



SciLog DN 3127: SciPres Pressure Sensor, Post Autoclaving Sensor Response

Objective: Test SciPres Sensor Response after Repeated (3) Autoclaving Cycles.
Autoclaving Conditions: Sterilization Temperature: 257°F (125°C); Sterilization Time: 30min., Pressure: 19 psi, Drying Time: 30min.

SciPres 0.50" Barb Sensor ID	Pre-Autoclave		Post Trial 1		Post Trial 2		Post Trial 3	
	psi NIST 0.00	psi NIST 30.00	psi NIST 0.00	psi NIST 30.02	psi NIST 0.00	psi NIST 30.00	psi NIST 0.00	psi NIST 30.02
S3-220221-1007	0.00	29.99	0.01	30.06	0.02	30.04	0.04	30.04
S3-220227-1007	0.00	29.99	0.00	30.06	0.02	30.05	0.04	30.06
S3-220229-1007	0.00	29.99	0.02	30.10	0.03	30.06	0.04	30.07
S3-220230-1007	0.00	29.99	0.01	30.06	0.30	30.24	NR	NR
S3-220234-1007	0.00	29.99	0.00	30.05	0.10	30.22	0.05	30.06
S3-220240-1007	0.00	30.00	0.02	30.06	0.79	31.06	NR	NR
Group Average Group SD*	0.00	29.99 0.00	0.01	30.07 0.02	0.21	30.28 0.39	0.04	30.06 0.01

* SD = Standard Deviation NR = No and/or Erratic Response

Test Protocol: Prior to autoclaving, factory-calibrated SciPres sensors (6) were removed from inventory and pressure-tested at 0.00 and 30.00 psi. The "out-of-box" sensor response data are listed as "Pre-Autoclave" in the table above. The SciPres sensor ambient air-vent as well as the 8-pin sensor connector were covered with autoclavable tape (Cole-Parmer P/N: EG-08277-62). The sensors were placed into a paper bag (6 1/2"x 4" x12 3/8"), sealed with tape and placed in a Tuttnauer EZ9 Autoclave. The following conditions were maintained throughout the three autoclaving trials: 1.Sterilization Temperature: 257°F (125 °C); 2.Sterilization Time: 30 min; 3.Sterilization Pressure: 19 psi, 4.Drying Time 30 min.

After each trial, the SciPres sensors were allowed to cool to room temperature for one hour, followed by pressure tests at 0.00 psi and at 30.00psi. The applied pressure (30 psi) was generated with a regulated nitrogen gas source while monitoring the applied pressure with a NIST-traceable pressure gauge. The SciPres sensor response data (displayed by the SciPres Monitor) are listed in the table above as "Post-Trial 1", "Post-Trial 2" and "Post-Trial 3".

Post-autoclave sensor response tests were carried out with the original factory calibration. No sensor re-calibration were made before, during or after the three trials.

Summary: The tested SciPres sensors survived the autoclave conditions. However, sensor accuracy becomes increasingly compromised after multiple autoclave cycles. **For accurate performance, sensors should not be autoclaved more than two times.**

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

CAUTION: Do Not Exceed Maximum Pressure of 60 psi

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