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Protocol for Emulate Organ-Chips:

Effluent Volume Measurement

April 3, 2019

EP125 v1.0

TITLE Effluent Volume Measurement	DOCUMENT EP125	VERSION 1.0
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Goals:	Key Steps:	Other Required Materials:
Measure the effluent volume from Pod™ reservoirs	<ul style="list-style-type: none"> • Weigh samples • Weight conversion to volume 	<ul style="list-style-type: none"> • Eppendorf® tubes • Analytical scale • P1000 pipette and sterile tips • Ice bucket and ice • Wipes

1. Method

Note: Calibrate analytical scale before use.

1. Collect chip effluent samples according to Protocol EP124 Effluent Sampling. Immediately store samples on ice if needed.
2. Weigh each tube individually. If samples were stored on ice, transfer collected samples while they are still on ice to the weigh station. Wipe away excess ice and water from the exterior of the tube prior to weighing. Record the weight of each tube in grams (g).
3. Subtract the average weight of an empty Eppendorf tube from the recorded values to obtain the net weight of the collected samples. (Obtain average Eppendorf tube weight by averaging the weight of 3 empty Eppendorf tubes.)
4. Using a 1 g = 1 mL correlation, convert the net weight of each tube to the volume of sample collected (i.e., 500 mg = 500 μ L) for Organ-Chip media.
 - a. If the cell culture media used are significantly more or less dense than standard media, we recommend establishing a weight-to-volume standard curve for the specific media and applying it to the net weights of the collected samples.
5. Analyze samples using method of choice, or store samples in a labeled box at the appropriate temperature.

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