Prep Smarter, Not Harder

ICprep Series

Automated Sample Handling and Preparation

analytikjena
An Endress+Hauser Company

Effortless Sample Preparation for Ion Chromatography and More

Discover the cost-effective entry into sample preparation for AOF analysis with ICprep. Effortlessly prepare your samples for ion chromatography and other detection techniques while maximizing lab productivity with high throughput and streamlined workflows.

ICprep Series

Prep smarter, not harder

Increase lab efficiency

- Fraction collector for up to 100 samples
- Reduced maintenance and less method development
- Fast switch between liquid and solid samples

Stress-free AOF sample preparation

- Combustion without sample contamination
- Automatic process optimization and safe digestion for organic-rich matter
- Safety systems and robust parts for trouble-free device usage

Maximize flexibility. For AOF and beyond.

- Cost-effective entry to AOF/EOF/TOF sample preparation
- Flexible use of detectors (IC, HR-CS MAS, ISE, photometry …)
- Wide range of applications: halide speciation (F, Cl, Br, I) and sulfur

ICprep is available in two configurations:

ICprep automatic

High throughput for up to 100 samples in a sequence

ICprep basic

For low throughput needs

More information on the ICprep series
www.analytik-jena.com/ICprep

Stress-Free Preparation for AOF and Beyond

We developed ICprep to make sample preparation for ion chromatography and other detection methods easier than ever. You can count on fast workflows and precise results, regardless of sample type or quantity.

Increase lab efficiency

ICprep enables high throughput and streamlined workflows, freeing up valuable time for other lab tasks. Our fraction collector, capable of automating up to 100 samples in one sequence, significantly increases your lab efficiency. Smart technology ensures fast workflows and precise results, regardless of sample type or quantity.

Designed for sample preparation, our ICprep and APU series integrate seamlessly to provide a comprehensive solution for the entire AOF sample preparation workflow. From column adsorption or solid phase extraction (SPE) for aqueous samples to pyrohydrolytic combustion, our systems ensure precision, efficiency, and reliability at every step.

Highlights at a glance

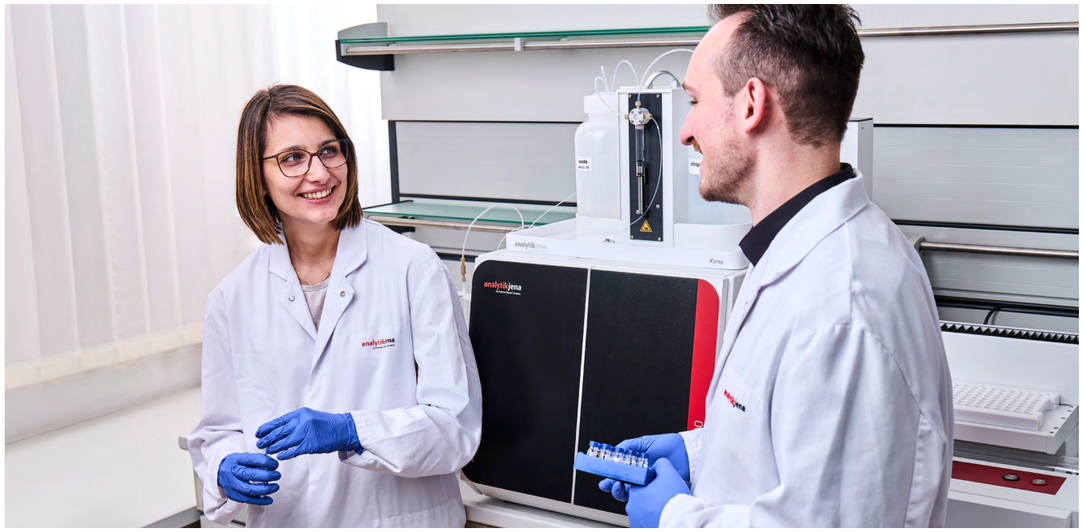
- Fraction collector with up to 100 samples
- Safe and matrix-optimized combustion
- Fast switch between liquid and solid samples
- Wide range of applications
- Complete AOF sample preparation workflow
- Eliminating sample contamination
- Flexible use of detectors (IC, ISE, HR-CS-MAS)

Stress-free AOF sample preparation

ICprep gives you the flexibility of working with different sample types and quantities. Both, liquid and solid samples are introduced by our Multi Matrix Sampler (MMS), and switching between them takes less than five minutes even for beginners. The Automatic Boat Drive (ABD) allows time- and matrix-optimized sample combustion in horizontal operation mode.
The unique flame sensor technology ensures quantitative and soot-free combustion for organic-rich matter. This guarantees maximum operational safety and reliable measurement results with less replicates.

