# Bacteria "Colonalyzer"

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## Abstract

Bacteria "Colonalyzer" is a digital raster graphic analyzer that computes the population density of bacteria colonies on a petri dish. The system uses a raster scanner to scan the bacterial sample and generate a high resolution image for display on the screen. The high resolution image, comprising of different colored regions, is then analyzed by the system to display a count of the bacteria types represented by the different colors. A direct application of this system is in water testing experiments conducted in remote locations around the world. This system drastically reduces the time spent manually counting the number of bacteria colonies. The user of the system is able to specify the degree of accuracy for the population count. For example, the user can specify the threshold size of ink blob sizes that the "Colonalyzer" should count. The user is also able to specify a region of the filter paper to analyze.