

Inhibitory effect of *Morinda citrifolia* L. on lipoprotein lipase activity.

ABSTRACT

Efficacy of *Morinda citrifolia* L. leaf (MLE) and fruit extracts (MFE) in inhibiting lipoprotein lipase (LPL) was determined *in vitro*. The result of the study showed that the highest inhibition on the LPL activity was exhibited by MLE ($66\% \pm 2.1\%$), which is significantly higher than that demonstrated by MFE ($54.5\% \pm 2.5\%$), green tea extract (GTE) ($54.5\% \pm 2.6\%$), and catechin ($43.6\% \pm 6.1\%$). Percent of LPL inhibition increase with concentration of the extracts. Quantitative analysis of the extracts revealed the presence of high levels of (+)-catechin at 63.5 ± 17 and 53.7 ± 5.7 mg/g in MLE and MFE, respectively, although not as high as that found in GTE (530.6 ± 42 mg/g). Appreciable amount of epicatechin was found in all extracts tested, while rutin was only found in MLE and MFE. The study suggested that both leaf and fruit of *M. citrifolia* may be used as antiobesity agents in body weight management.

Keyword: Catechin; Epicatechin; Lipoprotein lipase; *Morinda citrifolia* L.