



# Thermo Fisher Scientific organization



**ThermoFisher**  
S C I E N T I F I C



**Thermo**  
S C I E N T I F I C

- **Technology & Innovation**
- High-end analytical instruments, software, reagents, consumables
- Laboratory workflow solutions



- **Choice & Convenience**
- Complete product portfolio of laboratory equipment and supplies
- One-stop, total lab supplier

**Global Chemicals**

Including

Acros Organics, Fisher Bioreagents, **Fisher Chemical** & Maybridge

# Global chemicals – Where are we?

**Fairlawn, New Jersey**  
Analytical reagents and  
Bioreagents manufacture  
**Bridgewater, New Jersey**  
Solvents repackaging

**Geel, Belgium**  
Organic chemicals  
manufacture, **European  
distribution hub**



**Tintagel, UK**  
Building blocks and libraries manufacture  
**Loughborough, UK**  
Analytical reagents manufacture

# UK Manufacturing Facilities - Loughborough

## Manufacturing Capabilities



### ▪ Solvent distillation plant

- 4,500lt still, two 1,300L stills and two 200L stills

### ▪ Split site location

- Manufacturing, solids/liquids repacking and none solvent storage
- Solvent repackaging, storage and export packing

### ▪ Multi purpose plant

- Thirteen vessels from 2,600L to 250L

### ▪ Volumetric solution laboratory

- 200L to 2,000L

### ▪ Kilo Lab facility

### ▪ Full QC/QA Analytical Support





# US Manufacturing Facilities in Fair Lawn and Bridgewater

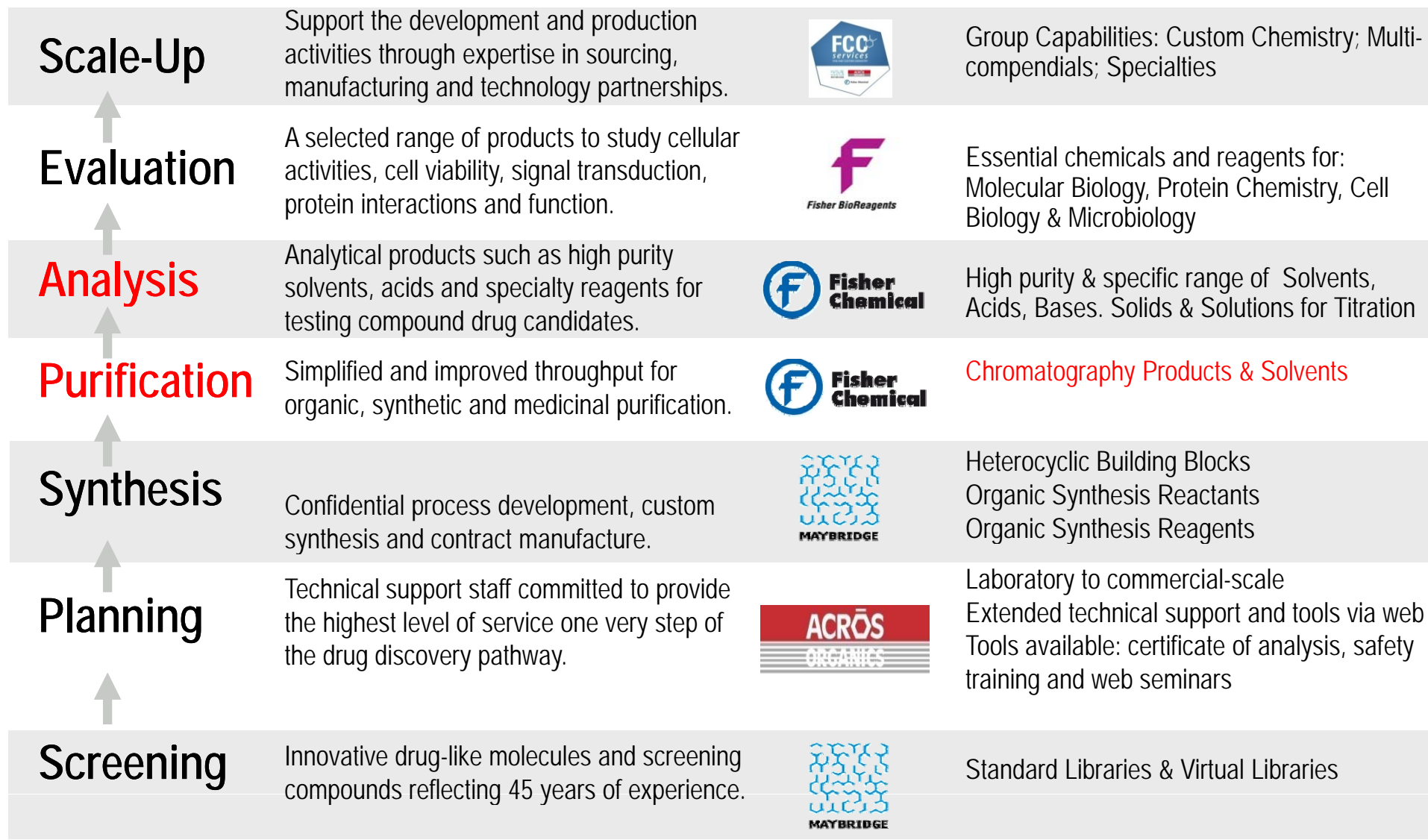
## Manufacturing Capabilities



- U.S. plants encompass over 150,000-sq. ft. of manufacturing on 65 acres
- Our manufacturing operations employ over 275 people
- We annually produce over 3.5 million gallons of liquid chemicals and 1.2 million pounds of dry salts
- **Our production capabilities include: blending solvents, distillation, crystallization, testing, packaging, filling, USP grade, multicompendial, GMP and complete customized chemical solutions**



# Use of Global Chemicals Brands in Chemistry & Life Sciences



# Fisher Chemical Product Portfolio

- Fisher Chemical analytical reagents are available in different grades designed for your application.

