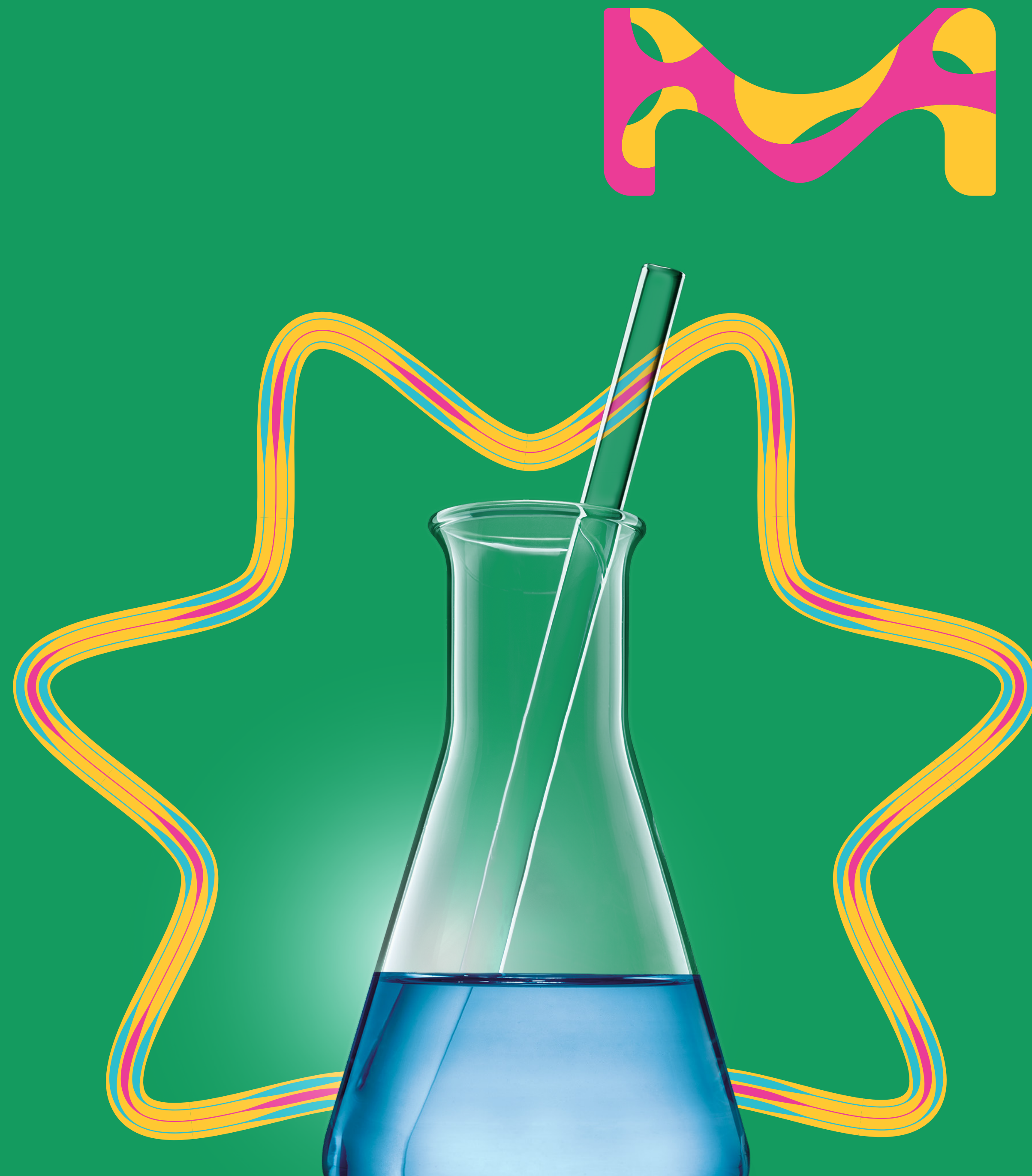


# Brighter Analysis

Solvents & Inorganics  
for accurate, brilliant results

Merck KGaA  
Darmstadt, Germany

The life science business of Merck KGaA, Darmstadt, Germany  
operates as MilliporeSigma in the U.S. and Canada.





**Brighter  
Analysis**

**HPLC  
&  
LC-MS**

**GC**

**Karl Fischer  
&  
Titration**

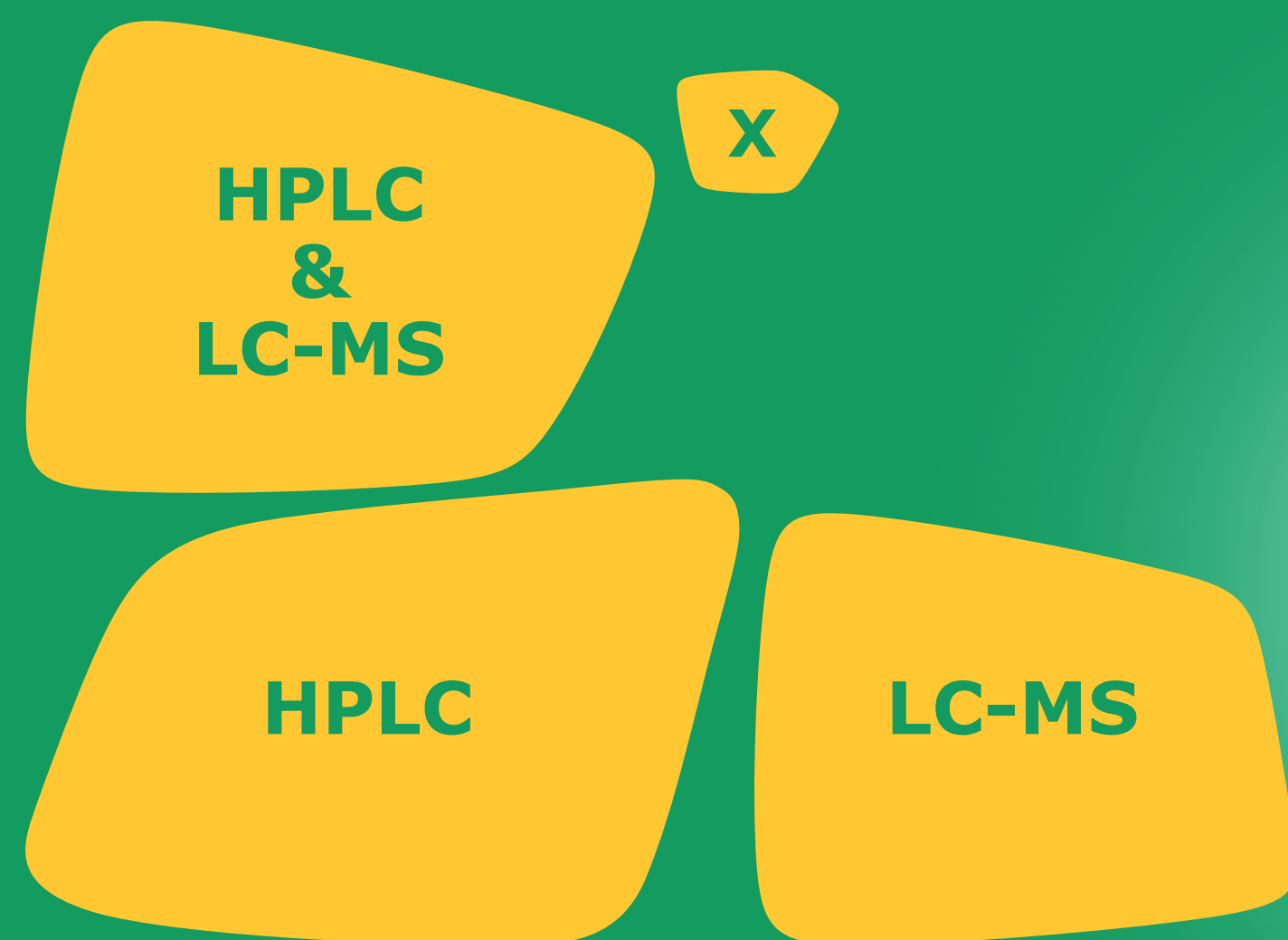
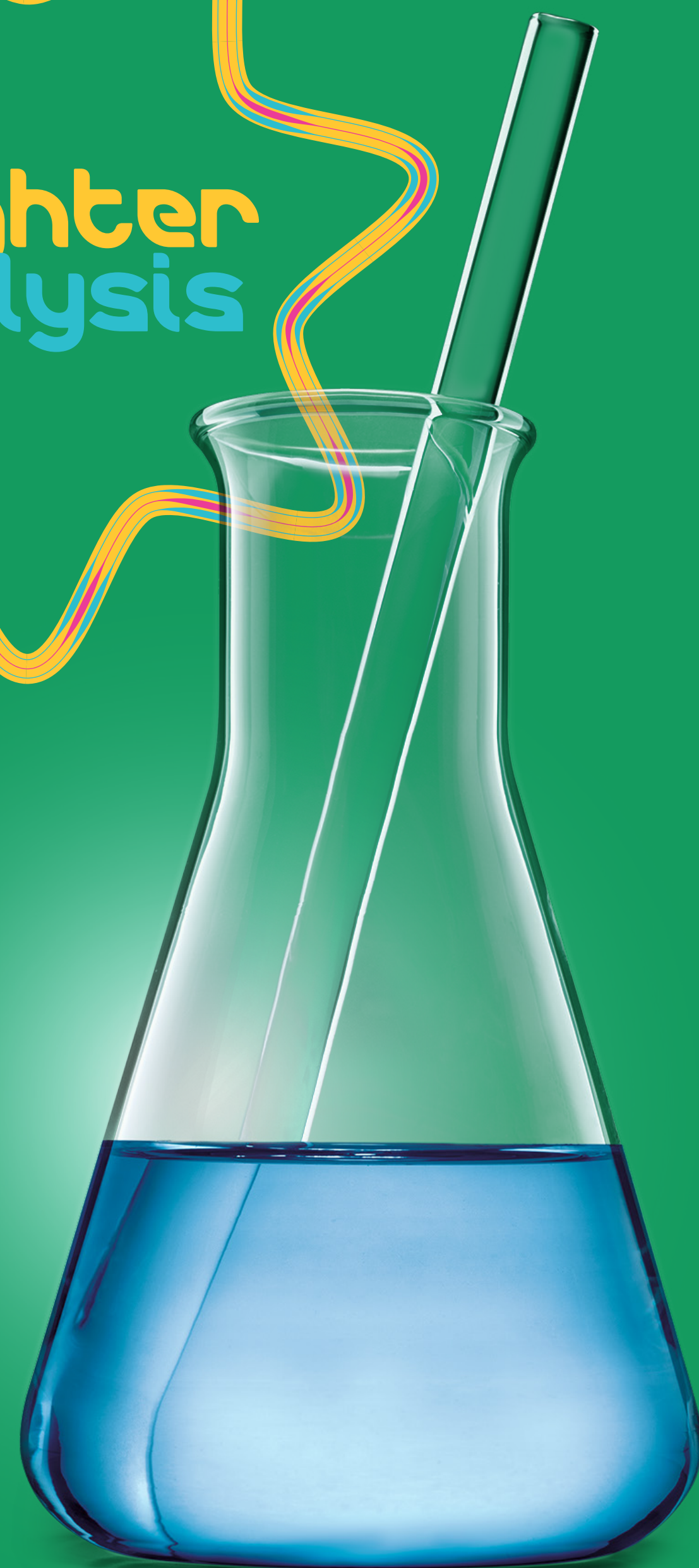
**Elemental  
Trace  
Analysis**

**Classical  
Analysis**

**Safety  
&  
Essentials**

**Contact**





# HPLC

In research and development, pharmaceutical quality control and environmental analysis HPLC requires high-performance solvents and reagents.

