Glowing, Glowing, Gone!

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Luminol is a chemical used in forensic science that produces chemiluminescence in the presence of hemoglobin, allowing it to be used to detect blood. Previous studies on luminol have noted possible interference to the luminol test caused by different domestic surfaces. In this study, the reaction of luminol to dried hemoglobin, turnip pulp, bleach and hemoglobin washed with bleach was examined on thirteen different surfaces. Turnip pulp and bleach are known as catalytic substances, meaning that they will react to luminol similarly to hemoglobin. These tests were performed using long exposure photography within a portable dark box. This resulted in 416 images that were then split into blue, green, and red color scales to measure the peak luminance using an arbitrary Gray Scale (0-255). From this data the average, maximum, standard deviation, and statistical error were calculated. The data were then input into Microsoft Excel to use If/Else statements for comparison. This data will be used to develop tools for correct identification of blood on a domestic surface based on luminance values alone.

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