Abstract

A Testing System

A testing system for continuous sampling and testing of effluent at a water treatment plant, the system comprising: a sampling system to collect samples of the effluent; a monitoring system connected to the sampling system, for measuring environmental parameters of the samples, the monitoring system comprising: a first analysis chamber for measuring environmental parameters of at least two selected from the group consisting of: pH, oxidation reduction potential (ORP) value for state of reduction oxidation (Redox), conductivity value for total dissolved solids (TDS), dissolved oxygen (DO), turbidity (Tu) value for suspended solid (SS) and temperature (T); a second analysis chamber for measuring the concentration of anions in the samples using a plurality of ion selective electrodes (ISEs); and a third analysis chamber for measuring the concentration of heavy metals in the samples using anode stripping voltammetry (ASV); and a control system to control the collection of samples by the sampling system, to control washing and rinsing of the analysis chambers, and to record the measurements obtained by the monitoring system.

Figure 1