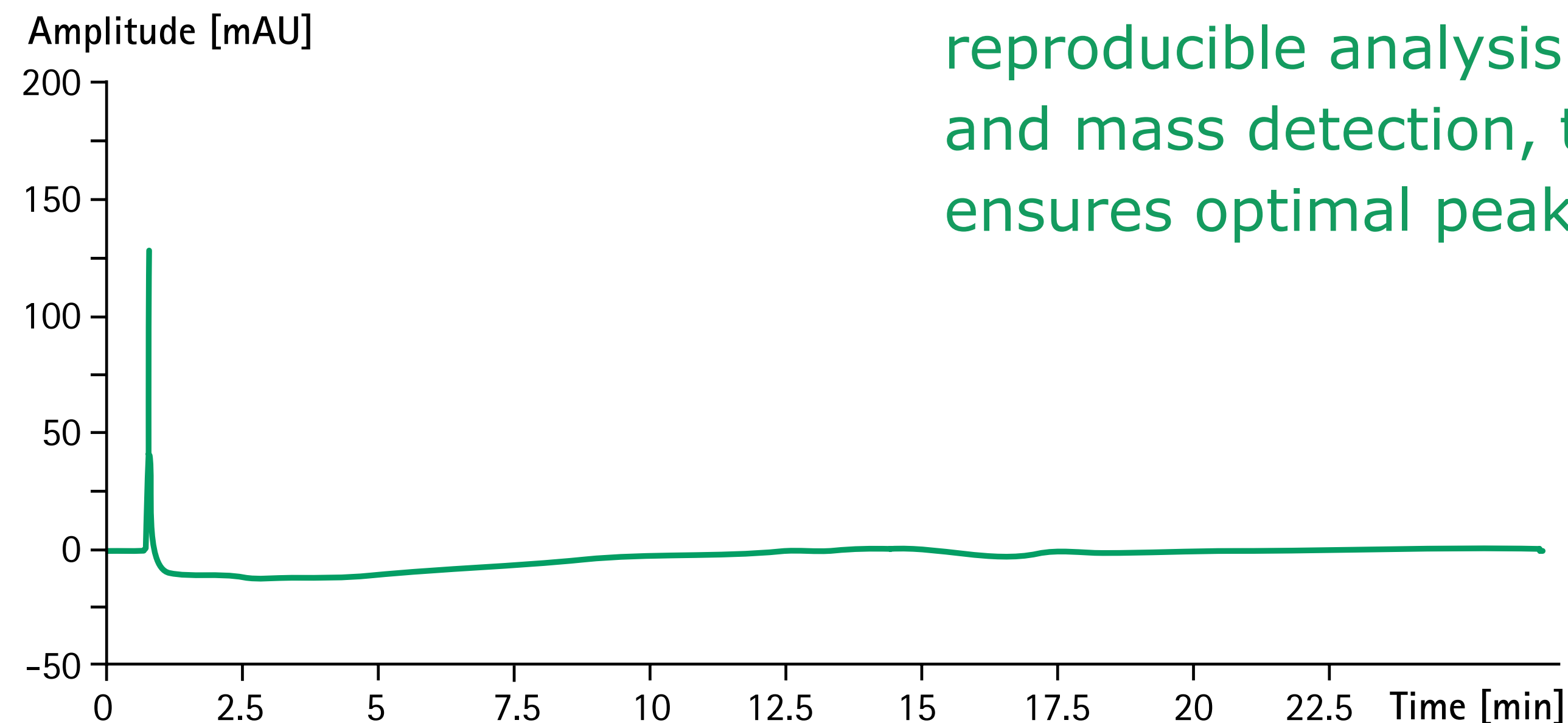
X

HPLC  
Solvents

HPLC  
Reagents

## HPLC Solvents

With their high degree of UV transmittance, low particle count, low acidity & alkalinity and low evaporation residue level, our HPLC solvents are ideal for high-demanding and reproducible analysis. Being suitable for UV, fluorescence and mass detection, the overall interference free baseline ensures optimal peak separation.



Check out what's new!



# HPLC

In research and development, pharmaceutical quality control and environmental analysis HPLC requires high-performance solvents and reagents.

X

## HPLC Solvents

## HPLC Reagents

### HPLC Reagents

We offer LiChropur® reagents ideal for HPLC analysis. These reagents are tested for inorganic impurities, including Al, Ca, Cu, Fe, K, Mg and Na.

- QC performed using a HPLC suitability gradient test at 220, 254 and 280 nm
- Filled under clean room conditions
- Extensive impurity profile of the product on the Certificate of Analysis



[Discover HPLC reagents](#)

# LC-MS

X

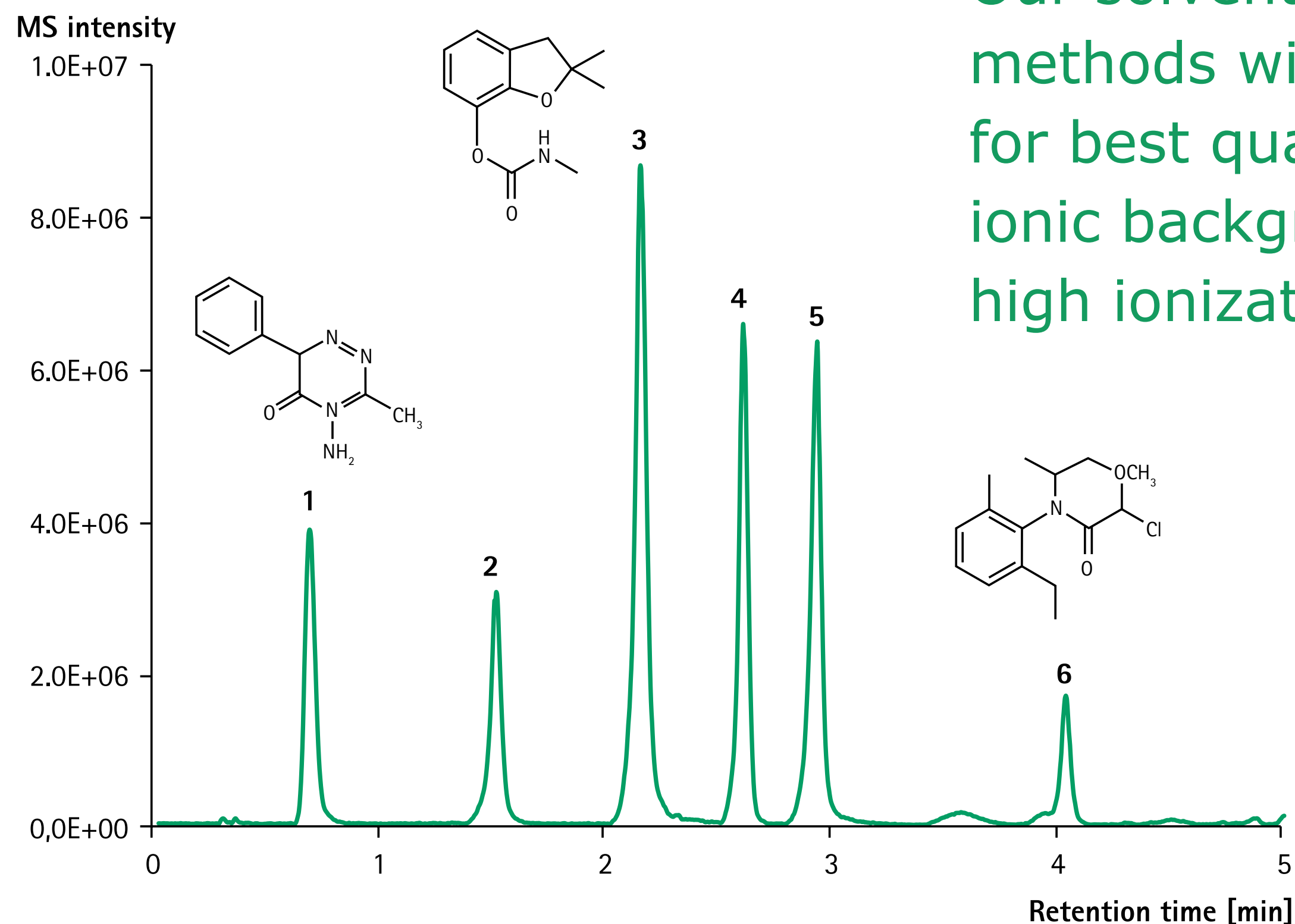
In research and development, pharmaceutical quality control and environmental analysis LC-MS requires high-performance solvents and reagents.

LC-MS  
Solvents

LC-MS  
Reagents

## LC-MS Solvents

Our solvents meet all stringent requirements of LC-MS methods with highest resolution and sensitivity in LC-MS for best quantitative results. Thanks to its low level of ionic background and ion suppression, this quality ensures high ionization efficiency.



Check out what's new!



# LC-MS

X

In research and development, pharmaceutical quality control and environmental analysis LC-MS requires high-performance solvents and reagents.

## LC-MS Solvents

## LC-MS Reagents

### LC-MS Reagents

We offer LiChropur® products specific for LC-MS analysis. These reagents are tested for inorganic impurities, including Al, Ca, Cu, Fe, K, Mg and Na.

- QC performed using a standard Reserpine test
- Filled under clean room conditions
- Extensive impurity profile of the product on the Certificate of Analysis



[Discover LC-MS reagents](#)





# GC Solvents

X

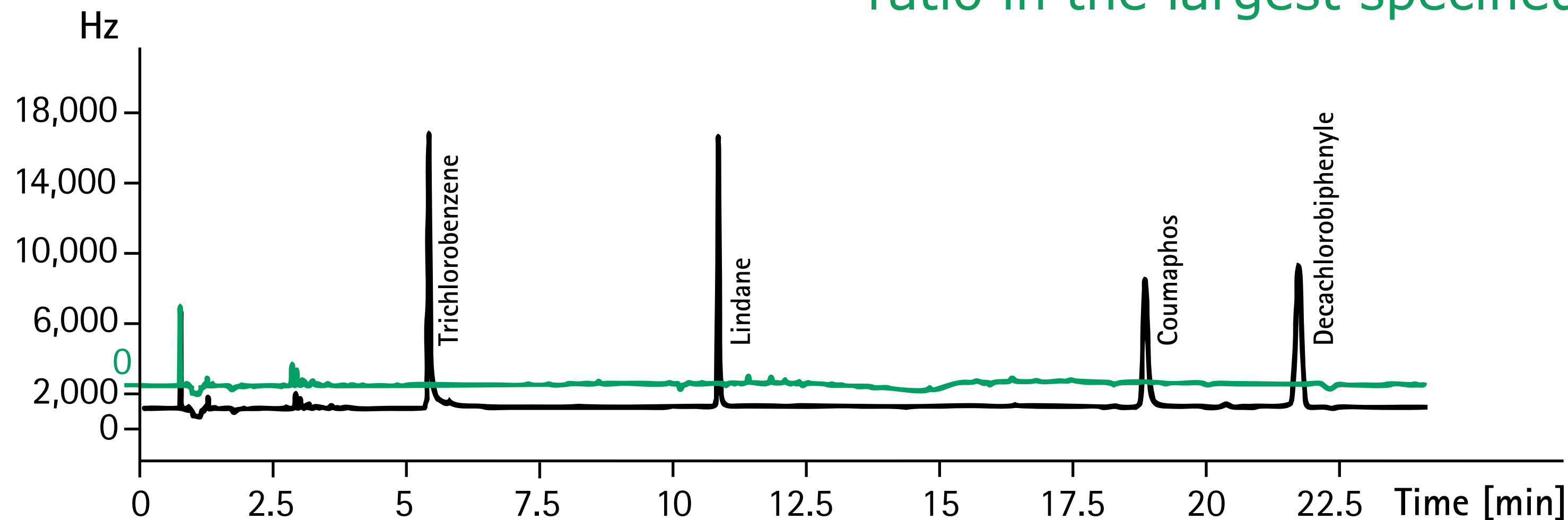
Whether you use ECD, FID, MS or HS – our comprehensive portfolio of GC solvents offers a dedicated product quality for your specific application and detection method.

