

**Abstract:**

As low-flow infusion is becoming more prevalent for clinical care, there is an increasing need for better evaluation of clinical infusion pump performance at low flow rates and in ways that are accessible to the clinical community. However, the current method in international standard require specialized facilities, costly equipment, long durations of testing, and the data produced is hard to interpret. We propose downstream microdrop monitoring (DMM) as a low-cost, easy-to-perform, and easy-to-interpret alternative. In particular, we show that the count and timing of microdrops are useful for evaluating flow accuracy and flow uniformity at low flow rates.

**Reference:**

An J, Butterfield RD, Sims NM. Evaluation of Clinical Infusion Pump Performance Through Downstream Microdrop Monitoring: A Preliminary Study. Annu Int Conf IEEE Eng Med Biol Soc. 2020 Jul;2020:6066-6069. doi: 10.1109/EMBC44109.2020.9175301. PMID: 33019354.