

# Using ImgSeek to Support Pharmacy Students for Pill Identification

Sirikanlaya Benjawan<sup>1</sup>, Verayuth Lertnattee<sup>2\*</sup>

<sup>1</sup>Faculty of Pharmacy, Siam University, Bangkok 10160, Thailand

<sup>2</sup>Faculty of Pharmacy, Silpakorn University, Nakhon Pathom 73000, Thailand

The number of tablets and capsules has been increasing very fast. It is difficult to identify all of them correctly. To support pharmacy students recognize more medicines, we need some tools that have ability of searching by images. The purpose of this study was to investigate the usability of the imgSeek, image processing open source software, for pills (tablets and capsules) identification. The photographs from both sides, i.e., front and back of 100 pairs of different pills were used for investigated. Two experiments were done, i.e., difference on a pair of identical pills and difference on patterns of physical characteristics. For patterns of physical characteristics, differences of color patterns, imprints and scorings are considered. The percentage of similarity and rank of the correct images were collected. The mean/median differences of these values were evaluated by statistical methods with 95% confidence level. The results from both of the percentage of similarity and rank for difference on a pair of identical pills and difference on patterns of physical characteristics were high significantly different ( $p < 0.01$ ). From the results, imgSeek could be applied for tablets and capsules identification. Students should be informed that a long ranked list of pills might be considered especially, a pill with simple physical characteristics.

**Keywords:** Pill Identification; ImgSeek; Physical Characteristics; Image Processing.

---

\*  
Email Address: lertnattee\_v@su.ac.th