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Bench Top Ionizer Calibration Procedure Desco 19500 & 19520, EMIT 50600, ESDS 43102

Test using a version of EOS/ESD STM3.1. Observe and record offset voltage (float voltage) in voltage, measure discharge time for +1000 volts to +100 volts, and -1000 volts to -100 volts in seconds.

Equipment and tools used:

- Charged Plate Monitor (CPM)
- Flat plastic probe or stick

Set-up:

1. Refer to EOS/ESD STM3.1, 6.3 Worksurface Ionization. Test should be performed on static dissipative worksurface. Testing technician and worksurface need to be properly grounded.
2. Refer to figure 11 – Test locations for bench top ionizer on page 11. Front of ionizer needs to be 12” away from surface of CPM plate, for TP2.

Testing:

Lab environment should be at 75°F at +/-5°F, relative humidity at 45% at +/-5% RH. Observe offset voltage for no less than 10sec before recording.

	MFG Specification	Recorded Values
Offset voltage (floating voltage) in voltage	+/-10 volts at TP2 (1 foot)	
Discharge time, +1000volts to +100volts in seconds	2 sec or less at TP2 (1 foot)	
Discharge time, -1000volts to -100volts in seconds	2 sec or less at TP2 (1 foot)	

Adjustments:

There is no pot to be adjusted in the event of the unit being out of balance. However, slight re-positioning of the 90° degree gold emitter pins can bring the unit back into balance. Flat insulative probe can be used to re-position the gold emitter pins.

Notes:

The emitter pins are the source of ion emission, and need to be kept clean of dirt and debris. Using 99% Isopropyl Alcohol is highly recommended in cleaning emitter pins. In an environment where the humidity is higher than 60%, you will notice a much higher discharge time, due to ions recombining with air molecules.