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Different Types of Properties of Cane Juice Centrifugation

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Abstract:

The affirmation of rotator for the specific kind of suspension needs some key data. The particles, which are open in different sizes, their task in the medium, outstanding thickness, thickness, etc are the major norms. It includes a central screw type transport which clears the saved solids. The speed keeps up could be around 8000 rpm in the level of 70-75% mud moisture. In this paper we are examining centrifugation of stick juice in the sugar business.

Keywords*: ICUMSA, Centrifugation, Cane juice, viscosity etc.*

I. INTRODUCTION

Centrifugation is one of the main unit assignments in the sugar business. The segment of suspended particles and characteristic salts at a basic stage and at an encompassing temperature (at the infection stage) profitably influences clarification. Something different, at a higher temperature the deterioration of suspended particles will undoubtedly occur. In the last case, the separation will be progressively irksome and will extend the scale declaration in a glow exchanger similarly as addition the consistency. This decline of mud will in like manner decrease the volume of mud commonly procured from the clarifier, which is around 25% on stick. As needs be, the stack on the vacuum turning channel will be decreased by 5-7%. The filterability of centrifuged mud/juice may speak to an issue without suspended particles. the physical appearance of the compensated juice is breathtaking with a trace of turbidity containing a humble amount of floating bagacillo. An in a general sense equivalent to greenish clue was moreover uncovered by Hionig, while the concealing estimation shows an extraordinary improvement in view of centrifugation. In Indian conditions, the earth cure plays a critical factor in the examination of the sugar balance. As opposed to the standard methodology, if the centrifuged juice is genuinely checked, the sugar balance report could be made progressively careful. This is an additional piece of elbowroom of the treatment.

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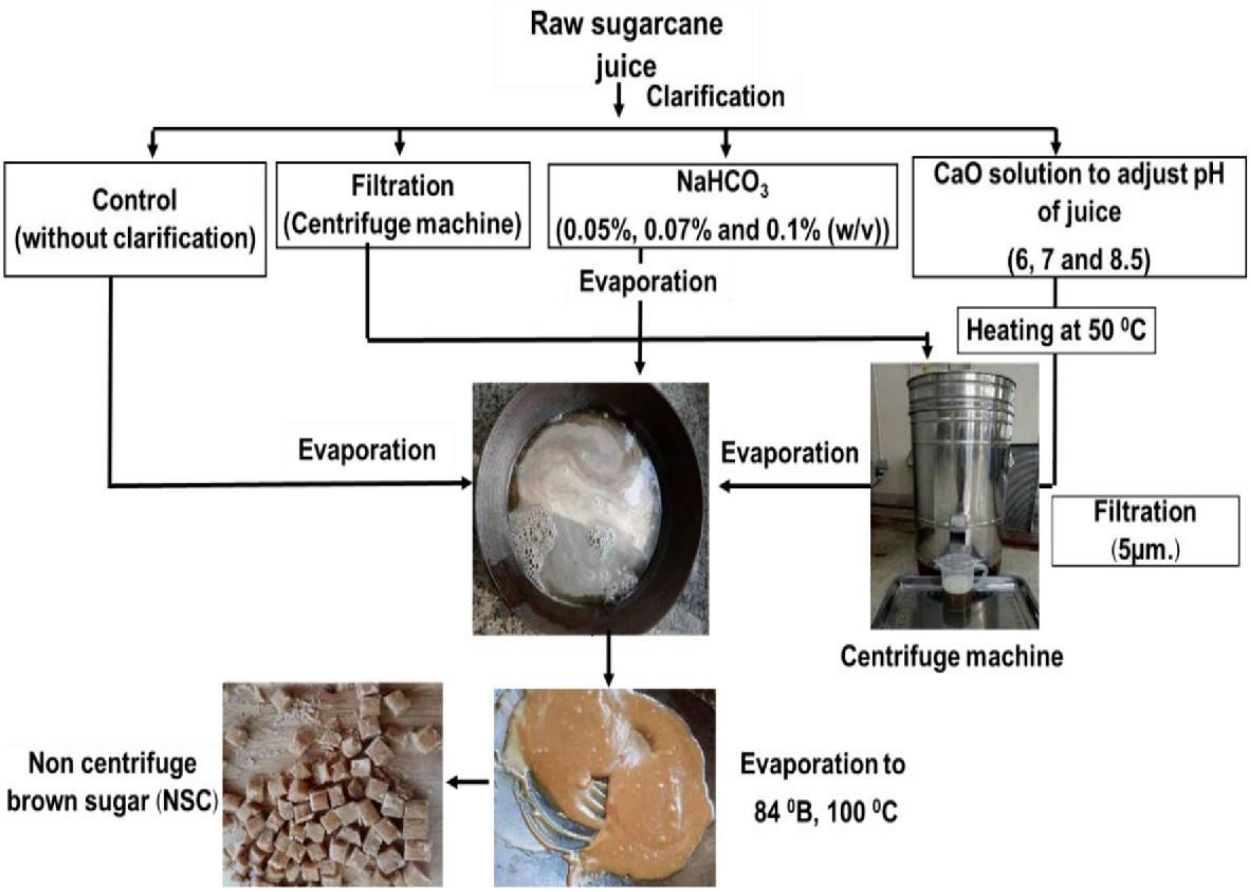

Fig 1: cane juice centrifugation

II. MATERIALS AND METHODOLOGY

Cane juice samples were subjected to centrifugation using a Remi R-8 C batch-type laboratory model. This was operated at 6000 rpm, attaining 2000g at the bottle tip. For every run it was set for 5 minutes. Optimization of the centrifuge operation is a function of design and so was not carried out. Only the various effective parameters due to centrifugation of cane juice have been observed in the present study. Purity measurement of cane juice was done using a Sucromat in a conventional way. A Brookfield RVT viscometer was used to measure the apparent viscosity difference at 50 rpm using spindle No.1 The ICUMSA colour measurement was done using TEA-buffer and membrane filter as described elsewhere. The colour measurements were carried out on an ELICO spectrophotometer.

