

## ABSTRACT

A research on *Lactobacillus casei* (*L. casei*) biomass production was carried out by using nutrient media which were added with carbon sources such as glucose, fructose, lactose, sucrose, and fructo-oligosaccharide with the same concentration of 4%.

The aim of this study to determine carbon sources generated the most optimal growth of the *L. casei*. Effects of carbon sources on *L. casei* growth were observed during 24 hours by total plate count (TPC) and the turbidimetry method.

The results showed that the *L. casei* can grow on all media but gave a different response. On the sucrose media, *L. casei* grow faster and the cells abundance was greater than lactose, glucose, and fructose. The cells amount on the sucrose media were  $33 \times 10^{30}$  cfu/mL, while on the fructose media the *L. casei* grow was lower than other media and the cells abundance were slimmest.

**Keywords:** *Lactobacillus casei*, carbon sources, method of TPC, method of turbidimetri

