

ABSTRACT

The dominant use of synthetic materials in household products that are not yet fully environmentally friendly, as well as the abundance of sawdust waste from wood processing industries in Banyumas Regency that has not been optimally utilized and has the potential to pollute the environment if not managed properly. This condition creates an urgent need for product design solutions that are more sustainable and relevant to an environmentally friendly lifestyle. This study discusses the design of household products in the form of Trays, Coasters, and Placemats using alternative materials made from sawdust waste and cassava starch. The solution is carried out by designing products from composite materials of sawdust and cassava starch, through trials of three material composition ratios to determine the best physical and visual properties. The product is designed with a natural minimalist style approach that is adapted to the character of the material, as well as through ergonomic analysis, market, and simple production processes. The 50:50 composite ratio shows the best performance in terms of strength, water resistance, and visual quality. The final product shows strong potential as an environmentally friendly alternative with good aesthetic value and functionality.

Keywords: wood dust, cassava starch, biodegradable, natural style, composite material.