

PROJECT 1

A traditional syrup production plant in Pahang is able to produce 100 L per day, which is marketed in a-250 mL bottle pack. Suddenly, they receive a commercial grant from the government to increase the production capacity up to 2000 L per day for export purposes.

- a) Assuming that the plant was designed from a plastic-based mixer and traditional heater, what is your idea to improve the equipment?

- b) Determine the steps of scaling up the plant up to the desired capacity. Explain each step in order for the manufacturer is able to fabricate.

- c) Explain the ratio of the equipment dimension based on the similarity method. Relate the ratio based on mathematical model, and find secondary data necessarily if available.