

The MBBR process development has been based upon the main gathering concept in one system, the optimal AS properties and processes of the bio-film, and the elimination of the unwanted properties of every one of the processes [11]. Unlike the majority of the bio-film reactors, the MBBR utilizes all effective reactor volume for microbial growth, which offers a number of the benefits compared to its competitors. As a result, the biofilm-based processes can exhibit a higher capacity for the volumetric treatment; in other words, they have the ability to treat the same waste-water amount in a smaller volume.