THE ABSORPTION OF WATER BY WASHED PARCHMENT COFFEE WHEN STORED UNDER WATER

It has been observed that it is a common practice among coffee processors of Puerto Rico during peak harvest periods, when existing drying facilities prove inadequate, to store fermented washed parchment coffee under water for periods of up to 48 hours to prevent it from deteriorating. This investiga-

tion was undertaken to determine whether there was appreciable absorption of water by the parchment coffee during such periods of submergence.

Small replicated samples of fermented washed parchment coffee were placed in tared baskets of fine meshed screen which were suspended in beakers of water. The basket and the parchment coffee were initially placed in the beakers for 2 minutes. They were then removed and 2 minutes were allowed for the unattached free water to drain from the parchment coffee, after which the initial weight of the basket and parchment coffee was ascertained. The basket with the parchment coffee was again suspended in the beaker of water and reweighed at intervals of 1, 4, 12, 24, 48, and 72 hours, a period of 2 minutes being allowed for the drainage of the free water from the basket before each weighing.

The recorded net mean weights of the samples of parchment coffee at the stated intervals reduced to a percentage basis of the initial weight are shown in the following tabulation:

Period in hours	*Percentage of initial weight*	*Difference from previous value*
0	100.00	—
1	101.24	1.24
4	101.40	.16
12	100.65	−.75
24	100.41	−.24
48	100.95	.54
72	101.34	.39

A statistical consideration of the results shows that a difference from the previous value of the "percentage initial weight" greater than 0.95 is significant at the 5-percent probability level, or of 1.40 at the 1-percent probability level; therefore, there is a significant increase in weight at the 5-percent level only after the first hour of soaking. Subsequent periods of soaking reveal no further significant increases, and the slight variations from period to period may be attributed to experimental error.

The samples did not appear to deteriorate during the 72 hours of submergence; however, it will be necessary to undertake further investigations to ascertain whether the cup quality of the coffee is in any way impaired by such treatment or if the change in weight is due to factors other than water absorption.

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