



MicroFlo™ Select and MicroFill™ Reagent Dispensers Comparison

Flow Rate and Velocity Differences between Peristaltic and Syringe Pump Dispensers

Flow rate is defined as the volume of fluid which passes through a dispense tip per unit of time. *Velocity* is the rate of change of fluid position.

Below find comparison tables for flow rates and velocities using BioTek's MicroFlo Select and MicroFill Dispensers. This information will be useful when determining the most appropriate dispense technology and setting for a particular reagent and/or application.

MicroFlo Select Dispenser (peristaltic pump) – 1x8 manifold			
Cassette	Setting	Flow Rate ($\mu\text{L}/\text{tip}/\text{sec}$)	Velocity ($\text{mm}/\text{tip}/\text{sec}$)
1 μL , 0.0075" tip	Low	56	1754
	Med	60	2105
	High	64	2245
5 μL , 0.014" tip	Low	120	1208
	Med	140	1410
	High	160	1611
10 μL , 0.014" tip	Low	140	1410
	Med	160	1611
	High	180	1812

MicroFill Dispenser (syringe pump) – 1x16 manifold		
Setting	Flow Rate ($\mu\text{L}/\text{tip}/\text{sec}$)	Velocity ($\text{mm}/\text{tip}/\text{sec}$)
0.020"		
1	225	1133
2	300	1510
3	375	1888
4	450	2265
5	500	2517

96-well microplate = 2 tips/well
384-well microplate = 1 tip/well

96-well microplate = 1 tip/well
384-well microplate = 1 tip/well

Contact BioTek's Technical Assistance Center (tac@biotek.com) with questions.

Rev. 10/13/08