

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

This chapter contains conclusions from the research results on determining critical factors for the quality improvement of patchouli oil in the West Pasaman Regency and suggestions for further research.

5.1 Conclusions

Based on the research that has been done, the conclusions in this research, as follows:

1. The exporter's requirements for patchouli oil to be purchased are the minimum amount of patchouli oil 70 kg, PA content min 32%, acid number max 5, and Fe (Iron) content max 20, where this standard becomes the trade standard and higher than SNI.
2. Patchouli oil quality is affected by several factors and sub-factors. Based on data processing, several factors and sub-factors that affect the quality of patchouli oil, such as the harvesting process factor with harvesting age, harvesting method, harvest time, and material sorting; drying factor with drying process time, drying method, material cutting, and patchouli drying place; the distillation process factor with the distillation process time, distillation equipment material, steam pressure, steam flow rate, condenser, the composition of raw materials, and distillation method; packaging and storage factors with packaging type, no air contact, storage time, no sunlight contact, and water-free.
3. The factors that most influence the quality of patchouli oil sequentially is the distillation process (weight 0.453), drying process (weight 0.208), packaging and storage (weight 0.180), and the harvest process (weight 0.160). While the sub-factors that most influence each factor are harvest age from harvest process factor, drying method from patchouli drying

factor, the distillation process time from distillation process factor, and not being in contact with air from packaging and storage factor.

4. Several quality improvement recommendations of patchouli oil quality are based on the critical factors and sub-factors. The recommendations such as use patchouli seeds *Pogostemon cablin* obtained from trusted sources such as Balitro, sorting the patchouli by seeing and touching, using the wind drying method with hanging the patchouli in the shade, provide the counseling regarding the better distillation process with expert, using timer to make sure the time of distillation process, and using dark glass bottles, jugs, HDPA plastic as a substitute for PA plastic canister's and stored underground to maintain the quality of patchouli oil during the storage process.

5.2 Suggestion

The suggestions that can be given for the further research are:

1. Centralized coordination and supervision of all parties supporting the development of patchouli oil agroindustry for a follow-up quality improvement of patchouli oil in West Pasaman Regency
2. Further research related to feasibility distillation equipment as a tool of the distillation process. This suggestion is because the distillation process becomes a critical factor based on this result research.