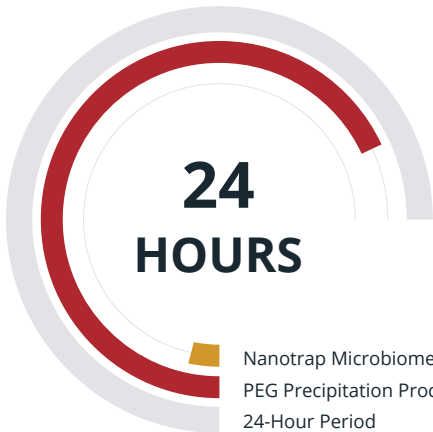


The WBE Smackdown!

We put two wastewater-based epidemiology methods head-to-head to see which is the fastest, most efficient way to capture and concentrate microorganisms from your complex samples.

[Ceres Nanotrap® Microbiome Particles](#) streamline your sample processing protocol -- capture and concentrate 24 samples in only 42.5 minutes (manual). PEG precipitation can take up to 21 hours!

The clear winner of this smackdown in the lab is Nanotrap Microbiome Particles!




Nanotrap Microbiome Particles Procedure

(Streck IFU Manual Procedure)

Procedure Steps	Time Involved
Pipette 10 mL of wastewater sample from the wastewater bottle into a clean 15 mL conical tube.	5 minutes
Add Nanotrap Microbiome Particles and Enhancement Reagent (optional).	5 minutes
Incubate samples with Nanotrap Microbiome Particles at room temperature for 10 minutes. Invert 2-3 times to mix the particles at the 5-minute mark.	10 minutes
Place samples onto a magnetic rack compatible with 15 mL conical tubes. Allow time to separate Nanotrap Microbiome Particles from the sample.	10 minutes
Using a pipette, discard the supernatant carefully without disturbing the Nanotrap Microbiome Particle pellet.	4 minutes
Add 1mL of molecular grade water to the tube and resuspend the Nanotrap Microbiome Particle pellet using a pipette.	2 minutes
Transfer the Nanotrap Microbiome Particles and the molecular grade water to a clean 1.5 mL microcentrifuge tube.	3 minutes
Use a magnetic rack compatible with 1.5 mL tubes to separate the Nanotrap Microbiome Particles from the sample.	1.5 minutes
Use a pipette to discard the supernatant without disturbing the pellet.	2 minutes
Pellet containing captured and concentrated intact microorganisms ready for nucleic acid extraction and purification or storage at -80 °C.	Process Complete

Total Time:	42.5 minutes
Automated Sample Processing Option	YES



PEG Precipitation Procedure

(Borchardt et. al. 2017)

Procedure Steps	Time Involved
Transfer 100 mL of wastewater sample into a clean bottle. Add MB Grade PEG and 0.2M NaCl2.	20 minutes
Mix samples at 4 °C.	2 hours
Precipitate samples at 4 °C.	16 hours
Centrifuge samples at 4700 xg for 45 minutes at 4 °C.	45 minutes for each 8-sample batch 24 samples equals 3 batches 3 x 45 minutes = 2 hours 15 minutes
Remove supernatant from the sample pellet using a pipette.	5 minutes for each batch = 15 Minutes
Resuspend pellet in the remaining liquid.	3 minutes
Transfer pellets to a clean 1.5 mL microcentrifuge tube.	3 minutes
Pellet containing captured microorganism fragments ready for nucleic acid extraction and purification or storage at -80 °C.	Process Complete

Total Time:	20 hours 56 minutes
Automated Sample Processing Option	NO



For Research Use Only. Not for use in diagnostic procedures.