For easy reading the different grades have been colour coded in the Fisher Chemical catalogue and carry a special quality label on the bottle.

## specific

### Wide range of Solvents

- HPLC -MS & Optima LC-MS grade
- Advanced HPLC gradient grade
- HPLC Gradient grade
- HPLC Electrochemical
- HPLC Fluorescence
- Gel Permeation Chromatography
- For Pesticide & Petroleum Residue - Distol
- Dried distilled

### Reagents, Acids, Bases & Standards

- For ultra-Trace Metal analysis- Optima TM (ppt level)
- For Trace Metal grade ( ppb level) & Primar Plus grade
- Elemental Standard for AAS, ICP & ICP-MS

## analysis

### Wide range of Acids, Bases , Solvents & Reagents

- For analysis grade
- For analysis grade Conform to Eur.Pharmacopeia

## extra-pure

### Wide range of Acids ,Bases, Solvents & Reagents

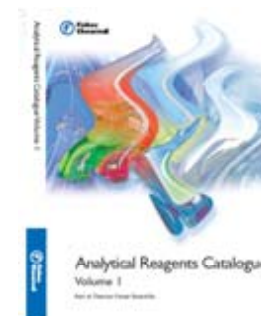
- For research application
- Extra-pure & pure grade

## titration

- **Volumetry** : solution ready to use or Concentrate .Nist Traceability .
- **pH-metry** : Buffers solution ready to use, ampoule & Colour coded Nist Traceability
- **Karl Fischer** titration Aqualine TM



**Fisher Chemical**



# Fisher Chemical Product labels

**Hazard Information:**  
 Flammable, Inflammable, Entzündlich, Ontvlambaar  
 Harmful, Nocif, Mindergiftig, Schadelijk  
 R11, R20/21/22, R36, S16, S36/37

**Product Name and Application:**  
**HPLC Gradient grade**  
 Acetonitrile Far UV  
 Acétonitrile  
 Acetonitril, Far UV  
 Acetonitril

**Technical Specifications and Lot Analysis:**  
 UN No.: 1648 Class: 3, CAS No.: 75-05-8  
 EEC Label: Store at <30°C EINECS 2008352  
 Formula: CH<sub>3</sub>CN FW:41.05  
**Lot Analysis**  
 Absorbance @ 195 nm: 0.008 A.U.  
 Absorbance at 200 nm: 0.024 A.U.  
 Absorbance at 210 nm: 0.006 A.U.  
 Absorbance at 220 nm: 0.003 A.U.  
 Absorbance at 230 nm: 0.001 A.U.  
 Absorbance at 240 nm: 0.002 A.U.  
 Absorbance at 250 nm: 0.000 A.U.  
 Acidity / alkalinity: 0.000083 meq/g  
 Assay (GC): 99.99 %  
 Gradient (max. eluted peak): 0.0003 A.U.  
 Residue after evaporation: None Detected  
 Water: 0.0054 %

