

IC Food Packs



Complete packs for food analysis

Free with every IC Food Pack:

- MagIC Net software
- Ultrafiltration



Make your food analysis more efficient!

Ion chromatography (IC) is a versatile, proven method used in both food and beverage analysis. Anions, cations, amines, organic acids, carbohydrates, amino acids, sugar substitutes, preservatives and flavoring agents can be reliably and precisely determined via IC in virtually any matrix.

IC is a highly efficient method: Chemically similar substances can be determined in parallel in a single analysis. IC becomes even more efficient if you make use of the numerous options available for automated sample preparation that Metrohm offers you.

Now is the ideal moment to ramp up the efficiency of your food analysis: We have put together four complete IC packs dedicated to the needs of modern food labs. Our special gift to you: **With each of the four packs we give you our MagIC Net software plus the hardware for Inline Ultrafiltration free of charge!**

Take advantage of our promotion (valid for orders from July 1, 2014 until December 31, 2015) and ramp up the power of your laboratory bench now!

IC applications for the food industry

IC is a versatile method: The following table gives you an overview of the scope of IC applications in food analysis.

Sample	Parameters
Meat products, spices, soups, sauces, fish	<ul style="list-style-type: none"> • Anions: nitrite, nitrate (DIN EN 12014-4:2005), chloride, phosphate, polyphosphates • Organic acids • Cations: alkaline and earth alkaline metals, ammonium, biogenic amines • Carbohydrates: monosaccharides and disaccharides, sugar alcohols
Biscuits, bakery products, flour	<ul style="list-style-type: none"> • Anions: bromate, fluoride, acetate, formate, chloride, nitrite, nitrate, phosphate, sulfate • Carbohydrates: monosaccharides, disaccharides and polysaccharides (e.g. inulin)
Table salt, spices, curing salt and herbs	<ul style="list-style-type: none"> • Anions: sulfate, sulfite, bromide, iodide, chloride, iodate, fluoride, phosphate, molybdate, polyphosphates • Organic acids • Cations: alkaline metals
Fruit and vegetables including dried fruit, dried vegetables, jam	<ul style="list-style-type: none"> • Anions: phosphite, nitrite, nitrate (DIN EN 12014-2:1997), chloride, phosphate, sulfate, perchlorate • Organic acids • Cations: alkaline metals and earth alkaline metals • Carbohydrates: monosaccharides and disaccharides • Sugar substitutes: sucralose, saccharin, cyclamate, stevia
Sweeteners, gelling agents and thickeners	<ul style="list-style-type: none"> • Anions: fluoride, chloride, bromide, nitrate, phosphate, sulfate • Organic acids • Cations: alkaline metals and alkaline earth metals, ammonium, transition metals • Carbohydrates: monosaccharides, disaccharides and polysaccharides, sugar alcohols • Sugar substitutes: sucralose, saccharin, cyclamate, stevia
Coffee, cocoa, chocolate, tea	<ul style="list-style-type: none"> • Anions: fluoride • Organic acids • Cations: alkaline metals and earth alkaline metals • Carbohydrates: monosaccharides and disaccharides in instant coffee (ISO 11292), sugar alcohols • Polar substances: caffeine, glycerol
Milk and dairy products	<ul style="list-style-type: none"> • Anions: iodide, chloride, phosphate, sulfate, nitrate, nitrite, thiocyanate, perchlorate, cyanurate • Organic acids • Cations: alkaline metals and alkaline earth metals, ammonium • Carbohydrates: monosaccharides and disaccharides (e.g. lactose in lactose-free milk) • Polar substances: choline, melamine
Beer, vinegar, spirits, and wine	<ul style="list-style-type: none"> • Anions: fluoride, chlorite, chloride, bromide, nitrate, sulfite, sulfate, phosphate, oxalate • Organic acids • Cations: alkaline metals and alkaline earth metals, ammonium, transition metals, biogenic amines • Carbohydrates: monosaccharides, disaccharides and oligosaccharides, sugar alcohols, glycols
Fruit and vegetable juices, soft drinks	<ul style="list-style-type: none"> • Anions: chloride, phosphate, sulfate, nitrite, phosphite, sulfite, nitrate • Organic acids • Cations: alkaline metals and alkaline earth metals, ammonium • Carbohydrates: monosaccharides and disaccharides, sugar alcohols • Polar substances: phenylalanine, aspartame, caffeine, glucuronolactone
Table and mineral water	<ul style="list-style-type: none"> • Anions: fluoride, chloride, nitrite, bromide, nitrate, phosphate, sulfate, iodide, silicate, carbonate, chromate (ASTM D 4327, EPA 300.1, DIN EN ISO 10304-1) • Oxyhalides: bromate, chlorite, chlorate (DIN EN ISO 10304-4, ASTM D 6581, EPA 300.1) • Cations: alkaline metals and earth alkaline metals, ammonium (ISO 14911:1998) • Polar substances: phenols

