

## ABSTRAK

Tujuan dari penelitian ini adalah untuk mengidentifikasi faktor-faktor penyebab cacat produk dan memberikan usulan perbaikan dengan menggunakan metode *Six Sigma* melalui tahapan DMAIC (*Define, Measure, Analyze, Improve* dan *Control*). Serta menentukan faktor penyebab kerusakan produk menggunakan Diagram Sebab-Akibat (*Fishbone Diagram*). Berdasarkan hasil perhitungan analisa cacat produk *Lauric Acid* periode Januari sampai Desember 2022 ditemukan jenis cacat kontaminasi 16.310,28 ton dan cacat tingginya kadar air 1749,28 ton sehingga di dapat nilai *Defect Per Million Oppurtinities* (DPMO) 275.015,6 dengan nilai Sigma 3,50. Setelah melakukan tahapan analisa menggunakan *Fishbone Diagram* ditemukan faktor penyebab kerusakan produk antara lain mesin, metode, bahan baku dan manusia. Dari segi usulan perbaikan untuk meminimalisir cacat produk maka perusahaan harus melakukan overhaul setiap tahunnya, mengadakan training untuk operator yang bekerja, melakukan *drain* air untuk tangki *feed* dan mengontrol *plant* sesuai kapasitasnya.

**Kata Kunci :** Kualitas, Six sigma, DMAIC, Diagram Sebab-Akibat

## **ABSTRACT**

*The purpose of this study is to identify the factors that cause product defects and provide suggestions for improvement using the six sigma method through the DMAIC (Define, Measure, Analyze, Improve and Control) stages. As well as determining the factors that cause product damage using a cause-and-effect diagram (Fishbone Diagram). Based on the results of the analysis of defects in Lauric Acid products for the period from January to December 2022, 16.310,28 tons of contamination defects were found and 1749,28 tons of high moisture content defects resulted in a Defect Per Million Opportunities (DPMO) value of 275.015,6 with a Sigma value of 3,50. After carrying out the analysis stages using a Fishbone Diagram, it was found that the factors causing product damage included machinery, methods, raw materials and people. In terms of proposed improvements to minimize product defects, the company must carry out an overhaul every year, conduct training for working operators, drain water for the feed tank and control the plant according to its capacity.*

**Keywords : Quality, Six sigma, DMAIC, Fishbone Diagram**