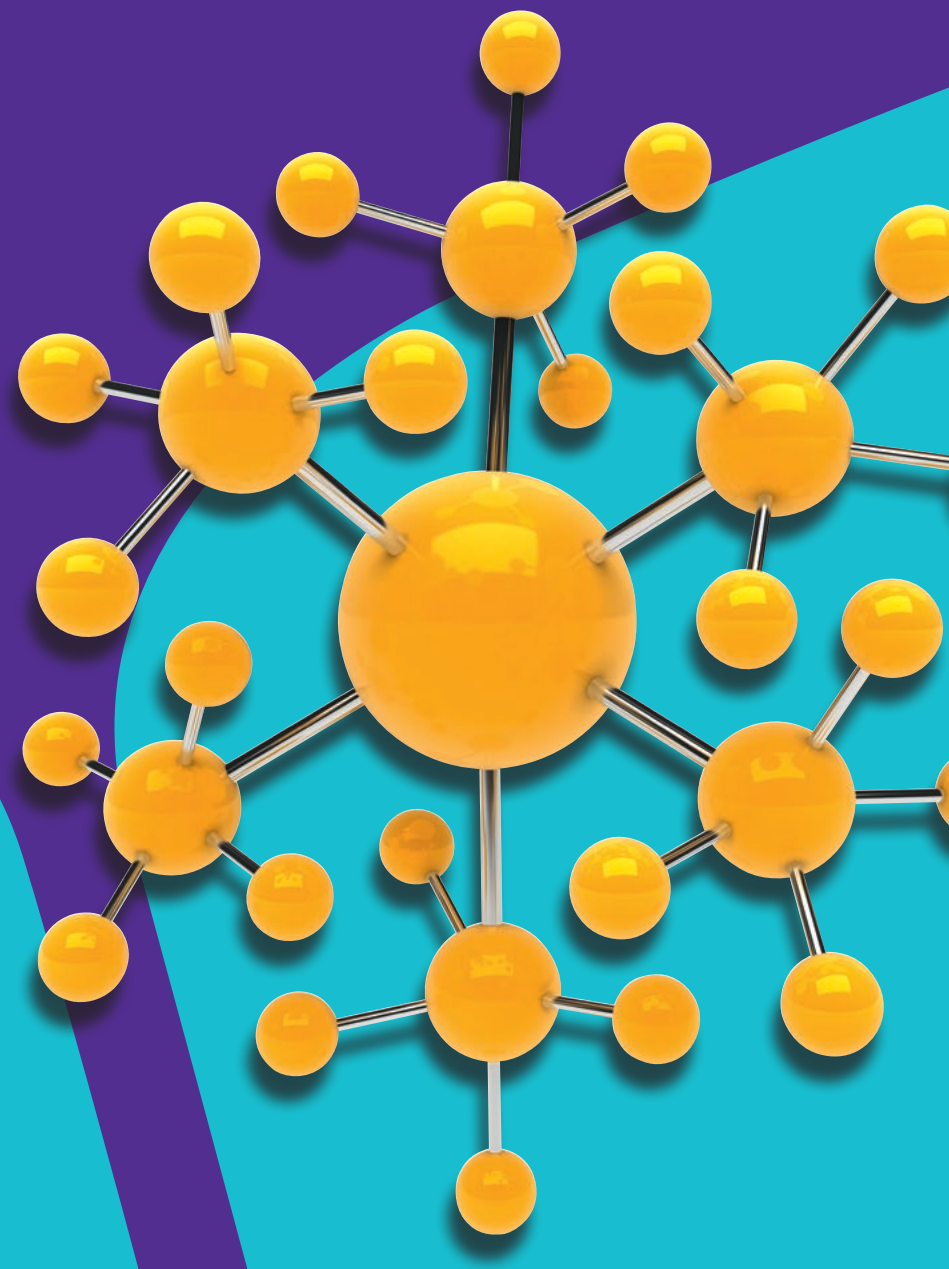
New Chemistry Products for Metabolomics Workflows

2024 ISSUE-2



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Lab & Production Materials

Millipore®
Preparation, Separation,
Filtration & Monitoring Products

Supelco®
Analytical Products

MilliporeSigma has brought together the world's leading Life Science brands, so whatever your life science problem, you can benefit from our expert products and services.

Sigma-Aldrich®

Lab & Production Materials

The Sigma-Aldrich® portfolio of MilliporeSigma offers a strong and ever-expanding collection of lab and production materials. Through our technical support and scientific partnerships, we help connect our customers with a whole world of progress.

Supelco®

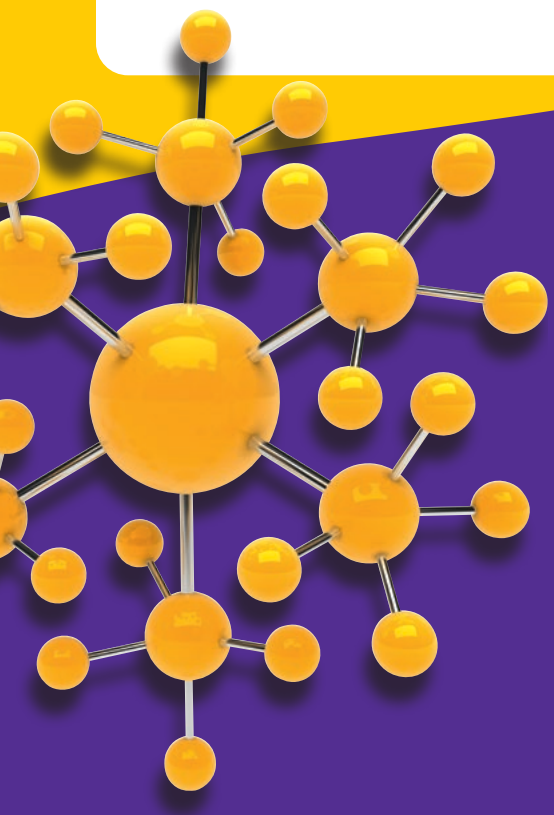
Analytical Products

The Supelco® portfolio of analytical solutions of MilliporeSigma is developed by analytical chemists for analytical chemists to ensure your results are accurate, precise and reproducible. Every product is meticulously quality-controlled to maintain the integrity of your testing protocols and, with our dedicated scientists, the expertise you need is always on hand.

