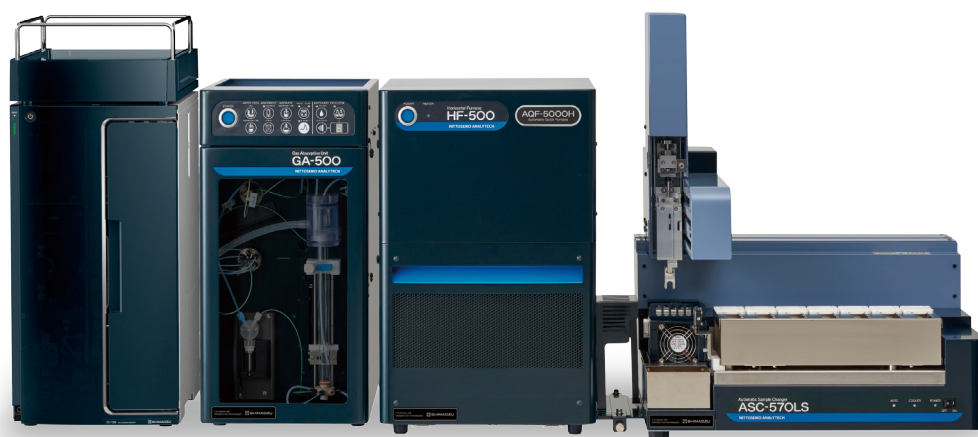


Combustion Ion Chromatography System



Combustion Ion Chromatography System

This combustion ion Chromatography system consists of a Shimadzu Nexera™ IC ion chromatograph configured in combination with a Nittoseiko Analytech automatic quick furnace for combustion ion chromatography. It combusts liquid or solid samples in the automatic quick furnace and collects the absorption solution into which the evolved gases are absorbed. Then the collected absorption solution is automatically injected into the ion chromatograph to analyze the halogen and sulfur content.



Combustion Ion Chromatography System

(Nexera IC Ion Chromatograph and AQF-5000H Automatic Quick Furnace for Combustion Ion Chromatography)

Achieves Automatic Analysis of Halogen and Sulfur Content in Samples

- The system is ideal for applications such as evaluating halogen-free electrical/electronic materials, analyzing the fluorine content in iron and steel slag, analyzing the total bromine content in waste plastics, and analyzing the sulfur content in materials.
- The absorption solution processed by the automatic quick furnace is automatically injected into and analyzed by the ion chromatograph.

Standard Solutions for Preparing Calibration Curves Can Be Injected Directly from the Automatic Quick Furnace into the Ion Chromatograph

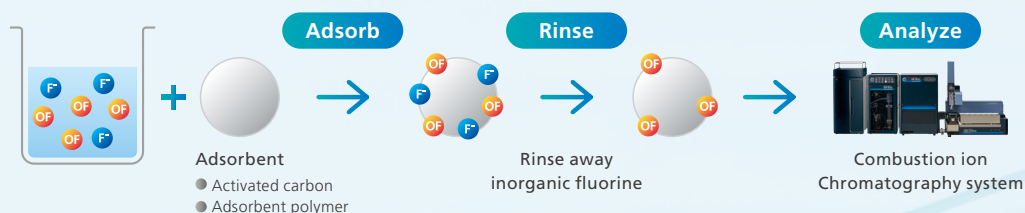
- All process steps, from calibration curve preparation by the ion chromatograph to sample measurement, can be performed automatically.
- The ES-500 external liquid selector (optional) can be used to automatically switch between six standard solutions for preparing calibration curves and introduce them into the ion chromatograph.

Enables High-Speed Screening of PFAS by Analyzing Adsorbable Organic Fluorine (AOF)

- The AOF method enables screening of the total content of PFAS (per- and polyfluoroalkyl substances, organic fluorine compounds).

AOF Method

Organic fluorine compounds in a sample solution are collected using an adsorbent, and the total fluorine content is then analyzed with a combustion ion chromatograph.



