











Specialized Chemical Services

Meeting your bespoke research and manufacturing needs

For the times when the product you need is not readily available off the shelf from a chemical catalog, you can save time and resources by turning to the company you can trust.

Fisher Chemical, Fisher BioReagents, Acros Organics, Alfa Aesar and Maybridge offer one of the most comprehensive cost-effective solutions available in the market for all your production chemical needs, whether you are engaged in initial research or scaling up to full production.

We offer 50+ years of experience, a wide portfolio of products and an extensive global network of over 3,500 chemical suppliers and partner manufacturers operating under Confidentiality Disclosure Agreements.

Manufacturing Capabilities

Our custom synthesis, blending, distillation, crystallization, testing, packaging and filling capabilities allow us to manufacture a broad range of products and deliver tailored chemical solutions to customers in the pharmaceutical, biotech and general industrial markets.

We specialize in high-volume packaging as well as custom micro-scale weighing, while maintaining chemical purity.

NOW WITH ADDED CUSTOM SYNTHESIS CAPABILITIES

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Semi-Bulk & Bulk Chemical Services



The extensive catalogue offering encompasses the Fisher Chemical, Fisher BioReagents, Acros Organics, Alfa Aesar and Maybridge brands. Any product from these brands is available in larger quantities to suit your semi-bulk and bulk requirements.

We can secure and manage the supply of these products using either internal manufacturing or select partners worldwide through our extensive supply-chain network.

Our sourcing team has the global reach to make the best buy available on the market without losing sight of local market demands, needs and expectations. We can provide a "lean" single supplier option and reliably manage multi-product supply projects. Technical Sourcing specialists work with you to understand your process requirement and with our supply partners to ensure these requirements are met in full, on time.

Our experience with precious and base metals is unrivaled in the research and development field. Elements from aluminum to zirconium, as well as alloys, ceramics and other materials, are available in a variety of forms and purity specifications.

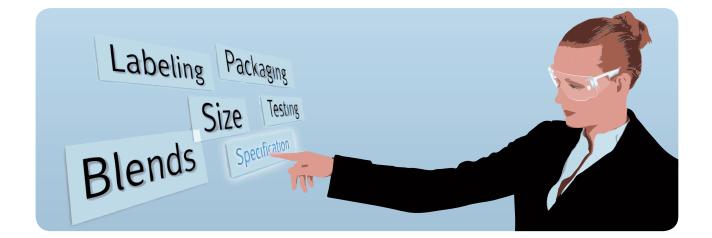
Our life science product lines provide high quality reagents and biochemicals. If you would like more information on bulk or custom requirements for life science research areas, please contact our team.







Choose how our products are adapted to meet



Tailored Solvents and Solvent Blends

We can tailor make solvents to meet your specifications for your application. In addition, our dedicated solvent-mixing facilities are available to produce high-quality blends. Solvents are charged by weight, through a 0.2-micron filter, by air-driven pump and/or by nitrogen pressure. Small amounts of solid and liquid additives are added via charge-ports.

All blending and mixing operations are carried out according to written procedures. The mixing vessels are cleaned (CIP) before and after the mixing/blending operation and are left in a dry condition, filled with nitrogen, between operations.

The final product can be supplied in packaging from 1L glass bottles to stainless steel containers up to 1000L.

Testing Services

Our extensive in-house laboratory QC capabilities* and carefully chosen external partners allow us to respond quickly to specific quality control testing at your request on chemicals you purchase from us.

This includes method development and validation, which establishes that the performance characteristics of an analytical method are suitable for its intended purpose.

All significant method characteristics are defined:

specificity, reproducibility, accuracy, precision, linearity, limit of detection, limit of quantitation and range.

*See page 7 for list of analytical tests and techniques we can offer.

CHOOSE SCS FOR MIXTURES, BLENDS OR TO CHANGE SPECIFICATION

Customized Packaging and Labeling

Our products are available in a wide variety of innovative packaging designed for safety, environmental protection, convenient handling and storage and preservation of product integrity while complying with all relevant regulations. Custom-packing is also available for chemicals or packaging supplied by you.

Our returnable containers and FisherPaks* are available in 10L to 1350L volumes to accommodate lab to production scale needs. By choosing this service, you will benefit from greater solvent purity and safety, improved productivity and lower environmental impact.

You also get convenience and choice with a range of accessories available to fit your laboratory needs to connect the containers to your systems, including color-coded "quick connects".*

In addition, our custom weighing service can provide you with products from the Acros Organics and Maybridge brands at a scale from nanogram to ton – and in your own specified containers if required.

*FisherPaks and quick connects are only available in North America.