Millipore®

Preparation, Separation, Filtration & Monitoring Products

The Millipore® portfolio of MilliporeSigma offers an ecosystem of industry-leading products and services, spanning preparation, separation, filtration and monitoring – all of which are deeply rooted in quality, reliability and time tested processes. Our proven products, regulatory and application expertise are a strong foundation you can rely on to consistently perform at the highest level.



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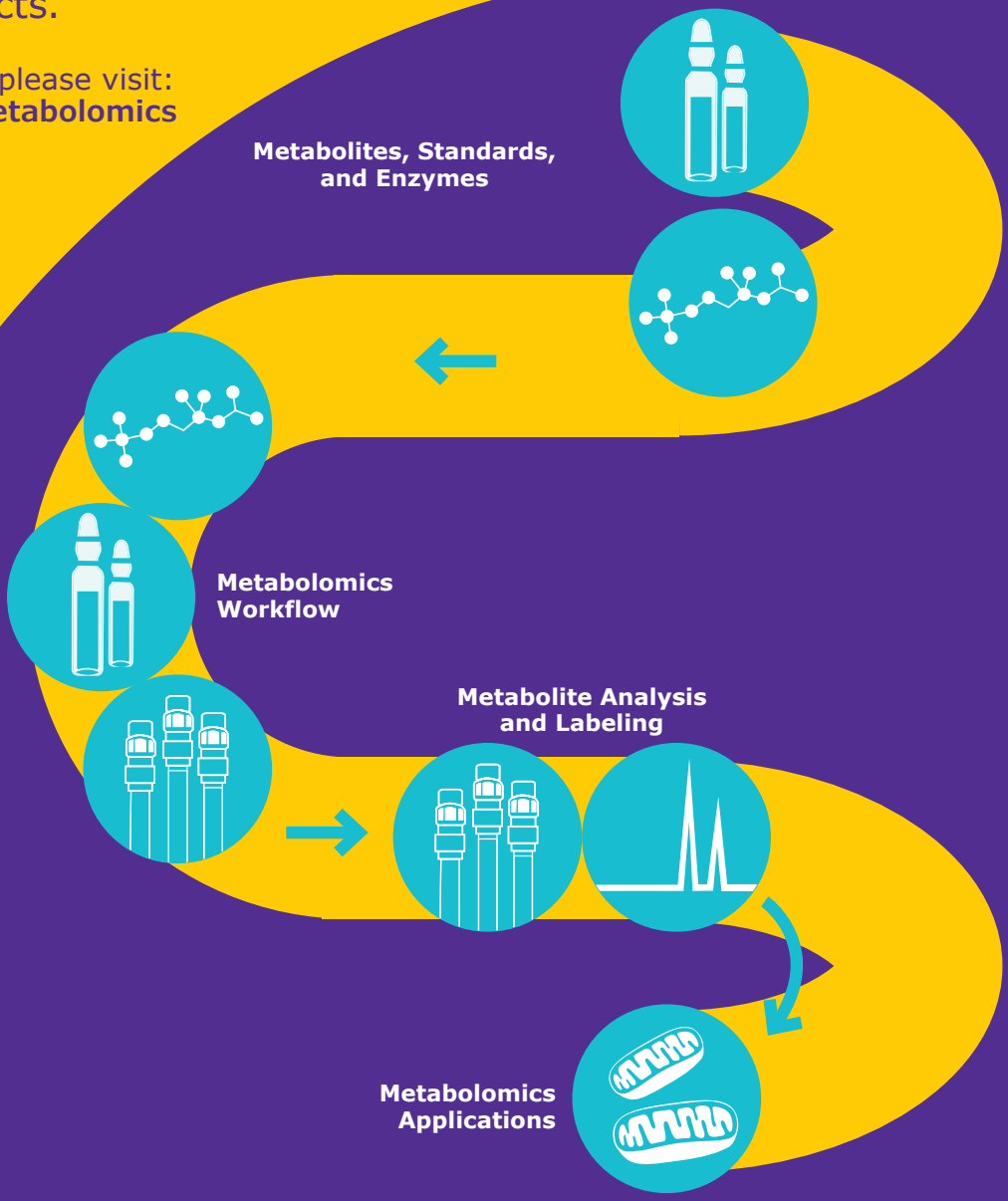
METABOLOMIC DISCOVERY

Before testing new drugs, metabolomic pathways need to be thoroughly investigated. Our broad range of >1300 products, including metabolites, metabolite mixtures, metabolite libraries, metabolite assay kits, enzymes, separation tools, metabolite analysis and labelling help you navigate the metabolic pathways to biomarker discovery.

Use this reference guide to browse our newest products.

For more information, please visit:
SigmaAldrich.com/Metabolomics



New Metabolism Assay Kits

- Convenient, simple, and highly-dependable assays for monitoring metabolic pathways
- Assay kits utilize spectrophotometric, fluorometric, and/or luminescence detection methods
- Kits contain all necessary components and reagents for analysis

Cat. No.	Product Name	Description
MAK463	Hydroxyproline Assay Kit	100 colorimetric assays for the quantitative determination of hydroxyproline and collagen in biological and cosmetic samples using perchlorate-free chemistry.
MAK464	Lactate Dehydrogenase Assay Kit	100 colorimetric assays for lactate dehydrogenase activity determination and evaluation of drug effects in biological samples.
MAK465	Glycogen Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of glycogen in biological samples as well as the evaluation of drug effects on glycogen metabolism.
MAK466	Free Fatty Acid Assay Kit	100 colorimetric or fluorometric assays for the detection of free fatty acids in biological and food and beverages samples.
MAK467	Aspartate Transaminase (AST) Assay Kit	100 colorimetric assays for the quantitative determination of aspartate transaminase (AST) in biological samples and for studying the effects of drugs on AST activity.
MAK468	NAD/NADH Assay Kit	100 colorimetric assays for the quantitative determination of NAD+/ NADH and ratio determination in cell or tissue extracts.
MAK471	Urea Assay Kit III	100 colorimetric assays for the determination of urea in biological and food and beverages samples.
MAK472	Iron Assay Kit	250 colorimetric assays for the detection of iron in biological samples and for studying the effects of drugs on iron metabolism.
MAK473	ATP Assay Kit	100 bioluminescent assays for the quantitative determination of ATP in biological samples.
MAK474	Acetate Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of acetate and the evaluation of drug effects on acetate metabolism.
MAK475	Creatinine Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of creatinine in biological samples.
MAK476	Glucose Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of glucose in biological and food and beverages samples.
MAK477	Calcium Assay Kit	500 colorimetric assays for the quantitative determination of calcium and evaluation of drug effects on calcium metabolism in biological samples.

