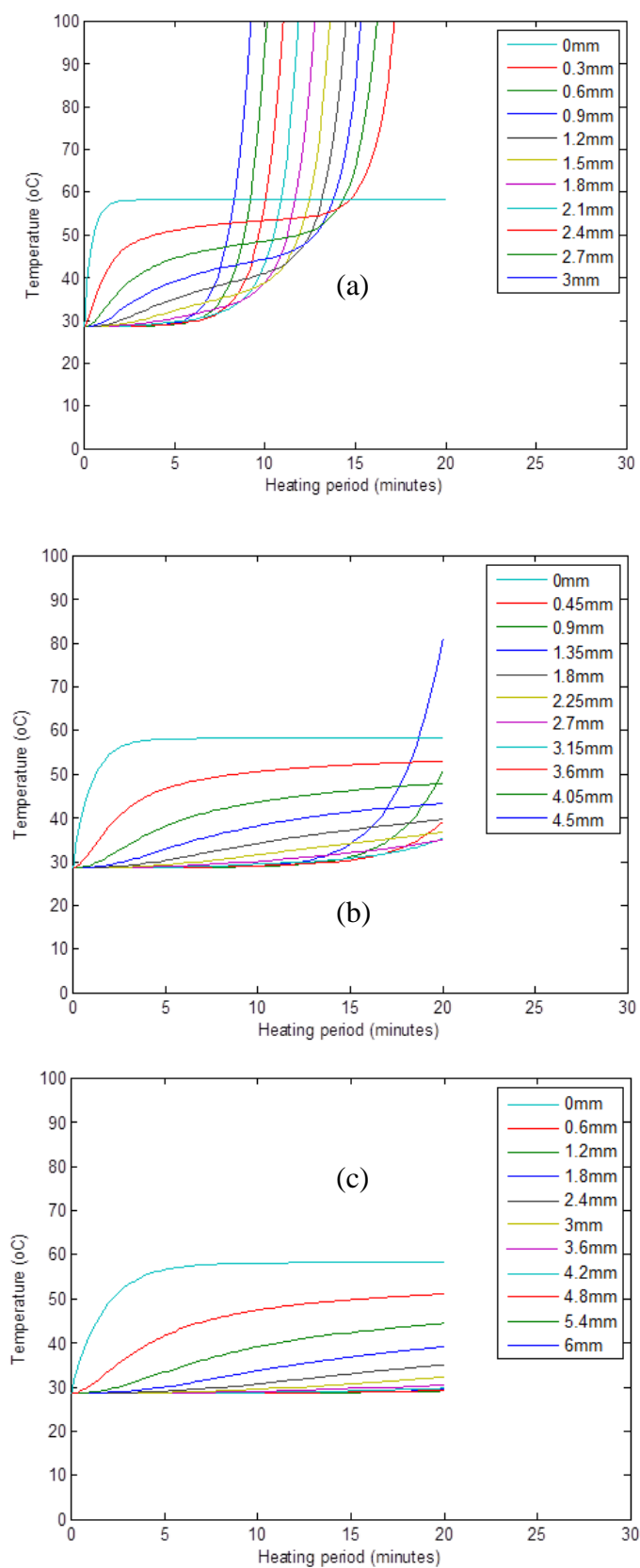


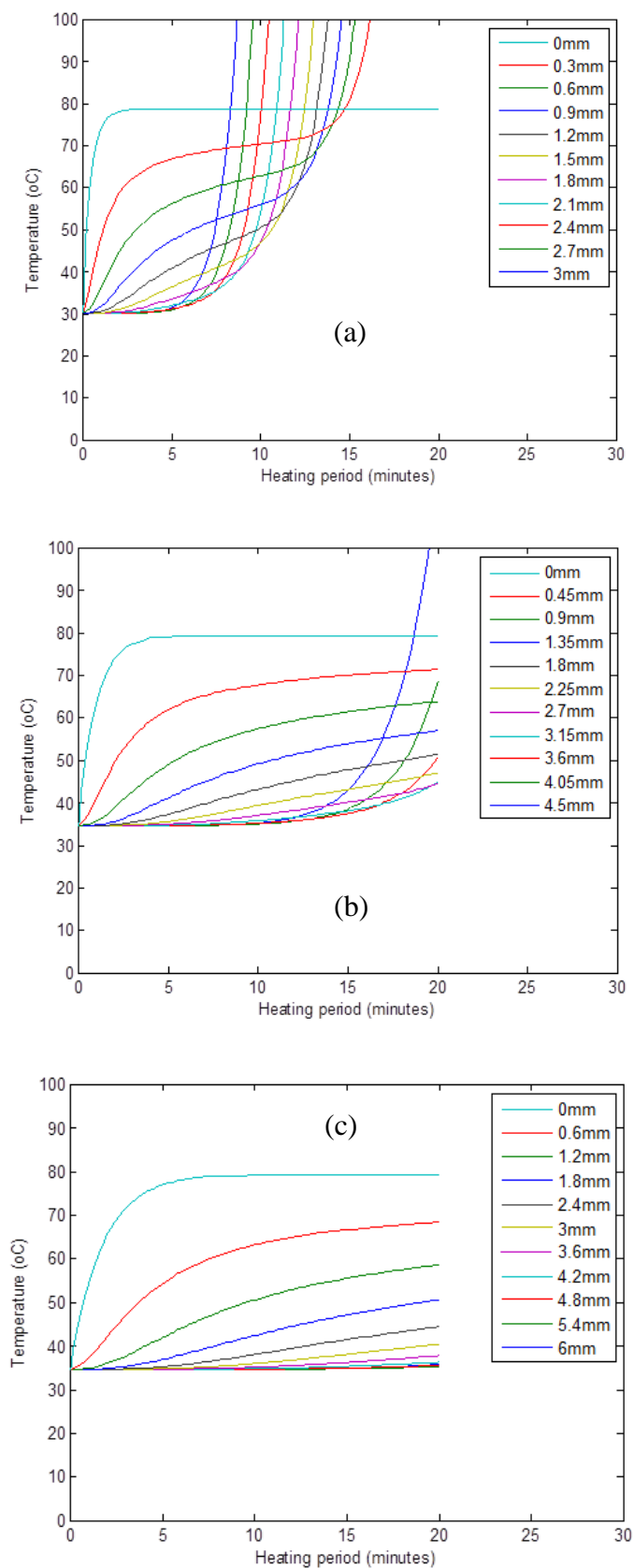
## **APPENDIX F**

### **SIMULATION INTERIOR TEMPERATURE DISTRIBUTION OF SINGLE FRUIT DURING MICROWAVE HEATING OF OIL PALM FRUIT**

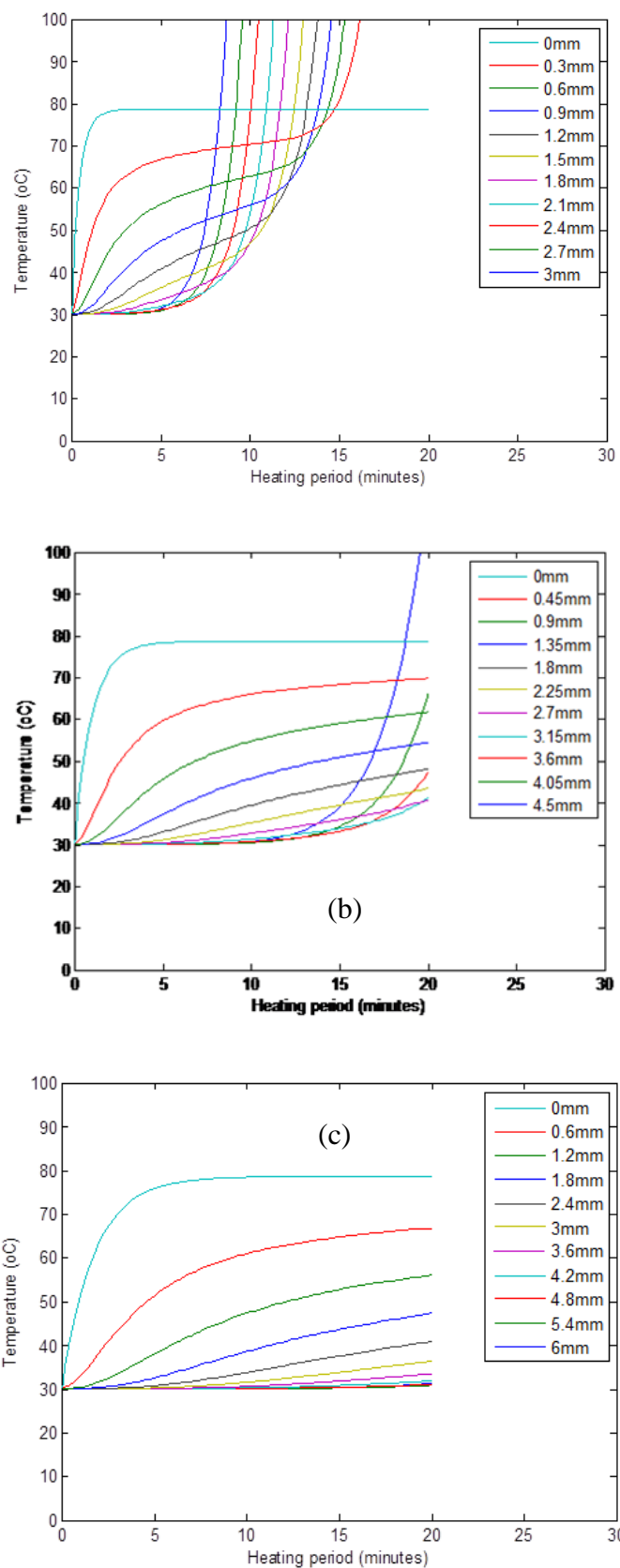
In this appendix, results of simulation of temperature distribution within the mesocarp