SUPPLEMENTAL INFORMATION:
A Continuous-Flow, Microfluidic Fraction Collection Device

Christopher Baker and Michael G. Roper*

Department of Chemistry and Biochemistry, Florida State University, 95 Chieftain Way,
Tallahassee, FL 32306

Keywords: microfluidic, fraction collection, electrophoresis, separation

*Address Correspondence to:
  Dr. Michael G. Roper
  Department of Chemistry and Biochemistry
  Florida State University
  95 Chieftain Way
  Dittmer Building
  Tallahassee, FL 32306
  Ph 850-644-1846
  Fx 850-644-8281
  E-mail: roper@chem.fsu.edu

Table S1 ANOVA table for W_s response

Source	df	Sum of Squares	F value	Prob > F
θ	1	0.000096	0.6635	0.436 *
l	1	0.09425	651	< 0.0001
θl	1	0.00555	38.3	0.00016
Model	3	0.09990	230	< 0.0001
Error	9	0.001302		

Table S2 ANOVA table for L_{sf} response

Source	df	Sum of Squares	F value	Prob > F
θ	1	0.2772	271	< 0.0001
l	1	0.7164	700	< 0.0001
θl	1	0.00263	2.57	0.153 **
θ^2	1	0.04725	46.2	0.000253
l^2	1	0.0011	1.08	0.334 **
Model	5	1.059	207	< 0.0001
Error	7	0.001022		

Table S3 ANOVA table for W_c response

Source	df	Sum of Squares	F value	Prob > F
θ	1	0.03635	5.03	< 0.0001
l	1	0.2663	36.9	< 0.0001
Model	2	0.3026	20.9	0.000264
Error	10	0.07213		

* insignificant, but retained for model hierarchy
** statistically insignificant
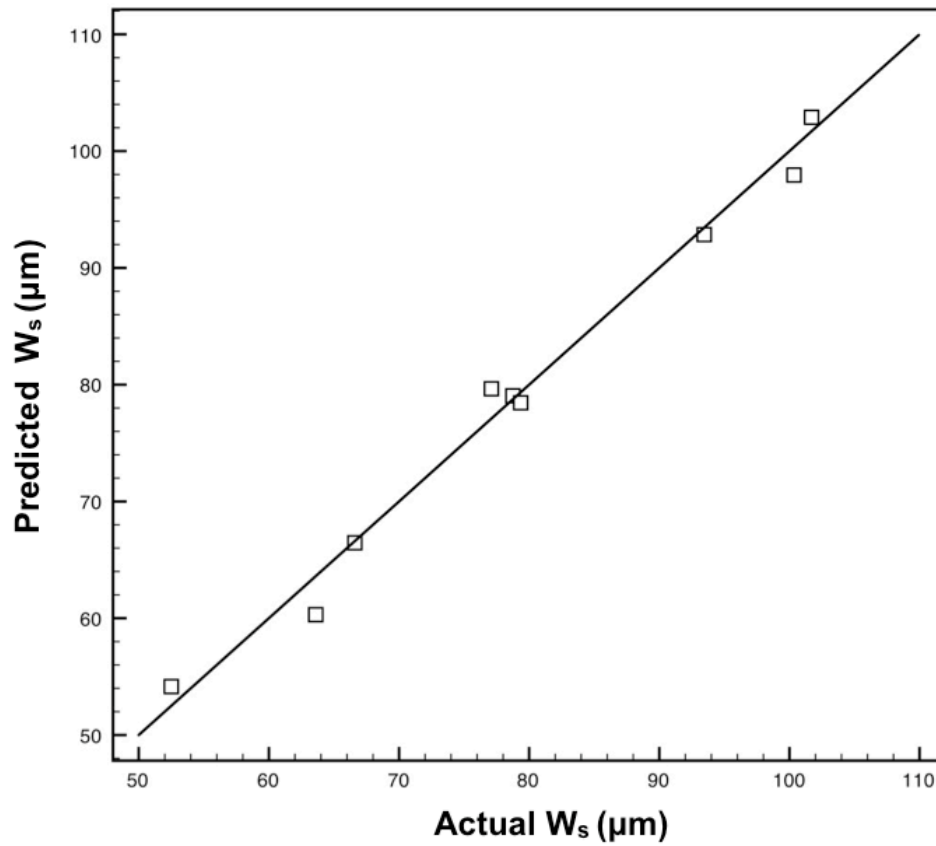df = degrees of freedom

