

11th Global Summit on

Food & Beverages

September 22-24, 2016 Las Vegas, USA

Development of *dongchimi* for the elderly by using texture modification technology

Dong June Park, Yong Gi Chun, Bum Keun Kim, Sang Hoon Lee and Chan Eun Park
Korea Food Research Institute, Republic of Korea

In this research, *dongchimi* (one of famous Korean traditional *kimches*) for the elderly was prepared. Generally, it is very hard for the elderly to chew radish (major material to prepare *dongchimi*) due to its high value of hardness (1.5×10^6 – 1.8×10^6 N/m²). Therefore, radish was ground and reconstituted to the size of 2X2X1.5 cm using gelatin as materials for the texture modification. Other ingredients, such as, garlic, ginger, pear, etc. were added and fermented to prepare *dongchimi*. Initial pH of *dongchimi* was around 5.79-5.98. Time to reach optimum pH (around 3.9) was investigated at different fermentation temperature (4°C and 20°C). It was required more time (13 days) to reach optimum pH than control (8 days) at 4°C. However, at 20°C, only 3 days were required to optimum pH regardless of samples. When it comes to hardness, although there were no differences in control (1.8×10^6 N/m²) after fermentation, much lower value was obtained for the reconstituted one (1.6×10^4 N/m²) indicating reconstituted *dongchimi* is suitable for the elderly. In general, universal design food (UDF), available in Japan, classifies processed foods into four groups, such as UDF1, UDF2, UDF3 and UDF4; in which UDF3 and UDF4 are suitable for the elderly for whom it is hard to chew hard foods. Conclusively, various edible materials such as xanthan gum, guar gum, carrageenan, etc. could be used to prepare texture modified foods for the elderly.

Biography

Dong June Park has completed his PhD from Korea University and Post-doctoral studies from New Jersey Institute of Technology. He is the Principal Research Scientist of Korea Food Research Institute, a premier food science organization. He has published more than 50 papers and patents.

djpark@kfri.re.kr

Notes: