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Application of Attribute Control Charts for Analyzing Audit Reports for a Quality Certification Laboratory in Textiles

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Abstract: The attribute control charts allow knowing if one process is under statistical control with discrete characteristics (quantity of errors); in this case of study we will analyze the defects found during the audits performed by the quality department to the reports emitted by a certified laboratory in textiles. These errors affect the customer satisfaction, depending on the finding type, since a typo mistake to the acceptance of a rejected test or vice versa, which will produce disconformities in the use of the clothes and therefore result on legal complaints by the final customer, who belongs to the American market. The maximum allowed is one error by report, the quality assurance department since three months ago started an audit program for the reports to verify the quantity of errors found, the results show that on average there are 2.15 errors by report. This article intends to carry out an analysis of the application of attribute control charts to the laboratory with the object to determine if the process is under statistical control and if it is not, to find the special causes and eliminate them in order to comply with the indicator. The final objective is to search for continuous improvement.

Keywords: Attribute control charts, KPI and vendor