



## Optigel: Polymer Phases for HPLC Applications

Under the name **Optigel**, VDS optilab offers various ion-exchange separation phases on a polymer basis. The matrix used as basic material is a polystyrene-divinylbenzene network modified in accordance with the desired function. This allows working over a very wide pH range and – in contrast to silica gel phases – without destroying the phase itself. However, when using polymer phases, it has to be ensured that these materials are not exposed to a pressure higher than 100 bar and a flow rate of 1.0 mL/min.

**Optigel CarbEx II** cation exchange phases are modified with sulfonic acid groups at polystyrene-divinylbenzene matrix. As counterions,  $H^+$  and  $Ca^{2+}$  are available by default. For special separations, **Optigel CarbEx II** with  $Pb^{2+}$  as counterion can also be produced on request.

### Optigel CarbEx II phases can be used for the following separation problems:

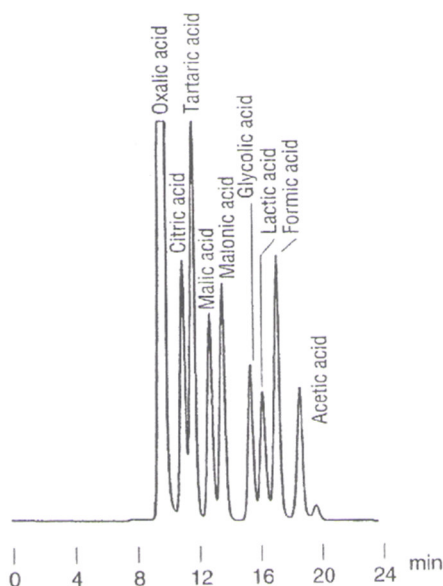
Modification	Typical Eluents	Applications	Sample Matrix
<b>CarbEx II H<sup>+</sup> 9 μm</b> <i>pH range 1 – 3</i>	1 – 100 mM sulfuric acid	organic acids carbohydrates alcohols	analysis of ingredients, raw materials, fermentation brews, beer, wine, blood plasma
	distilled H <sub>2</sub> O	carbohydrates	
	1% phosphoric acid	organic acids	
<b>CarbEx II Ca<sup>2+</sup> 9 μm</b> <i>pH range 5 – 9</i>	bidistilled H <sub>2</sub> O	carbohydrates sugar alcohols	analysis of corn syrup, fruit juice, beer, wine, e.g. sorbitol and mannitol

The standard dimensions of **Optigel CarbEx II** columns are **300 x 8.0 mm** and **250 x 8.0 mm**. For rapid analysis of organic acids we recommend **Optigel CarbEx II H<sup>+</sup>** in **150 x 8.0 mm** using 1% phosphoric acid.

The modification **Optigel CarbEx II Ca<sup>2+</sup>** in **150 x 8.0 mm** allows a fast separation of carbohydrates or sugar alcohols.

#### Optigel CarbEx II H<sup>+</sup> 9 μm

Dimension: 300 x 8.0 mm  
 Eluent: 1% phosphoric acid  
 Flow Rate: 0.6 mL/min  
 Temperature: 45 °C  
 Detection: UV 210 nm



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