

Test Suspension for FReTA

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Introduction

An experiment was performed to validate the quiescent settling column in the FReTA apparatus. The tube floc team chose to design a small experimental apparatus that validates the workability of FReTA. The basic idea of this study was to compare experimental settling velocities from a simple settling column to theoretical velocities. By verifying that the experimental values were similar to those of the predicted, already validated values, the accuracy of the values measured by FReTA could solidified.

Materials and Methods

Since this is a validation test, the team desires to acquire very accurate data by creating a simple apparatus with low possibility of error and high efficiency of collecting necessary information. The apparatus will consist of a loop that will be directly connected to the ball valve and effluent turbidimeter. No flocculation will be done; this experiment will solely focus on the accuracy of FReTA's ability to measure correct turbidity values. With the use of Process Controller and MathCad, the retrieved data will be analyzed and compared. The following links show more details on the specific apparatus and methods team has used:

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[Experimental Apparatus](#)

* [Data Acquisition \(Particle Beads\)](#)

[Results and Discussion](#)