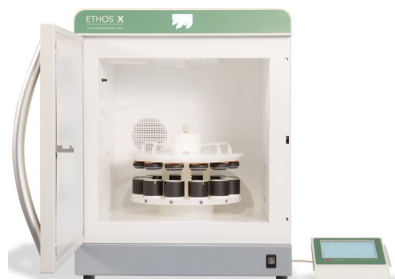


## RELEASE

# ETHOS X – Advanced Microwave Extraction System for Environmental Laboratories



Microwave-assisted solvent extraction offers superior lab efficiency in the determination of organic pollutants with microwave green extraction technique. Typical applications include chlorinated pesticides, semi-volatile organics, PAHs, PCBs, chlorinated herbicides, phenols, organophosphorus pesticides, dioxins and furans.

Determination of organic pollutants in environmental matrices is a common task for thousands of laboratories worldwide, as it leads to controlling and protecting our environment from high levels of contaminants. This analysis is often done to evaluate the effectiveness of a remediation process, to assess the contamination in waste, in waste landfills and for general environmental monitoring. Therefore, every day environmental laboratories deal with several challenges to ensure high quality data and fast turnaround time while maintaining their competitiveness.

Extraction of pollutants from solid matrices is often performed with techniques that limit the productivity and have high running costs. Many laboratories still use the Soxhlet method that was developed in 1879!

Milestone listened to the needs of environmental laboratory professionals by developing the ETHOS X with the fastEX-24 rotor, which allows for simultaneous extraction of 24 samples in 40 minutes with minimal solvent usage. By using large volume disposable glass vials, the fastEX-24 rotor simplifies handling and allows to achieve lower detection limits.

- High throughput: 24 samples in 40 minutes.
- Superior return of investment. Substantial reduction in solvent.
- Simple handling. Disposable glass vials.
- Consistency & Reproducibility. Consistent and reproducible results.
- Safety & Reliability.



### Achieving lower detection limits with higher sample amount

The ETHOS X with fastEX-24 rotor extracts up to 30 grams of sample with minimal solvent volume, helping analysts to accomplish their tasks.

The Milestone fastEX-24 rotor uses disposable glass vials, eliminating the need for cleaning and the possibility of memory effect between different runs. The 100 mL vials can accommodate the extraction of a large sample amount. The easy to handle and affordable cost of the vials leads to high productivity at a very low running cost. ETHOS X system easily adapts to existing extraction chemistry through the use of a unique, patented material, called Weflon. Stir bars of Weflon are heated by microwaves and they subsequently transfer this heat to the non-polar solvent, which is not heated by microwaves.

### COMPLIANCE

Several official methods describe the use of microwave closed-vessel technology to enhance the extraction efficiency of organic pollutants, such as US EPA 3546, ASTM and other national methods. The ETHOS X with fastEX-24 further enhances the performance of microwave technology for the extraction of water-insoluble or slightly water-soluble organic compounds from soils, clays, sediments, sludges, and solid wastes.



# ETHOS X



*Chlorinated pesticides Semivolatile organics  
PAHs PCBs Chlorinated herbicides (phenoxyacid  
herbicides) Phenols Organophosphorus pesticides  
and chlorinated herbicides Dioxins and furans  
Petroleum Hydrocarbons*

ELEVATED SAMPLE THROUGHPUT

DISPOSABLE VIALS

MINIMUM SOLVENT USAGE

SUITABLE FOR US EPA METHOD  
3546 AND ASTM METHOD  
D5765-05

## ADVANCED MICROWAVE EXTRACTION SYSTEM FOR ENVIRONMENTAL APPLICATIONS

The overall concept of the ETHOS X for environmental applications has been developed to fully comply with the requirements of US EPA and ASTM methods.

This system has been developed by studying the working routine of several thousand contract laboratories around the world performing solvent extraction, with the aim of helping them, by offering an integrated solution able to render their activity easier, faster and safer.

A completely new rotor has been specifically developed by Milestone to fully accomplish the US EPA method 3546 requirements. This new rotor consists of a 24-position carousel, which holds large pressure vessels made of an innovative and unique inert polymer material. At the core of the vessel there is a disposable and inexpensive 100 mL glass vial. A self-regulating pressure cover assures safe operations of the system. Temperature and pressure are monitored and controlled in all vessels by non-contact sensors.

With an installed power of 1900 Watt, the ETHOS X is the most powerful microwave platform system available for extraction.

VIDEO

WEBSITE

**Is your Laboratory following US EPA 3546?**  
**Learn more at: [www.milestonesrl.com/environmental](http://www.milestonesrl.com/environmental)**

