EFFECT OF SOAKING AND WASHING PRETREATMENTS IN GRAINS OF TWO VENEZUELAN RICE FOR SUSHI PREPARATIONS

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In Venezuela, Japanese restaurants have become very popular due to sushi increased consumption. Rice varieties suited for sushi preparations are not well adapted to Venezuela field conditions, thus grains should be imported. Sushi rice grains have different size, shape, amylose content, and cooking behavior than rice commonly consumed in Venezuela, beside, it’s more expensive. At present study, soaking and washing pretreatments of grains from adapted rice genotypes coded “DPR1” and “CT15705” (low-amylose) were applied, and effects over instrumental texture and amylograph profiles were measured using as reference a commercial “Japanese sushi rice” (low-amylose) and “Venezuelan rice” (intermediate-amylose). Later, sushi rolls were made using the best pretreatment combination in a commercial Japanese restaurant in Caracas and affective sensory test was applied with fifty consumers. Pretreatment affect textural and functional starch properties of genotypes evaluated (p<0.05). Soaking and washing increased pasting temperature, holding strength, setback and consistency, while decreased peak viscosity and breakdown of rice samples. On the other hand, textural aspects like adhesiveness, cohesiveness and gumminess increased, while springiness and chewiness decreased. Low-amylose rice samples washed three times followed by 30 min long soaking performed similar to “Japanese rice”. Consumer preference reached was 42%, 35%, and 23% for rolls from “DPR1”, “Japanese sushi rice”, and “CT15705”, respectively. Pretreatments improved the potential of Venezuelan adapted low-amylose rice cultivars for sushi preparations.