An accurate understanding of the contents of any pharmaceutical entity helps to ensure both drug efficacy and patient’s safety. Over several decades, there has been significant improvement in the analytical methods and techniques ensuring critical quality attribute analysis of the pharmaceutical products. The solutions offered by Dionex Ion Chromatography systems are widely adopted and are everyday gaining more traction because of the several technological advancements and benefits in these Dionex IC systems. These advancements include superior accuracy, high-throughput, improved reliability, and environmental safety concerns which significantly contribute towards the critical analysis of the drug entity of interest. IC primarily relies on suppressed as well as non-suppressed conductivity detections for ionic species in pharmaceutical samples. Dionex IC systems can accurately analyze multiple anions/cations in a single injection, thereby, accelerating the analysis throughput. The productivity can be further improved by converting the single channel system to a dual-channel system where two different samples can be concurrently analyzed. Most recent advancement, Consumables Device Monitor, can automatically identify and tracks the installation time, use, and performance metrics of all the installed IC consumables. This feature can reduce any associated downtime due to consumable installation errors and can even schedule preventive maintenances. Such smart capabilities can significantly improve the productivity as well as lessen the burden on the analysts’ time in a fast-paced pharmaceutical laboratory. All modern IC systems can make eluents automatically, allowing the consistent and reliable production of high purity IC eluent concentrations. The only routine reagent then needed is high-purity water. Consequently, the instrument pump seals and pistons only come into contact with deionized water instead of acids and bases which can precipitate. This extends the lifetime of pump seals and pistons, and significantly reduces the overall pump maintenance requirements. Dionex IC systems are constantly evolving with the changing times and needs. Recent IC systems are equipped with a tablet supporting 11 different languages with an intuitive interface. This tablet control enables direct local control of the system and its status. All these enhanced capabilities and advancements have only led to the successful adoption of IC for analyzing ionic species in pharmaceutical applications.

**Biography**

Sergio Guazzotti is a Senior Global Marketing Director for ion chromatography and sample preparation at Thermo Fisher Scientific. Prior to this role, he was the Global Marketing Director for gas chromatography/gas chromatography-mass spectrometry also at Thermo Fisher Scientific. He joined the company in 2008 as Senior Global Strategic Marketing Manager for HPLC and was later appointed as Senior Integration Manager to assist the integration of Dionex Corporation into Thermo Fisher Scientific. Prior to joining Thermo Fisher Scientific, he was the Vice President of Engineering and Technical Services at Nanostream, Inc. Earlier in his career, he was a Professor of Analytical Chemistry at the University of California, San Diego. He holds a PhD degree in Chemistry from the University of California.