

## **ABSTRACT**

The research project was the development of a total polyphenols test kit in teas for commercialization. The present study focused on the development of a color strip that can be used to quantitatively determine the concentration of phenolic compounds in teas. A developed color strip was produced and validated to measure phenolic compounds in a range from 0-25%w/w in teas. The test is performed as the procedure of the invented test kit for total polyphenols in teas. The amount of polyphenols in teas was quantitatively determined by comparing the color intensity to the developed standard color strip. The results obtained from validation studies indicate a fairly precision and accuracy. The developed color strip can be used to approximately determine the content of phenolic compounds. Next, a test kit package was designed and the cost analysis was then evaluated. In a final work, a prototype test kit was invented providing a model test kit for producing in a commercial scale.

**Keywords :** Test kit, Teas, Total polyphenols