**Product Code and Date Information:**  
 Net: 2.5 litres  
 Packing Date: 20/04/05  
 Date opened: \_\_\_/\_\_\_/\_\_\_  
 Code: A/0627/17 Batch: 0561084  
 Use within 3 years of opening

**Graph:**  
 Absorption Spectrum  
 Absorbance (a.u.) vs Wavelength (nm)  
 Legend: Actual (solid line), Guaranteed (dashed line)

**Contact Information:**  
 Fisher Scientific UK Limited, Bishop Meadow Road, Loughborough, Leicestershire LE11 5RG UK.  
 Tel: +44(0) 1509 231166 www.fisher.co.uk  
 Fax: +44(0) 1509 231893 e-mail info@fisher.co.uk



Health and safety info

Product code  
 Packing date  
 Lot no  
 Batch no  
 Expiry date

Application data

Specification or lot analysis data  
 Storage data  
 Chemical data inc CAS, EINECS, formula and weight etc



# What's about GHS

SYSTÈME GÉNÉRAL  
HARMONISÉ  
(GHS)



## GHS - le nouveau système de classification et d'étiquetage des produits chimiques dans l'Union européenne

Introduction du Système Général Harmonisé (GHS) de classification et d'étiquetage des produits chimiques et de leurs mélanges dans l'Union européenne

### NOUVELLE RÉGLEMENTATION GHS

Le règlement (CE) n° 1272/2008 - désigné par les acronymes GHS ou CLP - est entré en vigueur le 20 janvier 2009.

Ce règlement régit la classification, l'étiquetage et l'emballage des substances et mélanges (l'acronyme anglais CLP correspond à « regulation on Classification, Labelling and Packaging of substances and mixtures ») et, à compter de 2015, remplacera en totalité la directive européenne 67/548/CEE relative aux substances et la directive 1999/45/CE relative aux préparations.

Le règlement CLP repose sur la recommandation de l'Organisation des Nations-Unies relative au « Système Général Harmonisé » (GHS-ONU, livre violet) dont l'origine remonte à la conférence sur le développement durable qui s'est tenue en 1992 à Rio de Janeiro (Agenda 21, chapitre 19).

#### Délais de mise en œuvre

Étiquette	Ancien marquage	Nouveau marquage
Substances	Autorisé jusqu'au 01.12.2010. (stocks : + 2 ans)	Autorisé depuis le 20.01.2009, obligatoire à partir du 01.12.2010
Mélanges	Autorisé jusqu'au 01.06.2015. (stocks : + 2 ans)	Autorisé depuis le 20.01.2009, obligatoire à partir du 01.06.2015
Fiche de données de sécurité	Ancienne classification	Nouvelle classification
Substances	Obligatoire jusqu'au 01.06.2015	Autorisé depuis le 20.01.2009, obligatoire à partir du 01.12.2010
Mélanges	Obligatoire jusqu'au 01.06.2015	Autorisé depuis le 20.01.2009, obligatoire à partir du 01.06.2015

GHS01 Explosion de bombes 	GHS02 Flamme 	GHS03 Flamme sur un cercle 
GHS04 Bouteille de gaz 	GHS05 Corrosion 	GHS06 Tête de mort 
GHS07 Point d'exclamation 	GHS08 Danger pour la santé 	GHS09 Environnement 

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## COMMENT SE PRÉPARER AU NOUVEAU SYSTÈME ?

Vous avez déjà commencé en consultant ce prospectus. Un guide sur le GHS fournit d'autres informations. Ce dernier a été publié par l'Office allemand de l'Environnement à l'automne 2007 (sur la base de du règlement CLP encore au stade de projet), afin de présenter les bases du nouveau règlement aux fabricants et formulateurs (voir lien vers le site Web ci-dessous).

Pour de plus amples informations nous vous conseillons de consulter le site officiel dédié par pays.