during microwave irradiation at various mesocarp thickness of fruit diameter ( $r = 3$  mm, 4.5 mm, and 6 mm respectively). Semi discretization of transient heat transfer equation into radial distance was provided in Chapter 4 Section 4.7.



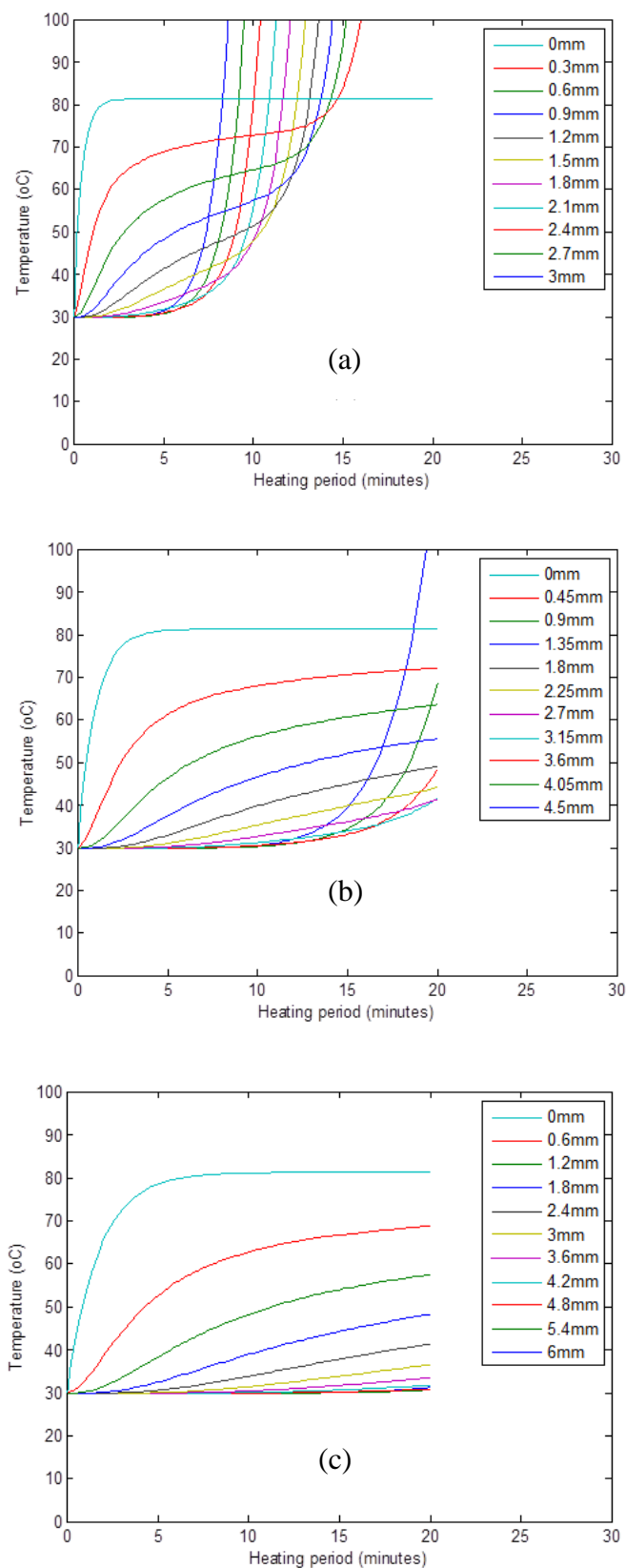
**Figure F1** Interior temperature distribution in oil palm fruit