Figure S1

Figure S1. **Predicted value of W_s vs. actual values observed in simulations.** The response followed a two-factor interaction model ($W_s = \beta + \theta + l + \theta\ l$). The linear trend between predicted values and those observed in simulation indicated agreement between the statistical model and simulation results ($p < 0.0001$).
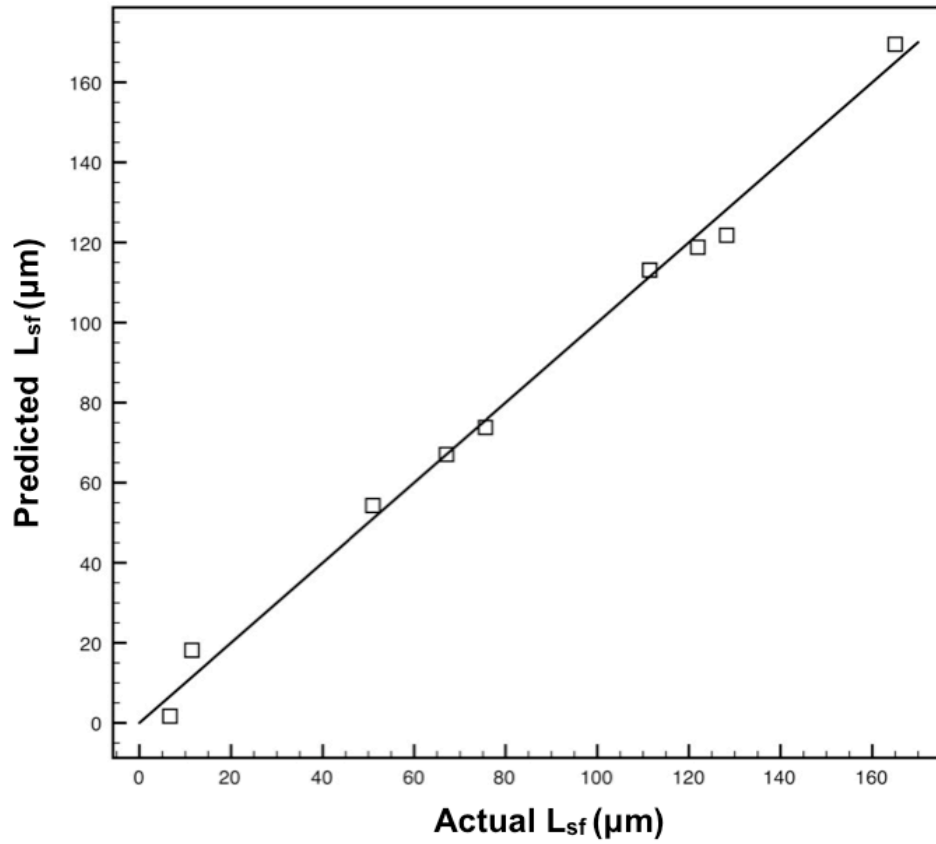
Figure S2

Figure S2. Predicted value of L_{sf} vs. actual values observed in simulations.
The response followed a quadratic model ($L_{sf} = \beta + \theta + l + \theta^2$) with $p < 0.0001$.
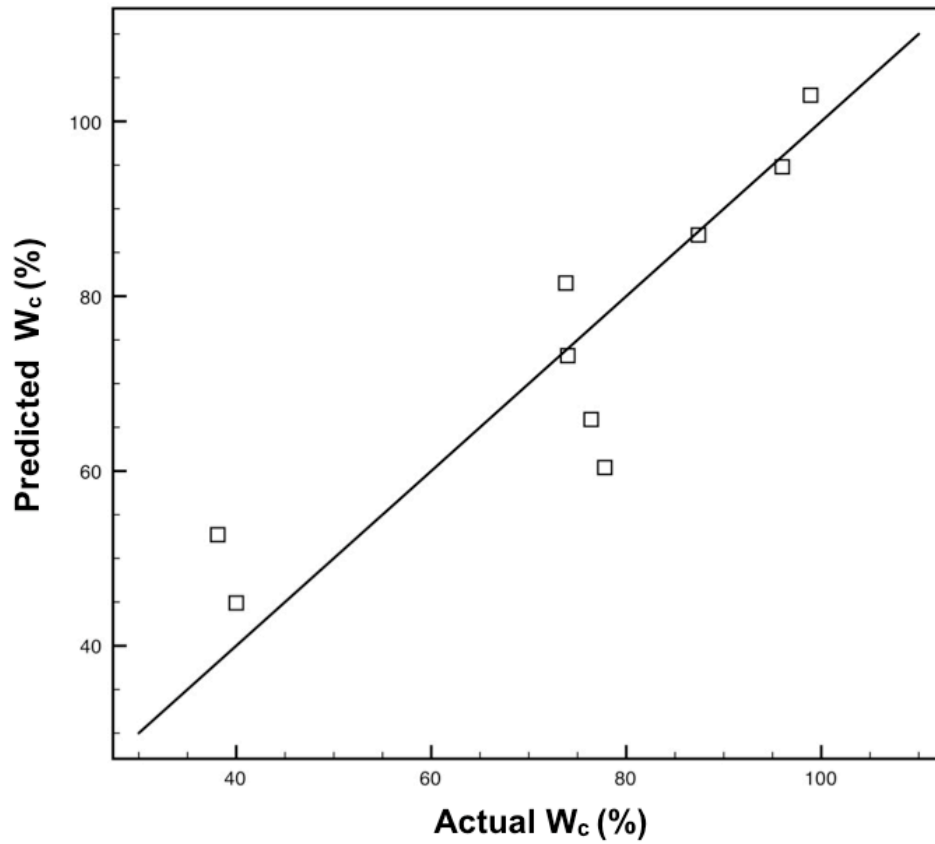
Figure S3

Figure S3. **Predicted value of W_c vs. actual values observed in simulations.** The response followed a linear model ($W_c = \beta + \theta + l$). While there was spread among the data, especially at the lower end of the model, the model was statistically significant ($p = 0.000264$).