



## Hydrogen (H<sub>2</sub>) SAE J2719 Fuel Analysis Report

Customer:  
Address:  
Phone:  
Attn.:  
Email:

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

Sample ID: Compressed, Gaseous H<sub>2</sub> Fuel @ H70 Dispenser Nozzle  
Sample ID: Received in 2 x 1L passivated ALI cylinders + VHP Filter Patch Kit

Date Sampled:

### Test Description/Units

### Result

### Spec

<b>Hydrogen Fuel Index</b> (H <sub>2</sub> , % Purity v/v by Subtractive Diff.): -----		99.97 min
Comments: Positive Identification by GC, LOQ = less than 1, MDL = less than 0.01		
<b>Total Non-Hydrogen, Non-Helium Gases</b> (ppm v/v): -----		300 max
Comments: LOQ = 1, MDL = 0.5		
<b>Water Vapor</b> (H <sub>2</sub> O, ppm v/v): -----		5 max
Comments: LOQ = 1, MDL = 0.5		
<b>Total Non-Methane Hydrocarbon Content</b> (TNMHC, ppm v/v as CH <sub>4</sub> ): -----		2 max
Comments: LOQ = 0.2, MDL = 0.1		
<b>Oxygen</b> (O <sub>2</sub> , ppm v/v): -----		5 max
Comments: LOQ = 1, MDL = 0.5		
<b>Methane</b> (CH <sub>4</sub> , ppm v/v): -----		100 max
Comments: LOQ = 0.1, MDL = 0.05		
<b>Helium</b> (He, ppm v/v): -----		300 max
Comments: LOQ = 20, MDL = 10		
<b>Nitrogen</b> (N <sub>2</sub> , ppm v/v): -----		300 max
Comments: LOQ = 1, MDL = 0.5		
<b>Argon</b> (Ar, ppm v/v): -----		300 max
Comments: LOQ = 1, MDL = 0.5		
<b>Carbon Dioxide</b> (CO <sub>2</sub> , ppm v/v): -----		2 max
Comments: LOQ = 0.1, MDL = 0.05		
<b>Carbon Monoxide</b> (CO, ppm v/v): -----		0.2 max
Comments: LOQ = 0.1, MDL = 0.05		
<b>Total Sulfur Content</b> (TSC, ppb v/v as H <sub>2</sub> S): -----		4 max
Comments: LOQ = 0.5, MDL = 0.25 ppb each target VSC analyte		
<b>Formaldehyde</b> (CH <sub>2</sub> O, ppm v/v): -----		0.2 max
Comments: LOQ = 0.02, MDL = 0.01		
<b>Formic Acid</b> (CHOOH, ppm v/v): -----		0.2 max
Comments: LOQ = 0.25, MDL = 0.02		
<b>Ammonia</b> (NH <sub>3</sub> , ppm v/v): -----		0.1 max
Comments: LOQ = 0.02, MDL = 0.01 ppm.		
<b>Total Halogenates</b> (VXC + Inorganics, ppm v/v as X): -----		0.05 max
Comments: X = Cl, Br, I, F, LOQ = 0.02, MDL = 0.001 target VXC analytes.		
<b>Particulates</b> (Non-volatile Residue, ppm w/w): -----		1
Comments: LOQ = 0.2, MDL = 0.05 @ 2 kg sample size		

LOQ = Limit of Quantitation. MDL = method detection limit (lowest amount of analyte detected). Trace = impurity was below LOQ but above MDL.  
nd = indicates the impurity was not detected (below MDL). -- = test not performed. % = percent. ppm = parts per million. ppb = parts per billion. v/v = vol. analyte/vol. sample. w/w = wt. analyte/wt. sample.  
Conversions: 1 ppm v/v = 1 µmol/mol (SI), 1 ppm w/w = 1 mg/kg (SI). VSC = target list volatile sulfur compounds. VXC = target list volatile halogenated (organic) compounds.

**Report Summary:** For the tests performed, this H<sub>2</sub> fuel sample meets all SAE J2719 purity requirements.

**Reviewed by / Date:**

*Laboratory Manager* mm/dd/yyyy

Laboratory Manager – 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. Methods can be reviewed by the customer upon request. The acceptance criteria of the above-quoted item(s) are based on ISBT specifications, NFPA, CGA, USP, or other industry specifications unless otherwise specified on the contract.

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Accreditation # 68099