IC Food Pack Flex – the all-round pack for anion analysis

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Routine analysis in the food and beverage industry faces a wide range of analytes. With the IC Food Pack Flex, you can determine virtually all of them – fully automatically and many even in a single analysis. Here are only the most important ones:

- Nitrite, nitrate in meat, milk or soft drinks
- Chloride, nitrate, sulfite, sulfate, phosphate in beer, wine and other beverages
- Iodide, perchlorate, thiocyanate in dairy products
- Organic acids in meat, dairy products, wine, coffee, soft drinks and many other parameters

Even if your analytes are present in challenging sample matrices, determination using the IC Food Pack Flex remains purely routine: The hardware for Inline Ultrafiltration is already included in the pack; other versions of Metrohm Inline Sample Preparation (e.g., Inline Dilution or Inline Dialysis) can be retrofitted. Your benefit: All samples are prepared automatically and analyzed in the shortest time possible – a significant advantage particularly when high sample throughput is a must.

The IC Food Pack Flex includes:

- 930 Compact IC Flex with column oven, degasser and sequential suppression
- IC Conductivity Detector
- Metrohm Suppressor Module
- Peristaltic pump or 800 Dosino for transporting the regeneration solution of the suppressor
- 858 Professional Sample Processor – pump with rack, sample vials and caps
- IC equipment for Inline Ultrafiltration **(included free of charge)**
- MagIC Net Compact **(included free of charge)**

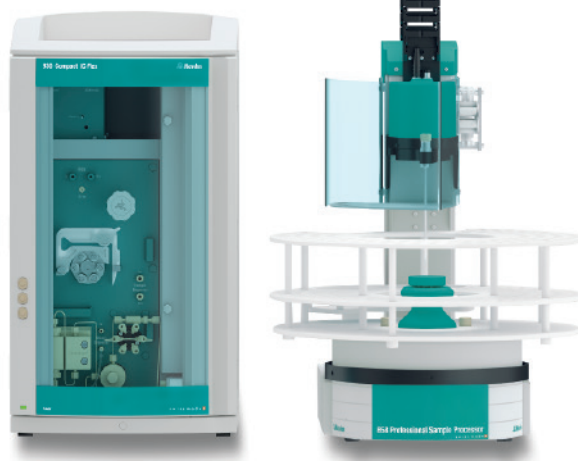
Your benefits

- Fully automated system for high sample throughput
- Integrated Inline Ultrafiltration
- For all anionic analytes
- Straightforward operation, no language barriers (MagIC Net software is available in 15 languages!)

Two versions: IC Food Pack Flex/PP

Free of charge!

- Inline Ultrafiltration
- MagIC Net Compact



IC Food Pack Flex/PP. The classic, particularly robust version: The regeneration solution for the suppressor is transported by an integrated peristaltic pump.

Order number: 2.930.8020

IC Food Pack Flex/DR

Free of charge!

- Inline Ultrafiltration
- MagIC Net Compact



IC Food Pack Flex/DR. The maintenance-free version with «Dosino Regeneration»: The regeneration solution for the suppressor is transported by a patented 800 Dosino.

Order number: 2.930.8010

IC Food Pack Vario – the complete pack for anion and cation analysis

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With the IC Food Pack Vario you can determine everything that you can also determine with the IC Food Pack Flex – and more. Hence, in addition to the channel for anion analysis, this system features a second channel for cation analysis.

With the IC Food Pack Vario, you can use Metrohm Inline Sample Preparation to its full potential: Inline Ultrafiltration is already included in the pack, Inline Dilution, Inline Matrix Elimination, Inline Dialysis, Inline Neutralization, Inline Extraction and many more can all be retrofitted.

