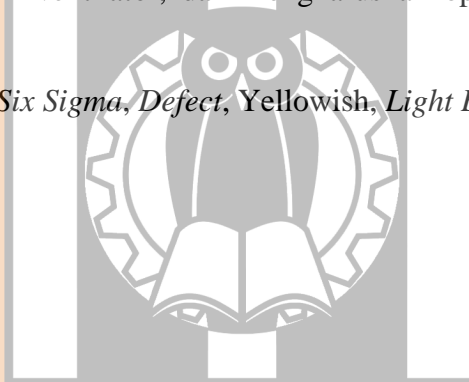


## ABSTRAK

PT. Tridi Oasis Group merupakan perusahaan yang memproduksi *flakes* atau serpihan Polyethylene Terephthalate daur ulang atau *recycled* PET yang bersumber dari sampah botol plastik PET. Salah satu dari tiga produk yang dihasilkan oleh PT. Tridi Oasis Group adalah *light blue flakes* rPET. Pada proses produksi *light blue flakes* rPET ditemukan berbagai macam permasalahan sehingga menyebabkan terjadinya *defect* produk. Berdasarkan data yang diperoleh, pada bulan Januari 2020 - Desember 2020 produk *light blue flakes* rPET memiliki tingkat *defect* sebesar 12% dari total produksi. Berdasarkan hal tersebut, maka dilakukan penelitian yang bertujuan untuk memberikan usulan perbaikan untuk mengurangi jumlah cacat produk *light blue flakes* rPET. Berdasarkan hasil penelitian diketahui bahwa jenis *defect* yang paling sering terjadi adalah Yellowish dengan persentase sebesar 77,7%, nilai DPMO sebesar 24.659,415 dan nilai sigma sebesar 3,466. Diketahui juga penyebab terjadinya *defect* Yellowish terdiri dari lima jenis faktor yaitu faktor manusia, material, metode, mesin, dan lingkungan. Kemudian rekomendasi perbaikan yang diusulkan adalah membuat *color chart*, membuat proses tambahan yaitu *pre washing*, melakukan pengecekan kondisi botol dan *flakes* di beberapa proses, waktu perebusan dilakukan sesuai SOP yaitu 15 menit, memaksimalkan pelatihan kepada operator baru, melakukan pelatihan lanjutan kepada operator input dan operator sortir botol, menambah waktu *maintenance* mesin *hotwash*, menambah jumlah turbin ventilator, dan mengharuskan operator menggunakan *earplug*.

**Kata Kunci :** Kualitas, *Six Sigma*, *Defect*, Yellowish, *Light Blue Flakes* rPET



## **ABSTRACT**

*PT. Tridi Oasis Group is a company that produces recycled PET flakes or Polyethylene Terephthalate flakes sourced from PET plastic bottle waste. One of the three products produced by PT. Tridi Oasis Group is a light blue flakes rPET. In the production process of light blue flakes rPET found various kinds of problems that cause product defects. Based on the data obtained, in January 2020 - December 2020 the rPET light blue flakes product had 12% defect rate of the total production. Based on this, a research was conducted that aims to provide suggestions for improvements to reduce the number of defects in the light blue flakes rPET product. Based on the results of the study, it is known that the type of defect that most often occurs is Yellowish with the percentage is 77.7%, DPMO value is 24,659,415 and sigma value is 3,466. It is also known that the causes of Yellowish defects consist of five types of factors, namely human factors, materials, methods, machines, and the environment. Then the recommendations for improvement proposed are making a color chart, making additional processes, namely pre washing, checking the condition of bottles and flakes in several processes, boiling time is carried out according to the SOP, which is 15 minutes, maximizing training for new operators, conducting advanced training to input operators and sorting bottles operators, increasing maintenance time of hotwash machine, increasing the number of turbine ventilators, and requiring operators to use earplugs.*

**Keywords:** *Quality, Six Sigma, Defect, Yellowish, Light Blue Flakes rPET*

