Industrial Research Project Title	Improvement of Shampoo Viscosity in Mixing Process using Statistical Technique
Industrial Research Project Credits	6
Candidate	Miss Kultida Chunkoa
Supervisors	Dr. Suksan Prombanpong
	Mr. Charoen Soontravanich
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Abstract

The purpose of this project is to improve quality of shampoo in mixing process by employing a quality management and statistical technique. The major problems affecting in mixing process are identified and analyzed by using statistical method. This work focuses on shampoo viscosity, and its improvement, particularly a reduction in variation that affected the viscosity, occurring in the processes. The procedures of this work are initially to study a present situation for analyzing the performance of the process. The method and parameters of the mixing processes are subsequently studied. The brainstorming method is employed to analyze all possible defects by using the cause and effect diagram. All causes relating to viscosity are further studied by using the failure mode and effect analysis (FMEA), for finding the serious causes, those are, ratio of oil (%USOM) in detergent, percentage dosing of foam booster, and percentage adding of brine. The hypothesis test and experimental design have been used to test these factors. Results shown that 3 investigated factors are significant. In conclusion, the relationship between these factors is presented in the viscosity equation. Various values of these factors have been represented in the viscosity equation. The viscosity approximately 4500 – 5500 cps. will be acceptable. These results will be used as a guideline to improve and control system for increasing the right first time value (RFT).