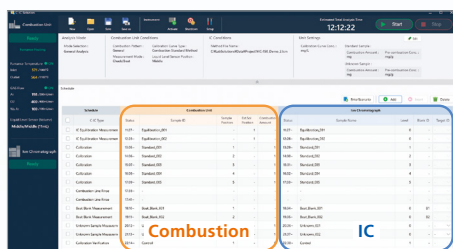
Full Support for Combustion Ion Chromatography (C-IC)

Integrated C-IC Solution Software

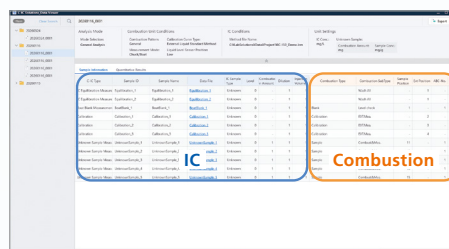


Launcher

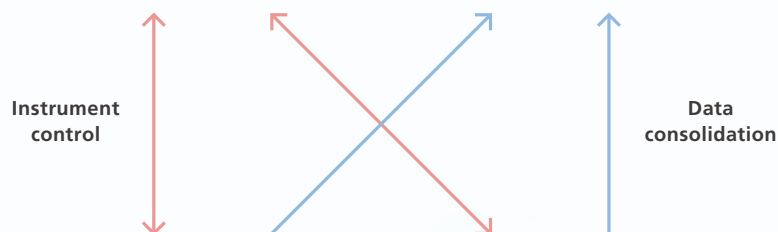
- C-IC Solution software enables integrated control of both the Nittoseiko Analytech automatic quick furnace and the Shimadzu ion chromatograph.
- The software calculates the content in samples based on information from the combustion process and the quantitative results obtained by the ion chromatograph.
- The results can be viewed using the data viewer function.



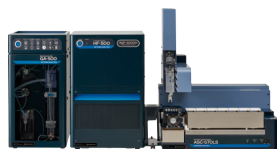
Instrument control window



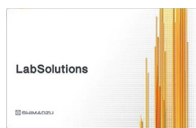
Data viewer



NSX-5000



Automatic quick furnace for
combustion ion chromatography
AQF-5000H



LabSolutions FL



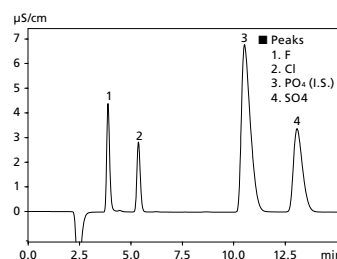
Ion chromatograph
Nexera IC

- It features an overlapped combustion function that performs combustion while analysis is underway in the ion chromatograph, which improves throughput.
- The user interface provides an intuitive display of both the analysis status in the ion chromatograph and the combustion processing status in the automatic quick furnace.

Steel Slag Analysis

The chromatogram to the right shows data from the analysis of halogen (F: fluorine, Cl: chlorine) and sulfur content in steel slag (a byproduct generated during steel manufacturing) using a combustion ion chromatograph.

With phosphate (PO_4) added as an internal standard, good separation from the other ions was achieved.

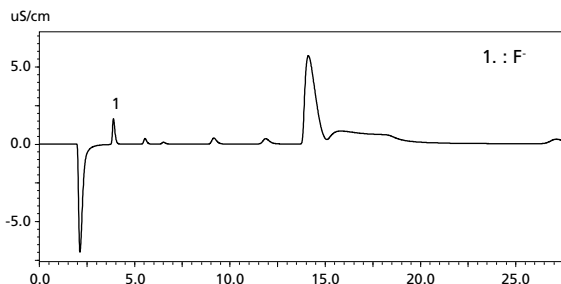


For more details, clicks the application button

Application

Adsorbable Organic Fluorine (AOF) Analysis

This example shows data from the analysis of a PFAS standard compound, PFHxS, in accordance with EPA 1621. Samples were prepared to achieve a 25 $\mu\text{g/L}$ concentration of fluoride ions, which were reliably detected.



For more details, clicks the application button

Application

For inquiries about the automatic quick furnace, contact the following:

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TEL: +81-46-278-0056 FAX: +81-46-278-0057

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