



Laboratory reagents for food,  
beverage and dairy analysis

**ThermoFisher**  
SCIENTIFIC

# Laboratory reagents for food, beverage and dairy analysis

At Thermo Fisher Scientific, we understand the importance of determining the nutritional value and quality of food, such as carbohydrates, proteins, vitamins and fats. We also recognize the critical nature of testing for traces of pesticides, metabolites, mycotoxins, allergens, heavy metals and other contaminants to ensure food safety.

We offer a comprehensive range of high quality products developed by our Thermo Fisher Scientific instrumentation and chemical experts to meet your analysis workflows:

- High purity solvents and blends for LC-MS and UHPLC-MS
- Thermo Scientific™ Chromplete™ solvents designed for multiple techniques:
  - HPLC coupled with UV, UV-Vis, PDA, ECD, FL and RI detectors
  - Gas Chromatography coupled with FID, ECD and TCD detectors
  - UV Spectrophotometry
  - Extractions and purification
- High purity acids for trace elemental analysis by AAS, ICP-OES or ICP-MS
- Reagents for water content analysis by Karl Fischer titration
- Reagents for dairy testing

## Discover our Customized Products

How can we help? We customize our products to meet your requirements, offering you an ideal solution. We distill, blend, test, package and deliver chemicals tailored to your needs.

- Semibulk and bulk chemical services
- Custom-made chemicals
- Returnable drum delivery system

The chemicals you need—tested, packaged and delivered to meet your exact requirements.



**Request a quote at:** [wesupportyourchemistry.com](https://www.thermofisher.com/wesupportyourchemistry.com)

# High purity solvents and blends for liquid chromatography

The certified performance of Fisher Chemical™ solvents and blends offers the most reliable solutions for today's scientist, running chromatography analysis in the food and beverage industry. Our range of solvents and blends is designed to deliver reproducible performance for determination of the presence of aflatoxins or mycotoxins, and the components and concentration present in the finished product.

Whatever the level of detection, our range of solvents and blends meet the challenges of chromatography from HPLC, LC-MS up to UHPLC-MS applications.

For laboratories using multiple techniques for food characterization, the Chromplete range is an innovative complete solution. Our Chromplete solvents are suitable for multiple applications such as HPLC, GC, Supercritical Fluid Chromatography (SFC) and tested to globally recognized ACS (American Chemical Society) and USP specifications.



Application	Grade	Product Description	Product Code
<b>HPLC, GC, Spectrophotometry</b>	Thermo Scientific Chromplete	Acetonitrile	T00101
		Methanol	T00102
		2-Propanol	T00104
		Water	T00103
<b>LC-MS</b>	Fisher Chemical Optima LC-MS	Acetic Acid	A113
		Acetonitrile	A955
		Acetonitrile, with 0.1% Formic acid (v/v)	LS120
		Acetonitrile, with 0.1% TFA (v/v)	LS121
		Ammonium Acetate	A114
		Ammonium Formate	A115
		Formic Acid	A117
		Methanol	A456
		2-Propanol	A461
		Trifluoroacetic Acid (TFA)	A116
		Water	W6
		Water, with 0.1% Formic acid (v/v)	LS118
Water, with 0.1% TFA (v/v)	LS119		
<b>UHPLC-MS</b>	Thermo Scientific UHPLC-MS	Acetonitrile	A956
		Methanol	A458
		Water	W8
<b>LC and LC-MS</b>	Thermo Scientific ChromaCare	ChromaCare Instrument Flush Solution	T11110

Many products are available in amber glass and borosilicate glass bottles. View our full range of products, packaging options and pack sizes online.



# Solvents for gas chromatography

The food and beverage industry requires gas chromatography (GC) analysis to detect flavors and fragrances and to determine contaminants like pesticide residues.

The Fisher Chemical™ Distol™ grade of solvents and reagents are suitable for extraction and sample preparation prior to analysis by GC-ECD and GC-FID.

The determination of residual solvents (volatile organic impurities) by GC Headspace is also an important quality control procedure in the food and beverage industry as is their use in ensuring desired flavor

development during processing such as coffee or chocolate. The Fisher Chemical GC Headspace solvents are performance tested to ensure low organic contaminants, facilitating the extraction of volatile organic impurities.