GC-ECD & FID /  
GC-MS Solvents

GC Headspace  
Solvents

## GC-ECD & FID / GC-MS Solvents

Our GC solvent qualities are ideal for all gas chromatography applications. These solvents are specially developed and tested for ECD, FID and MS detection and show minimal signal-to-noise ratio in the largest specified retention time range.



Check out what's new!

# GC Solvents

X

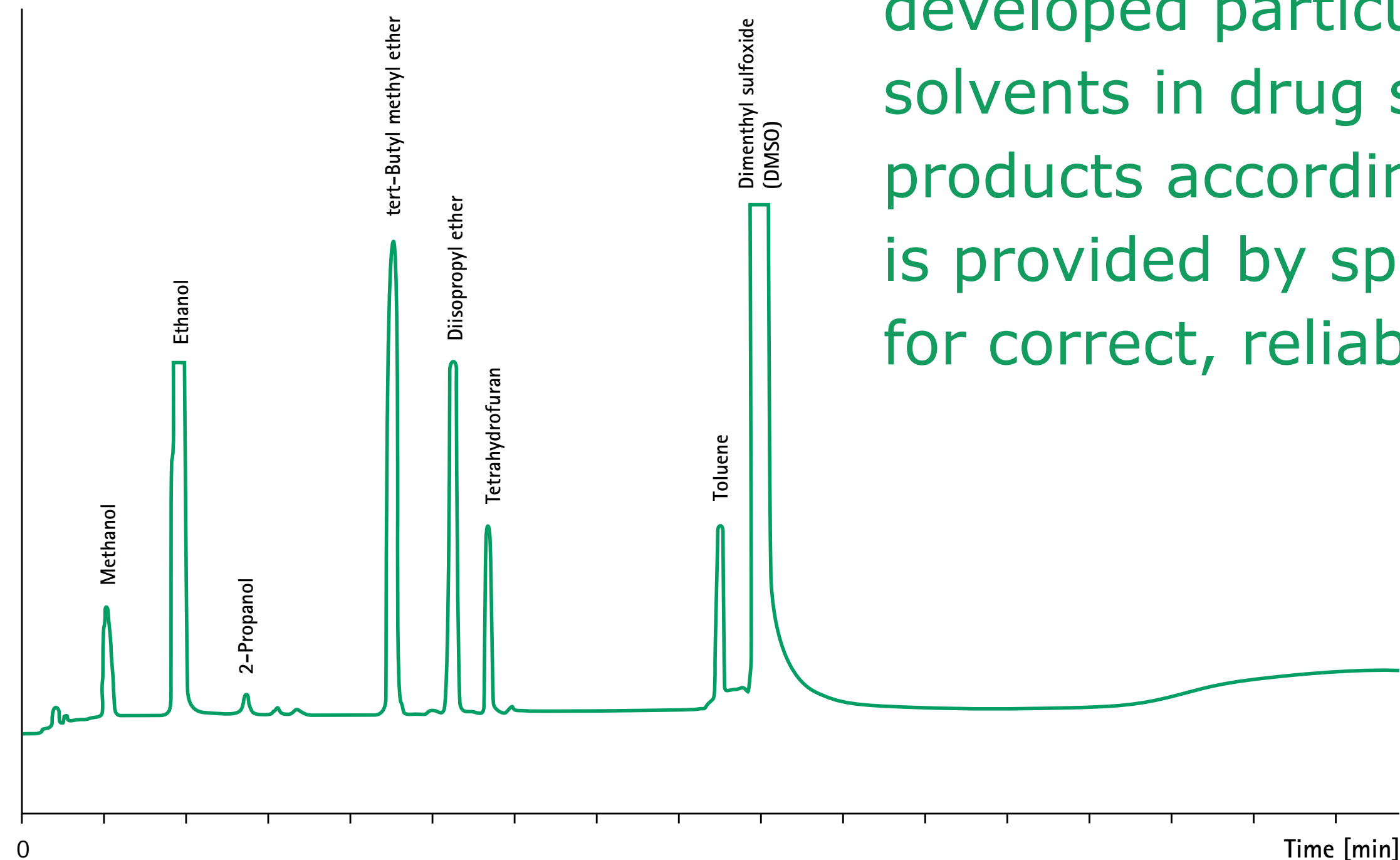
Whether you use ECD, FID, MS or HS – our comprehensive portfolio of GC solvents offers a dedicated product quality for your specific application and detection method.

GC-ECD & FID /  
GC-MS Solvents

GC Headspace  
Solvents

## GC Headspace Solvents

Our solvents for headspace gas chromatography are developed particularly for the analysis of residual solvents in drug substances, excipients, and drug products according to Ph Eur and USP. Their high purity is provided by special designed production processes – for correct, reliable and reproducible results of analysis.



Check out what´s new!





**Brighter  
Analysis**

**Karl Fischer  
&  
Titration**

**Karl  
Fischer  
Titration**

**Titration**

X



# Karl Fischer Titration



Accurate, reliable, and fast moisture content determination gained from over 40 years of experience in Karl Fischer Titration.

Aquastar®  
Reagents

Applications  
& Support

Volumetry

Coulometry

Water  
Standards

## Aquastar® Reagents

Aquastar® Karl Fischer Reagents – the standard for reproducible results.

Our Aquastar® reagents & standards are distinguished by their excellent quality. From the selection of raw materials & packaging to our stringent production processes and quality control we apply the strictest standards to produce reliable and consistent Karl Fischer reagents.



Discover Aquastar®



# Karl Fischer Titration

Accurate, reliable, and fast moisture content determination gained from over 40 years of experience in Karl Fischer Titration.



**Aquastar®  
Reagents**

**Applications  
& Support**

**Volumetry**

**Coulometry**

**Water  
Standards**



## Applications & Support

Need help finding the right method for your application? Benefit from our experience and download a personal copy from more than 500 Karl Fischer applications.

**Get your application note**

For individual support please contact us under:

**[Aquastar@milliporesigma.com](mailto:Aquastar@milliporesigma.com)**

# Karl Fischer Titration

Accurate, reliable, and fast moisture content determination gained from over 40 years of experience in Karl Fischer Titration.

X

**Aquastar®  
Reagents**

**Applications  
& Support**

**Volumetry**

**Coulometry**

**Water  
Standards**

## Volumetry

Volumetric Karl Fischer titration is the preferred method for moisture determination in samples of high water content (0.1% to 100% water), and is one of the most frequently used methods for water determination.

We offer a broad range of Aquastar® reagents:

- One component reagents
- Two component reagents
- Reagents for Aldehyde and Ketones
- Special reagents for oils and fats



[Discover volumetry](#)

[Discover Aquastar®](#)



# Karl Fischer Titration

Accurate, reliable, and fast moisture content determination gained from over 40 years of experience in Karl Fischer Titration.

X

Aquastar®  
Reagents

Applications  
& Support

Volumetry

Coulometry

Water  
Standards

## Coulometry

For samples with water content of below 1%, coulometric Karl Fischer titration is the preferred method.

Find a wide range of Aquastar® coulometric reagents for accurate and reproducible results, with titration cells both with and without diaphragms:

- CombiCoulomat Fritless
- CombiCoulomat Frit uses just one reagent for both the anode and cathode chamber
- Coulomat A – NC for the anode chamber & Coulomat C – NC for the cathode chamber



Discover coulometry

Discover Aquastar®



# Karl Fischer Titration

Accurate, reliable, and fast moisture content determination gained from over 40 years of experience in Karl Fischer Titration.

X

**Aquastar®  
Reagents**

**Applications  
& Support**

**Volumetry**

**Coulometry**

**Water  
Standards**

## Water Standards

For precise water determination every time; our Aquastar® water standards can be used for titer determination and instrument check.

Qualified in our DIN EN ISO/IEC 17025 accredited laboratory, you can rely on our Aquastar® standard reference materials.

- Water standards in ampoules, including oil standard (15 to 30 ppm)
- Water standard – oven 1%
- Lactose standard 5%
- Di-Sodium tartrate dihydrate 15.55%



[Discover water standards](#)

[Discover Aquastar®](#)

# Titration

Precisely adjusted, high-quality volumetric solutions for dependable titration and analysis.

X

Titripur®

Packaging

Titripac®

Volumetric  
Standards

Indicators

## Titripur® Volumetric Solutions

Our range of Titripur® volumetric solutions offer outstanding purity, quality and reliability. For metal or impurity analysis, assays, or concentration determination. With our first-rate volumetric solutions, you can be sure that your titrations always meet the most rigorous demands.

**Consistently high quality –  
and the certification to prove it.**



Discover titration

# Titration

Precisely adjusted, high-quality volumetric solutions for dependable titration and analysis.

X

Titripur®

Packaging

Titripac®

Volumetric  
Standards

Indicators

## Packaging

We believe that sophisticated packaging is essential to ensure the highest quality. So we only use glass and plastic grades that do not alter any of the products characteristics during their shelf life in unopened bottles.

Optimized for every application; our volumetric solutions are available in a variety of formats to fit your needs:

- Titrisol® ampoules as concentrates
- Ready-to-use PE and glass bottles & canisters in different pack sizes
- Our unique and sophisticated Titripac® packaging



Discover volumetric solutions

Discover Titripur®



# Titration

Precisely adjusted, high-quality volumetric solutions for dependable titration and analysis.

X

Titripur®

Packaging

Titripac®

Volumetric  
Standards

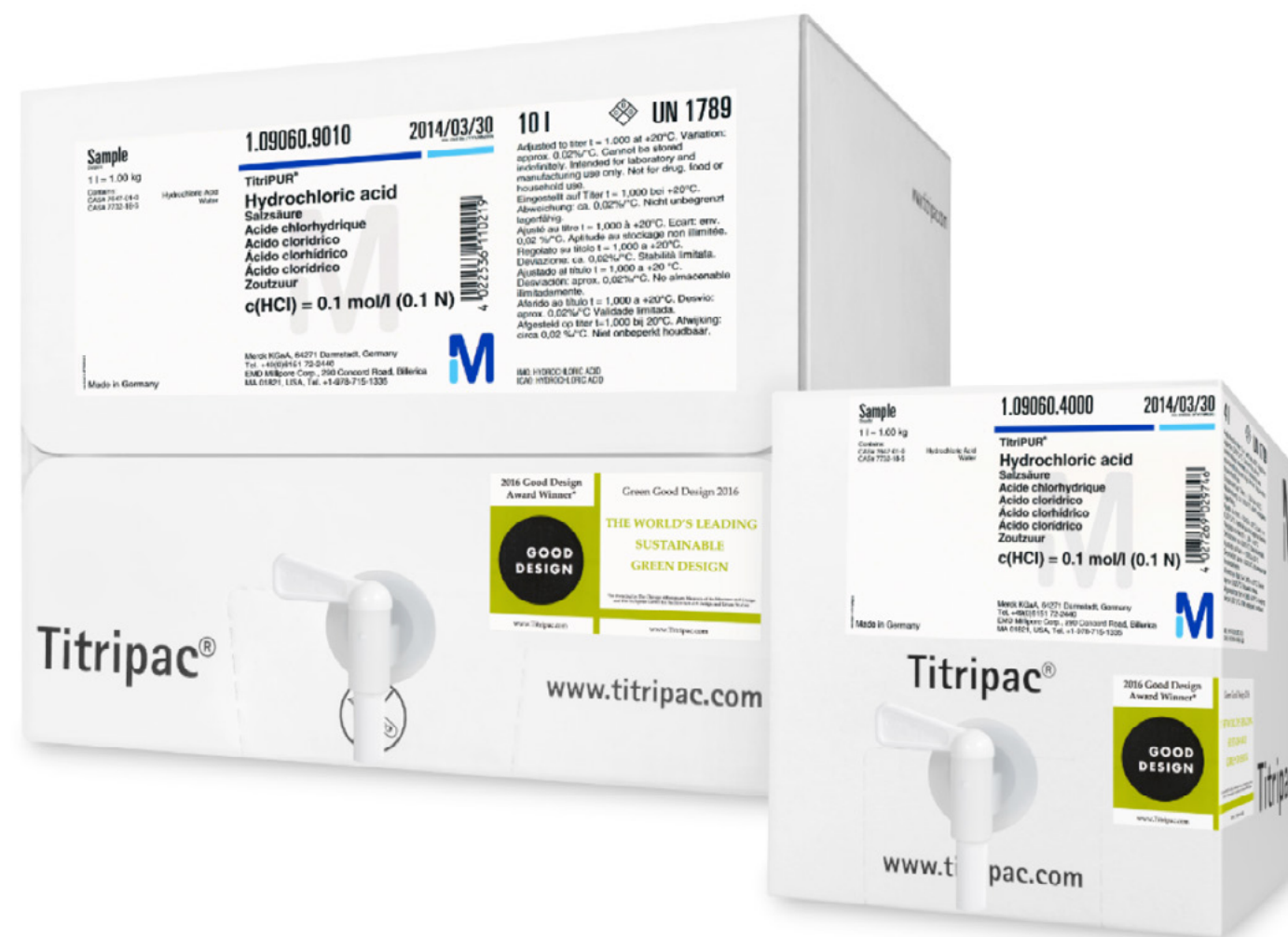
Indicators

## Titripac®

Our innovative packaging solution that saves time, money, and protects the environment is also winner of the Green Good Design Award 2016.

