



# ZORBAX Equivalents to USP L-Numbered Packings

Application  
Pharmaceutical  
Robert Ricker

The US Pharmacopeia (USP) is a standard source for many pharmaceutical methods. HPLC column L-numbers are recommended for most LC methods listed with the USP.

PACKING DESCRIPTION	Equivalent Zorbax Columns <sup>†</sup>	Particle Size (µm)	Pore-Size* (Å)	Common Lengths** (mm)
L1-Octadecyl silane chemically bonded to porous silica or ceramic micro-particles, 3 to 10 µm in diameter.	Zorbax ODS <sup>1</sup> Zorbax ODS classic <sup>1</sup> Rx-C18, SB-C18 Eclipse XDB-C18 <sup>1</sup>	3.5 and 5µm	80 Å 300Å	15-250mm
L3-Porous silica particles, 5 to 10 µm in diameter.	Zorbax SIL <sup>1</sup> , Rx-SIL	3.5 and 5µm	80 Å 300Å	15-250mm
L7-Octylsilane chemically bonded to totally porous silica particles, 3 to 10 µm in diameter.	Zorbax C8 <sup>1</sup> Rx-C8, SB-C8 Eclipse XDB-C8 <sup>1</sup>	3.5 and 5µm	80Å 300Å	15-250mm
L8-An essentially monomolecular layer of aminopropylsilane chemically bonded to totally porous silica gel support, 10 µm in diameter.	Zorbax NH <sub>2</sub>	5 µm	80Å	150mm 250mm
L9-10-µm irregular, totally porous silica gel having a chemically bonded, strongly acidic cation-exchange coating.	Zorbax SCX <sup>1</sup> BioSeries SCX <sup>2</sup> (spherical 5µm particle )	5 µm	80 Å 300Å	250mm
L10-Nitrile groups chemically bonded to porous silica particles, 3 to 10 µm in diameter.	Zorbax CN <sup>1</sup> SB-CN	3.5 and 5µm	80 Å 300Å	15-250mm
L11-Phenyl groups chemically bonded to porous silica particles, 5 to 10 µm in diameter.	Zorbax Phenyl SB-Phenyl	3.5 and 5µm	80Å	50-250mm
L13-Trimethylsilane chemically bonded to porous silica particles, 3 to 10 µm in diameter.	Zorbax TMS	5µm	80Å	150mm 250mm
L14-Silica gel 10 µm in diameter having a chemically bonded, strongly basic quaternary ammonium anion-exchange coating.	Zorbax SAX <sup>1</sup> BioSeries SAX <sup>2</sup> (spherical 5µm particle )	5µm	80Å 300Å	250mm
L33-Packing having the capacity to separate proteins by molecular size over a range of 4,000 to 400,000 daltons. It is spherical, silica-based, and processed to provide pH stability.	Zorbax BioSeries: GF-250 GF-450 (10,000 to 1,000,000 dal.-range)	4.5µm 6µm	150Å 300Å	250mm 250mm

## Highlights

- ZORBAX HPLC columns are available for a broad range of modern USP LC column designations and methods.

<sup>1</sup> This bonded phase is only available in the 80Å pore size.

<sup>2</sup> This bonded phase is only available in the 300Å pore size.

\* Zorbax columns are available in a variety of pore sizes (80Å, 300Å) chosen to match the proposed uses for the column.

\*\* Zorbax columns are available in a wide variety of column dimensions chosen to match the proposed uses for each column packing.

New column configurations become available on an ongoing basis, to meet new demands of the chromatographer.

Diameters: 1, 2.1, 3.0, 4.6, 9.4, and 21.2 mm  
Tube lengths: 50, 75, 150, and 250 mm  
Cartridge-Column Lengths: 15, 30, and 50 mm  
(Traditional cartridges 6 x 40 mm)

<sup>†</sup>Most custom column configurations are available upon request. Please inquire, using part # 899999-999.



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