Special Solutions

We have experience in developing solutions for our catalog range, but if you have a special requirement for an aqueous or non-aqueous solution, we can manufacture it to your exact specifications.



your requirements



Custom Synthesis

We have been custom manufacturing products for many years with production methods for over 8000 products in our extensive database. Whether you are looking to synthesise complex organic building blocks, ligands and precious metal catalysts, optimise your synthesis or develop a scalable route, we are able to provide the expertise and knowledge to support your project.

Our diverse and flexible custom manufacturing capabilities support our customers' custom synthesis requirements from R&D through to full scale production, with quantities from gram to tonne. Communication with our customers is a key priority for our dedicated UK custom synthesis team, who are on hand to provide bespoke support to customers throughout the development and manufacturing process. Our laboratories operate to ISO 9001 & 14001 accreditations.

Contact us via <u>www.alfa.com/bulkquote</u> to initiate the process of creating a non-disclosure agreement and discuss your chemistry, to enable us to work together on your next custom synthesis project. Pre or post project audits are welcomed to give you confidence in our systems, processes and facilities.

Supply Chain Management

For customers requiring bulk quantities of catalogue items, we can manage and control the supply chain for these products and provide customers with full details of the following:

- Synthesis route
- Country of origin
- Details of the manufacturer
- Supplier qualification and audits
- Change control
- Document control

High Volume Solvent Delivery Systems



Safety, efficiency and convenience

High-volume solvent delivery systems, available in 10L to 1350L, offer environmentally friendly solvent handling solutions for your applications, enhancing safety and improving productivity within your lab.

Enhanced solvent safety

High-volume solvent delivery systems incorporate safety features to protect the lab and the environment by offering a combination of mechanical and manual controls to prevent unwanted solvent flow. The bottle-free, closed system eliminates the potential for glass bottle breakage and makes the risk of spills and exposure to vapors negligible.

Reduce lab-operating costs

Increase lab efficiency by eliminating:

- Repeated solvent testing
- Multiple lots of material
- Bottle rinsing
- Disposal costs

Environmentally friendly solution

- Reduce the amount of solid waste generated in your laboratory
- Minimize the release of flammable or toxic solvent liquids and vapors
- Eliminate bottle rinsing empty containers are returned, cleaned and refilled

For your applications

- High-performance liquid chromatography (HPLC)
- Preparative chromatography and high-volume gas chromatography sample preparation
- Process synthesis and extractions



Quality & Reliability



Certifications and Licenses

All of our manufacturing and QC processes are written in standard operating procedures and are carefully followed to assure specifications and the consistency of products we deliver.

Our manufacturing quality is reflected in a variety of certifications and licenses that we hold, including our ISO 9001:2008 and ISO 14001:2004, FDA, DEA and ATF licenses, which are regularly audited. We welcome pre-arranged customer visits to our sites to showcase our capabilities and competencies.

Our testing capabilities include:

Spectroscopy

- Atomic Absorption Spectroscopy (AAS)
- Inductively Coupled Plasma Mass Spectroscopy (ICP-MS)
- Ultraviolet-visible Spectrophotometry (UV)
- Fourier Transform Infrared (FTIR)
- Fluorescence Spectroscopy
- Nuclear Magnetic Resonance (NMR)

Chromatography

- Gas Chromatography (GC) with a range of detectors
- GC-Mass Spectrometry
- Ultra High Performance Liquid Chromatography (UHPLC) with diode-array or refractive index detectors
- HPLC Mass Spectrometry
- Thin Layer Chromatography (TLC)

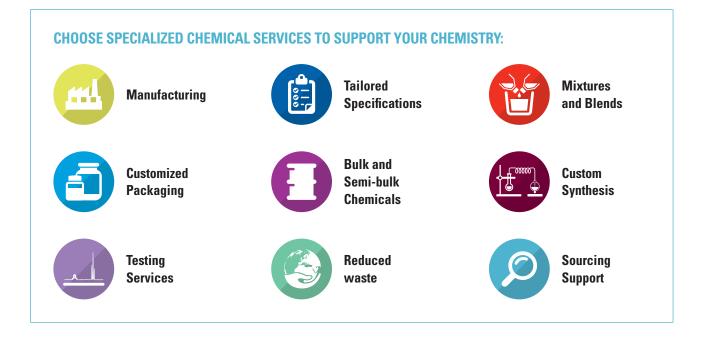
Other capabilities

- Differential Scanning Calorimetry (DSC)
- Optical rotation
- Specific gravity
- Density
- Viscosity
- Melting point
- Refractive index
- Karl Fischer

Specific tests can be performed on request for any of our products.

The chemicals you need tested, packaged and delivered to your exact specification. Let our experts make your life easier!

To request a quotation, visit www.wesupportyourchemistry.com







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