Implementation of the Horizon Total Solution is Making a Notable Difference

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Facing projects varying in scope and size, from large environmental monitoring investigations to routine compliance testing, Weck Laboratories had a need to automate sample preparations within the organics semi-volatile laboratory. While current personnel faced increasing sample loads, Weck Laboratories brought on Horizon Technology's automated sample preparation systems.

Eduardo Morales a Senior Chemist for Weck Laboratories in the City of Industry, California works in the organics semi-volatile lab. Eduardo trains current and new personal along with daily performing many extractions and concentrations for semi-volatile analysis. Eduardo explains the reasoning for selecting Horizon Technology's instruments is that "we wanted to automate our procedures and increase our productivity using our current personnel. To accomplish this, we needed a product that was not only capable of handling our current workload, but able to fulfill our needs in terms of reproducibility and quality"

Since the addition of Horizon's automated solid phase extraction (SPE) technology within the laboratory it has made a difference in several ways. Eduardo explains: "To better suit our needs we acquired the Horizon SPE-DEX® 3000XL oil and grease instrument which is capable of extracting very dirty water samples. This extractor has released the SPE-DEX 4790 extractors from the O&G task, keeping them cleaner for more sensitive trace level analysis. With the addition of the 4790s we have improved our sample capacity while still maintaining quality." Both automated SPE-DEX units are able to carry out water extractions by supplying the proper prewet solvents onto the SPE disk followed by the sample, air-dry times and the correct elution solvents.

To help streamline the extract drying and concentration procedures, the semi-volatile lab implemented the DryVap Concentrator System. Eduardo explains, "We were using a hot water bath in conjunction with a nitrogen blower to evaporate our samples. This process was labor intensive and requires sodium sulfate. The DryVap® is capable of automating these final two steps of the sample preparation process by drying and concentrating the extracts. Since incorporating the DryDisk® to remove residual water from the extracts, we have eliminated the use of sodium sulfate, thus reducing labor costs"

With other extraction techniques being used within the laboratory such as liquid-liquid extraction (LLE), the group still produces large volume extracts that need to be dried and concentrated. Eduardo adds"LLE is still used for a number of methods" noting that their "DryVap has facilitated the second part of this process by automating the drying and concentration step."