New Metabolism Assay Kits, continued

Cat. No.	Product Name	Description
MAK478	a-Amylase Activity Assay Kit	100 colorimetric assays for the quantitative determination α-amylase in biological and agricultural samples.
MAK479	NADP/NADPH Assay Kit	100 colorimetric assays for the quantitative determination of NADP+ / NADPH and ratio determination in cell or tissue extracts.
MAK480	Ethanol Assay Kit	500 colorimetric assays for the quantitative determination of ethanol in food and beverage samples.
MAK481	Ethanol Assay Kit	100 colorimetric assays for the quantitative determination of ethanol and the evaluation of drug effects on alcohol metabolism in biological samples.
MAK482	Lipase Assay Kit	100 colorimetric assays for the quantitative determination lipase in biological samples.
MAK483	Uric Acid Assay Kit	250 colorimetric assays for the quantitative determination of uric acid activity and the evaluation of drug effects on uric acid metabolism in biological samples.
MAK484	Phenylalanine Assay Kit	100 fluorometric assays for the quantitative determination of L-phenylalanine in biological samples.
MAK485	Pyruvate Kinase Assay Kit	100 colorimetric or fluorometric assays for the determination of pyruvate kinase and the evaluation of drug effects on pyruvate kinase activity in biological samples.
MAK486	Carbonyl Assay Kit	100 colorimetric assays for the quantitative determination of carbonyl groups (ketones, aldehydes) or protein carbonyls in biological samples.
MAK487	Lactose Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of lactose and the evaluation of drug effects on lactose metabolism.
MAK488	Phosphate Assay Kit	500 colorimetric assays for the determination of phosphate in serum, urine, saliva, sweat, food and beverages, water, soil and fertilizer, and the drug effects on phosphate metabolism.
MAK489	Glucose Uptake Assay Kit	100 fluorometric assays for the determination of glucose uptake in whole cells and the evaluation of effects of ligands or drugs on glucose transport.
MAK490	L-Amino Acid Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of L-amino acids in biological and food and beverage samples.
MAK491	Formate Assay Kit	100 colorimetric assays for the quantitative determination of formate in biological samples such as urine and serum.
MAK492	Fumarate Assay Kit	100 colorimetric assays for the quantitative determination of fumurate in biological and food and beverage samples.
MAK493	Isocitrate Dehydrogenase (IDH) Assay Kit	100 colorimetric assays for the quantitative determination of Isocitrate dehydrogenase (IDH) in biological samples.
MAK494	Creatine Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of creatine in biological samples.

New Metabolism Assay Kits, continued

Cat. No.	Product Name	Description
MAK495	Aspartate Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of aspartate and the evaluation of drug effects on aspartate metabolism in biological samples.
MAK496	Zinc Assay Kit	250 colorimetric assays for the quantitative determination of zinc in biological and environmental samples and the evaluation of drug effects on zinc metabolism.
MAK497	Xanthine Oxidase Assay Kit	100 colorimetric or fluorometric assays for the determination of xanthine oxidase and the evaluation of drug effects on xanthine oxidase metabolism in biological samples.
MAK498	Alcohol Dehydrogenase (ADH) Assay Kit	100 colorimetric assays for the quantitative determination of alcohol dehydrogenase (ADH) in biological samples.
MAK499	Glutamate Dehydrogenase (GDH) Assay Kit	100 colorimetric assays for the quantitative determination of glutamate dehydrogenase (GDH) in biological samples.
MAK500	Alanine Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of alanine and the evaluation of drug effects on alanine metabolism in biological samples.
MAK501	Glucose Oxidase Activity Assay Kit	100 colorimetric or fluorometric assays for the determination of glucose oxidase and the evaluation of drug effects on glucose oxidase metabolism in biological samples.
MAK502	Galactose Assay Kit	100 colorimetric or fluorometric assays for the determination of galactose concentration in biological and food and beverage samples as well as the evaluation of drug effects on galactose metabolism.
MAK503	Glucose 6-Phosphate Assay Kit	100 colorimetric assays for the quantitative determination of glucose-6-phosphate (G6P) in biological samples.
MAK504	Coenzyme A Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of Coenzyme A (CoA) in biological samples.
MAK505	Ascorbic Acid Assay Kit	100 colorimetric or fluorometric assays for the determination of ascorbic acid in biological and food and beverage samples as well as the evaluation of drug effects on ascorbic acid metabolism.
MAK506	Peroxidase Assay Kit	100 colorimetric or fluorometric assays for the peroxidase activity determination in biological samples.
MAK507	Magnesium Assay Kit	250 colorimetric assays for the quantitative determination of magnesium in biological and environmental samples as well as the evaluation of drug effects on magnesium metabolism.
MAK508	Choline Assay Kit	100 colorimetric or fluorometric assays for the determination of choline in biological and food and beverage samples as well as the evaluation of drug effects on choline metabolism.
MAK509	Ferric Reducing Antioxidant Power (FRAP) Assay Kit	250 colorimetric assays for the determination of ferric reduction antioxidant potential in plant extracts, foods, vitamins, supplements, and biological samples such as serum, plasma, and urine.
MAK510	Chloride Assay Kit	250 colorimetric assays for the quantitative determination of chloride in biological, environmental, and food and beverage samples as well as the evaluation of drug effects on chloride metabolism.

