

## Pelelehan gula kelapa dan suhu transisi gelas

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### Abstrak

The objective of this research was to reduce coconut sugar melting by enhancing glass transition temperature ( $T_g$ ). Silicone dioxide ( $\text{SiO}_2$ ) and magnesium carbonate ( $\text{MgCO}_3$ ) were added before the coconut sugar was formed. Concentrations of  $\text{SiO}_2$  and  $\text{MgCO}_3$  were 0.5 %, 1.0 %, and 1.5 % respectively. Analysis was conducted for solidification temperature, moisture content, water activity, and glass transition temperature of coconut sugar. In this research, the glass transition temperature of coconut sugar was measured with differential thermal analyzer (DTA). The result showed that the addition of  $\text{SiO}_2$  and  $\text{MgCO}_3$  was not influenced toward moisture content of coconut sugar, but water activity was decreased. The solidification temperature and glass transition temperature were increased. The best coconut sugar was produced by addition of 1.5 %  $\text{SiO}_2$  with solidification temperature  $72.67^\circ\text{C}$ , water activity 0.5, and glass transition temperature  $70.45^\circ\text{C}$ .