

**SciLog DN 3124: SciCon Conductivity Sensors, 100hr Exposure to 70% IPA  
at 22 °C and 10 psi of Back Pressure**

**Test Solution: 0.100 N KCl, 12.88 mS @ 25.0 °C**

\* Standard Deviation

Test Data SciCon Sensor ID	Initial Sensor Response to 12.88 mS Test Solution	Sensor Response 25 Hour Exposure	Sensor Response 50 Hour Exposure	Sensor Response 75 Hour Exposure	Sensor Response 100 Hour Exposure	Sensor Response Average	Sensor Response SD*	Sensor Response %SD
C1-240423-0308	12.78	12.83	12.79	12.83	12.82	<b>12.81</b>	<b>0.03</b>	<b>0.21</b>
C1-240424-0308	12.73	12.68	12.65	12.74	12.70	<b>12.70</b>	<b>0.04</b>	<b>0.33</b>
C1-240425-0308	12.78	12.77	12.76	12.81	12.77	<b>12.78</b>	<b>0.02</b>	<b>0.17</b>
C1-240426-0308	12.83	12.78	12.80	12.87	12.77	<b>12.82</b>	<b>0.04</b>	<b>0.31</b>
C1-240426-0308	12.76	12.71	12.85	12.81	12.87	<b>12.78</b>	<b>0.06</b>	<b>0.48</b>
Group Average: Group SD* %SD	<b>12.78</b> <b>0.04</b> <b>0.29</b>	<b>12.75</b> <b>0.06</b> <b>0.47</b>	<b>12.77</b> <b>0.07</b> <b>0.58</b>	<b>12.81</b> <b>0.05</b> <b>0.37</b>	<b>12.79</b> <b>0.06</b> <b>0.50</b>	<b>12.78</b> <b>0.05</b> <b>0.37</b>		

**SUMMARY:** The sensor response data, collected over 100 hours of continuous exposure to isopropyl alcohol (IPA), show a stable sensor accuracy and precision level over time. For individual sensors, the average accuracy measured @12.88 mS, stays well within established limits of +/- 0.2 mS. The same holds for the sensor group averages based on the responses of the five sensors. **The long-term (100 hours) stability of the sensor pre-calibration is verified by the above sensor data.**

**NOTE:** SciLog sensors have been designed for disposable, single-use applications. However, with proper care, the sensors can be re-used repeatedly while maintaining good accuracy and precision. If required, sensors can be re-calibrated.

**CAUTION:** Do Not Exceed Maximum Pressure of 60 psi

**Test Protocol:** Six pre-calibrated (@12.88mS) SciCon Luer conductivity sensors were exposed to 70% isopropyl alcohol (IPA) for 100 hours at 22 °C and 10 psi back pressure. The IPA solution was continuously recirculated (150ml/min) through the in-line SciCon sensors using a peristaltic pump. At 25 hour intervals, the test was briefly interrupted, the sensors were flushed 3x with distilled water and purged for 5 minutes with distilled water utilizing a peristaltic recirculation pump. Prior to testing, the SciCon sensors and the test solution were temperature equilibrated at 25.0 °C for 45 minutes utilizing a constant temperature glove box. While in the glove box, the sensors were tested with a 0.100 N KCl (12.88mS) solution that was re-circulated through the in-line sensors at 150ml/min. Test solution conductivity was tested with a NIST-traceable (YSI, Model 30) conductivity sensor. The test solution temperature was monitored with a NIST- tractable thermistor. All Sensors were tested with their original factory calibration; no re-calibration were carried out before or during the test run.

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