

ABSTRACT

The study is about the trial to be performed in order to test the distinctness (D), uniformity (U), and stability (S) of a new orchid plant, *Dendrobium hybrid* for which the breeder applied for intellectual property rights. The novelties declared as criteria for obtaining the rights are the size and color of its flowers. A comparative design was applied to the test to determine if the candidate variety is different from the reference variety in terms of DUS. The samples of 20 pots of each variety filled with soilless media (coconut bark base), will be randomly selected from the 2-year-old propagated parts of both population and arranged in four rows, with 2 replications of each, under opened shade house with a shade covering of 70 %. The trial was conducted in October 2005 and evaluated in December 2006 on the breeder's land, Samut Sakon province in a manner consistent with the declaration of plant variety protection regulations. Measurements were taken from all trial plants at one time in the mature stage, and two third of the flowers in the first inflorescence were blooming (harvesting period), or approximately one month after the samples were taken. Data was collected according to the guideline on their characteristics: their stems, leaves, and flowers. Afterward, an observation was conducted when the second inflorescence was mature, or approximately one and a half months after the first inflorescence shooting, to investigate the stability of the flowers. All the quantitative data was analyzed using the Statistical Package for Social Science (SPSS) for frequency distribution and mean, and t-test was applied to investigate the growth where appropriate, while the qualitative data was illustrated by descriptive manner. The size and color of the flowers of both candidate and reference varieties are significantly distinct, uniform and stable(DUS). Moreover, it was found that some minor characteristics were clearly distinct on the basis of morphological characters.