Application	Grade	Product Description	Product Code
<b>Pesticide Residue Analysis</b>	Distol	Acetone, 99.8+%	A/0603
		Acetonitrile, 99.8+%	A/0623
		Chloroform, 99.8+%, stabilized with amylene	C/4963
		Cyclohexane, 99.5+%	C/8933
		Dichloromethane, 99.8+%, stabilized with Amylene	D/1853
		Ethyl acetate, 99.8+%	E/0903
		Hexanes	H/0403
		Methanol, 99.8+%	M/4053
		Toluene, 99.8+%	T/2323
<b>GC Headspace</b>	GC Headspace	Dimethyl sulfoxide, DMSO	D139
		N,N-Dimethylacetamide, DMAC	D160
		N,N-Dimethylformamide, DMF	D133
		N-Methylpyrrolidone, NMP	N140
		Water	W10

500mL, 1L and 2.5L pack sizes available in amber glass.

View our full range of products, packaging options and pack sizes online.



# Reagents for trace elemental analysis

Trace elemental analysis of drinking water, fish and other food stuffs requires high purity reagents for accurate results.

Fisher Chemical offers the grade of acid to suit your analysis – whether you're using AAS, ICP-OES or ICP-MS.



- Fisher Chemical™ Optima™ Acids (1-100 ppt) – Suitable for detection up to ppq levels. Feature the lowest metal content (1 ppt for key metals) and the highest purity
- Fisher Chemical™ TraceMetal™ Acids (0.1-1 ppb) – High-purity, exceptional value. Specification measured at 0.1 ppb for key metals
- Fisher Chemical™ Primar Plus™ Acids (1-10 ppb) – The perfect choice for routine applications
- For Analysis, AR Acids (Low cadmium, lead and mercury level) – Suitable for use in environmental and food applications

Application	Grade	Product Description	Product Code
<b>AAS</b>	For analysis, with low cadmium, lead and mercury	Hydrochloric acid, 25%	H/1020
		Hydrochloric acid, 37%	H/1180
		Nitric acid, 69%	N/2320
<b>ICP-OES</b>	Primar Plus	Acetic acid glacial	A/0411
		Hydrochloric acid, 37%	H/1196
		Nitric acid, 68%	N/2272
	TraceMetal	Hydrochloric acid, 34-37%	A508
		Nitric acid, 67-69%	A509
		Sulfuric acid, 93-98%	A510
<b>ICP-MS</b>	Optima	Hydrochloric acid, 32-25%	A466
		Nitric acid, 67-69%	A467
		Sulfuric acid, 96%	A468

Other acids and pack sizes are available.  
View the full range online.



# Karl Fischer for water content analysis

Fisher Chemical™ Aqualine™ reagents are designed for water content analysis by Karl Fischer titration. The Aqualine portfolio is designed to meet the needs of the analytical chemist by providing accurate water content determination using volumetric or coulometric titration ensuring trouble free & fast results.

- Aqualine volumetric range for high water content analysis available in one or two component solution
- Aqualine coulometric range for low water content at ppm level
- Aqualine water standards for Karl Fischer titrator calibration packed in glass ampoules

Our reliable Aqualine reagents provide fast and stable endpoints to ensure accurate results.



Application	Product Description	Product Code	
<b>Aqualine Karl Fischer Titration</b>	Volumetric Reagents Single Component	Aqualine Complete 1	K/1900
		Aqualine Complete 2	K/1950
		Aqualine Complete 5	K/2000
	Volumetric Reagents Two Component	Aqualine Solvent	K/2100
		Aqualine Solvent CM	K/2110
		Aqualine Titrant 2	K/2150
		Aqualine Titrant 5	K/2200
	Reagents for Aldehydes & Ketones	Aqualine Complete 5K	K/2250R
		Aqualine Matrix K	K/2300R
	Coulometric Reagents	Aqualine Electrolyte A	K/2500
		Aqualine Electrolyte AG	K/2520
		Aqualine Electrolyte CG	K/2560
	Water Standards	Aqualine Sodium Tartrate Dihydrate	K/2770
		Aqualine Water Standard, 1 mg/g	K/2710
		Aqualine Water Standard, 5 mg/g	K/2730
		Aqualine Water Standard, 10 mg/g	K/2720
		Aqualine Water Standard KF Oven	K/2760

Available packaged in 500mL, 1L and 2.5L amber glass bottles and ampoules. View the full range of products and pack sizes online.



