

# Factors related to the starch content during the extraction process of cassava (*Manihot esculenta*, crantz) crop

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## Abstract

The objective of this article was to determine the factors that affect the % starch during the extraction process from the cassava crop (*Manihot esculenta*, Crantz). The material used corresponded to the commercial varieties "Concha Rosada" and "Llavitera", harvested at 9 and 11 months, using a  $2^{5-1}$  fractional factorial design, considering 16 observations, where the effect of 5 factors on the % starch was evaluated: crop variety, harvest time, type of cleaning (manual and mechanized), volume of water used in the leaching process and grinding speed; applying the analysis of variance through the statistical R program. A significant effect ( $p \leq 0.05$ ) of the cutting speed factor was found, in addition to the interactions variety of cassava \* amount of water in the leaching process and amount of water in the process leaching\*harvest time; Four factors were selected: cassava variety, harvest time, amount of water in the leaching process and milling speed, as the predominant factors in the cassava starch extraction process. The application of the  $2^{K-1}$  fractional factorial design allowed us to select the factors of cassava variety, grinding speed, amount of water used in the leaching process and harvest time, from the total factors initially addressed.

## Author keywords

$2^{K-1}$  extraction. Factorial design

Cassava

Controllable factors

Interaction

Starch