

# Sorption Isotherms of Ternary Eluents in Reversed-Phase Liquid Chromatography

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## ABSTRACT

The experimental technique of mass spectrometric tracer pulse chromatography (MSTPC) was used to measure the excess volume of each eluent component for binary and ternary mixtures of water, acetonitrile, and methanol on a C<sub>18</sub>-bonded silica RPLC packing over the full composition range. Table S-1 represents the results of the experimentally determined excess volumes of all eluent components.

Volume Fraction			Excess Volume (mL)		
Water	Acetonitrile	Methanol	Water	Acetonitrile	Methanol
1.00	0.00		0.00	0.00	
0.90	0.10		-0.11	0.11	
0.80	0.20		-0.17	0.17	
0.70	0.30		-0.21	0.21	
0.60	0.40		-0.21	0.21	
0.50	0.50		-0.18	0.18	
0.40	0.60		-0.14	0.14	
0.30	0.70		-0.07	0.07	
0.20	0.80		-0.02	0.02	
0.10	0.90		0.02	-0.02	
0.00	1.00		0.00	0.00	
	0.00		0.00		0.00
1.00		0.00	0.00		0.00
0.90		0.10	-0.04		0.04
0.80		0.20	-0.06		0.06
0.70		0.30	-0.06		0.06
0.60		0.40	-0.05		0.05
0.50		0.50	-0.04		0.04
0.40		0.60	-0.03		0.03
0.30		0.70	-0.02		0.02
0.20		0.80	-0.01		0.01
0.10		0.90	0.00		0.00
0.00		1.00	0.00		0.00
	1.00	0.00		0.00	0.00
	0.90	0.10		-0.02	0.02
	0.80	0.20		-0.03	0.03
	0.70	0.30		-0.03	0.03
	0.60	0.40		-0.03	0.03
	0.50	0.50		-0.03	0.03
	0.40	0.60		-0.02	0.02
	0.30	0.70		-0.01	0.01
	0.20	0.80		-0.01	0.01
	0.10	0.90		0.00	0.00
	0.00	1.00		0.00	0.00
0.80	0.10	0.10	-0.10	0.08	0.02
0.70	0.15	0.15	-0.11	0.10	0.01
0.60	0.20	0.20	-0.10	0.10	0.00
0.50	0.25	0.25	-0.08	0.08	0.00
0.25	0.25	0.50	-0.02	0.02	0.00
0.20	0.20	0.60	-0.01	0.01	0.00
0.15	0.15	0.70	0.00	0.00	0.00
0.10	0.10	0.80	0.00	0.00	0.00
0.10	0.80	0.10	0.00	0.00	0.00
0.15	0.70	0.15	0.00	0.00	0.00
0.20	0.60	0.20	-0.02	0.02	-0.01
0.25	0.50	0.25	-0.03	0.04	-0.01
0.30	0.40	0.30	-0.03	0.05	-0.01
0.35	0.30	0.35	-0.04	0.05	-0.01
0.40	0.20	0.40	-0.04	0.04	0.01
0.45	0.10	0.45	-0.04	0.02	0.02

**Table S-1.** Experimental Results for the Excess Volume of Eluent Components