Abstract

Anthocyanin is water solublable natural colorant come from flavonoid familia which cause red, blue, violet color and widely spread in plant world. Anthocyanin’s stability is affected by pH, light, metals, reductor oxidator and temperature. Using descriptive statistics, known that the high temperature and reductor adding decrease the stability below 40%. The maximum stability reached using UV is 575.8 Å and 534.04 Å using neon. Metals treatment by giving FeCl₃ reached maximum stability at 631.66 Å, CuSO₄ at 631.36 Å and 668.34 Å for given non-metals treatment. Ascorbat acid strengthen the stability of anthocyanin. Based on experiments, H₂O₂ treatment reach maximum stability at 969.34 Å and 929.78 Å for Na-Thiosulfat treatment. The maximum stability at 72.66 °C is 602.25 Å. The overall stability is reached under acidic condition of buffer solution, that is in range 0.6 – 1.2 and the wave length of spectrofometer between 370 and 720 nm.

Keywords: Anthocyanin’s stability, Factorial design, Ordinary least square method, Stationary point, Ridge analysis.