All samples are completely oxidized by pyrohydrolytic combustion in a high-temperature, oxygen-rich environment. We eliminate sample contamination through complete combustion and direct dosing of AOF columns without charcoal ejection.

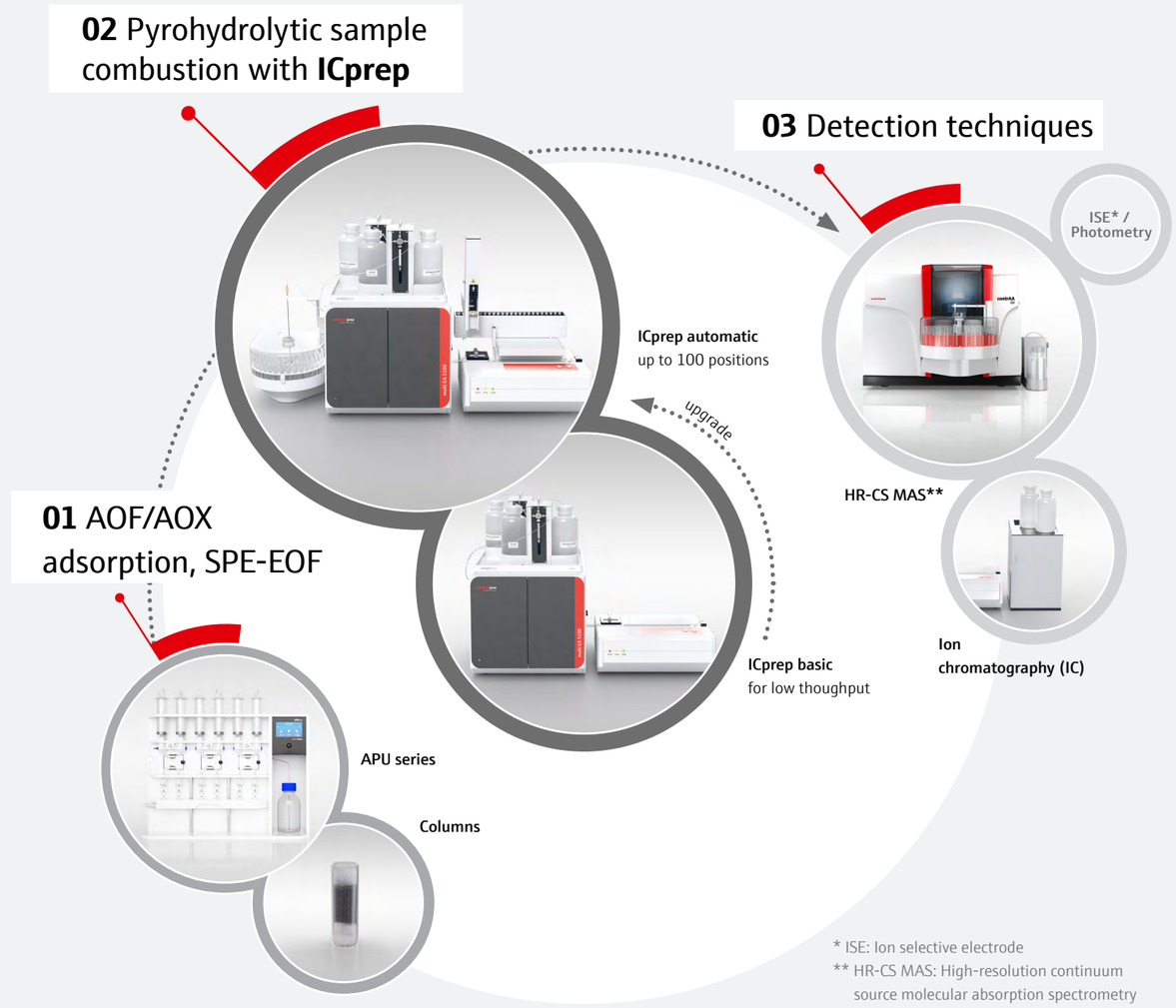
Additionally, we offer a wide range of suitable columns and consumables, as well as personalized application support.



