MicroTAS 2013: The 17th International Conference on Miniaturized Systems for Chemistry and Life Sciences, Freiburg, Germany, 27-31 October 2013

CHARACTERIZATION OF MICROFLUIDIC COMPONENTS FOR LOW-COST POINT-OF-CARE DEVICES

S. Hugo1* , K. Land1 and H. Becker2

1Council for Scientific and Industrial Research, SOUTH AFRICA and

2microfluidic ChipShop, GERMANY

ABSTRACT

This paper presents the characterization of microfluidic components for the realization of low-cost point-of-care diagnostic devices, with focus on full blood count applications. We present a set-up to enable automated actuation of device components utilizing parameters similar to those produced by manual actuation. Initial results show that simple microfluidic components can be used to achieve repeatable and accurate results for sample and reagent introduction and propulsion, as well as mixing and dispersion of sample and reagent, without the need for complex microfluidic operations.