Development of Software for Color Mapping in Microfluidic Microcircuits

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The use of tools for material analysis is widely studied in several areas of science. Its importance is reflected in the results of thousands of exams every day, proving to be paramount for the medical field. Microfluidics is an option for handling very small amounts of fluids. Structures known as microcircuits are responsible for receiving and handling these fluids. The manufacture and measure of effectiveness represent a challenge due to its size scale. The work demonstrated that the analysis by color, can map areas of the microcircuits where the microfluidic are moving, evidencing a new perspective of analysis. During of research was necessary to develop a 3D interface to solve problems as focus, illumination, correct position of cellphone and microcircuit to get a good image of the sample. Using a microfluidic image capture interface, it was possible to obtain images that were analyzed by color mapping software. The analyzes showed characteristics of microfluidic microcircuits that can serve as support in its production process.