HYDRODYNAMIC PARAMETERS OF MINIMALLY PROCESSED CASSAVA

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This study was conducted in order to determine the terminal velocity, drag coefficient and wall effect of cassava slices with defined geometric shapes such as circular flat plate, cylinder and cube during fall in cylinders containing water. The drop tests were conducted in cylinders of 50, 100 and 150 mm in diameter and 1400 mm in depth. With the physical characteristics and terminal velocity was calculated the drag coefficient and wall effect. It was concluded that the higher terminal velocity (0.01343 ms$^{-1}$) was obtained for the cylindrical particles falling into the tube of 150 mm diameter; the lowest terminal velocity (0.00264 ms$^{-1}$) was obtained for cubic particles, during the drop in tube of 50 mm in diameter. There is influence of the size tube in the terminal velocity of particles; the terminal velocity in the cylinder containing water is strongly influenced by shape and size of particles. The drag coefficient was higher for larger particles during the fall in tubes of smaller diameter.

Keywords: terminal velocity, hydraulic transport, drag coefficient.