Thermography has becoming important in studies of breast tissue lesions including breast cancer. This technique presents advantages as providing non-invasive analyses, low costs, user friendly equipment, short time data collection, and real time monitoring. This work is focused on the improvement of thermographic image contrast by using filtered optical properties from a non-toxic polymeric gel with an optical window range situated approximately at 1000 cm\(^{-1}\). Absorption spectrum of gel was characterized by FT-IR spectroscopy from 4000 to 400 cm\(^{-1}\). An absorption efficiency study \textit{in vitro} was carried out by the analysis of the change in a temperature gradient curve. DSC and TGA were also used to characterize thermal stability and desorption behavior of the gel.

\textbf{Keywords:} Thermography, Gel, Cancer

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