- Analysis
- Teaching
- Experimentation

		IHE DELFT	eawag					CSE	ENPHO	2iE		UTEC	INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD
8.6	**CHEMICIAL AND PHYSICO-CHEMICAL PROPERTIES**												
8.6.1	**Solids and moisture content**												
8.6.1.1	Total solids and moisture content - volumetric and gravimetric method by oven drying	■	■	■	■	■	■	■	■	■	■	■	■
8.6.1.2	Volatile and fixed solids - ignition method	■	■		■	■	■		■	■	■	■	■
8.6.1.3	Total suspended solids and total dissolved solids - oven-drying method	■	■	■	■	■	■	■	■	■	■	■	■
8.6.1.4	Volatile suspended solids - ignition method	■	■	■	■	■	■		■	■	■	■	■
8.6.1.5	Total solids and moisture content - thermal balance (moisture analyser) method				■	■	■						■
8.6.1.6	Sand content	■	■				■					■	■
8.6.2	**Chemical oxygen demand (COD)**												
8.6.2.1	Chemical oxygen demand - closed reflux spectrophotometric method	■	■	■	■	■	■	■		■	■	■	■
8.6.2.2	Chemical oxygen demand - closed reflux titrimetric method				■	■	■		■		■		■
8.6.3	**Fat and fibre**												
8.6.3.1	Crude fat - Soxhlet extraction method	■	■				■				■		
8.6.3.2	Crude fibre - filtration method	■					■						
8.6.4	**Nitrogen**												
8.6.4.1	Total nitrogen - spectrophotometric method	■	■	■	■	■	■			■		■	■
8.6.4.2	Ammonium - colorimetric (test strip method)		■		■		■						■
8.6.4.3	Ammonium - phenate spectrophotometric method	■	■		■	■	■		■	■	■	■	■
8.6.4.4	Ammonia - distillation and titration method			■	■	■	■	■		■	■		■
8.6.4.5	Nitrite - colorimetric (test strip method)		■		■		■						■
8.6.4.6	Nitrite - spectrophotometric method	■	■	■	■	■	■		■	■	■	■	■
8.6.4.7	Nitrate - colorimetric (test strip) method		■		■		■						■
8.6.4.8	Nitrate - cadmium reduction spectrophotometric method	■	■	■	■	■	■			■	■	■	■
8.6.4.9	Total Kjeldahl nitrogen - distillation and titration method			■	■	■	■	■	■	■	■	■	
8.6.5	**Phosphorus**												
8.6.5.1	Total phosphorus and orthophosphate - spectrophotometric method	■	■	■	■	■	■	■	■	■	■	■	■
8.6.5.2	Orthophosphate - colorimetric (test strip) method	■	■		■		■				■		■
8.6.6	**pH and electrical conductivity**												
8.6.6.1	pH - electrode method	■	■	■	■	■	■	■	■	■	■	■	■
8.6.6.2	Electrical conductivity - electrode method	■	■	■	■	■	■	■	■	■	■	■	■
8.6.7	**Elemental analysis**												
8.6.7.1	**Metals - overview**												
8.6.7.2	Metals - acid digestion for environmentally available metals	■			■	■	■	■		■	■	■	■
8.6.7.3	Ultimate analysis - total carbon, hydrogen, nitrogen, oxygen, and sulphur				■			■					■
8.6.7.4	Chlorine - colorimetric (test strip) method		■		■		■			■	■		■
8.6.7.5	Chlorine - spectrophotometric method		■	■	■	■	■			■		■	
8.6.7.6	Chloride - colorimetric (test strip) method		■		■		■			■			■
8.6.7.7	Chloride - spectrophotometric method	■	■		■	■	■			■	■	■	
8.6.8	**Colour and turbidity**												
8.6.8.1	Colour - visual comparison method		■		■	■		■			■		■
8.6.8.2	Turbidity - nephelometric method	■	■	■	■	■	■	■	■	■	■		■
8.6.9	**Settleability and dewaterability**												
8.6.9.1	Jar test	■	■			■	■			■	■		■
8.6.9.2	Capillary suction time		■										
8.6.9.3	Water activity				■		■						
8.6.9.4	Sludge volume index	■	■	■	■	■	■		■	■	■		■
8.7	**PHYSICAL PROPERTIES**												
8.7.1	**Physical and mechanical**												
8.7.1.1	Density - mass and volume measurement method	■	■	■	■	■	■	■					■
8.7.1.2	Density - volume displacement method	■	■		■		■						■
8.7.1.3	Particle size - laser light scattering method		■		■								
8.7.1.4	Rheological properties - rheometer method				■								
8.7.1.5	Liquid limits - cone penetrometer method						■						
8.7.1.6	Plastic limits - thread-rolling method						■						
8.7.1.7	Compressibility and stickiness - texture analyser method				■								
8.7.2	**Physical and thermal**												
8.7.2.1	Thermal conductivity - thermal conductivity analyser method				■								
8.7.2.2	Calorific value - bomb calorimeter method	■			■	■	■	■					■
8.8	**BIOLOGICAL PROPERTIES**												
8.8.1	**Pathogens**												
8.8.1.1	*E. coli* and total coliforms - colony forming unit method	■	■		■	■	■	■	■	■	■	■	■
8.8.1.2	*E. coli*, faecal coliforms, and total coliforms - most probable			■	■	■	■	■		■	■		
8.8.1.3	Bacteriophage - plaque assay method			■	■		■			■			
8.8.1.4	Helminths - microscopy method			■	■	■	■	■	■	■			■