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Monday, 21 April 2008 10:46 -

KOKOMO, IN – With cleaning on the up-tick due to more aggressive fluxes and greater concern over residues, a test method for localized extraction has been proposed to the IPC Ionic Conductivity/Ion Chromatography task group.

In a presentation at Apex last month, Terry Munson of **Foresite**, a test lab, suggested a production method for extracting residues in isolated areas and assessing their corrosivity.

The proposed test method, Automated Localized Extraction of Electronic Hardware and Components, defines the parameters to nondestructively extract ionizable surface contamination from a localized isolated area of an electronic assembly using heated micro fluids to be used for electrical assessment and ionic/organic analysis. This localized extraction method is not designed to remove residues that do not easily ionize or are trapped in a protective organic film (i.e., rosin) that would not normally be brought into solution during an elevated temperature humidity event on the electronics.

"We believe that the tools on the floor should allow the engineer to answer, 'How is my process running and for the incoming boards, components, SMT 1 and 2, wave solder and selective, hand solder and rework?'" says Munson. “But if you have a cleaning process, can you look at the system’s ability to clean after 12 hours and three soldering operations, or do you have to clean after each soldering process?
"The increased complexity and circuit sensitivity of today's electronic assemblies, with very little through-hole, and the use of 0201, 01005, direct FETs, QFNs and microvias and microBGAs, we need to move cleanliness assessment to the digital age and look at the pockets of contamination that have a negative impact on field performance.”