



| COMPARING TODAY'S MICROWAVE DIGESTION TECHNOLOGIES

You've decided to invest in a microwave digestion system for your trace element requirements. So, how do you go about selecting the optimum technology for your samples? What types of acids will be best suited for your elements of interest, and what temperature and pressure will be required? After understanding these issues, you can look more closely at the pros and cons of the various microwave technologies.

There are three commercially available technologies, which can be easily distinguished for performance and productivity. The sequential system allows for single sample digestion, one at a time, with limited temperature and pressure capability. Productivity is considered to be low because it is digesting one sample at a time. Traditional rotor-based system offers good temperature and pressure capability and medium productivity. Last but not least, the SRC technology offers high temperature and pressure capability as well as superior productivity than any other system.

With SRC technology, there is no requirement to batch samples with a similar matrix; so as a result, all sample types can be digested at the same time. Additionally, the high temperature and pressure capabilities of the technology allow even the most difficult organic matrices to be digested in the minimum amount of time. With the nitrogen-pressurized capping system, samples of widely different analyte concentration can be positioned next to each other in the chamber without concerns of cross-contamination. It's also worth pointing out that there is no minimum volume of acid that must be used with the SRC, which is extremely useful particularly when looking to lower detection capability or to analyzing very small sample sizes.

By offering no vessel assembly and the ability to rapidly cool down, an improved workflow can be achieved. And by using disposable glass vials and fewer vial components, it will reduce labor costs and lower the costs of consumables compared to the vessels used in traditional microwave approaches.

Learn more at: <https://www.milestonesrl.com/products/microwave-digestion/ultrawave>

Video: <https://vimeo.com/album/5602707/embed>

