.5L) of gas sample contained within a minicyl does not meet the definition of a Div 2.2 hazardous material. Therefore, **non-compressed** Div. 2.2 gas sample contained in a minicyl is not IATA-defined as hazardous material as per it’s “exemptions” description.

3.) Concerning our 1L NVR polished steel can, the customer takes a CO₂ snow sample at their location and lets the snow evaporate within this can. This empty NVR can is then clip-lidded and shipped back within our *No-Haz* kit for lab examination for any trace non-volatile residue (ex. Particulates). Therefore this container is shipped as an empty can.

It is the prerogative of your designed carrier to make a final decision concerning acceptance of your shipment. However, based upon the sound technical data listed above, which indicates total compliance with both the letter and spirit of IATA dangerous goods shipping regulations, **ALI recommends that your kit sample be properly labeled as a “non-hazardous industrial sample of no commercial value”**.

Please see the attached confirmation of this letter’s contents by the Manager of Dangerous Goods – FedEx and contact us if you require assistance with your sample shipment. .



January 2015

Subject: Airborne Labs International Gas Sample Kit Shipments

To Whom It May Concern:

The Non-Flammable, Non-Toxic Gas Sample Kit shipments (air, carbon dioxide, oxygen, nitrogen, argon, sulfur hexafluoride) are not Dangerous Goods according to the enclosed information from Airborne Labs International when prepared according to Airborne Labs instructions (last revised 01/2015).

The samples are not dangerous goods when the pressure is below 200 kPa gauge pressure (29 psig, 43.5 psia) according to IATA Dangerous Goods Regulations (see section 3.2.2.4.1). These shipments should NOT be rejected for not having dangerous goods marking, labeling, or documentation.

Please contact DG Administration at 1-901-434-7233 or 1-888-288-3786, or the DG Hotline at 1-901-434-3200 or 1-800-463-3339, silent prompt 81 if you have any questions concerning these shipments.

Sincerely,

Thomas J. Leech, III
Manager, Dangerous Goods Hotline

Note: This letter is for use with Airborne Labs International, Inc., "Non-Hazardous "No-Haz" Division 2.2 Gas Sample Kit Shipments by I.A.T.A. Definition" letter (revised 01/2015).

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