during microwave heating of 0.5 kg sample at medium level and various mesocarp thickness : (a)  $r=3$  mm (b)  $r=4.5$  mm and (c)  $r=6$  mm



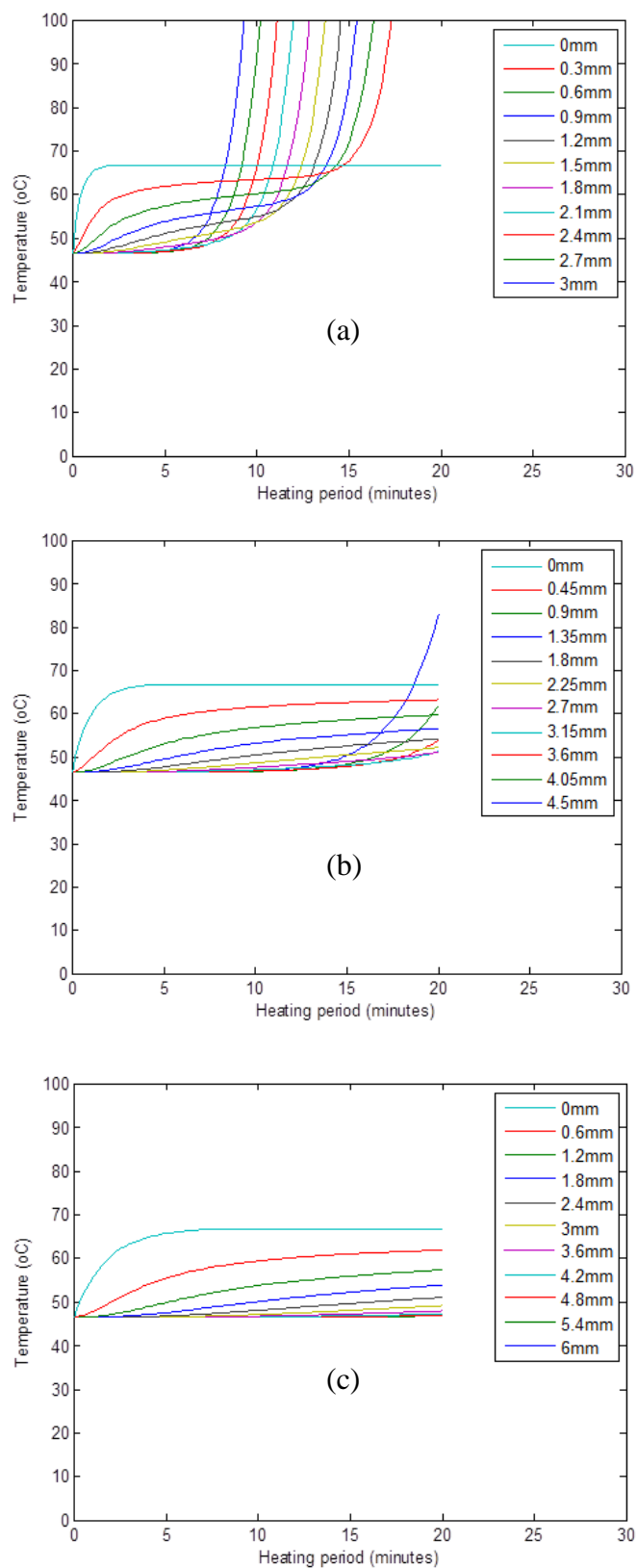
**Figure F2** Interior temperature distribution in oil palm fruit during microwave heating of 0.5 kg sample at medium high power level and various mesocarp thickness : (a)  $r=3$  mm (b)  $r=4.5$  mm and (c)  $r=6$  mm



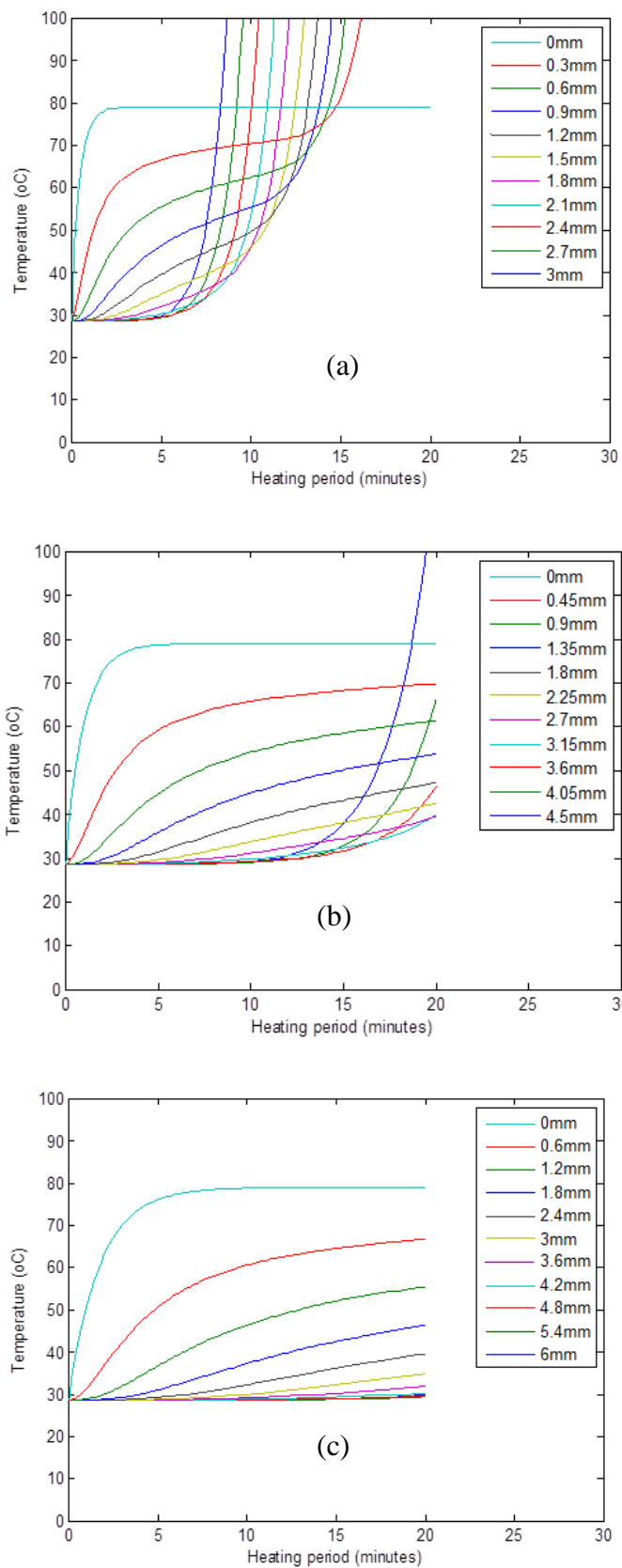
**Figure F3** Interior temperature distribution in oil palm fruit during microwave heating of 0.5 kg sample at high power level and various mesocarp thickness : (a)  $r=3$  mm (b)  $r=4.5$  mm and (c)  $r=6$  mm



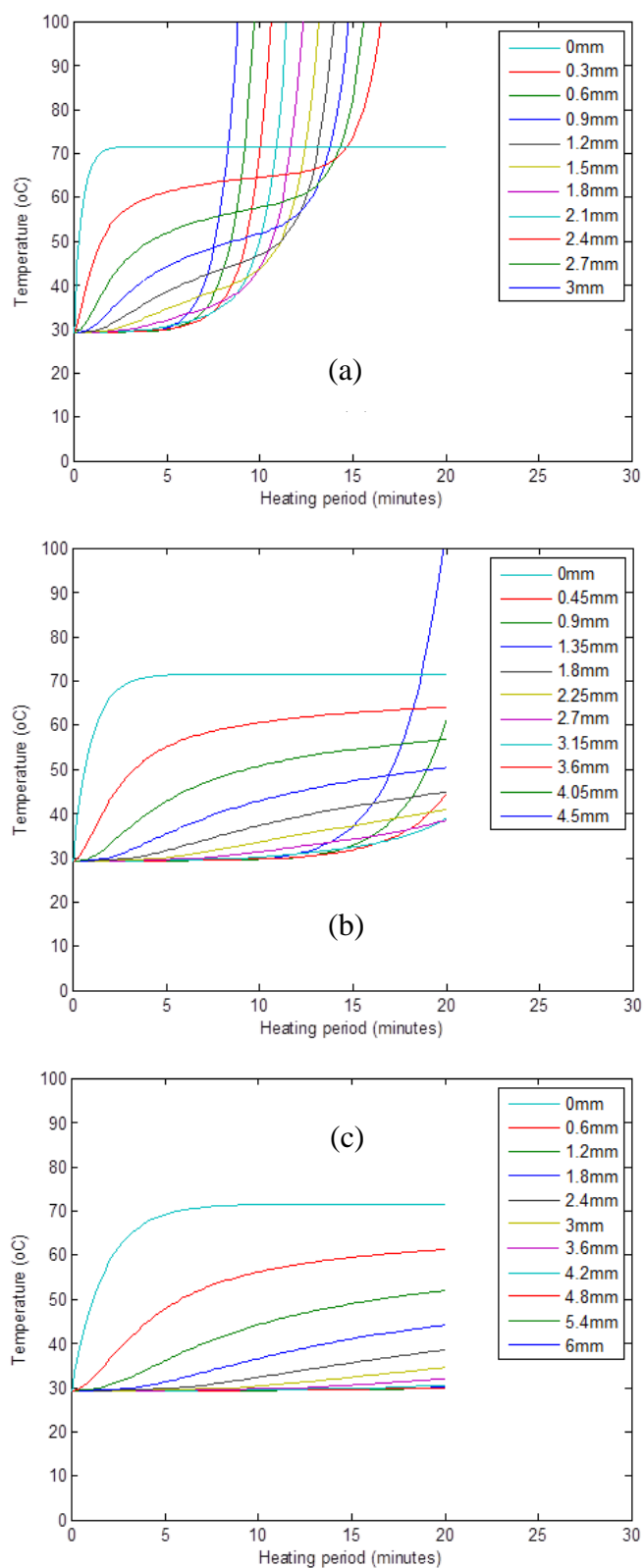
