

WATCHARIN SAE-ENG : ENERGY SAVING AND TIME REDUCTION IN CASSAVA  
DRYING VIA EXPLOSION PUFFING. THESIS ADVISOR : ASSO. PROF. WIWUT  
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The cassava drying via explosion puffing was investigated in this study to search for the optimum conditions. The drying time and energy consumptions were compared with those of the conventional method.

It was found experimentally that the suitable conditions for puffing the cassava cubes ( $1.2 \times 1.2 \times 1.2 \text{ cm}^3$  in volume), which have been dried using hot air temperature and velocity of  $60^\circ\text{C}$  and  $0.6 \text{ m/sec}$ , respectively, were as follows :

1. For the cassava cubes with pre-puffing water contents in the range of 15-19 %, the suitable pressure for explosion puffing was found to be between 15-19 psig.

2. For the cassava cubes with pre-puffing water contents in the range of 52-57 %, the suitable pressure was between 21-25 psig.

It was found that the drying of cassava cubes with explosion puffing under suitable conditiond required 15 % less energy consumption and 25 % less drying time than the case of drying without puffing.