

Activated sludge process (ASP) is a type of biological wastewater treatment process for treating sewage or industrial wastewaters using aeration and a biological floc composed of bacteria and protozoa. Different boundary conditions, such as the hydraulic residence time (HRT) in the aeration tank, which is defined as the aeration tank volume divided by the flow rate, control the removal efficiency. There are many different designs, but in general, all ASP have three main components: an aeration tank that serves as a bio reactor; a settling tank for separating AS solids and treated waste water; and a return activated sludge (RAS) equipment that transfers settled AS from the clarifier to the aeration tank's influent.