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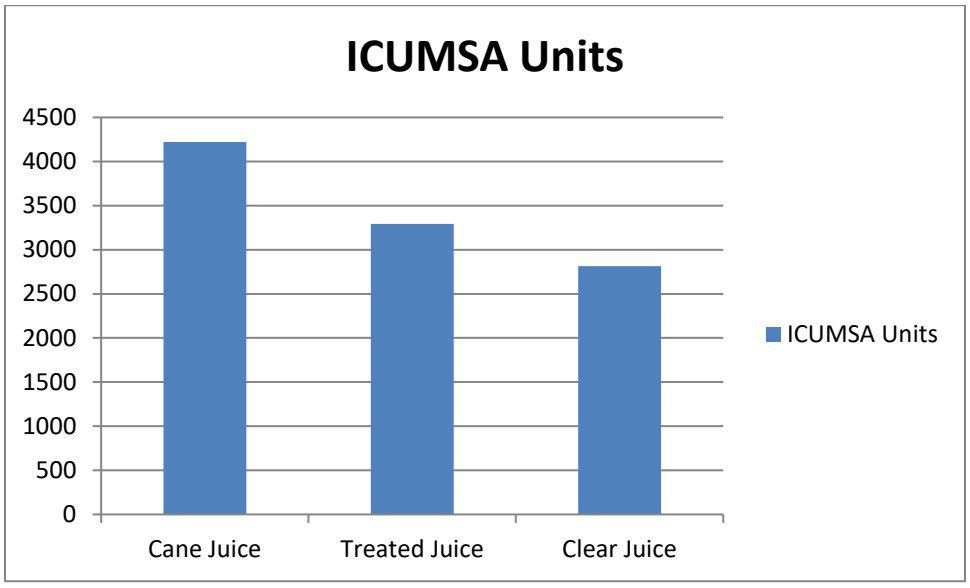
III. DATA ANALYSIS AND INTERPRETATION

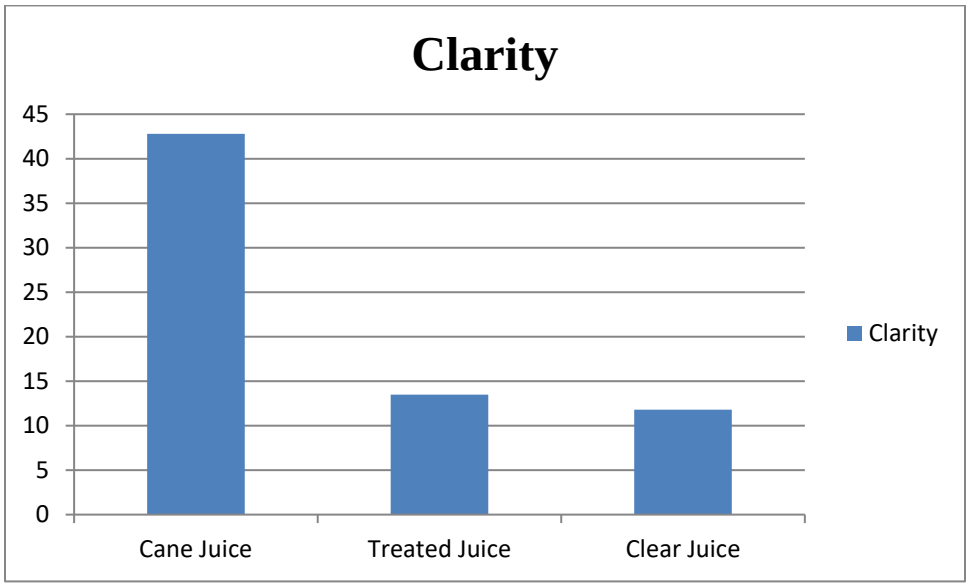
TABLE I

MEDIUM	WET MUD %	MOISTURE	CHEMICAL LOAD MILK OF LIME	ASH % ON CANE	ASH % ON
	W/W		SO2	JUICE	MUD
CANE JUICE	-	-	11.8CC X	-	-
TREATED JUICE	5.2	75.7	12.5CC X	0.12	11.5

TABLE II

MEDIUM	VISCOSITY CPS	CLARITY	ICUMSA UNITS
CANE JUICE	1.25	42.8	4220.00
TREATED JUICE	1.18	13.5	3294.00
CLEAR JUICE	1.02	11.8	2815.00





III. CONCLUSION

The study involves the centrifugation of cane juice. The juice is subjected to centrifugation directly after milling of the cane. This treatment has been thought of particularly to clarify juices by removing the suspended particles, viz. silica, organic salts, etc. along with mud. In this paper the design pattern of the centrifuge has been shown. The effective factors such as removal of suspended particles, clarity and ICUMSA colour of the centrifuged juice has shown by the table and graph.

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