

*Use a better
column*

VDSpher[®]

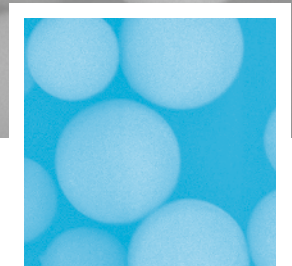
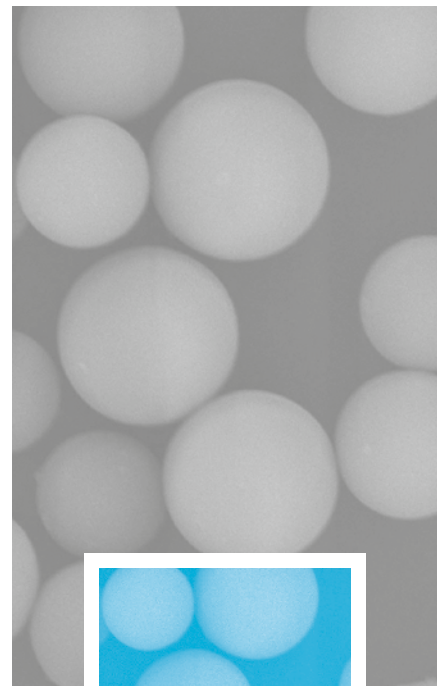


VDS optilab
Chromatographie
Technik GmbH



VDSpher[®]
OptiAqua

Your column
brand for
100% aqueous
Reversed Phase
Chromatography



VDSpher® OptiAqua

– your column brand for
100% aqueous reversed
phase chromatography

VDSpher® OptiAqua phases have been specially developed for highly hydrophilic applications. Special polar endcapping makes it possible to use 100% water as a solvent while still maintaining RP properties.

Based on spherical, porous and ultra-pure silica (VDSpher® OptiAqua > 99.95% Si, VDSpher® OptiAqua PUR > 99.995% Si) with narrow

particle and pore size distributions, various VDSpher® OptiAqua reversed phases with C18, C8 and C4 bonding have been created that deliver high plate numbers and sharp peaks.

A total of five VDSpher® OptiAqua phases with various pore and particle sizes are available, suitable for a broad range of applications. Please refer to Table 1 for possible combinations.

Table 1: VDSpher® OptiAqua phases

	Pore size [Å]	Particle sizes [µm]
OptiAqua 100 C18	100	5/10
OptiAqua PUR 100 C18	100	3/5/10
OptiAqua PUR 150 C18	150	5
OptiAqua PUR 100 C8	100	5
OptiAqua PUR 100 C4	100	5

This product range is thus ideal for both preparative and analytical HPLC and is optimally suited for different sizes of analytes. Various

molar mass ranges can be covered depending on the pore size of the modified silica (see Table 2).

Table 2: Recommended analyte sizes for VDSpher® OptiAqua phases

	Analyte size [g/mol]
OptiAqua 100 C18	30 - 800
OptiAqua PUR 100 C18	30 - 800
OptiAqua PUR 150 C18	120 - 3200
OptiAqua PUR 100 C8	30 - 800
OptiAqua PUR 100 C4	30 - 800



VDSpher® OptiAqua phases can also be used to separate polar substances. Examples of typical analytes include:

- Antibiotics
- Biomolecules
- Drugs
- Nucleobases
- Organic acids
- Parabens
- Pesticides
- Sulfonamides
- Water-soluble vitamins
- Xanthines

All VDSpher® OptiAqua phases are stable from pH 2 to 7.5 and can be used up to temperatures of 60 °C without problem. For further specifications, please refer to Table 3.

Table 3: Specifications for VDSpher® OptiAqua phases

	Endcapping	Carbon load [%]	Surface area [m ² /g]	USP
OptiAqua 100 C18	✓	13.0	300	L1
OptiAqua PUR 100 C18	✓	13.0	300	L1
OptiAqua PUR 150 C18	✓	6.9	175	L1
OptiAqua PUR 100 C8	✓	7.4	300	L7
OptiAqua PUR 100 C4	✓	6.5	300	L26

VDSpher® OptiAqua columns come in a range of dimensions from 1 - 63 mm inside diameter and 30 - 300 mm length. Guard

cartridges are likewise available. For a more detailed overview, please refer to our price list.



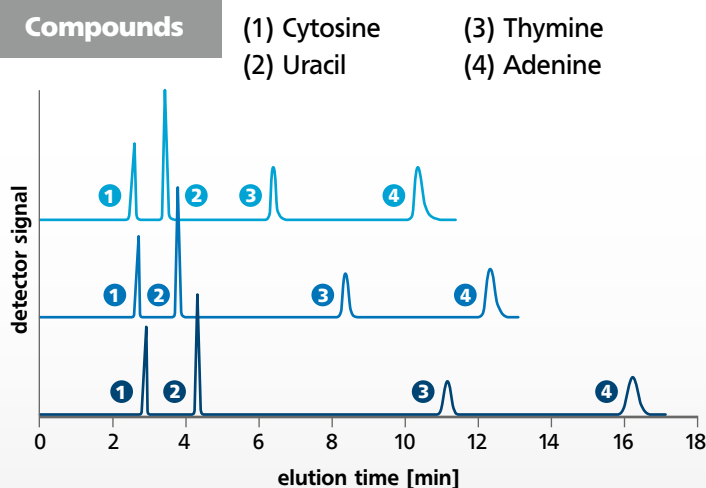
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Example of application

Made in Germany

VDSpher® OptiAqua PUR 100 C18 vs C8 vs C4 – Separation of Nucleobases



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VDSpher®

Column

VDSpher® OptiAqua PUR 100 C4
VDSpher® OptiAqua PUR 100 C8
VDSpher® OptiAqua PUR 100 C18

(5 µm, 150 mm x 4.6 mm)

Chromatographic conditions

Solvents: Water
(10 mM KH_2PO_4)

Flow rate: 1.0 ml/min

Temp.: Ambient

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