New Metabolism Assay Kits, continued

Cat. No.	Product Name	Description
MAK511	Malate Assay Kit	100 colorimetric assays for the quantitative determination of malate in biological, agricultural, and food and beverage samples.
MAK512	Malate Dehydrogenase Assay Kit	100 colorimetric assays for the quantitative determination of malate dehydrogenase in biological samples.
MAK513	Maltose Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of maltose in biological and food and beverage samples.
MAK514	Mannitol Assay Kit	100 colorimetric assays for the quantitative determination of mannitol in biological, agricultural, and food and beverage samples.
MAK515	Oxaloacetate Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of oxaloacetate in biological samples.
MAK516	Myeloperoxidase (MPO) Assay Kit	100 fluorometric assays for the myeloperoxidase (MPO) peroxidation activity determination in biological samples
MAK517	Glutathione (GSH) Assay Kit	250 colorimetric assays for the determination of reduced glutathione in whole blood, plasma, serum, urine, tissue, and cell extracts, as well as for studying the effects of drugs on glutathione metabolism.
MAK518	ADP Assay Kit	100 fluorometric assays for the quantitative determination of ADP in cells and other biological samples.
MAK520	Monoamine Oxidase (MAO) Inhibitor Screening Kit	100 fluorometric assays for the inhibitor screening of monoamine oxidase (MAO) and evaluation of MAO enzyme inhibitors for drug discovery.
MAK521	Fumarase Assay Kit	100 colorimetric assays for the quantitative determination of fumarase in biological samples.
MAK522	Starch Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of starch in biological, agriculture, and food samples, as well as for studying the effects of drugs on starch metabolism.
MAK523	Tryptophan Assay Kit	100 fluorometric assays for the quantitative determination of tryptophan in biological samples.
MAK524	Isocitrate Assay Kit	100 colorimetric assays for the quantitative determination of isocitrate (isocitric acid) in biological and food and beverage samples.
MAK525	Acid Phosphatase Fluorometric Assay Kit	100 fluorometric assays for the quantitative determination of acid phosphatase activity in biological samples.
MAK526	Diamine Oxidase Assay Kit	100 fluorometric assays for the quantitative determination of diamine oxidase (DAO) in biological samples such as serum and plasma.
MAK528	Superoxide Dismutase (SOD) Assay Kit	100 colorimetric assays for the quantitative determination of superoxide dismutase (SOD) in biological samples.

New Metabolism Assay Kits, continued

Cat. No.	Product Name	Description
MAK529	LDH Cytotoxicity Assay Kit	100 colorimetric assays for the quantitative determination of cytotoxicity based on lactate dehydrogenase released into cell culture medium, and for the evaluation of toxic compounds, toxins, detergents, environmental pollutants and physical treatment on cell lysis.
MAK530	Alkaline Phosphatase (ALP) Assay Kit	100 fluorometric assays for the quantitative determination of alkaline phosphatase (ALP) and screening of ALP modulators in biological samples.
MAK531	Catalase Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of catalase activity and the evaluation of drug effects on catalase activity in biological samples.
MAK532	Nitric Oxide Synthase (NOS) Assay Kit	100 colorimetric assays for the quantitative determination of nitric oxide synthase (NOS) activity and the evaluation of drug effects on NOS activity in biological samples.
MAK533	Arginase Assay Kit	100 colorimetric assays for the quantitative determination of arginase activity and the evaluation of drug effects on arginase activity in biological samples.
MAK534	Salicylate Assay Kit	100 colorimetric assays for the quantitative determination of salicylate in biological and cosmetic samples.
MAK535	Glutathione Reductase Kit	100 colorimetric assays for the quantitative determination of glutathione reductase activity in biological samples.
MAK536	Cytotoxicity Assay Kit	100 bioluminescent assays for the measurement of intracellular ATP for the evaluation of cell proliferation, cytotoxicity, apoptosis, and the high-throughput screening of anticancer drugs.
MAK537	D-Amino Acid Assay Kit	100 colorimetric or fluorometric assays for the determination of D-amino acid in biological and food and beverage samples.
MAK538	Ammonia Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of ammonia in biological samples.
MAK539	DNA Assay Kit	250 fluorometric assays for the quantitative determination of DNA in plasmid DNA, genomic DNA, cDNA, DNA following polymerase chain reaction, and DNA extracted from gel and other matrices.
MAK540	Beta-Hydroxybutyrate (Ketone Body) Assay Kit	200 colorimetric assays for the quantitative determination of beta-hydroxybutyrate (ketone bodies) in biological samples.
MAK541	α-Ketoglutarate Quantitation Kit	200 colorimetric assays for the quantitative determination of α-ketoglutarate in biological samples.
MAK542	Glucose Uptake Assay Kit	100 colorimetric assays for the measurement of glucose uptake in tissues and cells.
MAK543	High Sensitivity Glucose Quantitation Kit	500 fluorometric assays for the quantitative determination of glucose in biological and food and beverage samples.
MAK544	Enterokinase (Enteropeptidase) Activity Assay Kit	200 colorimetric assays for the quantitative determination of enterokinase (enteropeptidase) activity in biological samples.
MAK545	Beta-Lactamase Activity Assay Kit	200 colorimetric assays for the quantitative determination of β-Lactamase activity in biological samples.

