

ABSTRACT

Cardiovascular diseases (CVDs) are mainly caused by postprandial lipemia (PPL), an increase of triglycerides-rich lipoprotein level in blood between time after a meal. Food consumption containing dietary fiber has been reported to lower blood triglycerides accumulation. Hence, this study aims to understand the effect of soluble non-viscous dietary fiber towards the lipid absorption in the food system using gastrointestinal (GIT) model to mimic the digestion and absorption process of lipids inside the human body. The analysis used a 500 nm spectrophotometer to evaluate the micelles emulsion absorbance of samples with no fiber, WMD, Fiber A, and B during 0, 60, 120, and 180 minutes. The result showed samples with no fiber, Fiber A and B had significant differences between absorbance values over time. Additionally, WMD had the highest absorbance in every time point with 0.46 ± 0.01 , 0.44 ± 0.03 , 0.44 ± 0.00 , and 0.42 ± 0.03 for 0, 60, 120, and 180 minutes, respectively. For the stability, samples with no fiber and WMD resulted in the stable micelles absorbance, compared to Fiber A and B. From these results, samples with WMD obtained the best decrease effect on micelles stability during in-vitro lipid digestion.

Keywords : *Cardiovascular disease, micelles stability, postprandial lipemia, soluble dietary fiber, triglycerides*