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Zero-Ion G3

Ionic Contamination (Cleanliness) Tester
Frequently Asked Questions

Q-	Is the Zero-Ion approved by military or IPC standards?
A-	Yes. The Zero-Ion performs a Resistivity of Solvent Extract (ROSE) test, specifically cited in WS6536, Mil-STD 2000A, ANSI/IPC-J-STD-001 TM650 (and other standards). In fact, the US Navy's EMPF determined the Zero-Ion to be the most sensitive ROSE tester available.
Q-	How long does cleanliness test take?
A-	That depends on the volume of contamination on the assembly. While the minimum test time is 30 seconds, an average test takes about 3 – 4 minutes.
Q-	How much space does Zero-Ion G3 require?
A-	Zero-Ion G3's base footprint is 39"W x 25"L x 37"H (991mm W x 635mm L x 940mm H) A countertop measuring 53"W x 28"L (1346mm W x 711mm L) is mounted atop the base. The 24" monitor is attached to the countertop. A keyboard holder measuring 21" x 10.5" (533.4mm x 266.7mm) extends from the countertop.
Q-	What's the largest board size that I can test?
A-	Zero-Ion comes with a choice of two basic test cell sizes, 18" x 18" (457.2mm x 457.2mm) and 24" x 24" (609.6mm x 609.6mm). An assembly up to 3.5" (89mm) high can be accommodated.
Q-	What are the utility requirements?
A-	120 VAC 10 amps –or- 240 VAC 5 amps
Q-	How is the Zero-Ion controlled?
A-	The Zero-Ion G3 is equipped with a PC based computer, a 24" LCD monitor, and a wireless keyboard with integrated trackball.
Q-	How are the cleanliness results viewed?
A-	Cleanliness results may be viewed on the 24" LCD display screen upon termination of the test. Additionally, the cleanliness results can be either manually or automatically printed on a user-provided printer.



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Q-	Can I view prior cleanliness results?
A-	Yes. The Zero-Ion G3 stores all test results and makes them available in the Test Results tab. The historical SPC capabilities allow for individual record "Next / Prior" scanning as well as recipe name searches.
Q-	What type of test solution is required?
A-	The test solution is a calibrated mixture of Isopropyl Alcohol (IPA) and de-ionized water. This is available from Aqueous Technologies or may be mixed on site by the user.
Q-	How many test recipes can be stored in the Zero-Ion G3?
A-	There is no limit (up to the capacity of the PC's hard drive).
Q-	Can the Zero-Ion G3 be used for bare board testing?
A-	Yes. In addition to bare boards, the Zero-Ion G3 is an excellent cleanliness monitoring tool for determining the cleanliness of incoming bare boards.
Q-	What makes the Zero-Ion G3 better than other brands?
A-	The Zero-Ion utilizes a dynamic filtering technology that filters and re-de-ionizes the test solution during the test, resulting in greater solventy (sensitivity) of the test solution. In addition, test solution is pumped through dozens of jets, creating a sweeping current, allowing contamination to be stripped off of the assembly and measured.
Q-	I've read that ion chromatography is a better test. Is that true?
A-	Yes and no. Ion chromatography is normally an outsourced service as the cost of the equipment exceeds \$100,000 and normally requires operation by a chemical engineer. While ion chromatography has the ability to both measure the volume of contamination and identify the contamination, the average cost is \$2,600 per test, disqualifying its daily use as a process monitoring tool. The Zero-Ion G3 may be operated by entry-level staff. Minimum training is required.
Q-	What about SIR testing? Is that better than the Zero-Ion?
A-	Surface Insulation Resistance (SIR) testing requires a PC board with SIR test patterns embedded on the surface of the board. SIR is normally considered a bare board test. The Zero-Ion G3 provides cleanliness testing capabilities on any bare or populated assembly. No special test patterns are required.
Q-	Is the Zero-Ion password protected?
A-	Yes. Rather than enter a password, the G3 is equipped with a "Supervisor Dongle". A supervisor simply inserts the dongle into the PC's USB slot and access to supervisor functions will be granted. Upon removal of the dongle, supervisor functions will become restricted. Supervisor functions include the programming of global settings, the ability to delete test results, and more.