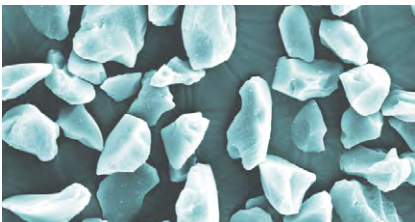


# ZEOprep<sup>®</sup> · ZEObeads<sup>®</sup> · ZEOSphere<sup>®</sup>

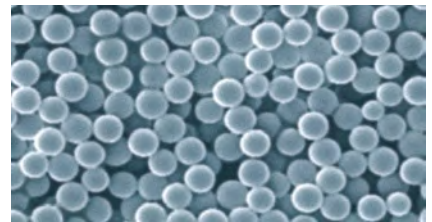
High Quality Chromatographic Silica  
manufactured with Swiss Accuracy and Consistency



**ZEOprep**  
granular silica  
economic solution for  
prep, flash and process scale  
industrial separations



**ZEObeads**  
spheroidal silica  
offers superior  
process performance  
at economic levels



**ZEOSphere**  
spherical silica  
ideal for high resolution  
analytical to process scale  
purifications

# The Zeochem Difference

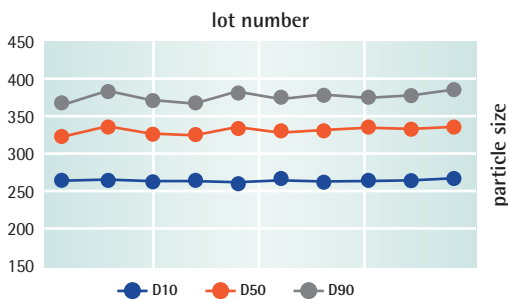
Zeochem is a quality-oriented Swiss company with locations throughout the world. We strive to provide excellent, responsive service, consistent and high-quality products and the expertise to help you find product and service solutions.

When it comes to meeting productivity and performance requirements, you can depend on our consistent, high-quality products and personalized service. All products are analyzed to ensure expected performance using international testing standards and, when required, proprietary test procedures specific to your applications.



## Why choose Zeochem Silica Gel

**Excellent reproducibility** makes Zeochem silica gel one of the most reliable materials for process and flash scale applications.



Zeochem silica gel is available as standard with **4 different residual moisture contents**, allowing customers to balance performance requirements with economical considerations.



### At a glance – Your advantages

Batch to Batch Reproducibility

Wide Range of Selectivity Options

High Purity

Range of Moisture Contents

Chemical and Mechanical Stability

High Loadability

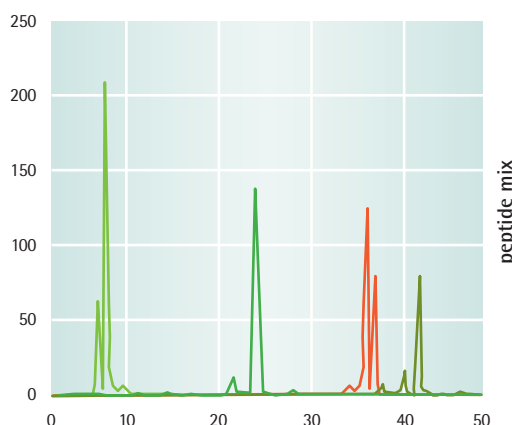
Large Scale Batches (kg to multi-ton)

Narrow Particle Size Distribution

A robust production process ensures **exceptional mechanical strength** resulting in longer life and higher operating pressures.



**Strict quality controls** from raw material to finished product ensure highest quality silica gel that results in consistent and reliable chromatographic separations.

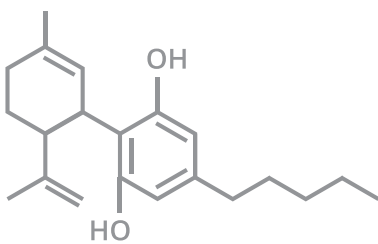


# Silica Separation. Effective. Efficient.

Due to its consistently reproducible results Zeochem silica gel has been used for decades in a wide variety of industries, including nutraceuticals, natural products, pharmaceuticals, biopharmaceuticals, fine chemicals, food and beverages.

