



Airborne Labs International

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Carbon Dioxide (CO₂) Analysis Sequestration Characterization Program[©]

Customer Company _____
Street Address 1 _____
City, State ZIP _____
Phone: nnn-xxx-xxxx, Cell: nnn-xxx-xxxx, (Fax: nnn-xxx-xxxx)
Attn.: Mr./Ms./Dr. John Smith and Mr./Ms./Dr. Derek Jeter
E-Mail: _____
Sample ID.: Vaporized Liquid CO₂ / Gaseous CO₂: "See Sample ID on Analysis Auth Form"
Sample ID.: Received in 2L True Blue MLB Polybag 1.2 + MiniCyl 1.0 No-Haz Final Product Kits

ALI Track No.: _____
Received On: _____
Report Date: _____
Invoice No.: _____

Sample Date: _____
Process Stage: Final

Test Description/Units:

CO₂ Identification (Positive/ Negative by USP [DT]): _____
Comments: Positive ID = Positive Detector Tube Response.

CO₂ Purity (% v/v, [GC]): _____
Comments: Obtained by NCG + target list impurity subtraction method

Water Vapor (H₂O, ppm v/v [FTIR]): _____
Comments: This test requires a separate / dedicated minicyl sample.

Hydrogen (H₂, ppm v/v, [GC]): _____

Oxygen (O₂, ppm v/v, [GC]): _____
Comments: Result represents Total O₂ + Ar ppm v/v.

Nitrogen (N₂, ppm v/v, [GC]): _____

Carbon Monoxide (CO, ppm v/v, [DT]): _____

Ammonia (NH₃, ppm v/v, [DT]): _____

Oxides of Nitrogen (NO_x, ppm v/v, [DT]): _____
Comments: *Speciation performed if NO_x is above 2.5 ppm v/v

Nitric Oxide (NO, ppm v/v, [DT]): _____

Nitrogen Dioxide (NO₂, ppm v/v, [DT]): _____

Phosphine (PH₃, ppm v/v, [DT]): _____
Comments: _____

Total Hydrocarbons (THC, ppm v/v as CH₄, [THA]): _____
Comments: _____

Total Non-Methane Hydrocarbons (TNMHC, ppm v/v as CH₄, [GC]): _____

Methane (CH₄, ppm v/v, [GC]): _____

Acetaldehyde (AA, ppm v/v, [GC]): _____

Aromatic Hydrocarbon Content (ppb v/v as Benzene, [GC]): _____

Benzene (ppb v/v [GC/MS]): _____

Toluene (ppb v/v, [GC/MS]): _____

Ethyl Benzene (ppb v/v, [GC/MS]): _____

m,p Xylenes (ppb v/v [GC/MS]): _____

o Xylene (ppb v/v [GC/MS]): _____
Comments: _____

Total Sulfur Content* (TSC* ppm v/v as S, [GC]): _____
Comments: Obtained by summation of all speciated VSC target impurities less SO₂

Sulfur Dioxide (SO₂, ppm v/v, [GC]): _____

Hydrogen Cyanide (HCN, ppm v/v, [GC]): _____

Vinyl Chloride (VCl, ppm v/v, [GC]): _____

Result	LOQ	Spec
5	5	report
5	5	report
1	1	report
1	1	report
1	1	report
2	2	report
0.5	0.5	report
0.5	0.5	report
0.5	0.5	report
0.5	0.5	report
0.25	0.25	report
0.1	0.1	report
0.1	0.1	report
0.1	0.1	report
0.05	0.05	report
2	2	report
2	2	report
2	2	report
2	2	report
2	2	report
2	2	report
0.01	0.01	report
0.05	0.05	report
0.2	0.2	report
0.1	0.1	report

Sample ID: Customer Company

ALI Track No.:

Speciated Volatile Hydrocarbons (VHC, ppm v/v)

Ethane:	-----
Ethylene:	-----
Propane:	-----
Propylene:	-----
Isobutane:	-----
n-Butane:	-----
Butene:	-----
Isopentane:	-----
n-Pentane:	-----
Hexanes+:	-----

<u>Result</u>	<u>LOQ</u>	<u>Spec.</u>
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report

Comments: Pk ID based upon t_r match vs target analyte std. CH₄ result on pg 1.

Speciated Volatile Sulfur Compounds (VSC, ppm v/v)

Hydrogen Sulfide (H ₂ S):	-----
Carbonyl Sulfide (COS):	-----
Methyl Mercaptan:	-----
Ethyl Mercaptan:	-----
Dimethyl Sulfide:	-----
Carbon Disulfide:	-----
t-Butyl Mercaptan:	-----
Isopropyl Mercaptan:	-----
n-Propyl Mercaptan:	-----
Methyl Ethyl Sulfide:	-----
2-Butyl Mercaptan:	-----
i-Butyl Mercaptan:	-----
Diethyl Sulfide:	-----
n-Butyl Mercaptan:	-----
Dimethyl Disulfide:	-----
Unknown VSC:	-----

	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report
	0.01	report

Comments: Peak ID based upon t_r match against target analyte standards. Note: SO₂ + TSC* results reported on pg. 1.

Speciated Volatile Oxygenates (VOX, ppm v/v)

Dimethyl Ether:	-----
Ethylene Oxide:	-----
Diethyl Ether:	-----
Propionaldehyde:	-----
Acetone:	-----
Methanol:	-----
t-Butanol:	-----
Ethanol:	-----
Isopropanol:	-----
Ethyl Acetate:	-----
Methyl Ethyl Ketone:	-----
2-Butanol:	-----
n-Propanol:	-----
Isobutanol:	-----
n-Butanol:	-----
Isoamyl Alcohol:	-----
Isoamyl Acetate:	-----
Unknown VOX:	-----

	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report
	0.1	report

Comments: Peak ID based upon t_r match against target analyte standards. AA & Ethylene Glycol results reported on pg. 1.

LOQ = Limit of Quantitation (lowest amount of analyte quantitatively determined with suitable precision and accuracy) MDL = method detection limit (lowest amount of analyte detected). trace = unquantified amount observed between MDL and LOQ. nd = indicates the impurity was not detected (below MDL). -- = test not performed. na = not available. LT = less than the amount specified. GT = greater than the amount specified. % = percent. ppm = parts per million. ppb = parts per billion. v/v = volume analyte/volume sample. w/w = weight analyte/weight sample. [result] indicates the result was obtained by the method listed within brackets. TSC* = ISBT Total Sulfur Content excluding SO₂. Unit Conversions: 1ppm v/v = 1µL/L = 1000 ppb = 0.0001% v/v. Date format: MM/DD/YY.

Report Summary:

Customer requested a sequestration CO₂ analysis.

Please advise if additional testing is required.

Reviewed by / Date:

Laboratory Manager

mm/dd/yy

Laboratory Manager

Attachments: none

Addendum: Signatures, Instrument & Notebook data on-file

ISO Statement

Statements of conformity (pass or fail) resulting from the test/analysis performed on the above sample will not take into account the reported measurement uncertainty unless otherwise specified. This is a shared risk decision rule in which the customer also has responsibility for determining acceptance of the results. The methods Airborne Labs International uses are developed by Airborne Labs International and are based on the current revisions of international, national, or industry standards unless otherwise specified. The acceptance criteria of the above item are based on ISBT specifications, NFPA, CGA, USP, or other industry specifications unless otherwise specified on the contract.



Accreditation # 68099