Designed to make titration more reliable and less wasteful, solutions can be used from the first to the last drop.

- No contamination – hermetically sealed
- Reduction of titer determinations
- Easy to use with integrated withdrawal tap
- Environmentally friendly disposal



Discover Titripac®

# Titration

X

Precisely adjusted, high-quality volumetric solutions for dependable titration and analysis.

Titripur®

Packaging

Titripac®

Volumetric  
Standards

Indicators

## Volumetric Standards

Certipur® volumetric standards are reliable and certified reference materials which ensure precise titration results. Designed to make titration more reliable and less wasteful, solutions can be used from the first to the last drop.

- Directly traceable to primary standard reference materials from the NIST (National Institute of Standards and Technology, USA)
- Qualified in our DIN EN ISO /IEC 17025 accredited laboratory

Discover volumetric standards



# Titration

Precisely adjusted, high-quality volumetric solutions for dependable titration and analysis.

X

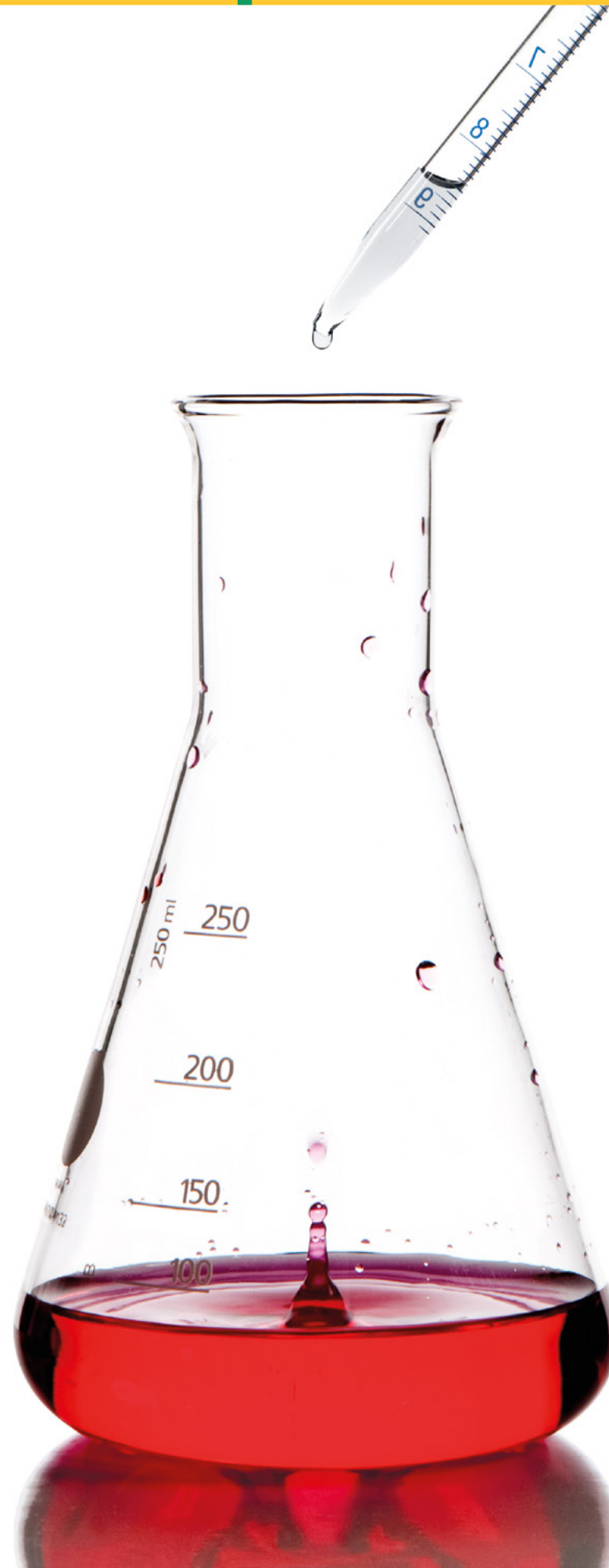
Titripur®

Packaging

Titripac®

Volumetric  
Standards

Indicators



## Indicators

For manual titration, indicators show the endpoint of the titration through easily recognizable visual changes such as color change, clouding or fluorescence. Tailored to the exact requirements of your applications, we offer a wide range of high quality indicators:

- Acid-Alkali (pH) indicators
- Complex or metal indicators
- Fluorescence indicators
- Redox indicators
- Special application indicators

[Discover our indicators](#)





**Brighter  
Analysis**

**Elemental  
Trace  
Analysis**

X

**Quality  
Grades**

**ICP & AAS  
Analysis**

**XRF  
Analysis**

**High Purity  
Acids  
& Salts**

# Quality Grades

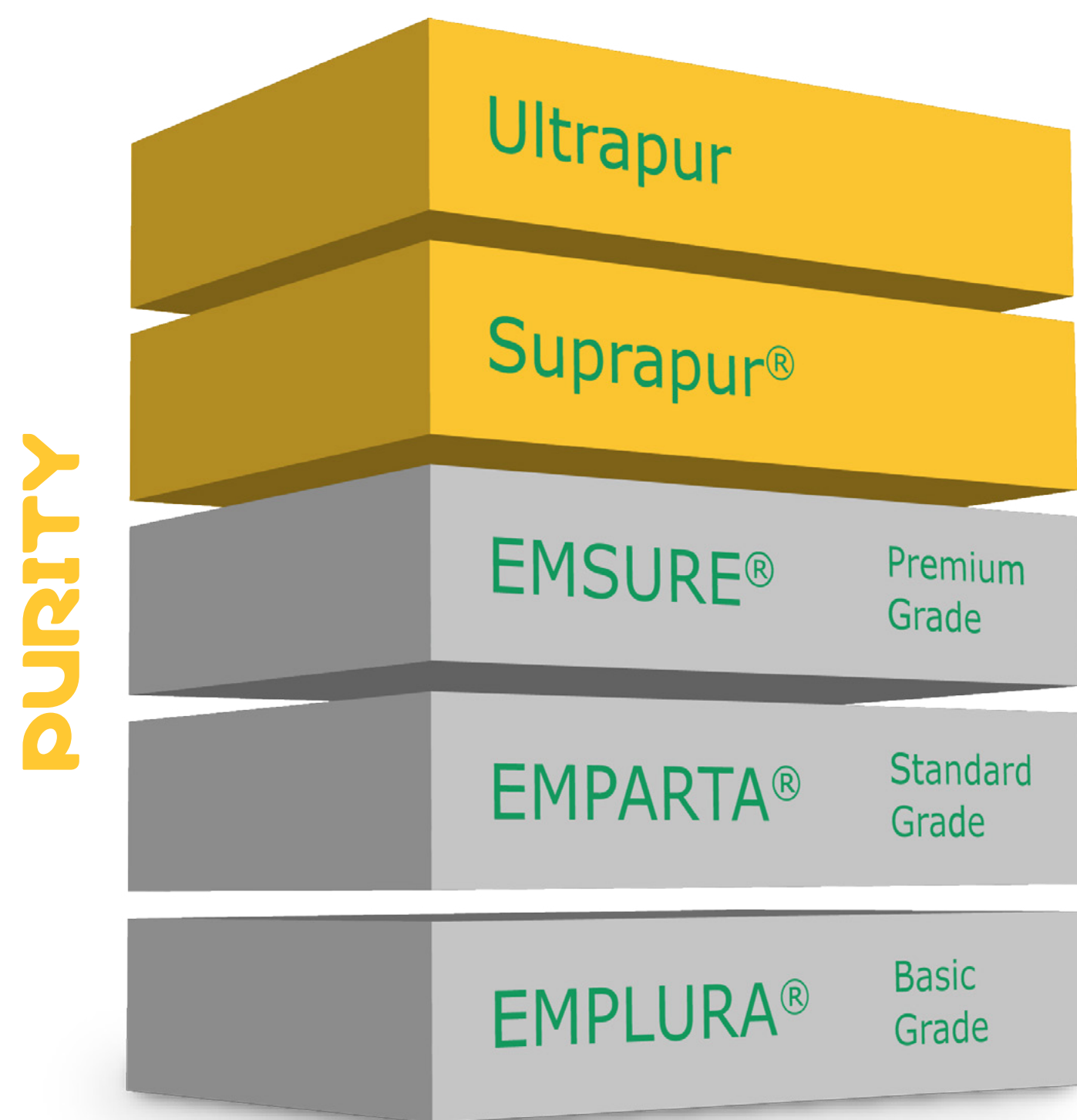
Find the suitable quality grade for the perfect match.



High Purity  
Acids

High Purity  
Salts

High Purity  
Fluxes



## High Purity Acids

Ultrapur acids and bases meet the highest demands of ultra-trace analysis in the ppt range Suprapur® acids and bases are ideal for trace elemental analysis e.g. AAS and ICP in the ppb range.

[Discover high purity acids](#)

# Quality Grades

Find the suitable quality grade for the perfect match.



