PENGARUH ASAM SITRAT TERHADAP PERUBAHAN WARNA EKSTRAK BUNGA TELANG (*Clitoria Ternatea L.*)

Muhammad Hanif Pratama
19/442533/PA/19282

INTISARI

Penelitian dengan topik pengaruh asam sitrat terhadap antosianin dalam ekstrak bunga telang telah dilakukan. Alasan topik tersebut dipilih karena potensi antosianin sebagai antioksidan dalam pembuatan produk kosmetik. Produk kosmetik sering ditambahkan senyawa vitamin C yang mengandung asam sitrat untuk menjaga kesehatan kulit. Oleh karena itu, penelitian ini bertujuan untuk mengetahui pengaruh asam sitrat terhadap antosianin dalam ekstrak bunga telang sehingga terjadi perubahan warna.

Metode spektrofotometer ATR-IR dan *UV-Visible* digunakan pada penelitian ini. Ekstrak bunga telang diambil dengan cara maserasi pada suhu kamar dan di tempat yang tidak terkena sinar matahari langsung selama 24 jam. Etanol 75% dan akuades digunakan sebagai pelarut secara terpisah. Setelah itu, larutan ekstrak ditambahkan variasi asam sitrat. Selanjutnya, pH larutan dicek lalu antosianin dianalisis dengan menggunakan spektrofotometer ATR-IR dan *UV-Visible*.

Berdasarkan penelitian, ekstrak bunga telang mengandung antosianin yang bervariasi tergantung pelarut dan tingkat keasaman. Antosianin lebih banyak terekstrak dalam pelarut etanol 75% daripada dalam pelarut akuades. Selain itu, konsentrasi antosianin juga mengalami penurunan seiring dengan penurunan pH terutama dalam pelarut etanol 75%.

Kata kunci : antosianin, asam sitrat, ekstrak bunga telang, spektrofotometer ATR-IT, spektrofotometer *UV-Visible*.

EFFECT OF CITRIC ACID ON THE COLOR CHANGE OF BUTTERFLY PEA FLOWER (Clitoria Ternatea L.) EXTRACT

Muhammad Hanif Pratama
19/442533/PA/19282

ABSTRACT

Research on the topic of the effect of citric acid on anthocyanins in butterfly pea flower extract would be carried out. The reason this topic was chosen was because of the potential of anthocyanins as antioxidants in making cosmetic products. Cosmetic products were often added with vitamin C compounds which contain citric acid to maintain healthy skin. Therefore, this study aimed to determine the effect of citric acid on anthocyanins in butterfly pea flower extract resulting in color changes.

The ATR-IR and UV-Visible spectrophotometer method was used in this research. Butterfly flower extract was taken by maceration at room temperature and in a place that was not exposed to direct sunlight for one day. Ethanol 75% and distilled water were used as solvents separately. Afterward, various amounts of citric acid were added to the extract solution. Next, the pH of the solution was checked and the anthocyanin were analyzed using ATR-IR and UV-Visible spectrophotometer.

Research had shown that butterfly pea flower extract contained anthocyanins, which vary depending on the solvent and acidity level. Higher anthocyanins were extracted in 75% ethanol than in distilled water. Furthermore, anthocyanin concentration were decreased with decreasing pH especially in 75% ethanol.

Keywords: anthocyanin, ATR-IR spectrophotometer, butterfly pea flower extract, citric acid, UV-Visible spectrophotometer.