



**4.86%** PLAGIARISM  
APPROXIMATELY

**0.28%** IN QUOTES 

## Report #12592325

**INTRODUCTION** Research Background Plastic is made of few derivative compounds from petrochemical that is synthetically making by using monomer and adding few chemical agents to shaping it into long polymer chains (Shimao, 2001). Plastic is suitable for many products and has so many functions in daily life because it has suitable characteristics such as light-weight, cheap, reliable, and durable. Plastic is also suitable for industrial production because it is fluid, moldable, easy to print, and heat sealable. It can be integrated into production processes from the molding package, filled, and sealed all in the same production line (Marsh & Bugusu, 2007). Food packaging has a crucial function to preserve, protect, promotion media, and food distribution process. Food packaging comes in two main shapes according to their purpose: rigid packaging (wood boxes, glass, plastic bottles, cans, tins) and flexible packaging (plastic films, papers, and foil) (Raheem, 2012). According to data from World Count (2020), the total amount of plastic waste entered the ocean is around 8.798.208 tons. The floating plastic waste in the ocean already makes a "floating plastic island," which covered up to 2,531,819,106 km<sup>2</sup>. This data keeps growing up every second, meaning the plastic pollution in the environment is getting worse every second. There are three current methods to manage plastic waste, i.e.