

# Air-&-Gas Sampling Containers



There are various means for capturing, containing, & analyzing Air-&-Gas. Much is determined by the gas, the pressure, timing, and the analytes.

This study encompasses only methods for containing the sample

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Collection methods ('sampling') are the fundamental starting points when analyzing Air-&Gas. Additionally the air-&-gas source, transport time to the lab, and the substances being analyzed... all play a critical role in determining the ideal sampling method.

### Bottom line

To achieve the best analytical measurement & highest quality data, one must start with the most ideal sampling method. A major factor of this process begins with the sampling container

## METAL CONTAINER

### TYPICAL APPLICATIONS:

- Environmental
- Ambient air
- Compressed gases

### ADVANTAGES:

- Max containment of sample is 30 days
- Very low to no permeability of gaseous molecules
- Good ability to contain water vapor analyte if properly prepared
- Large volume sample, up to 15 liters
- Can run multiple types & cycles of analysis from one container
- Not prone to handling damage
- No outgassing from container material

### DISADVANTAGES:

- Must be sanitized prior to re-use to prevent cross contamination
- Heavy shipping weight and cost
- Is considered hazardous material above 29psi

## GLASS CONTAINER

### TYPICAL APPLICATIONS:

- Environmental
- Ambient air
- Compressed gases

### ADVANTAGES:

- Max containment of sample is 30 days
- Very low to no permeability of gaseous molecules
- Good ability to contain water vapor analyte
- Not prone to handling damage
- No outgassing from container material

### DISADVANTAGES:

- Must be sanitized prior to re-use to prevent cross contamination

## MULTI-LAYER BAG

### TYPICAL APPLICATIONS:

- Environmental
- Ambient air

### ADVANTAGES:

- Lightweight and compact (prior to capturing sample)
- No cross contamination if one-time use

### DISADVANTAGES:

- Max containment of sample is 24-48 hours, depending on transportation method
- Medium permeability of gaseous molecules facilitates loss of sample analytes. Analysis of Oxygen, Carbon Dioxide, and VOC is questionable.
- No ability to contain water vapor analyte.
- High tendency to outgas VOC's from bag material. Must be purged prior to use so as to prevent outgassing into sample
- Prone to shipping & handling damage

At Lawrence Factor's X-zam Labs we are driven to provide the latest research on new/emerging technologies.

## FURTHER READING

Contact X-zam Labs  
customer support re these  
references and in order to  
obtain more information,  
websites, and author info



### Articles

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