New Metabolism Assay Kits, continued

Cat. No.	Product Name	Description
MAK546	Glycerol 3-Phosphate (G3P) Assay Kit	200 colorimetric assays for the quantitative determination of glycerol-3-phosphate (G3P) in biological samples.
MAK547	High Sensitivity Beta-Hydroxybutyrate (Ketone Body) Assay Kit	200 fluorometric assays for the quantitative determination of beta-hydroxybutyrate (ketone bodies) in biological samples.
MAK548	Glucose-6-Phosphate (G6P) Assay Kit	200 fluorometric assays for the quantitative determination of glucose-6-phosphate (G6P) in biological samples such as serum, plasma, urine, and cell culture.
MAK550	Tyrosinase Assay Kit	100 colorimetric assays for the quantitative determination of tyrosinase activity in biological samples.
MAK551	Butyrylcholinesterase (BChE) Activity Assay Kit	100 colorimetric assays for the quantitative determination of butyrylcholinesterase (BChE) activity in biological samples.
MAK552	Fluo-4 No Wash Calcium Assay Kit	Sufficient for 10 fluorometric assay plates for the detection of intracellular calcium mobilization.
MAK553	Fluorimetric cADP-Ribose Assay Kit	100 fluorometric assays for the quantitative determination of cADP-ribose (cADPR) in biological samples.
MAK554	Fluorimetric Acetylcholinesterase Assay Kit	200 fluorometric assays for the quantitative determination of acetylcholinesterase (AChE) activity in biological samples.
MAK555	Lysyl Oxidase (LOX) Assay Kit	500 fluorometric assays for the quantitative determination of lysyl oxidase (LOX) activity in biological samples.
MAK556	Hypochlorite (Hypochlorous Acid) Assay Kit	200 colorimetric assays for the quantitative determination of hypochlorite (hypochlorous acid) in biological samples.
MAK557	Melanin Assay Kit	100 fluorometric assays for the measurement of melanin content in cells and other biological samples.
MAK558	Trypsin Activity Assay Kit	100 colorimetric assays for the quantitative determination of trypsin in biological samples such as cell and tissue extracts, serum, and plasma.
MAK559	Total Carbohydrate Assay Kit	100 colorimetric assays for the quantitative determination of carbohydrates in food and beverage, and biological samples.
MAK560	Lipid (Oil Red O) Staining Kit	Sufficient for 2 96-well assay plates for selective staining and detection of neutral lipids in cultured cells and adipocytes.
MAK561	Succinate Dehydrogenase Activity Colorimetric Assay Kit	100 colorimetric assays for the quantitative determination of succinate dehydrogenase (SDH) activity in biological samples such as cell and tissue culture supernatants and purified mitochondria.
MAK562	Branched Chain Amino Acid Kit	100 colorimetric assays for the quantitative determination of branched-chain amino acids (BCAA) in a variety of samples, such as food, dietary supplements, blood, serum and cells.
MAK563	MPO Colorimetric Activity Assay Kit	100 colorimetric assays for the quantitative determination of myeloperoxidase (MPO) activity in biological samples such as cells, tissues, serum, and white blood cells.

New Metabolism Assay Kits, continued

Cat. No.	Product Name	Description
MAK564	Triglyceride Quantification Colorimetric/ Fluorometric Kit	100 colorimetric or fluorometric assays for the quantitative determination of triglyceride in biological samples.
MAK565	High Sensitivity Triglyceride Fluorometric Assay Kit	100 fluorometric assays for the sensitive detection of triglyceride in various biological samples such as serum, plasma, saliva, other biological fluids, and tissue and cell culture samples.
MAK566	Acetyl-Coenzyme A Assay Kit	100 colorimetric or fluorometric assays for the quantitative determination of acetyl-coenzyme A (acetyl-CoA) in biological samples.
MAK567	Pyruvate Dehydrogenase Activity Assay Kit	100 colorimetric assays for the quantitative determination of pyruvate dehydrogenase (PDH) activity in biological samples.
MAK568	Lipid Peroxidation (MDA) Kit	100 colorimetric or fluorometric assays for the quantitative determination of lipid peroxidation (MDA) in biological samples such as cell and tissue culture, and plasma samples.