Pour information voici l'adresse du site BERPC français : <http://www.reach-info.fr/>

# Thermo Scientific & Fisher Chemical Synergy



**ThermoFisher**  
S C I E N T I F I C

**Thermo**  
S C I E N T I F I C

- **Technology & Innovation**
- High-end analytical instruments, software, reagents, consumables
- Laboratory workflow solutions

**Chromatography :**

- HPLC, UPLC, UPLC-MS , LC-MS/MS & LC-ICP-MS

**Trace Metal Analysis**

- ICP-MS, ICP & AA



**Fisher Chemical**



# Global Chemicals LC/MS Solvent Installation Kit with Thermo SID equipment

Launching from June 09

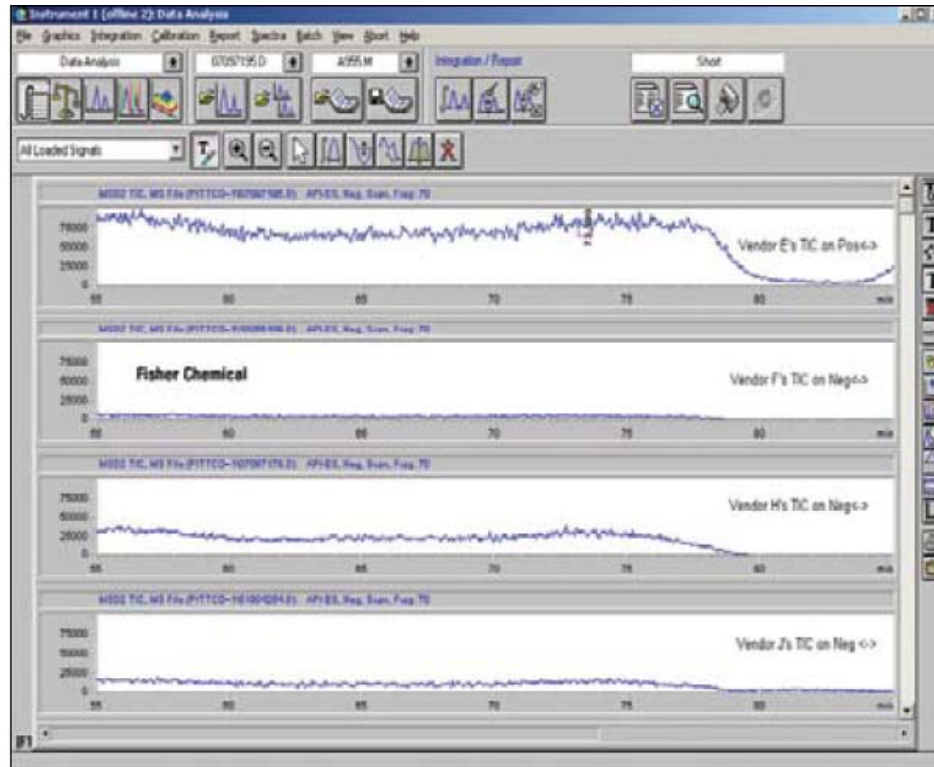


Fig. 3. Mass background in negative mode of blank solvent sample using single quadrupole LCMS. Note that the Fisher Chemical solvent system produced the flattest baseline and the lowest background noise in TIC.

## The Kit in the EcoSafPak includes:

- **Solvents:** Acetonitrile 1L; Methanol 1L; Water 1L; Isopropanol 1L
- Pretreated **empty bottle** with FisherLOCK™ Cap to prepare blends
- **Brochures:** Optima LCMS flyer + white paper





# Thermo SID Elemental –Fisher Chemical

## Fisher Chemical range :

Acid, Base & water  
Elemental standard



## Trace metal

## Primar plus

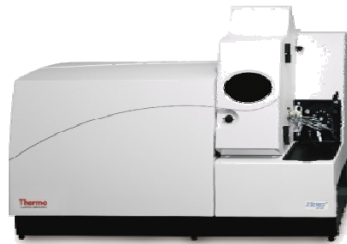


## AAS



## iCap Ice Cube

## Optima



## XSERIES 2

## Optima



## ELEMENT 2 ELEMENT XR



## Neptune

**Thermo Scientific SID Elemental**  
range of instruments

# TRACE METAL ANALYSIS : Chemicals and Instruments

- **Fisher Chemical Optima® :**  
Highest purity level

tested up 60 parameters ,

**as low as 100 ppt level detection**

bottled in class 10 clean room condition

pre-cleaned Teflon FEP & PFA ( HCl & HF)

individually double bagged in class 100 clean room

each bottle is packaged individually with CoA



ICP-MS



Element 2/HR  
Neptune

- **Fisher Trace Metal® Grade**

tested up 65 parameters

**certified below one ppb level**

safety packaging PVC coated bottle

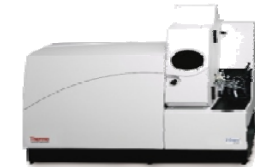
bottled in class 10 clean room condition



