IV. CONCLUSIONS

The results showed that the washing time, the slicing thickness, drying method and drying temperature affect the water content and active compounds of ginger and red ginger simplicia products. These effects include an increase in washing time material which increases the water content of simplicia products with lower levels of active compounds, while the increased of slice thickness increase the water content as well as an active compound of simplicia products. Meanwhile, the optimization result shows that drying method using sunlight with a black fabric as intermediary produced ginger and red ginger simplicia with the highest water content. Lower water levels produced from the drying process with direct sunlight and the lowest water content obtained from products which have dried in the oven. Furthermore, the increase in drying temperatures has produced simplicia with lower water content and reaches the maximum when used drying temperature of 115 ° C.

Ginger and red ginger simplicia product with an optimum quality obtained from the production stage with: (1) the washing time of 1 minute; (2) slice thickness of 0.15 cm; (3) a method of drying in an oven; and (4) using drying temperature of 115 ºC. An optimum ginger simplicia product has a water content of 11.17% with a 1.7% essential oil content; 0.86% oleoresin; 56.90% zingiberene content in essential oils; 42.50% gingerol content in oleoresin; and 21.54% shogaol content in oleoresin. Meanwhile, red ginger simplicia products with an optimum quality have a water content of 12.50% and 2.11% essential oil content; 0.88% oleoresin; 78.60% zingiberene content in essential oils; 80.06% gingerol content in oleoresin; and 8.02% shogaol content in oleoresin.

ACKNOWLEDGMENT

We would like to thank *Direktorat Penelitian dan Pengabdian Masyakarat Kementrian Riset dan Teknologi Pendidikan Tinggi* Republik Indonesia which has provided financial support through National Priority Research Programme Masterplant of Acceleration and Expantion of Indonesia Economic Development.

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