

A method and apparatus for treating waste material to remove selected components from the waste is described using a reactor or a series of reactors in fluid communication with each other for receiving the waste to be treated as influent. The influent forms a biomass including the waste and microorganisms and is treated by controlling the metabolic activity of the microorganisms by monitoring the oxygen utilisation rate or the potential oxygen utilisation rate of the biomass so as to determine the required amount of oxygen to be supplied to the biomass and to determine the period of aeration of the biomass in order to maintain a predetermined oxygen utilisation rate or value so as to remove the selected components of the waste. The preferred selected components to be removed are nitrogenous, carbonaceous and/or biological phosphorus containing materials or derivatives.