New Columns for Liquid Chromatography

Cat. No.	Product Name	Description
1.50658	SeQuant® ZIC®-cHILIC (3 µm) 100 Å, 150 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50657	SeQuant® ZIC®-cHILIC (3 µm) 100 Å, 100 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50660	SeQuant® ZIC®-cHILIC (3 µm) 100 Å, 100 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50662	SeQuant® ZIC®-cHILIC (3 µm) 100 Å, 250 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50659	SeQuant® ZIC®-cHILIC (3 µm) 100 Å, 50 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50666	SeQuant® ZIC®-cHILIC (3µm) 100 Å, 5 x 1 mm I.D. HPLC Guard column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50661	SeQuant® ZIC®-cHILIC (3µm) 100 Å, 150 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50764	SeQuant® ZIC®-cHILIC (3µm) 100 Å, 20 x 2.1 mm I.D. HPLC Guard column Kit	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50656	SeQuant® ZIC®-cHILIC (3 µm) 100 Å, 50 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
1.50487	SeQuant® ZIC®-HILIC (3.5µm) 100 Å, 150 x 1 mm I.D. HPLC Capillary column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50479	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 150 x 0.3 mm I.D. HPLC Capillary column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50480	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 150 x 1 mm I.D. HPLC Capillary column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50489	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 30 x 0.3 mm I.D. HPLC Capillary column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50478	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 30 x 1 mm I.D. HPLC Capillary Guard column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50492	SeQuant® ZIC®-HILIC (5 µm) 100 Å 5 x 0.3 mm I.D. HPLC Guard Capillary column (5 pc)	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50490	SeQuant® ZIC®-HILIC (5 µm) 100 Å 5 x 1 mm I.D. HPLC Capillary Guard column (5 pc)	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50465	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 150 x 0.075 mm I.D. HPLC Capillary column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50481	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 150 x 0.3 mm I.D. HPLC Capillary column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50482	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 150 x 1 mm I.D. HPLC Capillary column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50453	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 100 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50441	SeQuant® ZIC®-HILIC (5 µm) 200Å, 50 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50442	SeQuant® ZIC®-HILIC (3.5 µm) 100Å, 100 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50444	SeQuant® ZIC®-HILIC (3.5 µm) 100 Å, 150 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
1.50443	SeQuant® ZIC®-HILIC (3.5 µm) 100 Å, 150 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with highly polar Sulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50440	SeQuant® ZIC®-HILIC (3.5 µm) 100 Å, 250 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50447	SeQuant® ZIC®-HILIC (3.5 µm) 100 Å, 50 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50448	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 100 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50449	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 150 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50445	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 150 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50446	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 50 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50452	SeQuant® ZIC®-HILIC (3.5 µm) 200 Å, 50 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50454	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 100 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50446	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 150 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50455	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 150 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50457	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 250 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50458	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 250 x 4.6 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50450	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 50 x 2.1 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
1.50435	SeQuant® ZIC®-HILIC (5 µm) 200 Å 20 x 2.1 mm I.D. HPLC Guard column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50436	SeQuant® ZIC®-HILIC (5 µm) 200 Å 20 x 2.1 mm I.D. HPLC Guard column Kit	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
1.50669	SeQuant® ZIC®-cHILIC (3 µm) 100 Å, 150 x 0.3 mm I.D. HPLC Capillary column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50670	SeQuant® ZIC®-cHILIC (3 µm) 100 Å, 150 x 1.0 mm I.D. HPLC Capillary column	Silica-based HPLC column with phosphorylcholine functional group provides complementary selectivity for easier method development for analytes that have been difficult to separate in reversed-phase or HILIC mode.
1.50671	SeQuant® ZIC®-HILIC (5 µm) 200 Å, 250 x 21.2 mm I.D. HPLC column	Silica-based HPLC column with highly polar ulfobetaine functionality providing a permanent 1:1 zwitterion charge balance, offering overall neutral, with weak, but important, ionic interactions. Several publications have proved the excellent suitability of SeQuant® ZIC®-HILIC columns for the separation of polar metabolites.
50111-U	Purospher® STAR RP-18 endcapped (2 µm) 50 x 1.0 mm I.D. HPLC Capillary column	Purospher® STAR RP-18 endcapped capillary columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
50115-U	Purospher® STAR RP-18 endcapped (2 µm) 150 x 1.0 mm I.D. HPLC Capillary column	Purospher® STAR RP-18 endcapped capillary columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
50114-U	Purospher® STAR RP-18 endcapped (2 µm) 50 x 0.3 mm I.D. HPLC Capillary column	Purospher® STAR RP-18 endcapped capillary columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
50118-U	Purospher® STAR RP-18 endcapped (2 µm) 150 x 0.3 mm I.D. HPLC Capillary column	Purospher® STAR RP-18 endcapped capillary columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
1.51014	Purospher® STAR Phenyl (2 µm) Hibar® HR 100 x 2.1 mm I.D. UHPLC column	Purospher® STAR Phenyl (2 µm) UHPLC columns are based on ultra-pure fully porous silica particles providing very good seletivity for the separation of compounds containing aromatic structures.
1.51013	Purospher® STAR Phenyl (2 µm) Hibar® HR 50 x 2.1 mm I.D. UHPLC column	Purospher® STAR Phenyl (2 µm) UHPLC columns are based on ultra-pure, fully porous silica particles providing good selectivity for the separation of compounds containing aromatic structures.
1.50673	Purospher® STAR Phenyl, 3 µm Hibar® HR 100 x 2.1 mm I.D. UHPLC column	Purospher® STAR Phenyl (2 µm) UHPLC columns are based on ultra-pure, fully porous silica particles providing good selectivity for the separation of compounds containing aromatic structures.
1.50648	Purospher® STAR RP-18 endcapped (2 µm) Hibar® HR 100 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-18 endcapped (2 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
1.50649	Purospher® STAR RP-18 endcapped (2 µm) Hibar® HR 150 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-18 endcapped (2 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
1.50645	Purospher® STAR RP-18 endcapped (2 µm) Hibar® HR 30 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-18 endcapped (2 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
1.50646	Purospher®STAR RP-18 endcapped (2 µm) Hibar® HR 50 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-18 endcapped (2 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
1.50653	Purospher® STAR RP-18 endcapped (3 µm) Hibar® HR 100 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-18 endcapped (3 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
1.50654	Purospher® STAR RP-18 endcapped (3 µm) Hibar® HR 150 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-18 endcapped (3 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-round retention characteristics.
1.50650	Purospher® STAR RP-18 endcapped (3 µm) Hibar® HR 30 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-18 endcapped (3 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
1.50651	Purospher® STAR RP-18 endcapped (3 µm) Hibar® HR 50 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-18 endcapped (3 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. These columns are designed for universal use and allow for the separation of basic, neutral, and metal chelating compounds with simple mobile phases and excellent peak symmetry, high efficiency and long term stability. These columns offer an outstanding stability from pH 1.5 to 10.5 over a wide temperature range and demonstrate best all-around retention characteristics.
1.50629	Purospher® STAR RP-8 endcapped (2 µm) Hibar® HR 100 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-8 endcapped (2 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. They provide less hydrophobiity compared to C18 columns.
1.50630	Purospher® STAR RP-8 endcapped (2 µm) Hibar® HR 50 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-8 endcapped (2 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. They provide less hydrophobiity compared to C18 columns.
1.50675	Purospher® STAR RP-8 endcapped, 3 µm Hibar® HR 100 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-8 endcapped (3 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. They provide less hydrophobiity compared to C18 columns.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
1.50674	Purospher® STAR RP-8 endcapped, 3 µm Hibar® HR 50 x 2.1 mm I.D. UHPLC column	Purospher® STAR RP-8 endcapped (3 µm) UHPLC columns are based on ultra-pure, fully porous silica particles. They provide less hydrophobiity compared to C18 columns.