High Purity  
Acids

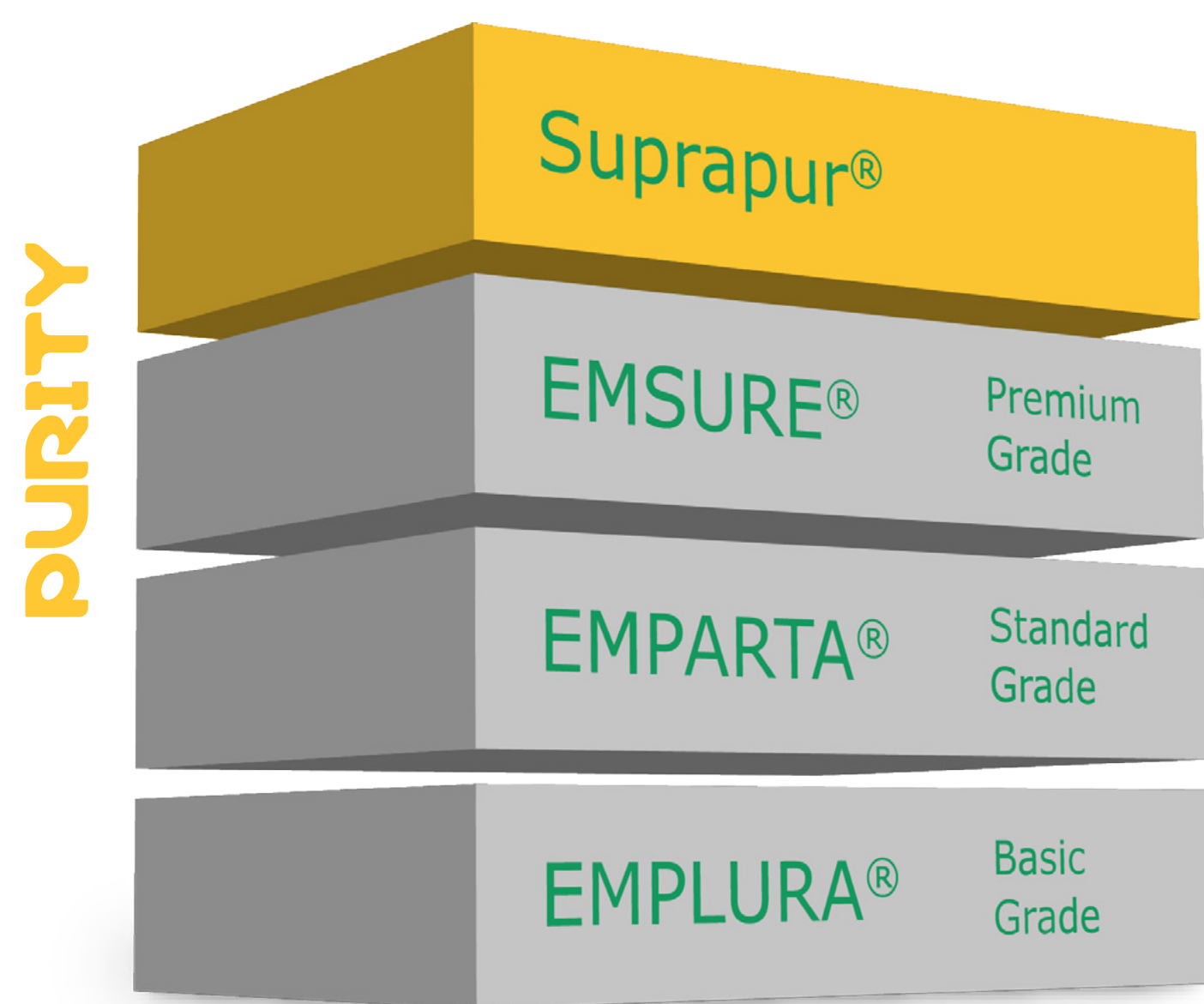
High Purity  
Salts

High Purity  
Fluxes

## High Purity Salts

Suprapur® salts are most suitable for sample preparation in trace elemental analysis. Have confidence in your analytical results.

- High batch-to-batch consistency
- Certificate of Analysis (CoA) with detailed impurity profile



Discover high purity salts



# Quality Grades

Find the suitable quality grade for the perfect match.



High Purity  
Acids

High Purity  
Salts

High Purity  
Fluxes

## High Purity Fluxes

Spectromelt® products are high quality reagents for sample preparation in X-ray Fluorescence (XRF) analysis. The elemental impurities are determined and listed in the Certificate of Analysis.

- High purity and batch-to-batch consistency
- Homogeneous samples
- Increases measurement precision

[Discover high purity fluxes](#)



# ICP & AAS Analysis

Use certified reference materials for your calibration.



ICP & AAS

Auxiliaries for AAS



## ICP & AAS

For accredited testing labs, the use of reliable and traceable Certified Reference Materials (CRMs) for calibration is demanded by ISO/IEC 17025.

- Tested and manufactured under ISO/IEC 17025/ISO Guide 34 double accreditation
- Directly traceable to primary reference material from NIST
- Full Certificate of Analysis

The recommended reagents for trace analysis are Suprapur® and Ultrapur acids.

[Select your ICP standards](#)

[Select your AAS standards](#)

# ICP & AAS Analysis

Use certified reference materials for your calibration.



ICP & AAS

Auxiliaries for AAS



## Auxiliaries for AAS

For Atomic Absorption Spectroscopy (AAS) analysis, we offer reagents for both sample preparation and calibration. Our portfolio of auxiliary reagents for optimizing analysis conditions comprises selected matrix modifiers and spectroscopic buffers reduce interference for AAS measurement.

- Matrix modifiers for Graphite Furnace AAS (GF-AAS)
- High-purity spectroscopic buffers for Flame AAS (F-AAS)

The recommended reagents for trace analysis are Suprapur® and Ultrapur acids.

Select your auxiliaries for AAS



# XRF Analysis



For precise analysis, use our high purity and batch consistent XRF product portfolio for fusion, grinding and tableting.

**Spectromelt®**

**Spectromelt®  
A + B**

**Spectromelt® C**

## Spectromelt®

Spectromelt® materials for fluxing or pressing of powder tablets for X-ray fluorescence analysis (XRF). The purity of Spectromelt® borates gives the necessary degree of precision and our grinding aid materials are specially developed for automated sample preparation.

- Fluxing agents are available as granulate or fused material
- Spectromelt® reagents for grinding and tableting aid
- Spectromelt® tablets can be used for automated sample preparation



**Discover Spectromelt® reagents**

# XRF Analysis

X

For precise analysis, use our high purity and batch consistent XRF product portfolio for fusion, grinding and tableting.

**Spectromelt®**

**Spectromelt®  
A + B**

**Spectromelt® C**

## Spectromelt® A + B

Spectromelt® A (Lithium) and B (Sodium) borates facilitate very homogeneous samples, precise analyses and a reduced need for instrument adjustments.

- Available as granulated material or as fused particles
- Low loss on ignition
- Also available with integrated non-wetting-agent
- Analyzed for inorganic trace impurities with a high batch-to-batch consistency

**Select your fluxes**





# XRF Analysis

For precise analysis, use our high purity and batch consistent XRF product portfolio for fusion, grinding and tableting.



**Spectromelt®**

**Spectromelt®  
A + B**

**Spectromelt® C**

## Spectromelt® C

Grinding and tableting – tableting the sample is an alternative to fusion. The Spectromelt® C-series is especially developed as a grinding and tableting aid. In automated sample preparation of powder samples speed of analysis is an important factor.

- Spectromelt® C10, C15 and C20 are offered as tablets with a weight of 333 mg each for automated sample preparation
- The new Spectromelt® C15 MP micropowder can be used as a grinding and tableting aid

**Select your tableting aid**





# High Purity Acids & Salts

Detect your analyte, not the reagent impurities.



**Suprapur®  
Acids, Bases**

**Ultrapur  
Acids**

**Suprapur®  
Salts**

## Suprapur® Acids, Bases

Suprapur® acids and bases are ideal for sample preparation and production of calibration series in instrumental analysis for the use of trace analysis in the ppm – ppb range.

- Filled under clean room conditions
- Bottles are conditioned before filling
- Different premium packaging materials
- Quality Control after filling



Select your Suprapur® acids and bases

# High Purity Acids & Salts

Detect your analyte, not the reagent impurities.



**Suprapur®**  
Acids, Bases

**Ultrapur**  
Acids

**Suprapur®**  
Salts

## Ultrapur Acids

Ultrapur reagents meet the highest demands for ultra-trace instrumental analysis in the ppb to ppt range, because any impurity can compromise measurement accuracy.

- Filled under clean room conditions
- Bottles are conditioned before filling
- Premium packaging materials
- Quality Control after filling



Select your Ultrapur acids

# High Purity Acids & Salts

Detect your analyte, not the reagent impurities.



**Suprapur®  
Acids, Bases**

**Ultrapur  
Acids**

**Suprapur®  
Salts**

## Suprapur® Salts

For instrumental analysis we offer high purity of inorganic salts for sample preparation. High purity salts are produced under strict conditions in a clean room area ensuring purity and batch-to-batch consistency of our products.

- Purity 99.99% or up to 99.9999%
- Extensive impurity profile of the product on the Certificate of Analysis
- Suitable for sample preparation for elemental trace analysis

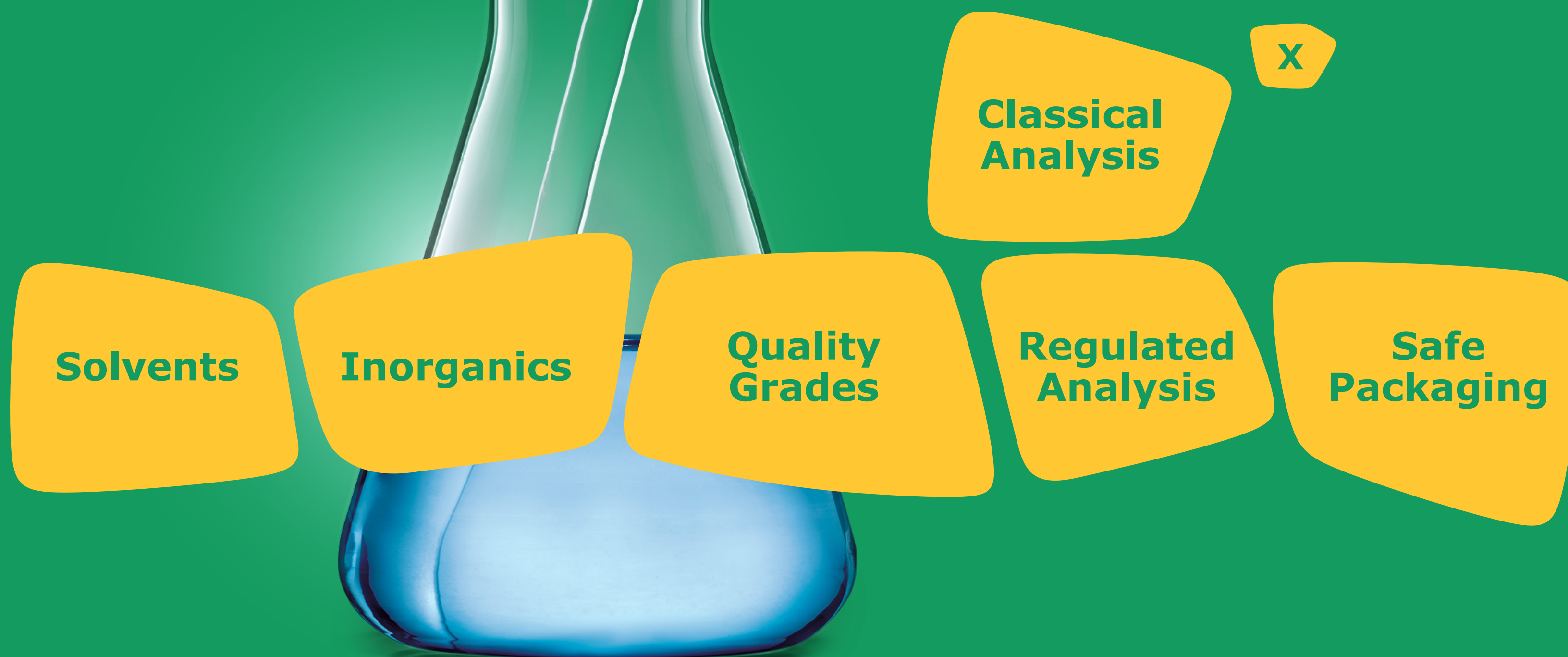
**Select your Suprapur® salts**







**Brighter  
Analysis**



# Solvents

X

Your one-stop supplier for solvents – including documentation, secure packaging and withdrawal systems.

**Classical  
Solvents**

**Dried  
Solvents**

**Preparative  
Chromatography**

**Greener Solvent  
Alternatives**

## Classical Solvents

Distinguished by exceptional quality and reliability, our classical solvents undergo strict controls and continuous development to meet growing regulations and customer requirements. Available in EMSURE<sup>®</sup>, EMPARTA<sup>®</sup> and EMPLURA<sup>®</sup> quality grades.

- Outstanding quality for reliable analytical results
- Wide range of pack sizes and packaging materials
- Withdrawal systems available

[Discover safe solvent handling](#)





# Solvents

Your one-stop supplier for solvents – including documentation, secure packaging and withdrawal systems.

