

STATISTICAL PROCESS CONTROL TOOL (SPCAID)

Document Location: Process Control, QC in-line, on-line and off-line process control

Alternate Name: SPCAID Excel Tool

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Overview

This document is a worksheet which can assist with Statistical Process Control (SPC). This worksheet is intended to provide a basic description of SPC application, including the use of control charts, process capability (C_p , C_{pk}), and process performance metrics. The SOP worksheet in this Excel tool will additionally provide instructions for entering test and inspection data into this Excel tool, editing/formatting control charts, and performing data analysis. This Excel tool primarily uses a form of SPC known as the control chart. Control charts plot the average value of a process output over time. By adding control limits that are created based on the standard deviation of those values, it can be determined whether a non-random value or pattern of values exist.

This tool provides statistical determination of process capability (C_p , C_{pk} , etc.), histograms to allow visualization of the distribution of sample values, and various process performance metrics. Furthermore, this Excel tool also contains descriptions of different chart types with different forms of sample data. Overall, this tool is intended to be a tool for SPC and can be

implemented within production processes for real-time analytics and identification of out-of-control packaging processes, increased productivity, and operational efficiency.

Link to Document

<https://docs.google.com/spreadsheets/d/1kGcMAUcIO10EsjcWkvV5F3-7fvaSQFLN/edit?usp=sharing&ouid=100998878154644642611&rtpof=true&sd=true>