

**DESIGN AND CONSTRUCTION OF A DEVICE FOR
MEASURING MOISTURE CONTENT IN COFFEE BEANS USING
AUTODESK INVENTOR**

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ABSTRACT

By utilizing Autodesk Inventor software, this study aims to create and construct a tool that can measure the water level in coffee beans during the drying process, enabling farmers to produce high-quality post-harvest products. The study encompasses literature review, field research, tool design and assembly, tool testing, data collection and processing, discussions, and conclusions.

The initial design of the tool was a small portable tube, which evolved into a box during the modification process. Following discussions with the partner, Bedagh Coffee, the final design is a drinking bottle. To ensure safe contact with food materials, stainless steel SS-304 is used. Material strength is measured through quantitative descriptive tool testing.

Test results indicate that the final tool design successfully meets the requirements for measuring water content in coffee beans, with sufficient frame strength to support parts and coffee beans with a capacity of 100 grams. It is expected that this research will assist coffee farmers in enhancing the quality and efficiency of the coffee bean drying process.

Keywords: *Coffee, SS-304, Water Content, Design.*