



PantaRei
water solutions

Analytical method for the determination of MLSS and MLVSS

Procedure to be followed using the
instruments already present in your
laboratory



Determination of MLSS

- 0) Set the temperature of the muffle at 105°C;
- 1) Weight the blank filter and take note (**M₀**) [mg];
- 2) Filter 25 ml of sample and take note of the volume (**V**) used [ml];
- 3) Take the filter (after filtration) and put it in the muffle at 105°C for 2h;
- 4) Let the dried filter for 15 min at room temperature;
- 5) Weight the filter after dehydration and take note (**M₁**) [mg];
- 6) Calculate the MLSS by the following formula.

$$\text{MLSS} = \frac{(M_1 - M_0) \times 1000}{V} \quad [\text{mg/L}] - \text{Equation 1}$$



Filters



Analytical balance



Muffle

Determination of MLVSS

- 0) Set the temperature of the muffle at 550°C;
- 1) Put the filter after dehydration (M1) into the crucible;
- 2) Weight the crucible+filter and take note (**M2**) [mg];
- 3) Put (M2) into the muffle at 550°C for 1h;
- 4) After 1h take out the crucible and let it cooling for 30 min at room temperature;
- 5) Weight the crucible after incineration and take note (**M3**) [mg];
- 6) Calculate the MLVSS by the following formula.

$$\text{MLVSS} = \frac{(M_2 - M_3) \times 1000}{V} \quad [\text{mg/L}] - \text{Equation 2}$$



Crucible



Muffle



Analytical balance



How to take note

Samples	MLSS (105°C - 2h)				MLVSS (550°C - 1h)		
	Weight blank filter (M0)	Sample Volume (V)	Weight filter after dehydration (M1)	MLSS concentration Equation 1	Weight crucible+filter (M2)	Weight crucible after incineration (M3)	MLVSS concentration Equation 2
	[mg]	[ml]	[mg]	[mg/l]	[mg]	[mg]	[mg/l]
Oxidation tank							
Return sludge							

If your balance weight value is in grams, multiply the results x 1000 in order to obtain mg



Best regards