# Reagents for dairy testing

Not all analytical reagents are created equal! Fisher Chemical products are manufactured and processed to provide accurate and consistent results and are specifically tested and validated on the latest instrumentation from Thermo Fisher Scientific and other leading manufacturers.

The Fisher Chemical portfolio includes reagents suitable for analysis of fat, determination of protein and acidity for dairy samples such as milk, cheese and yogurt.

Application	Grade	Product Description	Product Code
<b>Fat analysis</b>	For analysis	Ammonia solution, 25%	A/3360
	Extra Pure	iso-Amyl alcohol, 98%	A/7000
	For analysis	Diethyl ether, stabilized with BHT	D/2450
		Petroleum ether	P/1760
		Sulfuric acid, 62% <b>NEW!</b>	S/9370
	Extra Pure	Sulfuric acid, 91% for Gerber method	S/9360
<b>Nitrogen content (protein) determination</b>	Technical	Amido Black	N/0211
	Pure	Boric acid solution, 4% with indicator	K/0200
		Boric acid solution, 4% without indicator <b>NEW!</b>	K/0205
	Technical	Kjeldahl copper catalyst tablets	K/0125
	For analysis	Sodium hydroxide, 32% <b>NEW!</b>	S/4970
		Sodium hydroxide, 40%	S/4960
Sulfuric acid, 98% <b>NEW!</b>		S/9250	
<b>pH and acidity</b>	For pH measurement	Buffer solution pH 4, red	J/2826
		Buffer solution pH 7, yellow	J/2855
	For volumetric analysis	Hydrochloric acid, 0.1M (0.1N)	J/4350
		Hydrochloric acid, 1M (1N)	J/4320
		Sodium Hydroxide, (0.111N) <b>NEW!</b>	J/7670
		Sodium Hydroxide, 0.1M (0.1N)	J/7660
		Sodium Hydroxide, 1M (1N)	J/7620

Other reagents and sizes are available.  
View the full range of products and pack sizes online.



# Quality grades for every analytical application

Our portfolio of brands and product grades offer a range of solutions for your analytical testing needs.

- Application-specific testing for high resolution chromatography including, LC-MS, UHPLC-MS and GC Headspace
- Rigorous quality assurance and testing procedures throughout the production process, ensure the lot-to-lot consistency required for interference-free reproducible results every time
- High-volume solvent delivery systems, available in 10L to 1000L, offer environmentally friendly solvent handling solutions for your applications, enhancing safety and improving productivity within your lab

Fields	Application	Grade(s)	Description and Use
<b>Chromatography</b>	Liquid Chromatography (LC)	HPLC	Suitable for HPLC gradient
		Optima LC-MS	Suitable for LC-MS and UHPLC-UV
		Thermo Scientific UHPLC-MS	Highest purity for UHPLC-MS
	Gas Chromatography (GC)	Distol	For pesticides and residue analysis
		GC Headspace	Tested to ensure absence of Type 1, 2 and 3 volatiles
LC, GC, Spectrophometry & ACS	Thermo Scientific Chromplete	Universal choice for multiple techniques	
<b>Elemental Analysis</b>	AAS	For analysis Primar Plus	Acids analysis for metals in the very low parts per million (ppm) range
	ICP-OES	Primar Plus TraceMetal	Acids analyzed for 55 metals in low to very low parts per billion (ppb) range
	ICP-MS	Optima	Acids analyzed for more than 65 metals in the parts per trillion (ppt) range
<b>General Analytical Techniques</b>	Karl Fischer Titration	Aqualine	Karl Fischer titration reagents
	Volumetric titration	For volumetric analysis	Acid and base solutions suitable for precise titration
	pH titration	For pH Metry	Buffer standard solution
	Other Analysis	For Analysis Extra Pure	Purity reagents suitable for general lab techniques

**thermo**  
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chemical

**Thermo Fisher Scientific**  
ENA 23, Zone 1, nr 1350  
Janssen Pharmaceuticaaan 3a  
2440 Geel  
Belgium

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