Regarding different kinds of detection, there is no limit to flexibility with the IC Food Pack Vario: In addition to the conductivity detectors already included in the pack for conductivity measurement, you may also use UV detection and amperometric detection.

The IC Food Pack Vario includes:

- 940 Professional IC Vario for two analysis channels with a column thermostat, degasser and sequential suppression
- 2 × IC Conductivity Detector
- Metrohm Suppressor Module
- Peristaltic pump or 800 Dosino for transporting the regeneration solution of the suppressor
- 858 Professional Sample Processor – pump with sample rack, sample vials, and caps
- IC equipment for Inline Ultrafiltration **(included free of charge)**
- MagIC Net Professional **(included free of charge)**

Your advantages

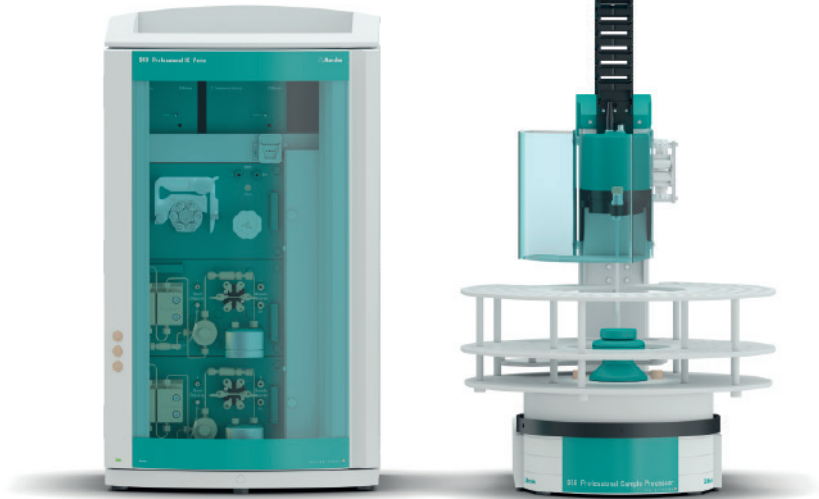
- Fully automated system for high sample throughput
- Integrated Inline Ultrafiltration, all other Metrohm Inline Sample Preparation techniques can be retrofitted
- For all anionic and cationic analytes
- Straightforward operation, no language barriers (MagIC Net software available in 15 languages!)

Two versions: IC Food Pack Vario/PP

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Free of charge!

- Inline Ultrafiltration
- MagIC Net Professional



IC Food Pack Vario/PP. The classic, particularly robust version: The regeneration solution for the suppressor is transported by an integrated peristaltic pump.

Order number: 2.940.8040

IC Food Pack Vario/DR

Free of charge!

- Inline Ultrafiltration
- MagIC Net Professional



IC Food Pack Vario/DR. The complete maintenance-free version with "Dosino Regeneration": The regeneration solution for the suppressor is transported by a patented 800 Dosino.

Order number: 2.940.8030

IC Food Pack Vario

Ordering information

2.930.8010	IC Food Pack Flex/DR
2.930.8020	IC Food Pack Flex/PP
2.940.8030	IC Food Pack Vario/DR
2.940.8040	IC Food Pack Vario/PP

Optional expansion possibilities

2.941.0010	941 Eluent Production Module
2.800.0010	800 Dosino
2.850.9110	IC Amperometric Detector
2.944.0010	944 Professional UV/VIS Detector Vario
2.945.0010	945 Professional Detector Vario – Conductivity
2.945.0020	945 Professional Detector Vario – Amperometry
2.945.0030	945 Professional Detector Vario – Conductivity & Amperometry
6.5330.090	IC Equipment: Additional Eluent on the Eluent Production Module
6.5330.100	IC Equipment: Inline Dialysis
6.5330.120	IC Equipment: Inline Dilution
6.5330.130	IC Equipment: Liquid Handling Station
6.5330.140	IC Equipment: MiPCT
6.5330.150	IC Equipment: Dose-in Gradient
6.5330.160	IC Equipment: MiPCT-ME
6.5330.170	IC Equipment: MiPuT
6.5330.180	IC Equipment: MiPT
6.5330.190	IC Equipment: Dosino Regeneration
6.2842.010	MSM-HC Rotor A
6.2844.000	MSM-LC Rotor A

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