**Figure F4** Interior temperature distribution in oil palm fruit during microwave heating of 1 kg sample at medium power level and various mesocarp thickness : (a)  $r=3$  mm (b)  $r=4.5$  mm and (c)  $r=6$  mm



**Figure F5** Interior temperature distribution in oil palm fruit during microwave heating of 1 kg sample at medium high power level and various mesocarp thickness : (a)  $r=3$  mm (b)  $r=4.5$  mm and (c)  $r=6$  mm

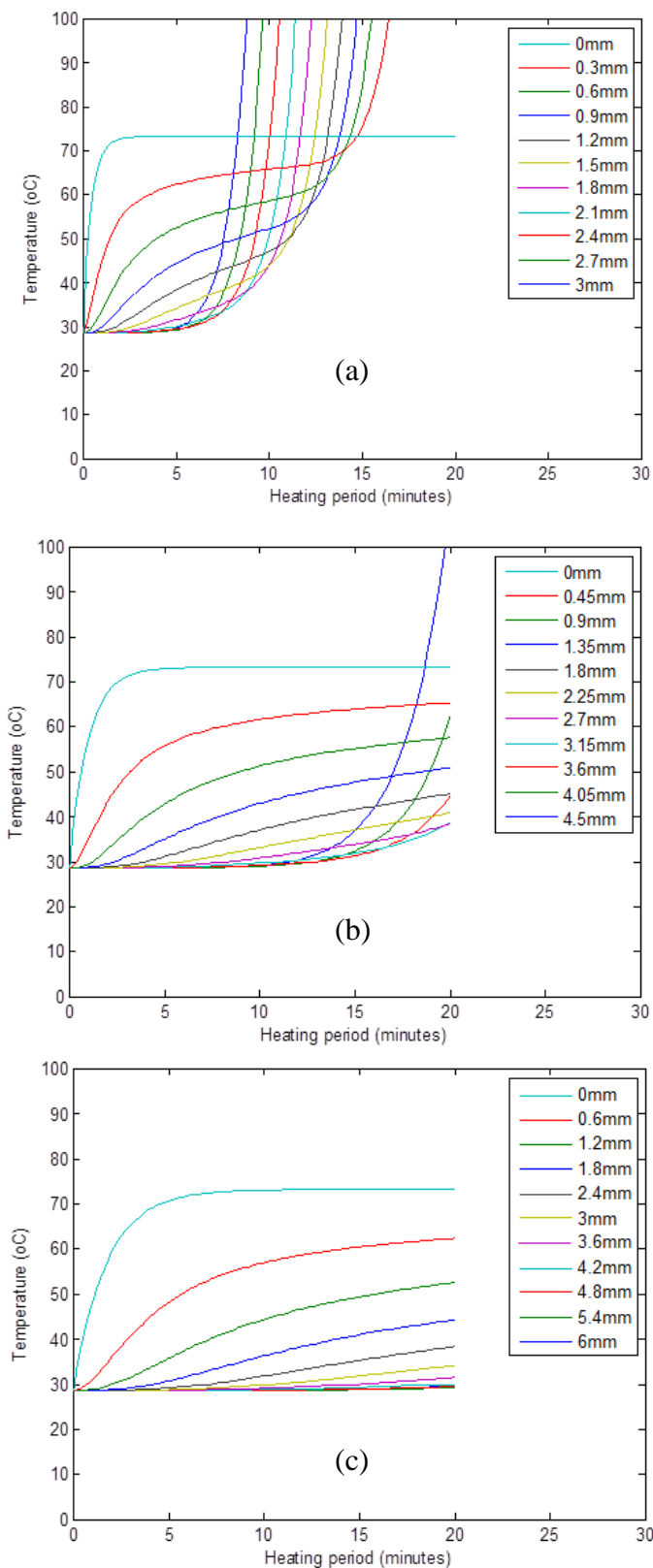


**Figure F6** Interior temperature distribution in oil palm fruit during microwave heating of 1 kg sample at high power level and various mesocarp thickness : (a)  $r=3$  mm (b)  $r=4.5$  mm and (c)  $r=6$  mm

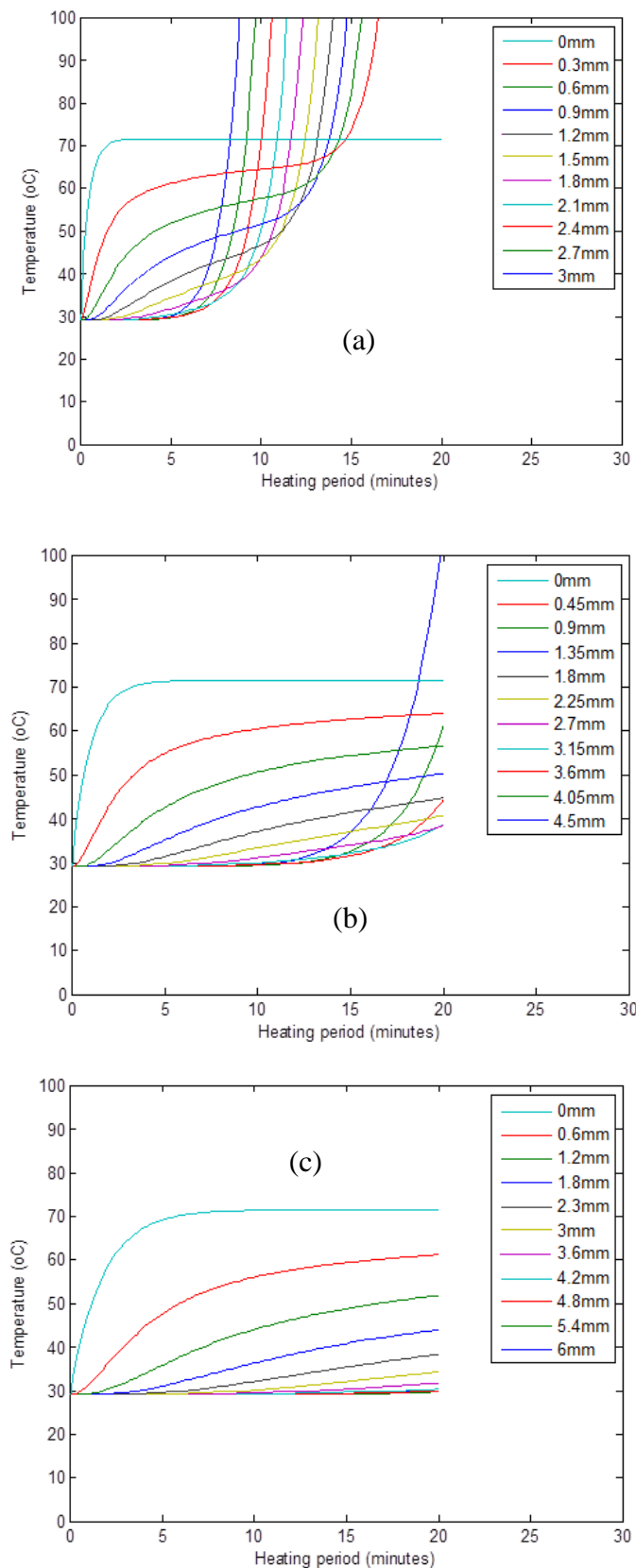


**Figure F7** Interior temperature distribution in oil palm fruit during microwave heating of 1.5 kg sample at medium power level and various mesocarp thickness : (a)  $r=3$  mm (b)  $r=4.5$  mm and (c)  $r=6$  mm





**Figure F8** Interior temperature distribution in oil palm fruit during microwave heating of 1.5 kg sample at medium high power level and various mesocarp thickness : (a)  $r = 3$  mm (b)  $r = 4.5$  mm and (c)  $r = 6$  mm



**Figure F9** Interior temperature distribution in oil palm fruit during microwave heating of 1.5 kg sample at high power level and various mesocarp thickness : (a)  $r=3$  mm (b)  $r=4.5$  mm and (c)  $r=6$  mm