# **Procter & Gamble - Wikipediabusiness recommendation report**

## Proctor & Gamble

## Executive summary

With complaints about the color tone regarding the Koleston Red (#54.7) product, the Hair Color team started a testing analysis to understand the source of the issue. Through sampling, the team concluded that only batch 36H401 would be recalled. This decision is made due to the high variation of Ceteareth-25 content in a specific batch and recalling only one batch conveys P&G's quality control and brand image.

## Analysis

A random sample selection has been made for each batch to verify whether the Cet-25 content in each product would be substantially large enough for the color to change to black instead of red (threshold 55.7 ml/L of Cet-25). After collecting the data, it's possible to conclude with 99.7% confidence level that the lower and upper bound of Cet-25 content limits are 51.67ml/L - 54.49ml/L.

The random sampling of 285 products from 12 different batches for the Cet-25 content concluded there 96.5% are within the bounds for valid Koleston Red #54.7 color. While testing 35 samples from the batches with complaints, a smaller sample size from all other batches in the quarantine room was tested to be proactive and avoid future issues. Based on statistical evidence, the team recalled only one batch: 36H401 (Appendix A). This batch found 6 out of the 35 samples (17.14%) above 54.49 ml/L Cet-25 content limit (Appendix B).

## RECOMMENDATION

There are not enough outliers or customer complaints in other batches to make a recall intervention. The cost of reputational damage would be too high if we were to recall every batch with an outlier above 55ml/L Ceteareth-25, besides the financial implications. Furthermore, it's important to consider that color tone can be affected by other variables, such as "the type of hair and shampoo and other hair products they use."

While P&G has more significant concerns with brand image and corporate responsibility due to its market size, not all companies have such high stakes. For instance, E-cigarettes have health issues due to physical harm to people, so it would be recommended to be even more careful with their decisions. In addition, the E-cigarette companies voluntarily chose not to recall the batches they were having issues with, which significantly damaged their brand reputation and product safety.

While products may have defects in manufacturing, companies should take steps to minimize and avoid the weaknesses. Using the threshold of 3 standard deviations away from the sample mean, it's guaranteed that 99.7% of the products result in red #54.7 color as labeled on the packaging; even with the upper limit of 54.49ml/L of Cet-25, it is still lower than the black color content of 55.7ml/L, ensuring product quality for the consumers.

## mARKETING CALL OF ACTION

As a leading corporation, P&G must act responsibly to safeguard the company's reputation and customer confidence. First, it is imperative to cover legal aspects and regulations by following all protocols and reporting to the Consumer Rights Agency the recall of batch 36H401 as early as possible. Sending a press release explaining the decision to our customers and sharing all the information for further steps on the company's social media. Finally, creating a landing page exclusively for this matter is important. Customers who bought the Koleston #54.7 from the 36H401 batch can quickly contact customer support through toll-free numbers, live chat, email, or submit a photo with details. All affected customers will receive a free product replacement and a discount code for hair color products used in physical stores or online.

## Appendix

**Appendix A**

Chart, line chart

Description automatically generated

**Appendix B**

Key Findings:

Product concerned: Koleston Red (#54.7)

Batches reported with issue: 36H401, 37A124, 42V425

Batches tested: All

Lower and Upper Bounds:

1. All batches: 51.67ml - 54.49ml
2. 36H401: 50.82ml - 55.99ml
3. 37A124: 52.33ml - 53.64ml
4. 42V425: 52.17ml - 53.71ml

Decision: Recall only 36H401 Batch