

Sampling Protocol

Case 1: Send mixed liquor samples within 12 hours after sampling

In short, please i) complete the sampling data sheet, ii) take 3 mixed liquor samples from the **aerobic zone** of one aeration tank in a plant using activated sludge process*, iii) and send all samples back with frozen ice packs.

Detail procedures

1. Preparation before sampling:

- (1) Freeze the ice packs (provided) in your freezer (-20°C is ideal) before use.
- (2) Fill the Sampling Data Sheet (provided) as fully as possible.
** You may also complete the Data Sheet and email to us after sending back samples. Because timing is important for mixed liquor samples.*
- (3) Please plan to take samples and send them back on Monday or Tuesday or Wednesday.
- (4) Schedule FedEx to **ensure the samples can be sent within 12 hours after sampling.**
- (5) Take the foam box with frozen ice packs, Sampling Data Sheet, 50-ml tubes in plastic bags, sampler, a wash bottle containing clean water, gloves, pen and marker pen (tools provided except the wash bottle).

2. Sampling:

- (6) Figure out sampling positions.
Typical sampling positions in an aeration tank are at the front, the middle and the end part of aerobic zone. If you can only reach one position of a tank, please take 3 sequential samples with 30-min interval.
- (7) Wear gloves. Take out a 50-ml tube with proper label of this position (provided). You may write a new label if necessary.
- (8) Rinse the sampler by mixed liquor at the position. Take at least 1 liter mixed liquor.
- (9) Shake or stir this 1-L mixed liquor and then transfer 40~50 ml to the tube.
- (10) Cap the tube tightly, put it back into plastic bag, chill in the foam box with ice packs, and cap the box. Wash the sampler by clean water.
- (11) Fill the sampling information in Sampling Data Sheet (provided).
- (12) Go to next position and repeat step (7)~(11).

3. Packing and shipping:

- (13) Check the foam box, ensure the samples surrounded by paper towel and ice packs. Put one ice pack on the top of the samples.
- (14) Seal the foam box by tape. Pack the foam box and files into the outer packaging.
- (15) Paste “Refrigerate Label” on one side of the outer packaging.
Keep the package in cool place before shipping.
- (16) Send by FedEx using the “FedEx US Airbill” we provided (we will pay ☺).
Remind the courier it is an overnight shipping. Let us know by email or phone call.

Thank you very much! Please feel free to contact us if you have any questions.

Name: Daliang Ning

Phone: 405 651 5322

Email: ningdaliang@ou.edu

* You may confirm the number of samples with us before sampling. Our objective is to collect at least 3 samples per plant and at least 12 samples per site (large city or region).

#	Materials in the sampling kit we provide	Number
1	FedEx US Airbill for shipping to Oklahoma University	1
2	Refrigerate Label	2
3	Sampling Protocol	1 Page
4	Sampling Data Sheet	_____copies
5	Notes about process type in sampling data sheet	1 Page
6	Example 1 of completed Sampling Data Sheet	1 Piece
7	Example 2 of completed Sampling Data Sheet	1 Piece
8	Labeled tubes in sealed plastic bags	_____prep.
9	Additional tubes in sealed plastic bags	_____prep.
10	Additional sealed plastic bags	_____
11	Marker pen	1
12	Pen	1
13	Gloves	_____ pairs
14	Ice packs	_____
15	Foam box	1
16	Paper towel as absorbent materials	/

Other necessary tools not provided in this kit:

1. Wash bottle (to wash the sampler)
2. Tape (to seal the package)
3. Sampler (a plant usually has samplers. if not, you can use a 1-L bottle with 15-foot rope as a sampler)
4. Other protective supplies (a plant may require and provide, e.g. hard hat)