Zeochem silica gel exhibits extraordinary performance in purification of naturally occurring APIs for example Paclitaxel, Docetaxel and many more.

Paclitaxel is a chemotherapy medication used to treat a number of types of cancer and is produced in multi ton scale under GMP.



Polyunsaturated fatty acids (PUFAs) and in particular DHA & EPA are widely used throughout the nutraceutical, pharmaceutical and cosmetics industries due to their well-known health benefits.

Due to its high performance and excellent selectivity Zeochem silica gel is the chosen purification material for many natural products, including Omega-3 and phospholipids.

Cannabinoids are of growing interest to the health and pharmaceutical industries, with up to 113 different compounds already identified.

Zeochem silica gel delivers cannabinoids of the utmost purity as demanded by this of highly regulated industry (>98% purity).

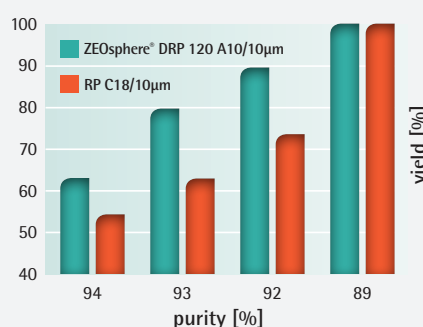
## Zeochem Commitment

New state of the art plant with hundreds of tons capacity continues Zeochem's 40 year production history:

- Unsurpassed service and support
- Investing in the future
- Swiss dependability
- Innovation through R&D
- Application advice and method development offered by our Technical Centre

**ZEOsphere<sup>®</sup> DRP Mixed-Mode products are today's answer to improved purification of large charged molecules, peptides and oligonucleotides.**

**DRP enhanced selectivity delivers high purity at reduced run times, consequently increasing yield and lowering solvent usage/costs.**



# Zeochem Chromatographic Silica Selection Guide

Typical Applications	Silica morphology	Pore size A	MW (D)	Particle size (um)	Separation efficiency	Surface modification/functionality
API Intermediates Small Molecules Natural Products Food Flavors Fragrances Lipids/oils/fats Carbohydrates Pigments Cosmetics Biomolecules Peptides Insulin Analogues Oligonucleotides Proteins Heavy metal scavengers	<b>Irregular (ZEOprep)*</b>	60 90 110	<800 <10,000 10,000	35 - 70 40 - 63 60 - 200 75 - 315 200 - 500		Acqueous Non Acqueous Retention of polar analytes
	<b>Spheroidal (ZEObeads)</b>	50	300 - 800	20 - 30		C4 Phenyl C8 C18 SiO2 Cyano* Diol* NH2* NH2P SAX
	<b>Spherical (ZEOsphere)</b>	100 120 200 300	7,000 < 30,000	5 10 15		Thiol (SH) & NH2 phases available for scavenging electrophiles and toxic heavy metals *Can be used in both NP & RP systems

Please note; the optimal chromatographic material is specific to each analyte and chromatographic system. The above information is based on general chromatographic principles and is intended to be used as a guide only. Some limitations apply to the above listed grades/functional groups.

**ZEOprep\* is available with 4 different moisture levels to custom fit your process and budget:**

- ZEOprep ACT: <1% moisture content recommended for moisture sensitive applications
- ZEOprep (STD): 2-4% moisture content
- ZEOprep HYD: 4-6% moisture content can be used for a wide variety of applications, depending on process stability
- Zeoprep ECO: <= 7% moisture content recommended for the more robust processes, where cost is a critical factor

Our new silica gel plant is ISO 9001 & 14001 certified.

**We are happy to meet your project requirements. Please contact us to outline your needs.**

All information contained in this brochure is given in good faith but without warranty or guarantee of any kind whatever, whether implied or expressed.

**ZEOCHEM®**

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