

# 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"



Analytical Test Methods:		Media Sampled:	Estimate of Uncertainty:
Gases & Vapors:	CAT-A-01 Gas Chromatography/Mass Spectrometry	Source Bottle: 759308	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: 8274	
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

From:  
 Trace Analytics, LLC  
 15768 Hamilton Pool Road  
 Austin, Texas 78738

To:  
 Mr. Mitchell Wilson  
 Rec & Tek SCUBA Inc.  
 529 Upper Sherman Avenue  
 Hamilton, ON L8V 3L9  
 Canada

Analytes	Source Results (1)	Ambient Results	Specification Allowable Limits
Oxygen, Volume %	20.7	N/A	20-22
Nitrogen, Volume %	78.3	N/A	N/A
Argon, Volume %	1.0	N/A	N/A
Nitrogen Plus Argon, Volume %	79.3	N/A	78-80
Carbon Monoxide (CO), ppmv	<0.5	N/A	2
Carbon Dioxide (CO2), ppmv	443	N/A	500
Water Content (H2O), ppmv/Dewpoint, °F (DT)	11 / -75	N/A	27 / -63 (W)
TVHC (including CH4), ppmv	5.0	N/A	15
Methane (CH4) ppmv	1.9	N/A	10
TVHC (excluding CH4), ppmv	3.1	N/A	5
Oil (condensed) & Particulate, mg/m3	0.06	N/A	0.1
Odor (provided by customer)	None/Slight	N/A	None/Slight
Halogenated Hydrocarbons, ppmv	<0.1	N/A	5
Atmospheric Dewpoint, °C (L)	-59	N/A	-53
Other	N/A	N/A	N/A

Sampled For	Rec & Tek SCUBA Inc.
Sampled By	Glenn Turner
Sampled On	11/2/2021
Received On	11/15/2021
Analyzed On	11/16/2021
Sampled From	Compressor
Make	Bauer
Model	K-12-3EU
Serial No.	96 / 1945 / 07
Cylinder(s)	4
Other ID	Compressor Room
Hours	742
Sample Phase	Before Filter Change
Customer Comments	
Report Number	21-35040
Customer ID	4020
Date Reported	11/16/2021
Frequency	Semi-Annual

(1) Results apply to the sample as received from the customer. Information supplied by the customer can affect the validity of results.  
 (DT) Water content Pass/Fail was determined by water vapor detector tube analysis.  
 (I) CGA G-7.1 Grade E as modified by IANTD in their document Blending Standards, 2003.  
 (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.  
 (W) Dew point is expressed in °F at one atmosphere pressure absolute.  
 (DT) Detector tube readings performed by the customer. Dew point is calculated at 1 atmosphere pressure (14.7 psia) from the detector tube reading.