

Properties of kojic acid and curcumin: assay on cell B16-F1

ABSTRACT

Ultra violet (UV) exposure and oxidative stress are casually linked to skin disorders. They can increase melanin synthesis, proliferation of melanocytes, and hyperpigmentation. It is possible that antioxidants or inhibitors may have a beneficial effect on skin health to reduce hyperpigmentation. In the last few years, a huge number of natural herbal extracts have been tested to reduce hyperpigmentation. The objective of this study was to determine and to compare of kojic acid and curcumin properties to viability cell B16-F1. In this study, our data showed that the viability of cell B16-F1 was 63.91% for kojic acid and 64.12% for curcumin at concentration 100 $\mu\text{g/ml}$. Further investigation assay of antioxidant activities, indicated that IC50 for kojic acid is 63.8 $\mu\text{g/ml}$ and curcumin is 16.05 $\mu\text{g/ml}$. Based on the data, kojic acid and curcumin have potential antioxidant properties to reduce hyperpigmentation with low toxicity effect in cell B16-F1.

Keyword: Antioxidant; Curcumin; Kojic acid; Viability cells B16-F1