Development of hand sanitizer gel containing Artocarpus lakoocha Roxb. heartwood extract and antibacterial activity test.

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Introduction: The objective of this study was to determine antibacterial activity of Artocarpus lakoocha Roxb. heartwood extract in purpose to develop hand sanitizer gel.

Materials and methods: amount and types of gelling agent (Carbopol940 0-2% and Sodium Carboxy Methyl Cellulose (SCMC) 0-2%), Amount of humectant (Glycerin 0-15% and Propylene glycol 0-15%), concentration of Artocarpus lakoocha Roxb. heartwood extract, concentration of ethanol 14.3-42.9% and container types (glass bottle, High and Low density polyethylene (HDPE,LDPE) were varied and Escherichia coli, Staphylococcus epidermidis, Staphylococcus aureus were used to determine antibacterial activity of the extract by agar well diffusion method to determine the proper concentration of the extract should be used in hand sanitizer gel. Concentrations and types of gelling agent, humectant and stability test were determined. Results and conclusion: After satisfaction questionnaire could be concluded that the most antibacterial activity and pleasant texture was 1% SCMC gel formulation containing 50% Artocarpus lakoocha Roxb. heartwood extract with 15% glycerin (clear zone was17 mm), from stability test, concentration of Artocarpus lakoocha Roxb. heartwood extract, extract, temperature and type of container can effect stability of gel.

Keywords Hand sanitizer gel, Artocarpus lakoocha Roxb. heartwood, Antibacterial activity.