50637-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 50 x 1.5 mm I.D. HPLC Capillary column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50638-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 100 x 1.5 mm I.D. HPLC Capillary column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50639-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 150 x 1.5 mm I.D. HPLC Capillary column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50640-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 50 x 2.1 mm I.D. UHPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50641-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 100 x 2.1 mm I.D. UHPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50642-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 150 x 2.1 mm I.D. UHPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50643-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 50 x 3.0 mm I.D. HPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50644-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 100 x 3.0 mm I.D. HPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50645-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 150 mm x 3.0 mm I.D. HPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50646-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 50 x 4.6 mm I.D. HPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
50647-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 100 x 4.6 mm I.D. HPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50648-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 150 x 4.6 mm I.D. HPLC column	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50649-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 5 x 1.5 mm I.D. HPLC Capillary guard columns 3pk	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50650-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 5 x 2.1 mm I.D. UHPLC Guard columns 3pk	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50651-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 5 x 3.0 mm I.D. HPLC Guard columns 3pk	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50652-U	Ascentis® Express PCS-C18, 2.7 µm, 90 Å, 5 x 4.6 mm I.D. HPLC Guard columns 3pk	Ascentis® Express PCS-C18 columns are designed for effective separation of basic, acidic, or neutral compounds using low ionic strength (formic acid) mobile phase conditions. With its unique Positive Charged C18 Chemistry, this column offers exceptional peak shape and improved loading capacity for basic compounds compared to traditional C18 chemistries.
50653-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 50 x 1.5 mm I.D. HPLC Capillary column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50654-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 100 x 1.5 mm I.D. HPLC Capillary column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50655-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 150 x 1.5 mm I.D. HPLC Capillary column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50656-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 50 x 2.1 mm I.D. UHPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50657-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 100 x 2.1 mm I.D. UHPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
50659-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 150 x 2.1 mm I.D. UHPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50660-U	BIOshell™ A160 Peptide PCS-C18, 2.7um, 50 x 3.0 mm I.D. HPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50661-U	BIOshell™ A160 Peptide PCS-C18, 2.7um, 100 x 3.0 mm I.D. HPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50663-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 150 x 3.0 mm I.D. HPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50664-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 50 x 4.6 mm I.D. HPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50665-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 100 x 4.6 mm I.D. HPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50668-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 150 x 4.6 mm I.D. HPLC column	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50670-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 5 x 1.5 mm I.D. HPLC Capillary guard columns 3pk	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50671-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 5 x 2.1 mm I.D. UHPLC Guard columns 3pk	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50675-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 5 x 3.0 mm I.D. HPLC Guard columns 3pk	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
50680-U	BIOshell™ A160 Peptide PCS-C18, 2.7 µm, 5 x 4.6 mm I.D. HPLC Guard columns 3pk	BIOshell™ A160 Peptide PCS-C18 columns are engineered for separations of peptides under low ionic strength conditions (formic acid). With a unique, positively charged surface (PCS) attribute, these columns are exceptional in resolving basic peptides and/or those applications requiring maximal sensitivity.
577141-U	Ascentis® Express 160 Å C30 (2.7 µm) 15 cm × 1.0 mm I.D. HPLC Capillary column	Ascentis® Express 160 Å C30 (2.7 µm) provides excellent selectivity for hydrophobic, long chain and structurally related isomers.
50584-U	Ascentis® Express 90 Å ES-C18 (2.7 µm) 10 cm × 1.5 mm I.D. HPLC Capillary column	The Ascentis® Express ES-C18 column consists of a sterically protected ligand, reducesing acidic hydrolysis, which enables the long term-use of low pH mobile phase conditions without sacrificing column performance over time.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
50586-U	Ascentis® Express 90 Å ES-C18 (2.7 µm) 15 cm × 1.5 mm I.D. HPLC Capillary column	The Ascentis® Express ES-C18 column consists of a sterically protected ligand, reducesing acidic hydrolysis, which enables the long term-use of low pH mobile phase conditions without sacrificing column performance over time.
50582-U	Ascentis® Express 90 Å ES-C18 (2.7 µm) 5 cm × 1.5 mm I.D. HPLC Capillary column	The Ascentis® Express ES-C18 column consists of a sterically protected ligand, reducesing acidic hydrolysis, which enables the long term-use of low pH mobile phase conditions without sacrificing column performance over time.
54273-U	Ascentis® Express 90 Å C18, 2.7 µm, 15 cm × 500 µm I.D.	Ascentis® Express C18 capillary columns provide outstanding performance for a broad range of analytes with highest separation efficiency
53998-U	Ascentis® Express 90 Å C18, 2.7 µm, 5 cm × 500 µm I.D.	Ascentis® Express C18 capillary columns provide outstanding performance for a broad range of analytes with highest separation efficiency.
582711-U	Ascentis® Express 90 Å C18, 2.7 µm, 5 cm × 1.0 mm I.D.	Ascentis® Express C18 capillary columns provide outstanding performance for a broad range of analytes with highest separation efficiency.
50630-U	Ascentis® Express 90 Å C18, 2.7 µm, 10 cm × 1.5 mm I.D.	Ascentis® Express C18 capillary columns provide outstanding performance for a broad range of analytes with highest separation efficiency.
50636-U	Ascentis® Express 90 Å C18, 2.7 µm, 15 cm × 1.5 mm I.D.	Ascentis® Express C18 capillary columns provide outstanding performance for a broad range of analytes with highest separation efficiency.
50629-U	Ascentis® Express 90 Å C18, 2.7 µm 5 cm × 1.5 mm I.D.	Ascentis® Express C18 capillary columns provide outstanding performance for a broad range of analytes with highest separation efficiency.
54275-U	Ascentis® Express 90 Å C8 (2.7 µm) 15 cm × 500 µm I.D. HPLC Capillary column	Ascentis® Express C8 provides enhanced retention for less hydrophobic compounds or faster separation if retention on C18 is too long.
53999-U	Ascentis® Express 90 Å C8 (2.7 µm) 5 cm × 500 µm I.D. HPLC Capillary column	Ascentis® Express C8 provides enhanced retention for less hydrophobic compounds or faster separation if retention on C18 is too long.
53561-U	Ascentis® Express Peptide 160 Å ES-C18 (2.7 µm) 15 cm × 1.0 mm I.D. HPLC Capillary column	Ascentis® Express Peptide 160 Å ES-C18 is designed for fast separations of peptides and polypeptides with high peak capacity. Ideal for harmaceutical/therapeutic peptide separation, eptide mapping, atural and synthetic peptide analysis and oligonucleotide analysis.
53558-U	Ascentis® Express Peptide 160 Å ES-C18 (2.7 µm) 15 cm × 500 µm I.D. HPLC Capillary column	Ascentis® Express Peptide 160 Å ES-C18 is designed for fast separations of peptides and polypeptides with high peak capacity. Ideal for harmaceutical/therapeutic peptide separation, eptide mapping, atural and synthetic peptide analysis and oligonucleotide analysis.
53548-U	Ascentis® Express Peptide 160 Å ES-C18 (2.7 µm) 5 cm × 1.0 mm HPLC Capillary column	Ascentis® Express Peptide 160 Å ES-C18 is designed for fast separations of peptides and polypeptides with high peak capacity. Ideal for harmaceutical/therapeutic peptide separation, eptide mapping, atural and synthetic peptide analysis and oligonucleotide analysis.
53547-U	Ascentis® Express Peptide 160 Å ES-C18 (2.7 µm) 5 cm × 500 µm I.D. HPLC Capillary column	Ascentis® Express Peptide 160 Å ES-C18 is designed for fast separations of peptides and polypeptides with high peak capacity. Ideal for harmaceutical/therapeutic peptide separation, eptide mapping, atural and synthetic peptide analysis and oligonucleotide analysis.
581385-U	BIOshell™ IgG 1000 Å C4, 5 cm x 1.5 mm I.D., 2.7 µm UHPLC Column	BIOshell™ IgG 1000 Å C4 is a high-speed, high-performance liquid chromatography column based on a wide-pore (1000 Å) Fused-Core® particle design. The Fused-Core® particle provides a thin porous shell of high-purity silica surrounding a solid silica core. This particle design exhibits high column efficiency due to the shallow diffusion paths in the 0.5 µm thin, porous shell and the small overall particle size of 2.7 µm. The densely bonded, extensively endcapped dimethylbutyl stationary phase of BIOshell IgG 1000 Å C4 provides a stable, reversed-phase packing that can be used for separating high molecular weight compounds such as proteins.

