

# Certificate of Analysis

## Rec & Tek SCUBA Inc.

is in compliance with the air/gas quality portion of the specification:

**CSA Z180.1-2019 & Oxygen Compatible Air-2003 (I)**

as analyzed and reported on this certificate for the sample described under section "sample & report information".

Results relate only to items tested. This report shall not be reproduced except in full without the written permission Trace Analytics, LLC.



Analytical Test Methods:		Media Sampled:	Estimate of Uncertainty:
Gases & Vapors:	CAT-A-01 Gas Chromatography/Mass Spectrometry	Source Bottle: 7013257	The average estimate of uncertainty at standard specification limits for 10 compounds normally reported is ±3.24%, at a 95% confidence interval (k=2). For more detailed uncertainty information, contact Trace Analytics, LLC.
Oil & Particulate:	CAT-A-03 Analytical Gravimetry	Ambient Bottle: N/A	
Particle Size:	CAT-A-04 Optical Microscopy	Source Filter: 009939	
Pressure Dew Point:	CAT-A-07 Gas Detector Tube	Detector Tube: Draeger 5-a/P	

*Maria Sandoval*  
Maria Sandoval, Laboratory Director

**Results of Test: PASS**

**Sample & Report Information (2)**

From:	Analytes	Source Results (1)	Ambient Results	Specification Allowable Limits	Sampled For	Rec & Tek SCUBA Inc.
Trace Analytics, LLC 15768 Hamilton Pool Road Austin, Texas 78738	Oxygen, Volume %	21.1	N/A	20-22	Sampled By	Mitchell Wilson
	Nitrogen, Volume %	78.0	N/A	N/A	Sampled On	7/25/2024
	Argon, Volume %	0.9	N/A	N/A	Received On	8/2/2024
	Nitrogen Plus Argon, Volume %	78.9	N/A	78-80	Analyzed On	8/6/2024
	Carbon Monoxide (CO), ppmv	<0.5	N/A	2	Sampled From	Compressor
	Carbon Dioxide (CO2), ppmv	301	N/A	600	Comp Make	Bauer
	Water Content (H2O), ppmv/Dewpoint, °F (DT)	9 / -77	N/A	27 / -63 (W)	Model	K-12-3EU
	TVHC (including CH4), ppmv	4.0	N/A	15	Serial No.	96 / 1945 / 07
	Methane (CH4) ppmv	2.0	N/A	10	Filtration	
	TVHC (excluding CH4), ppmv	2.0	N/A	5	Cylinder(s)	4
	Oil (condensed) & Particulate, mg/m3	<0.03	N/A	0.1	Other ID	Compressor Room
	Odor (provided by customer)	None/Slight	N/A	None/Slight	Hours	1131
	Halogenated Hydrocarbons, ppmv	<0.1	N/A	5	Customer Comments	
Atmospheric Dew Point, °C (L)	-61	N/A	-53	Report Number	24-25176	
Other	N/A	N/A	N/A	Customer ID	4020	
<p>(1) Results apply to the sample as received from the customer. Information supplied by the customer can affect the validity of results. (2) Information in this section is supplied by the customer (except dates received, analyzed and reported). (DT) Water content Pass/Fail was determined by water vapor detector tube analysis.</p> <p>(I) CGA G-7.1 Grade E as modified by IANTD in their document Blending Standards, 2003.</p> <p>(L) Dew Point (DP) for CSA Z180.1-19: In cylinders and piping ≥15.3 MPa (2216 psig), atmospheric dew point ≤ -53°C (-63°F). CSA Z180.1-2019: Compressed breathing air in cylinders or piping operating at pressures equal to or greater than 2216psig shall meet the limits above and should have a pressure dew point not exceeding 5°C (9°F) below the lowest temperature to which the cylinder or piping can be exposed at any season of the year in the applicable geographic location.</p> <p>(W) Dew point is expressed in °F at one atmosphere pressure absolute.</p> <p>(DT) Detector tube readings performed by the customer. Dew point is calculated at 1 atmosphere pressure (14.7 psia) from the detector tube reading.</p> <p>(P) Evidence of the presence of particulate was observed with the naked eye on the filter at the time of analysis.</p>					Date Reported	8/6/2024
					Frequency	Semi-Annual