Maximize flexibility for AOF and beyond

Discover the cost-effective entry into sample preparation for AOF analysis with ICprep. The ICprep series offers solutions tailored to your lab's needs. For lower sample throughput, our basic version is the perfect choice. However, you can always upgrade to our 100-position fraction collector. As an existing user of Analytik Jena combustion elemental and AOX analyzers, you can easily integrate ICprep with your current system to expand your application range without increasing bench space or investing in an additional system. Upgrades are available for most systems (multi EA 5000, multi EA 5100 and multi X 2500).

Your needs, your setup - mix the components fitting to your application



* ISE: Ion selective electrode
** HR-CS MAS: High-resolution continuum source molecular absorption spectrometry

Advanced Fluorine Analysis for Environmental Monitoring

Benefit from our expertise in the AOF/EOF sample preparation workflow. Unique combustion processes eliminate sample contamination.

The determination of halogens plays a vital role in detecting and managing environmental pollutants, safeguarding public health, and preserving ecosystems. Sample preparation is a bottleneck, as errors can falsify analysis results. The right preparation is therefore essential to ensure standard compliance and a time-saving, easy-to-use workflow. The ICprep series offers a straightforward approach to sample preparation for the determination of organically bound fluorine, for example as a sum parameter for non-targeted PFAS. Combined with a flexible choice for a third party detector you have a strong toolset available in your lab.

Solutions for AOF/CIC-AOX preparation

Enhance your sample preparation workflow with our seamlessly combined ICprep and APU series. From column adsorption or solid-phase extraction (SPE) for aqueous samples to pyrohydrolytic combustion and adsorption, our systems streamline processes, reduce downtime, and boost throughput of your CIC-AOX, AOF, and EOF samples—maximizing efficiency with minimal effort.

Make sample contamination history

We eliminate sample contamination through direct combustion of columns without charcoal ejection. Minimizing manual operation steps, this process significantly reduces errors. We also offer a wide range of suitable columns and other consumables, along with personalized application support. Our AOF columns impress with low fluorine blank values.

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Applications and standards

- AOF, AOCl, AOBr, AOI in water and wastewater: DIN 38409-59*
- AOF in water: EPA 1621*
- Halogens and sulfur in environmental solid matrices: DIN EN 17813
- Extractable organic fluorine in water and soils
- Halogen determinations in waste streams

*ICprep complies to the step of sample digestion according to pyrohydrolysis; the detection by IC or other suited principles is not done by ICprep. For AOF enrichment on columns or acc. to batch method, additional systems like APU series are required.

More information on the APU series
www.analytik-jena.com/aox-samplepreparation

Reliable Monitoring of Fluorine and Other Halogens Along the Chemical Value Chain

With optimized combustion control, ICprep streamlines sample preparation for analysis of fluorine and other halogens and sulfur in the chemical industry.

Halogen monitoring is essential to assure maximum process safety along the chemical value chain, as halogens tend to form corrosive acids. During the refining of crude oil, chlorine levels are the main concern. With alternative feedstocks like waste plastic being used increasingly, fluorine levels are also becoming a real threat to steam crackers and other refinery units.

Accurate fluorine analysis prevents corrosion and costly downtime, while enabling consistent product quality and full regulatory compliance. However, reliable results start with proper sample preparation. ICprep will help you save valuable time - even for difficult samples like waste plastic pyrolysis oil.

Save time with self-optimized combustion

Our unique flame sensor technology self-optimizes the combustion of samples – regardless of their properties or sample weight. The flame sensor continuously monitors the combustion process in real-time, making automatic adjustments to ensure safety and completeness. It pulls the sample out of the hot zone before combustion becomes too vigorous and reintroduces it only when it is safe.

Your benefits

- No method development required
- Complete, soot-free combustion for accurate results
- Low maintenance
- Time-saving

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Stay flexible with your detector choice and beyond

The ICprep series can be used for all common IC detectors and other techniques such as ion-selective electrodes (ISE), photometry, and high-resolution continuum source molecular absorption spectrometry (HR-CS MAS). Thanks to our multi matrix sampler (MMS), switching between liquid and solid samples takes less than five minutes, even for new users. This eliminates downtime and enhances efficiency.

Applications and standards

- F, Cl, S in aromatic hydrocarbons: ASTM D7359
- TOCl in crude oil: ASTM D8150
- F, Cl in coal: ASTM D8247
- F, Cl, Br in liquid organics: UOP 991
- TF determination in other feedstocks, renewables and waste recycling or waste plastic pyrolysis oil

ICprep complies to the step of sample digestion according to pyrohydrolysis; the detection by IC or other suited principles is not done by ICprep.

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Pictures: Analytik Jena GmbH+Co. KG (unless otherwise noted)
Subjects to changes in design and scope of delivery as well as further technical development!

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