



MILESTONE'S SUBCLEAN AND TRACECLEAN
LOWER COSTS
AND INCREASE PRODUCTIVITY

| CUSTOMER

With a mature quality system approved by FDA and certified by BPF, ISO 13485 and ISO 9001, Albhades offers multidisciplinary analysis in the healthcare field (pharmaceutical, cosmetics and medical instrumentation). Microbiology, toxicology, organic chemistry, inorganic chemistry, structural analysis and mechanical testing are their core business.

| CHALLENGE

The Albhades laboratory is equipped with ultraWAVE for microwave digestion, ICP-MS and ICP-OES for trace analysis in cosmetic and pharma matrices. These analysis require the use of high purity concentrated acids and the material used in the preparation of samples and subsequent analysis must be cleaned thoroughly to avoid possible contaminations. This, in turn, implicates high costs for the lab.

| SOLUTION

The Albhades laboratory therefore decided to invest in two new systems: the Milestone traceCLEAN - to increase the overall efficiency of cleaning materials, and the Milestone subCLEAN - to produce their own ultra-pure acids.

| BACKGROUND

Annelore Alias is the responsible for the inorganic chemistry laboratory at ALBHADES (www.albhades.com). Her laboratory has been growing rapidly in the last few years with many samples analyzed every day. That's why the lab has been equipped with a Milestone ultraWAVE microwave digestion system and an ICP-MS respectively for sample preparation and trace metal analysis.



Since these techniques require the use of high purity acids, the lab has decided to invest in buying the Milestone "Clean Chemistry" products.

They chose the subCLEAN, which allows the internal production of their own ultra-pure acid, and the traceCLEAN, which reduces the quantity of acid used for microwave and ICP glassware cleaning. Since Albhades needs to use quartz and Teflon vials, the traceCLEAN is also needed as a dedicated unit to perform glassware cleaning cycles leaving the ultraWAVE system dedicated only to digestion.

The nitric acid produced by the subCLEAN is currently used for trace metal determination throughout all the analytical methods of the lab and using many different matrices.

Approximately 12 liters of nitric acid is produced each month and used for decontamination, sample preparation and analysis.

LAB PROFILE CLEAN CHEMISTRY | CONTRACT LAB



| APPLICATION

The subCLEAN has proven to be an effective and reliable instrument for producing a continuous supply of high purity acid for many purposes. All parts in contact with acids are made of high-purity fluoropolymers. The subCLEAN is therefore suitable for the purification of HF acid, as well as for HNO₃ and HCl thus reducing levels of contamination.

Mainly used for the distillation of the nitric acid, Albhades was able to perfectly fit the use of this equipment in their lab workflow.

The quality of the nitric acid obtained with the subCLEAN was evaluated and the results showed that the quality of the produced acid was better than or equivalent to that of the commercial acid used beforehand.

On the other hand, the traceCLEAN allows the complete cleaning of all Teflon, glass and quartz elements, including microwave digestion glassware and ICP accessories while reducing the amount of acid used during cleaning.

Furthermore, there is no need to use the ultraWAVE to perform cleaning cycles, which helps to avoid any stops in the sample preparation process.

The implementation of this system enabled Albhades laboratory to optimize its time and costs, while increasing the control of contamination and extending the lifetime of their equipment. The quality of cleaning is frequently evaluated and the results show that the efficiency is higher than a conventional cleaning procedures performed in a microwave system.

| CONCLUSION

With this investment in the Milestone Clean Chemistry line, Albhades was able to confirm its leadership as trace metal analysis laboratory through the constant adoption of new technologies.



“The subCLEAN also offers a high return on investment. “The greatest advantage of this system is the quality to cost ratio of the acid produced.”

– Annelore ALIAS, laboratory manager. Inorganic Chemistry Division, ALBHADES Provence. Albhades@Albhades.com

| ABOUT MILESTONE

With over 50 patents and more than 20,000 instruments installed in laboratories around the world, Milestone has been widely recognized as the global leader in metals prep technology for the past 30 years. Committed to providing safe, reliable and flexible platforms to enhance your lab's productivity, customers worldwide look to Milestone for their metals digestion, organic extractions, mercury analysis and clean chemistry processing needs.



MILESTONE
H E L P I N G
C H E M I S T S

Milestone Inc. - 25 Controls Drive, Shelton, CT 06478
Tel: 866-995-5100 - Fax 203-925-4241
www.milestonesci.com - email: mwave@milestonesci.com