New Columns for Liquid Chromatography, continued

Cat. No.	Product Name	Description
581384-U	BIOshell™ IgG 1000 Å C4, 15 cm x 1.5 mm I.D., 2.7 µm UHPLC Column	BIOshell™ IgG 1000 Å C4 is a high-speed, high-performance liquid chromatography column based on a wide-pore (1000 Å) Fused-Core® particle design. The Fused-Core® particle provides a thin porous shell of high-purity silica surrounding a solid silica core. This particle design exhibits high column efficiency due to the shallow diffusion paths in the 0.5 µm thin, porous shell and the small overall particle size of 2.7 µm. The densely bonded, extensively endcapped dimethylbutyl stationary phase of BIOshell IgG 1000 Å C4 provides a stable, reversed-phase packing that can be used for separating high molecular weight compounds such as proteins.
577450-U	BIOshell™ IgG 1000 Å Diphenyl, 15 cm x 1.5 mm I.D., 2.7 µm UHPLC Column	BIOshell™ IgG 1000 Å Diphenyl is a high-speed, high-performance liquid chromatography column based on a wide-pore (1000 Å) Fused-Core® particle design. The particle provides a thin, porous shell of high-purity silica surrounding a solid silica core. This particle design exhibits high column efficiency due to the shallow diffusion paths in the 0.5 µm thin porous shell and the small overall particle size of 2.7 µm. The densely bonded, extensively endcapped diphenylmethyl bonded phase of BIOshell™ IgG 1000 Å Diphenyl provides a stable, reversed-phase packing that can be used for separating high molecular weight compounds, such as proteins.
577451-U	BIOshell™ IgG 1000 Å Diphenyl, 5 cm x 1.5 mm I.D., 2.7 µm UHPLC Column	BIOshell™ IgG 1000 Å Diphenyl is a high-speed, high-performance liquid chromatography column based on a wide-pore (1000 Å) Fused-Core® particle design. The particle provides a thin, porous shell of high-purity silica surrounding a solid silica core. This particle design exhibits high column efficiency due to the shallow diffusion paths in the 0.5 µm thin porous shell and the small overall particle size of 2.7 µm. The densely bonded, extensively endcapped diphenylmethyl bonded phase of BIOshell™ IgG 1000 Å Diphenyl provides a stable, reversed-phase packing that can be used for separating high molecular weight compounds, such as proteins.
577451-U	BIOshell™ A160 Peptide C18, 5 cm x 1.5 mm I.D., 2.7 µm UHPLC Column	BIOshell™ A160 Peptide C18 columns are specifically engineered to provide efficient separation of peptides as well as small proteins. These columns contain advanced Fused-Core® particles with pores strategically sized to 160 Å to enable optimized peptide diffusion. This attribute makes these columns an excellent choice for peptide mapping. Additionally, the sterically-protected C18 ligands provide extra stability allowing the columns to be used at an extended pH range (2-9) and high temperatures (up to 90 °C). This trait greatly expands the application range for the separation of biomolecules.
66922-U	BIOshell™ A160 Peptide C18, 15 cm x 1.5 mm I.D., 2.7 µm UHPLC Column	BIOshell™ A160 Peptide C18 columns are specifically engineered to provide efficient separation of peptides as well as small proteins. These columns contain advanced Fused-Core® particles with pores strategically sized to 160 Å to enable optimized peptide diffusion. This attribute makes these columns an excellent choice for peptide mapping. Additionally, the sterically-protected C18 ligands provide extra stability allowing the columns to be used at an extended pH range (2-9) and high temperatures (up to 90 °C). This trait greatly expands the application range for the separation of biomolecules.
67283-U	BIOshell™ A160 Peptide C18, 15 cm x 1.5 mm I.D., 2.0 µm UHPLC Column	BIOshell™ A160 Peptide C18 columns are specifically engineered to provide efficient separation of peptides as well as small proteins. These columns contain advanced Fused-Core® particles with pores strategically sized to 160 Å to enable optimized peptide diffusion. This attribute makes these columns an excellent choice for peptide mapping. Additionally, the sterically-protected C18 ligands provide extra stability allowing the columns to be used at an extended pH range (2-9) and high temperatures (up to 90 °C). This trait greatly expands the application range for the separation of biomolecules.
67284-U	BIOshell™ A160 Peptide C18, 5 cm x 1.5 mm I.D., 2.0 µm UHPLC Column	BIOshell™ A160 Peptide C18 columns are specifically engineered to provide efficient separation of peptides as well as small proteins. These columns contain advanced Fused-Core® particles with pores strategically sized to 160 Å to enable optimized peptide diffusion. This attribute makes these columns an excellent choice for peptide mapping. Additionally, the sterically-protected C18 ligands provide extra stability allowing the columns to be used at an extended pH range (2-9) and high temperatures (up to 90 °C). This trait greatly expands the application range for the separation of biomolecules.

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