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ASSESSING THE DIFFERENT DOSAGE OF COAGULANTS IN THE TEXTILE INDUSTRY WASTEWATER

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1. INTRODUCTION

Industrialization and sustainable development are needed in developing as well as developed countries. The textile industry along with other industries is one of the major industries in India. To production, it is considered as the second-largest producer in the world after china and wastewater from the textile industry has significantly increased in recent days, making it one of the major pollution worldwide **[Freitas et al., 2015; Hirendrasinh Padhiyar et al., 2020]**. Every one of the processes involved in the textile industry consumes large quantities of water along with several chemicals. The range of water consumption during production is 100-200 liter/kg **[Juliana Dotto et al., 2018]**. The main environmental concern in the textile industry is discharging the unwanted chemical load like surfactants, fine starch particles, organic dyes, chlorinated compounds, oxidizing agents, dispersing agents, fixing agent, smoothing agents, salts and some additives **[Hirendrasinh Padhiyar et al., 2020, Juliana Dotto et al., 2018]**. As far as this, a significant number of treatment processes has been developed for removal or destruction. Amongst, some well-proven methods are chemical precipitation, coagulation, adsorption, ion exchange, flotation, membrane filtration, coagulation/flocculation and advanced oxidation process **[Hans Kristianto et. al., 2018; Hirendrasinh Padhiyar et al., 2020]**.

Coagulation - flocculation is widely used most promising and practicing technologies for wastewater treatment on an industrial scale **[Aminu et. al., 2014; Freitas et. al., 2015; Liakos and Lazaridis, 2014]**. In the coagulation-flocculation process, the selection of coagulant plays a vital role in contaminant removal. Two categories of coagulants are developed so far, including organic and inorganic. Iron and aluminum salts were mainly used as an inorganic coagulant in textile wastewater treatment. But, large quantities of toxic sludge are produced from an inorganic coagulant and, which affects the pH of treated water **[Huang et. al., 2014; Liang et. al., 2014]**. Moreover, aluminum contributes to Alzheimer's disease according to **Huang et. al., 2014 and Lau et. al., 2014**. Due to these problems by inorganic coagulants, organic coagulants have received particular interest in textile

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