Classical  
Solvents

Dried  
Solvents

Preparative  
Chromatography

Greener Solvent  
Alternatives



## Dried Solvents

Moisture-sensitive applications demand high-purity solvents with the lowest possible water content. Our ready-to-use SeccoSolv® dried solvents are designed to fulfill the most challenging requirements to ensure reliable, and reproducible results.

- Innovative SeccoSept® septum cap
- Fully-sealed returnable stainless steel barrels (Europe only)
- IBC container available on request (Europe only)

Discover the benefits of SeccoSept®

Select your SeccoSolv® dried solvents



# Solvents

Your one-stop supplier for solvents – including documentation, secure packaging and withdrawal systems.

Classical  
Solvents

Dried  
Solvents

Preparative  
Chromatography

Greener Solvent  
Alternatives

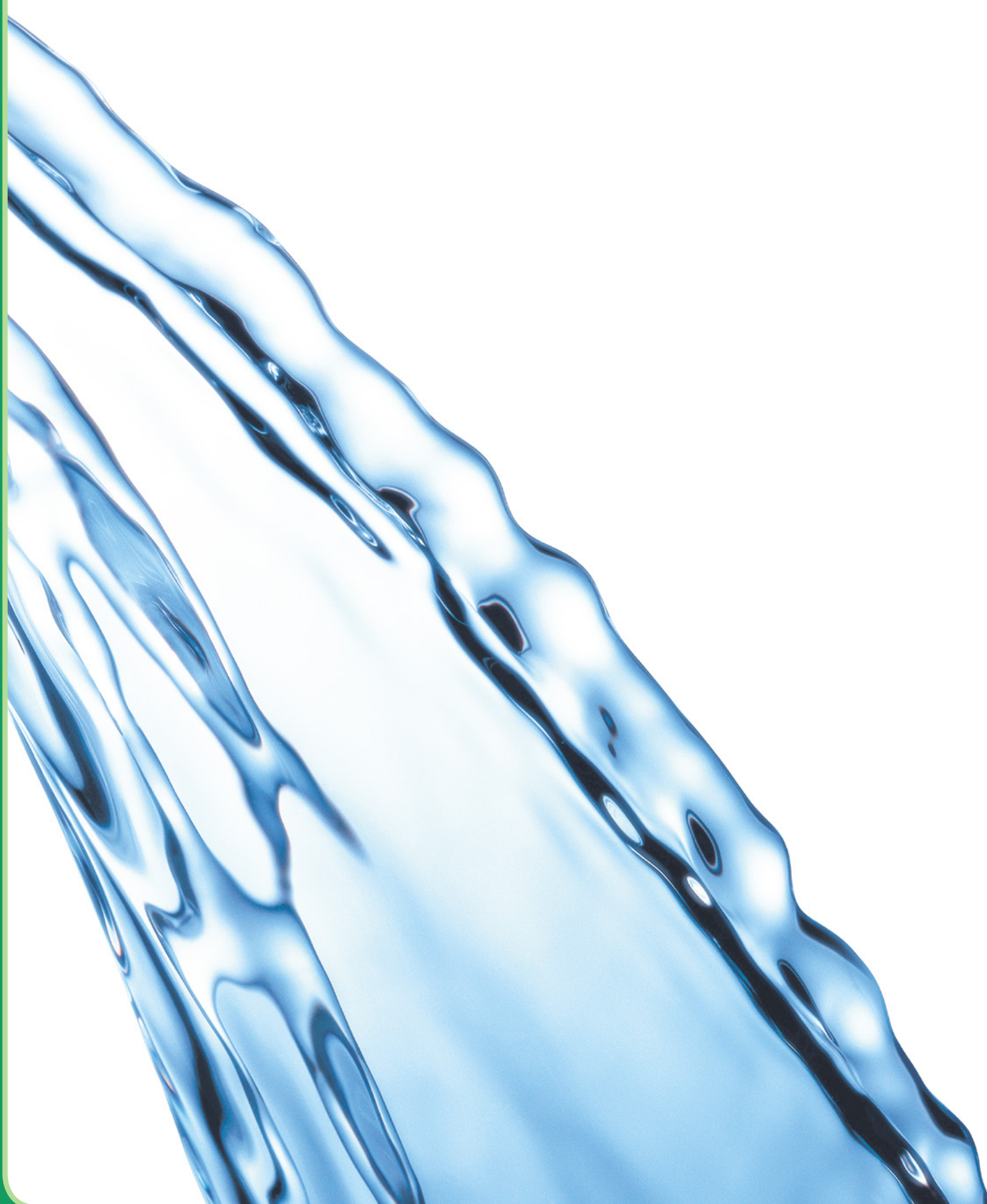


## Solvents for Preparative Chromatography

Prepsolv<sup>®</sup> solvents are tailored to the requirements of preparative HPLC to facilitate scale-up from analytical to preparative separations.

- Low evaporation residue
- Low water content
- Optimal protection of columns
- High flexibility in pack size and supply concepts

Select your Prepsolv<sup>®</sup> solvents



# Solvents

Your one-stop supplier for solvents – including documentation, secure packaging and withdrawal systems.

Classical  
Solvents

Dried  
Solvents

Preparative  
Chromatography

Greener Solvent  
Alternatives

X

## Greener Solvent Alternatives

We are committed to continually improving the sustainability performance of our products and adopting a greener chemical process. Our latest advances in green chemistry include:

- Bioethanol
- 2-Methyl tetrahydrofuran
- Cyclopentyl methyl ether
- Ethyl lactate



[Discover benefits of greener solvents](#)



# Inorganics

X

From acids to salts: enjoy the convenience of internationally accepted basic reagents from one trusted source.

Salts

Acids

Caustics & Bases

Metals & Oxides

Insight

## Salts

Salts for analytical use are manufactured under strictly controlled conditions almost exclusively at our facilities in Darmstadt, Germany.

- Outstanding analytical purity
- Wide range of salts for analytical purposes

Discover salts with enhanced flowability

Discover our complete portfolio of salts





# Inorganics

From acids to salts: enjoy the convenience of internationally accepted basic reagents from one trusted source.

X

Salts

Acids

Caustics & Bases

Metals & Oxides

Insight



## Acids

Our acids for analysis offer the highest possible quality, the greatest safety and most optimized packaging. Our products undergo strict quality checks using the most sensitive analytical instruments and methods.

[Discover safe working with HF](#)

[What's new with acids in Safebreak bottles?](#)

# Inorganics

X

From acids to salts: enjoy the convenience of internationally accepted basic reagents from one trusted source.

Salts

Acids

Caustics & Bases

Metals & Oxides

Insight

## Caustics & Bases

Our premium quality caustic alkalis and bases are produced using specially selected raw materials. So you can benefit from high purity and batch-to-batch consistency enabling reliable, reproducible analytical results.

- Outstanding, defined quality
- Pellets of defined, uniform size
- Extremely low values of impurities

[Watch our video](#)

[Discover caustics and bases](#)





# Inorganics

From acids to salts: enjoy the convenience of internationally accepted basic reagents from one trusted source.

X

Salts

Acids

Caustics & Bases

Metals & Oxides

Insight

## Metals & Oxides

Metals and metal oxides are suitable for a multitude of applications in R&D, production and quality control. Selected raw materials, state-of-the-art production technology, and stringent quality management ensure that we deliver you only premium products with consistently high purity and quality.

[Discover our range of metals and oxides](#)





# Inorganics

X

From acids to salts: enjoy the convenience of internationally accepted basic reagents from one trusted source.

Salts

Acids

Caustics & Bases

Metals & Oxides

Insight

## Insight

Have a look in our latest video about Classical Inorganics. You will learn more about our facilities, packaging development, quality control, and how analytical reagents are produced.

[Watch our video](#)



# Quality Grades



Each application poses unique demands – That's why we offer Inorganics and Solvents clearly structured in different quality grades.

**EMSURE®**  
for analysis

**EMPARTA®**  
for analysis

**EMPLURA®**



## EMSURE® for analysis

EMSURE® inorganics and solvents are our premium-grade products – optimized for critical and regulated analyses and highly demanding lab applications.

- Highest quality
- Widest scope of specifications
- Full compliance with international regulations

**Discover EMSURE® – our premium-grade**

**Learn more about the EMSURE® Quality Documentation**



# Quality Grades



Each application poses unique demands – That's why we offer Inorganics and Solvents clearly structured in different quality grades.

**EMSURE®**  
for analysis

**EMPARTA®**  
for analysis

**EMPLURA®**

## EMPARTA® for analysis

EMPARTA® products are designed for routine tasks in the analytical laboratory. These standard-grade products cover all important parameters and offer full ACS compliance.

- Standard quality for routine lab applications
- Efficient and cost-effective solution

**Discover EMPARTA® – our standard-grade**





# Quality Grades



Each application poses unique demands – That's why we offer Inorganics and Solvents clearly structured in different quality grades.

**EMSURE®**  
for analysis

**EMPARTA®**  
for analysis

**EMPLURA®**

## EMPLURA®

EMPLURA® products are your cost-efficient choice for preparative lab applications, standard production processes, and cleaning purposes. These basic-grade inorganic reagents and solvents:

- Offer adequate specifications with most common parameters
- Are available in small pack sizes as well as in bulk quantities

**Discover EMPLURA® – our basic-grade**





# Regulated Analysis

Analytical reagents are specified in accordance with various international regulations.

X

QA/QC

Compliance

Documentation

Pharmaceutical  
Analysis

Purity

## QA/QC

We don't just promise the highest quality, we prove it! Through stringent testing at our state-of-the-art labs.

- Our analytical competence
- Your analytical confidence
- Three quality grades to empower all applications

[Get more information](#)



# Regulated Analysis

Analytical reagents are specified in accordance with various international regulations.

X

QA/QC

Compliance

Documentation

Pharmaceutical  
Analysis

Purity

## Compliance

Our analytical reagents are specified in accordance with various international regulations depending on their quality grade. This way, we make sure their specifications suit the regulatory environment you work in.

- American Chemical Society (ACS)
- Reagents section of the European Pharmacopoeia (Reag. Ph Eur)
- International Organization for Standardization (ISO)



[Learn more about multi-standard compliance](#)



# Regulated Analysis

Analytical reagents are specified in accordance with various international regulations.

X

QA/QC

Compliance

Documentation

Pharmaceutical  
Analysis

Purity

## Documentation

Especially for our EMSURE® grade we offer an unrivalled documentation service in the field of analytical reagents. With EMSURE® Quality Documentation, you'll always be ready for demanding lab applications and audits.

- Less administration work
- Details on test protocols save analytical time
- Faster preparation for audits

[Learn more about EMSURE® Quality Documentation](#)



# Regulated Analysis

Analytical reagents are specified in accordance with various international regulations.

X

QA/QC

Compliance

Documentation

Pharmaceutical  
Analysis

Purity

## Pharmaceutical Analysis

Our analytical reagents meet the authoritative quality guidelines for pharmacopoeia analysis worldwide. Our analytical reagents are not only specified in accordance with the American ACS standard but also Reag. Ph Eur.

- Audit acceptance
- Lower validation efforts

Discover all reagents for pharmacopoeia analysis



# Regulated Analysis

Analytical reagents are specified in accordance with various international regulations.



QA/QC

Compliance

Documentation

Pharmaceutical  
Analysis

Purity

## Purity

Our Solvents and Inorganics are renowned for their outstanding quality and purity. Every step in our supply chain is subject to the most stringent controls and fully documented to give you complete confidence in your analysis.

- Outstanding chemical purity
- Extremely low limiting values
- Reliable qualitative and quantitative analyses

Discover highly pure chemicals





# Safe Packaging

X

Besides offering premium chemicals and reagents, we have invested decades into developing the most advanced packaging concepts in the field of chemistry.

