

SmartNotes

Which Dioxin and POPs applications can the DFS Magnetic Sector GC-HRMS be used for?

QA

Dioxins and other persistent organic pollutants (POPS) are everywhere, from the environment to our food. Laboratories need to analyze samples to find dioxins and POPs and guarantee their results are compliant with the regulations and controls on food and environmental safety.

For over a decade, the global scientific community has chosen Thermo Scientific solutions for their superior performance in routine quantitative analysis of dioxins and POPs.

The gold standard in confident, ultra-trace routine quantitation, the DFS Magnetic Sector GC-HRMS can be used for any dioxin and POPs application, and delivers sensitivity and high matrix tolerance. Complete worldwide compliance ensures you can keep up with global regulatory requirements.



Environmental protection

Around the world, environmental threats continue to evolve, and compliance standards and regulations along with them. Persistent organic pollutants analysis requires sensitive and selective workflows that facilitate compliance with official methods.

The DFS Magnetic Sector GC-HRMS enables laboratories to rapidly separate and quantitate contaminants in complex environmental samples down to femtogram levels. Even difficult sample types with heavy matrix effects can be successfully analyzed. The reliability, sensitivity, and robustness of the DFS Magnetic Sector GC-HRMS deliver dependable results that withstand examination.

Food safety

Food quality and safety are two of the most challenging issues in the current regulatory environment. Increasingly lower levels of dioxins in food, feed, and animal tissues mean that more selectivity and sensitivity are required to confirm their presence. No laboratory wants to risk their reputation reporting false negatives or false positives. The DFS Magnetic Sector GC-HRMS is the ideal system for this application. With defensible confirmatory quantitation of organic contaminants down to very low femtogram levels, you can perform food safety analysis with confidence.



Table 1. Official Methods recognizing Magnetic Sector technology.

Application	Regulation/Norm	DFS Magnetic Sector GC-HRMS
Food safety	EU Regulatory Feed Control (at ML)	Approved
Food safety	EN 16215	Approved
Food safety	Background food studies (<1/5th EU ML)	Recommended by EURL
Clinical research	Human studies at trace levels	Recommended by EURL
Environmental	EN 1948	Approved
Environmental: Dioxins and Furans	US EPA 1613 B for strict EPA compliance	Approved
Environmental: PBDEs	US EPA 1614	Approved
Environmental	US EPA Method 23	Approved
Environmental	US EPA Method 8290	Approved
Environmental: PCBs	US EPA Method 1668	Approved
Environmental: Pesticides	US EPA Method 1699	Approved
Environmental: Hormones and steroids	US EPA 1698	Approved
Environmental	JIS K0311	Approved
Environmental	JIS K0312	Approved



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