

## **Digital approach for gender discrimination from lip prints analysis in Malaysian chinese population (Klang valley)**

### **ABSTRACT**

Human identification plays a crucial role in forensic criminal investigation, but it can be a very complicated task. The analysis of lip print is a new tool for the purpose of identification as lip print is unique to every person. This study was conducted to differentiate gender based on lip print patterns among the Malaysian Chinese population in Klang Valley using scanning on lipstick-cellophane tape technique. 412 subjects from Malaysian Chinese (203 males and 209 females) were selected conveniently. Lip print was lifted using lipstick on cellophane tape technique, scanned and digital images were categorised according to Suzuki and Tsuchihashi's classification. Lip prints were divided into six sections: upper left, upper middle, upper right, lower left, lower middle and lower right. Adobe Photoshop 7.0 was used to analyse the lip print images. Type II was the dominant type in both genders for upper left, upper right, lower right and lower left sections, ranging from 87.2% to 94.6% for males and 70.3% to 90% for females while type IV was found to be the dominant in upper and lower middle sections for both genders, ranging from 69.5% to 70.4% in males and 67% to 70.3% for females. The results of this study may be used as a suggestion in personal identification of the Malaysian Chinese population in forensic science investigations.

**Keyword:** Cheiloscopy; Digital technique; Gender; Malaysian Chinese population; Suzuki and Tsuchihashi