**Packaging  
Know-How**

**Glass  
& HDPE**

**Safebreak  
& HF bottle**

**Safety  
Accessories**

## Packaging Know-How

Our internal packaging department is exclusively responsible for testing, developing and approving packaging materials. Our package testing facility is accredited by the German Federal Institute for Materials Research and Testing.

- Application-oriented packaging materials and volumes
- Safe and convenient handling, storage and transportation
- Optimal protection of chemicals and reagents from contamination

**Discover our packaging variety**



# Safe Packaging

X

Besides offering premium chemicals and reagents, we have invested decades into developing the most advanced packaging concepts in the field of chemistry.

Packaging  
Know-How

Glass  
& HDPE

Safebreak  
& HF bottle

Safety  
Accessories

## Glass & HDPE

As a valuable inert material, glass bottles are still the most preferred packaging for reagents, but there is always the risk of glass breakage. Our innovative HDPE bottle links safety, environmental protection, and cost savings along the entire process chain.

- No risk of breakage
- Integrated carrier handle for optimal handling
- Optimal center of gravity shift for convenient pouring
- Easy and environmentally-friendly disposal (no polystyrene outer packaging)

**Discover acids, bases and solvents in HDPE bottles**





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Accessories



## Safebreak & HF bottle

Our Safebreak bottle for acids is a glass bottle coated with polyethylene and can withstand considerable impact force.

- Should breakage occur, liquid acid and glass splinters are reliably contained
- Can be reused and ecologically disposed

We also supply hydrofluoric acid in a special 500 mL dosage bottle, equipped with a pouring aid.

- Allows drop-by-drop withdrawal
- Last drop stays reliably in the bottle

[Learn more about safety bottles for acids](#)

[Discover our range of acids](#)

# Safe Packaging



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## Safety Accessories

To further protect our customers during daily work, we offer several safety accessories specially designed for our S40 bottles.

- Withdrawal systems and level sensors for solvents
- Safety carriers for glass bottles
- Pouring and opening aids
- Label sets acc. to GHS, DIN EN ISO and GLP

[Explore our safety accessories](#)





**Safe  
Handling**

**Cleaning**

**Essentials**

**Buffers**

**Safety  
&  
Essentials**

**X**

# Safe Handling

X

For a safe and contamination-free work environment, our sophisticated handling and safety products for solvents and inorganics will give you peace of mind.

**Bottle  
Safety**

**Bottle  
Withdrawal**

**Container  
Safety**

**Container  
Withdrawal**

**Fixed  
Installations**

**Customized**

## Bottle Safety

Daily handling of hazardous goods demands high health protection. For breakable glass bottles in particular, there are several additional safety products to help you to comply with laws and regulations and make daily lab work safer and more convenient.

- Safety carriers
- Opening key, pouring aid and safety stand
- HPLC-bottle adapters
- Labeling according to international regulations



**Watch our video „Safety in the lab“**



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Withdrawal**

**Container  
Safety**

**Container  
Withdrawal**

**Fixed  
Installations**

**Customized**

## Bottle Withdrawal

Ensure safe and easy handling and contamination-free withdrawal of organic solvents with our broad range of withdrawal systems and accessories.

- Withdrawal systems
- Level sensors



**Select your withdrawal system**

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Withdrawal**

**Container  
Safety**

**Container  
Withdrawal**

**Fixed  
Installations**

**Customized**

## Container Safety

The majority of very critical solvent accidents are caused by static electricity. Solvents in containers from 10 L (drums/barrels) need to be treated with the highest safety considerations e.g. discharge static electricity properly.

- Antistatic device
- Opening key
- Gas-reducing valves
- Wall ducts and nozzle clamps



**Watch our video „Safety in the lab“**



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Bottle  
Withdrawal

Container  
Safety

Container  
Withdrawal

Fixed  
Installations

Customized

## Container Withdrawal

Designed to meet all relevant safety regulations, our tailor-made withdrawal systems ensure safe, easy and efficient withdrawal for every application.

- Maximum user safety
- Easy and contamination-free handling of solvents and inorganics
- Application orientated solutions and individual installations
- Ecological and economic benefits



Select your withdrawal system



# Safe Handling

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Safety**

**Bottle  
Withdrawal**

**Container  
Safety**

**Container  
Withdrawal**

**Fixed  
Installations**

**Customized**

## Fixed Installations

Optimize your work processes with regard to safety and efficiency. Where large volumes of solvents are turned around, delivery from a central safety cabinet to the point of use (e.g. lab fume hood) through a permanent supply circuit is one of the most rational ways of working.

- Standardized installations available
- Installation support

**Discover safe handling**





# Safe Handling

X

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**Bottle  
Safety**

**Bottle  
Withdrawal**

**Container  
Safety**

**Container  
Withdrawal**

**Fixed  
Installations**

**Customized**



## Customized

Individual environments and applications require individual withdrawal options. As the pioneer in developing high professional and innovative safety equipment we are always able to provide additional options for sustainable process automation.

- Individual planning
- Customized installation support

**Select your customized information**

# Cleaning

Protect your work, your personnel and the environment with our reliable, residue-free and biodegradable cleaning solutions.

X

Extran®

Specialties



## Extran®

With thorough, residue-free cleaning, Extran® products ensure that everything that comes into contact with chemicals or biological substances must be free of impurities, both before and after use. Trust our range of all-purpose detergents for manual cleaning or automated cleaning.

- Constant product quality and composition
- Free of scent, dyestuff, oxidants, chlorine, enzymes and NTA
- Technical application and validation support
- Biodegradable and toxin-free

Select your Extran® products



# Cleaning

Protect your work, your personnel and the environment with our reliable, residue-free and biodegradable cleaning solutions.

X

Extran®

Specialties

## Specialties

Effective solutions for tough jobs: Whether you require a mild or strong cleaning agent, our high-quality products help you achieve reliable results. Save valuable time and effort in your daily lab work:

- Chromosulfuric acid
- Sodium hydroxide solution

Select your specialties



# Essentials

X

Safety, simplicity and sustainability – our extensive portfolio for essential applications, e.g. drying, purification, absorption and indication of reactions.

**Spillage  
Absorption**

**Absorption  
& Filtration**

**Drying**

**Purification  
& Sample Prep**

**Indicators**

## Spillage Absorption

Accidental spills of hazardous liquids can happen in any lab. With Chemizorb<sup>®</sup>, you can remove harmful, aggressive or other unpleasant liquids quickly, safely and without harming the environment.



**Select your Chemizorb<sup>®</sup> products**



# Essentials

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Spillage  
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& Filtration

Drying

Purification  
& Sample Prep

Indicators

## Absorption & Filtration

Absorption, adsorption and filtration processes are indispensable for many lab applications such as separation, purification, decolorizing, or enrichment of substances. We offer a wide variety of premium absorption and adsorption reagents as well as filter and clarification materials.



Select your absorption & filtration products

# Essentials

X

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Spillage  
Absorption

Absorption  
& Filtration

Drying

Purification  
& Sample Prep

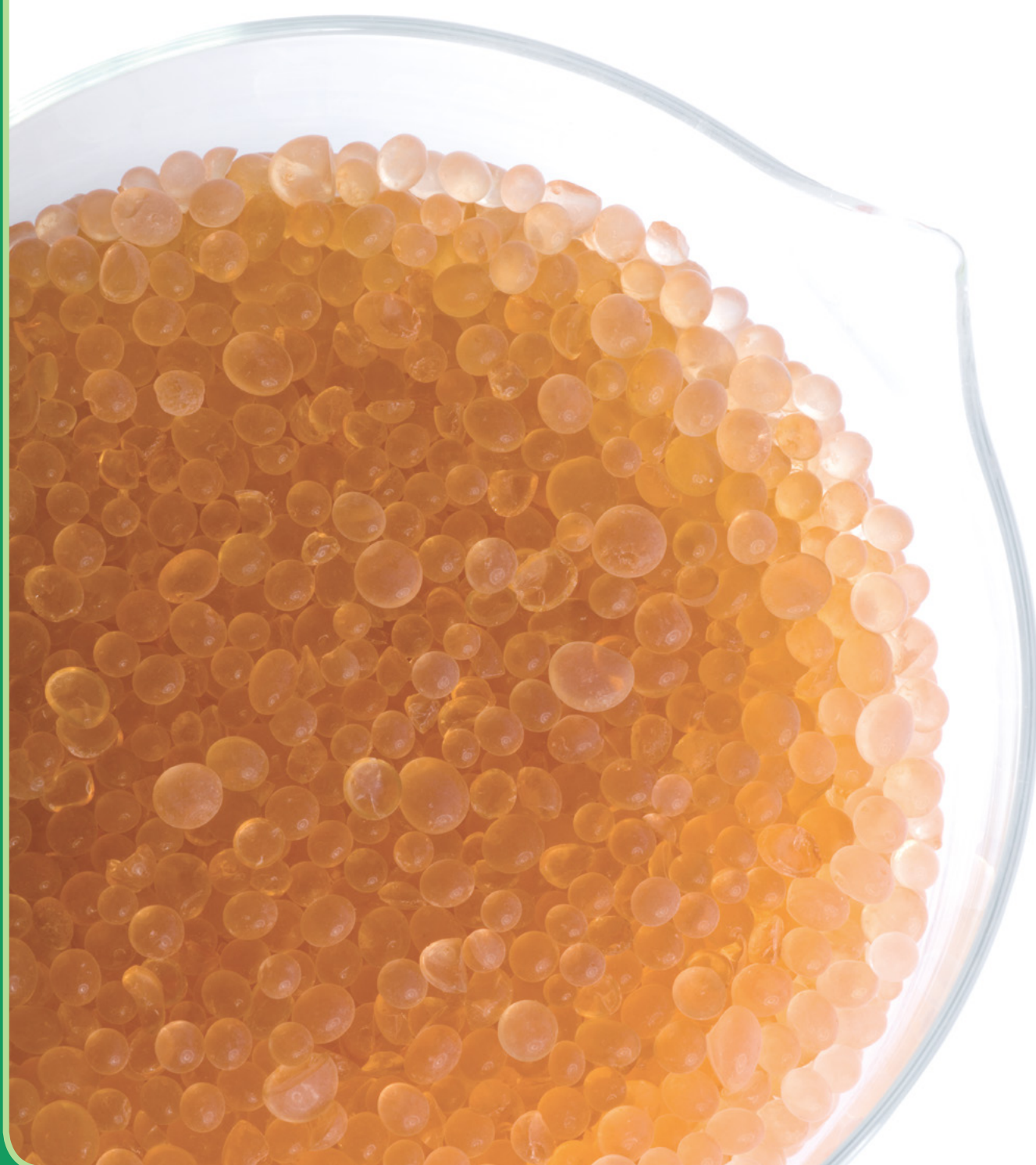
Indicators

## Drying

Our drying agents help to protect your valuable goods against moisture and mold formation, both on long transport routes as well as during storage. Our diverse product range is the ideal choice whenever drying of gaseous, liquid or solid substances is required.

- Reduce costs by increasing the longevity of your products
- Convenient and safe options, e.g. desiccant sachets, absorption tubes, molecular sieves without carcinogenic blue gel indicators

Select your drying agents





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Spillage  
Absorption

Absorption  
& Filtration

Drying

Purification  
& Sample Prep

Indicators

## Purification & Sample Prep

Routine laboratory work involves purifying, enriching and separating samples for analytical purposes. Our products cover various chemical and physical methods as well as an array of other applications:

- Removing residues from gases
- Decalcification, sealing, lubrication
- Separation and stabilization
- Reaction and filling aids



Select your purification & sample prep products

# Essentials

X

Safety, simplicity and sustainability – our extensive portfolio for essential applications, e.g. drying, purification, absorption and indication of reactions.

Spillage  
Absorption

Absorption  
& Filtration

Drying

Purification  
& Sample Prep

Indicators

## Indicators

Indicators are used in laboratories to observe chemical reactions. Whether for monitoring a chemical status, change of reaction or the end-point of a titration, you can rely on our large portfolio of indicators for highly accurate results.

