

"Potential Viscosity Enhancing Property of the Soursop Pulp (Annona muricata, Annonaceae)"

AUTHORS

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OBJECTIVES

To determine and evaluate the potential viscosity-enhancing property of soursop (Annona muricata).

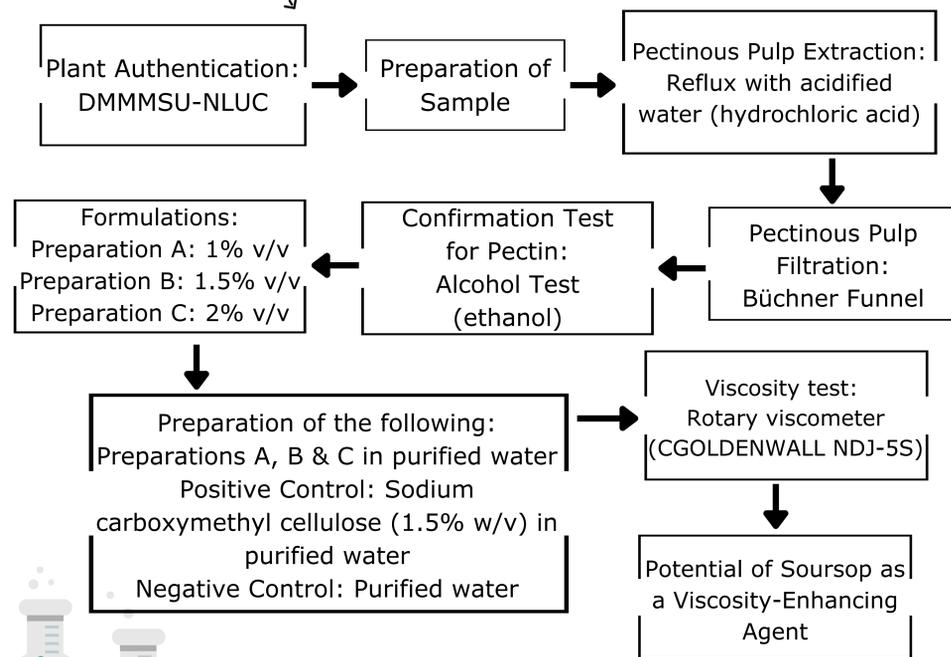
Specific Objectives

1. To determine which among the formulations of soursop pulp (1% v/v, 1.5% v/v, 2% v/v) will elicit the highest viscosity-enhancing activity.
2. To determine if there is a significant difference between the soursop pulp preparations compared to the sodium carboxymethyl cellulose as a viscosity-enhancing agent.

BACKGROUND

Viscosity-enhancing agents are excipients that work by entrapping solid particles in a dense formulation, it is widely used in pharmaceutical formulations to impart a viscous consistency especially in the case of pharmaceutical syrups and suspensions. The potential source chosen is the soursop plant, specifically its fruit. This is because of the supporting literature of the fruit's pectin percentage, that is approximately 17%. Thus, the entirety of our research is to make use of the soursop fruit, extract its pectinous pulp and establish its potential as a viscosity-enhancing agent.

METHODS



CONCLUSIONS

1. The higher the concentration of soursop pulp in a formulation, the higher its viscosity-enhancing effect.
2. All the soursop preparations have low viscosity-enhancing properties.
3. The formulations need more amount of soursop pulp to be able to amount to the viscosity-enhancing capabilities of the sodium carboxymethyl cellulose
4. The soursop preparations have potential in enhancing viscosity of formulations.

FINDINGS

- Preparation C with 2% v/v elicited the highest viscosity-enhancing activity with an average value of 6.5 millipascals per second.
- All the preparations ranges from 5.7 to 6.5 millipascal per second. These values make them categorized under the low viscosity category.
- The one-way ANOVA results showed a significant difference due to a p-value of $6.13E^{-39}$. As a post-op analysis, the Tukey Test was used as the statistical analysis tool which showed that all groups have significant differences.

RECOMMENDATIONS

1. Look upon the other maturity phases of the fruit since it may affect the amount of pectin available on the pulp.
2. Venture on other possible methods of pectin extraction that could be more effective than reflux with acidified water.
3. Utilize other instruments for viscosity measuring that could provide more accurate results and with lesser limitations.
4. Determine at what pulp concentration would a formulation produce desirable viscosity-enhancing results.