

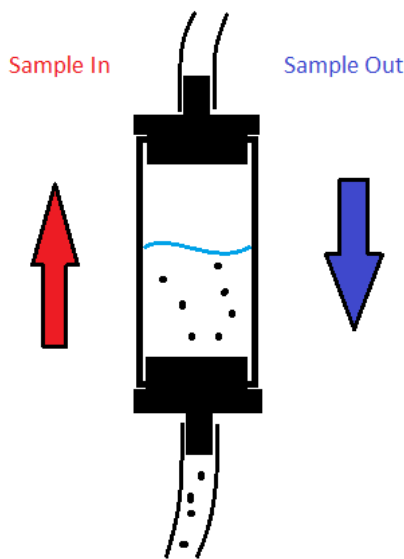
TECHNICAL BULLETIN

NUMBER 2019 - 019

Date: December 16, 2019
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Subject: Advantages of the MANTECH Flow-Through Turbidity Cell

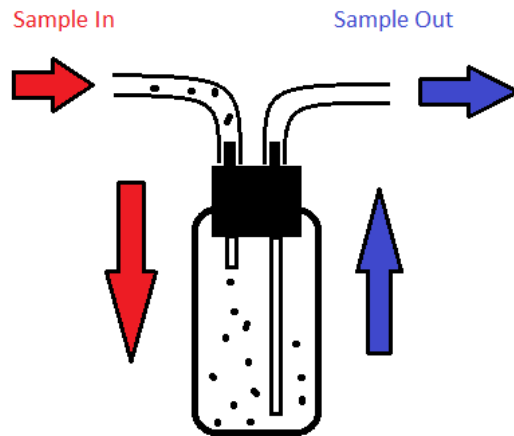
MANTECH’s automated turbidity solution features numerous unique advantages to promote rapid, accurate, and reliable turbidity analysis from only 40mL of sample volume. This document highlights these advantages and provides a comparison to other flow cell solutions on the market.

Proprietary Flow-Through Turbidity Cell



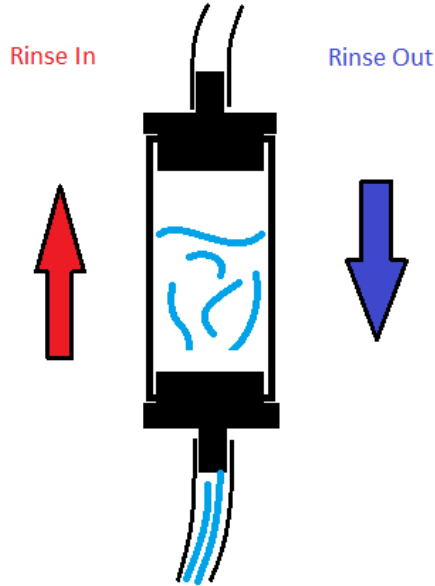
- Bi-directional pumping achieved with x1 reversible pump
- Sample is introduced from the bottom, fills cell and eliminates bubbles
- Sample is reverse pumped out through the bottom, emptying before rinsing
- All particles and liquid flush completely from cell every time

Standard Flow-Through Turbidity Cells



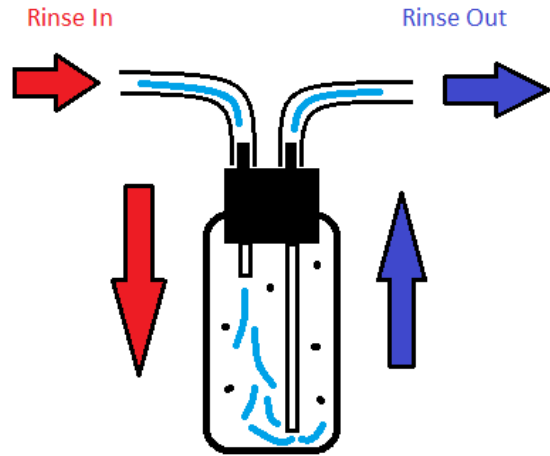
- Pumping in only one direction
- Sample is introduced through the top of the cell, sucked out through a fixed straw
- Cell never empties, therefore potential for dilution effects, carryover from previous samples
- Particles and solids can become trapped in the cell, nothing forcing them out

Proprietary Flow-Through Turbidity Cell



- Rinse water is introduced through the bottom
- Bi-directional pump performs rapid reverse and forward pumping to improve cleaning performance
- Active monitoring of turbidity value in rinse water confirms cell cleanliness
- Cell fully empties so NO particles, solids, or residue can remain from previous samples

Standard Flow-Through Turbidity Cells



- Rinse water introduced through the top, sucked out through fixed straw
- Particles can remain in suspension within the cell
- In some cases, extra pumps are required for rinsing.
- Requires significant volume and time
- More potential for requiring user intervention

For further details, please contact the MANTECH technical team at support@mantech-inc.com.