Sustainability
in commercial laundering processes

Module 1
Usage of water

Chapter 7

Glossary: Important parameters

Important parameters

AOX	**A**dsorbable **o**rganic halogen (**X**) compounds in waste water in mg/l (halogens are chloride, iodine and bromine. Chlorine is the most important element of these regarding waste water)
BOD	**B**iological **O**xygen **D**emand, indication of pollution load in water susceptible to biological degradation, expressed in oxygen consumption per litre water
BOD_5	**B**iological **O**xygen demand of waste water, indication of pollution load in water susceptible to biological degradation, expressed in the oxygen consumption per litre water in 5 days under standard conditions

Important parameters

COD — **C**hemical **O**xygen **D**emand, indication of pollution load in water susceptible to chemical oxidation, expressed in the oxygen consumption per litre water necessary to achieve this degradation*

- COD is equal to or larger than the BOD. The difference between COD and BOD is an indication of the part of the pollution load which is not biodegradable.
- The quotient of COD and BOD is a measure for biodegradability. This quotient often appears in limiting values

Important parameters

Conductivity	Electrical conductivity, indication of the salt concentration in the water, in mS (Siemens)/cm (usage of a special measuring device)
EW	Einwohnerwert, German unit for the pollution level and the volume of the waste water

Important parameters

Heavy metals	Heavy metals are e.g. cadmium, arsenic,copper and zinc. In soil and water, they are harmful pollutants. They are present in human and animal waste water. In laundering processes: especially heavily soiled work-wear contains heavy metals. Once in the environment, it is nearly impossible to get rid of them because they do not decompose.
Kjeldahl Nitrogen	Nitrogen concentration in the water determined by the Kjeldahl analysis method, in mg/l

Important parameters

MW	Molecular weight in g/mol
NTU	Nephelometric Turbidity Units, unit in which the turbidity of the waste water is expressed
pH	Acidity of the water; pH 7 = neutral pH <7 = acid pH >7 = alkaline

Important parameters

SDI	Silt Density Index, membrane fouling potential of the suspended solids
Settleable solids/ Suspended solids/ Settling agents	Particulate inorganic and organic material contained in water. Together water and settleable solids are a suspension. In sewage treatment plant, they get separated from the water by gravity. This procedure is located in a sedimentation tank and/or sand traps. Method of identification: „Imhoff-funnel, 30 minutes time. Settleable solids can also load waste water because agents may partly dissolve

Important parameters

TSS	Total suspended Solids in the waste water, suspended means non-dissolved particles
Water hardness	Hardness of water is caused by dissolved inorganic salts, particularly carbonates, sulphates and chlorides of calcium and magnesium. Hardness is usually expressed in mmol/l Water hardness table see chapter 2
WW	Waste water
WWTP	Waste water treatment plant