

## Abstract

This paper presents the specific color of the diamond image using the point by compare with the diamond in International Gemological Identification laboratory. In this research study was divided into three steps. The first step took photography in different format of photo. To study the appropriate format can used to identify color of diamonds. From the first step result are the photo are take from side view of diamonds on white paper can be classified the color of diamonds from analyze by the 4 person experts. In the second step divided into five groups as follow 1.Colorless 2.Near colorless 3. Faint yellow or brown 4.Very light yellow or brown 5.Light yellow or brown the research found that the system can be classified correctly to 77 percent compared with the classification of four experts. In the last step divided into 12 groups as follow D, E, F, G, H, I, J, K, M, O, R and X – Y the research found that the system can be classified correctly to 65 percent compared with the classification of four experts. By the second and third step of the research used measure by saturation of the diamonds. The accuracy of the results is the quality of the photos and the method that used to classified the photo. The result of the research found that the system is also able to develop additional capabilities because of the proposed system is only a prototype.