ICP & ICP-MS



iCAP



XSeries 2

- **Fisher Primar Plus ®**

tested up to 40 parameters at **1 to 10 ppb**

safety Coated glass bottle ( even if the bottle breaks,  
the safety coating will remain intact )



AAS



# Fisher Chemical –Traces Metal analysis brochures available

**Fisher Chemical**

CHOICE, QUALITY AND VALUE FROM THE WORLD LEADER IN SCIENCE

**Trace Metal Analysis**  
As low as 1 to 100 ppt

**OPTIMA® for Ultra Trace Metal analysis**  
as low as 1-100 ppt level detection

The highest purity of acids & bases: all products are certified below 100 parts per trillion (ppt or pg/g).

This range contains the fewest trace metallic impurities of any other acids tested up to 65 parameters at ppt levels.

**FISHER CHEMICAL OPTIMA® PACKAGING:**  
Teflon FEP bottle, Teflon PFA with HCl and HF (to avoid vapor permeability issues)

- Bottled in class 10 clean room conditions.
- Individually double bagged in class 100 clean room for product integrity.
- Each bottle is packaged individually.

Product Code	Description	Pack size	Type of packaging
A0415/07 A0415/08 A0415/15	Acetic acid glacial min. 99%	250ml 500ml 1l	Pre-cleaned Teflon FEP
A0365/07 A0365/08 A0365/15	Ammonia solution 28-32%	250ml 500ml 1l	Pre-cleaned HDPE
H1355/08	Hydrobromic acid 44-46%	500ml	Pre-cleaned Teflon FEP
H1300/07 H1300/08 H1300/15	Hydrochloric acid 32-36%	250ml 500ml 1l	Pre-cleaned Teflon PFA
H1435/07 H1435/08 H1435/15	Hydrofluoric acid 47-51%	250ml 500ml 1l	Pre-cleaned Teflon PFA
H1830/08	Hydrogen peroxide 30-32%	500l	Pre-cleaned Teflon FEP
N12275/07 N12275/08 N12275/15	Nitric acid 67-70%	250ml 500ml 1l	Pre-cleaned Teflon FEP
P1295/07 P1295/08 P1295/15	Perchloric acid 86-71%	250ml 500ml 1l	Pre-cleaned Teflon FEP
S1625/07 S1625/08 S1625/15	Sulfuric acid 93-98%	250ml 500ml 1l	Pre-cleaned Teflon FEP
W0115/08 W0115/15	Water	500ml 1l	Pre-cleaned LDPE

The Certificate of Analysis is delivered with each bottle & available on the website.

**ICP-Mass Spectrometry**

ICP-MS is the routine tool for multielement analysis. From ultra-trace (ppt) to matrix (%) elements in a large variety of samples – the whole periodic table can be analyzed routinely in a few minutes. Thermo Fisher Scientific provides the most complete range of ICP-MS instrumentation.

To exploit the full power of ICP-MS chemicals of highest quality and purity are prerequisites.

Thermo Fisher Scientific with its combined strengths in chemicals and analytical instrumentation guarantees unmatched quality for highest performance and undisputable results. Fisher Scientific Optima® Series provides a full range of chemicals for ultra-pure analysis – superiority is guaranteed by quality control when using unparalleled instrumentation from Thermo Fisher Scientific.

For more information, go to [www.thermo.com/trace](http://www.thermo.com/trace)

Brochure available in all languages

Please contact your local Fisher Scientific organization

# The World Leader in Serving Science

## Scale

- \$10+ billion in revenues
- 33,000+ employees in 40 countries
- 350,000 customers
- 150 countries served
- Fortune 300 company

## Capabilities

- Complete portfolio
- World-class technologies
- Commercial and service strength

## Brand Equity

- Two premier brands

**Thermo**  
SCIENTIFIC



## Mission

- To enable our customers to make the world healthier, cleaner and safer