- Acid-alkali indicators / pH indicators
- Redox indicators
- Complex / metal indicators
- Fluorescence indicators and special applications



Select your pH indicators



# Buffers

X

Certipur® buffer solutions & substances - certified reference materials according to ISO Guide 34, the gold standard for a reliable pH calibration.

Accreditation

Secondary  
Buffers

Ready-to-use  
Buffers

Buffers  
in Sachets

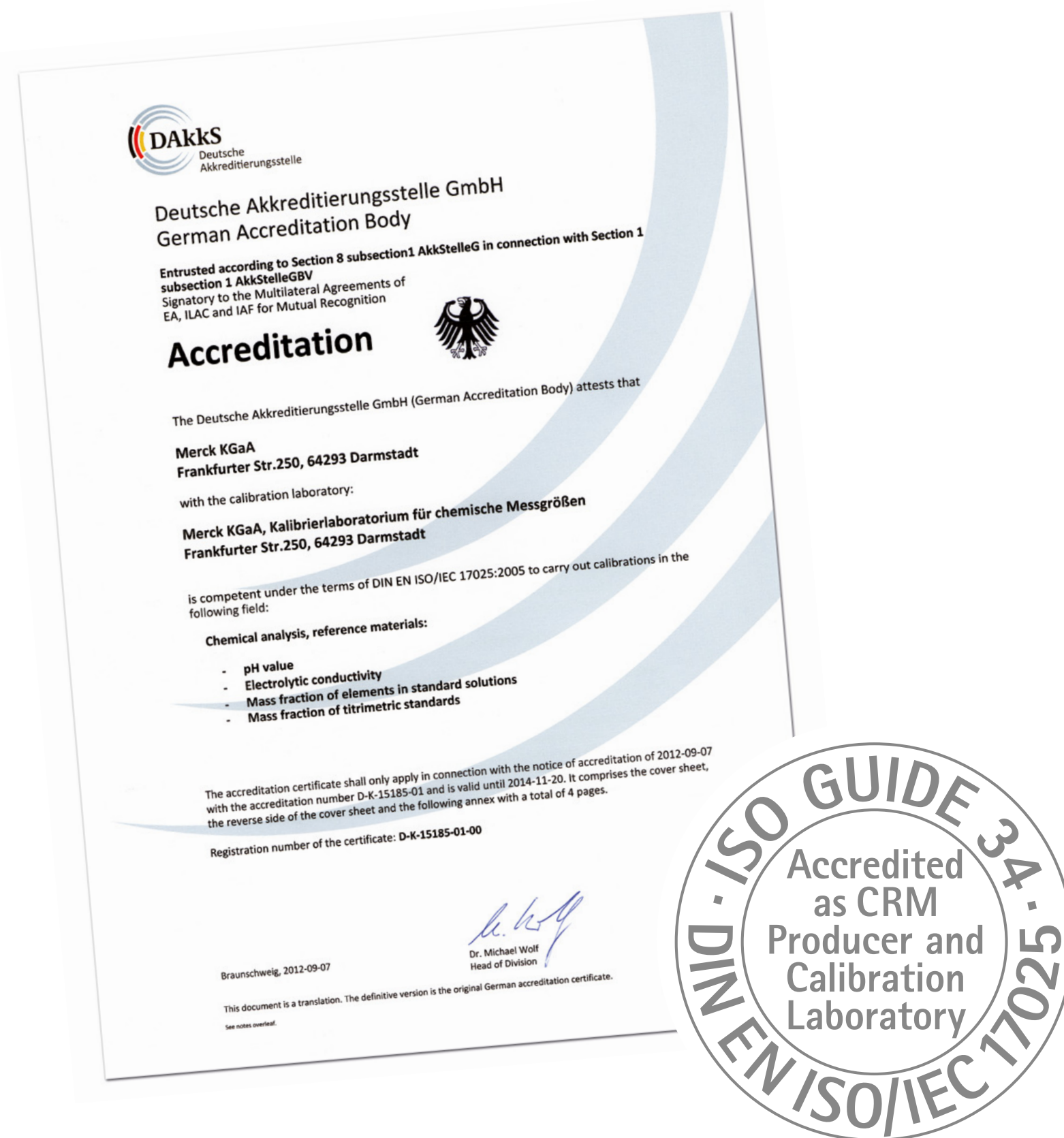
Buffers  
in Titripac®

Buffers according  
to USP & Ph. Eur.

## Accreditation

Certipur® buffer solutions and substances are now accredited as certified reference material according to ISO Guide 34. Along with our existing ISO/IEC 17025 accreditation as a testing and calibration laboratory, we now have the highest possible quality standard for certified reference materials.

Discover more



# Buffers

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Certipur® buffer solutions & substances - certified reference materials according to ISO Guide 34, the gold standard for a reliable pH calibration.

Accreditation

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Buffers  
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Buffers  
in Titripac®

Buffers according  
to USP & Ph. Eur.

## Secondary Buffers

Certified secondary buffers solutions & substances are employed for accurate calibration and monitoring of pH instruments and for control of other buffer solutions. Measured according to NIST, IUPAC, DIN, USP & Ph. Eur very precisely with uncertainty of only  $\pm 0.003$  pH units and supplied with full traceability and uncertainty documentation.

Discover more





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Buffers  
in Titripac®

Buffers according  
to USP & Ph. Eur.

## Ready-to-use Buffers

Precise and convenient ready-to-use buffers solutions for the daily routine calibration of pH instruments.

- Excellent quality – ISO Guide 34 accreditation
- Safe and convenient packaging concepts – Titripac® packaging, single-use sachets, & bottles
- Five point calibration against both NIST and PTB certified reference materials
- Accompanied by audit conformance certificates



Discover more

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in Sachets

Buffers  
in Titripac®

Buffers according  
to USP & Ph. Eur.

## Buffers in Sachets

Ready-to-use Certipur® certified buffers solutions packed in convenient single-use sachets for reliable calibration.

- Individually packed in hermetically sealed sachets
- Always fresh, accurate and ready to use
- No risk of contamination
- Broad range of buffers available



Discover more



# Buffers

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Buffers

Buffers  
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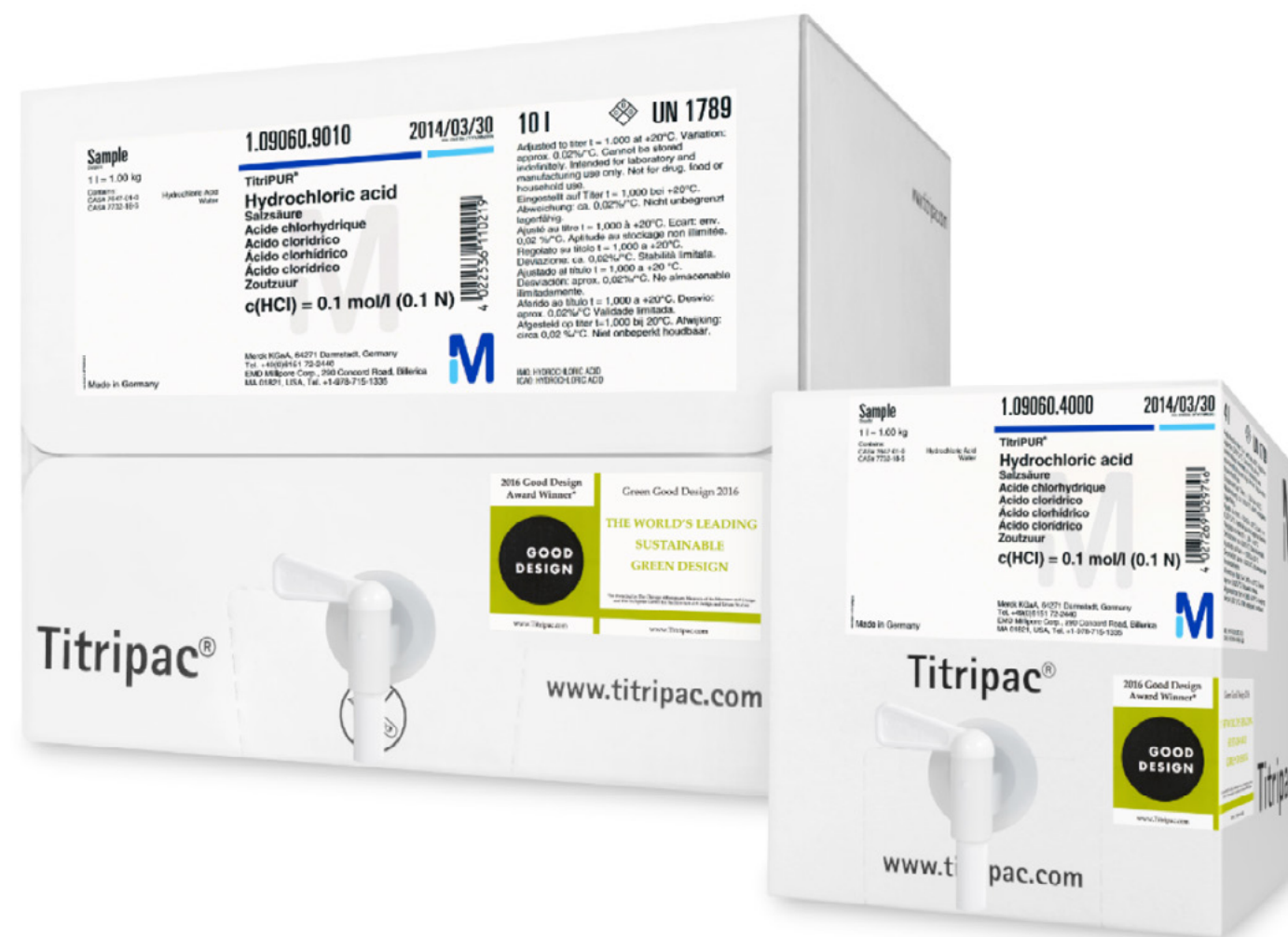
Buffers  
in Titripac®

Buffers according  
to USP & Ph. Eur.

## Buffers in Titripac® packaging

Certipur® buffers solutions are also offered in our innovative and convenient Titripac® packaging – economic and ecological solutions for easy and accurate pH calibration.

- No contamination of the solutions after opening the Titripac® packaging
- Convenient – just open and close the tap
- Less waste – use only the exact quantity needed
- Broad range of buffers in Titripac® packaging



Discover more

# Buffers

X

Certipur® buffer solutions & substances - certified reference materials according to ISO Guide 34, the gold standard for a reliable pH calibration.

Accreditation

Secondary  
Buffers

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Buffers

Buffers  
in Sachets

Buffers  
in Titripac®

Buffers according  
to USP & Ph. Eur.

## Buffers according to USP & Ph. Eur.

Certipur® buffer solutions are produced and tested according to EP and USP guidelines for the most precise calibration, qualification and monitoring applications.

- Accompanied by a Certificate of Analysis with all the details needed for internal documentation and audits
- Available in a variety of format – sachets, bottles and as secondary reference buffers solutions & substances
- Accreditation according to ISO Guide 34
- Traceable to NIST

Discover more





# Brighter Analysis



## Brighter Expertise

A global network of R&D, Manufacturing, and Quality Assurance combined with centuries of experience gives you the most up-to-date method development and documentation support for solvents & inorganics.

## Brighter Solutions

Our close cooperation with our customers allows us to develop and support innovative solutions, not just products.

## Brighter Convenience

Easy ordering on Sigma-Aldrich.com and our worldwide distribution organization mean you can find the right solution and have it delivered the way you want it.



[sigma-aldrich.com/brighter](https://sigma-aldrich.com/brighter)

**To place an order or  
receive technical assistance:**

[www.sigma-aldrich.com/customersupport](https://www.sigma-aldrich.com/customersupport)

[www.sigma-aldrich.com/techservice](https://www.sigma-aldrich.com/techservice)

