

Scien investigatory project: plants essay sample

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This study aimed to produce natural dye from the extract of mangosteen husks and explore the function of fixing agents (mordants). in the dyeing process. Mangosteen (*Garcinia mangostana*), a rare fruit known to be the “queen of tropical fruits,” contains bitter yellow latex and purple juice. The mangosteen husks, which are put to waste, produce stain. This led to the idea of producing a household product without using harmful chemicals. Literature reveals that mangosteen husks actually contain a substance called tannin, which makes the husks a potential source of natural dye. Using sliced mangosteen husks, an extract was obtained by boiling.

The extract was sifted from the solid materials using cheesecloth. A clean, cotton cloth was then subjected to a series of procedures from pretreatment and mordanting down to dyeing with the mangosteen extract. Alum and copper sulfate were used as mordants. Results revealed that the mangosteen extract was stabilized by both mordants, but copper sulfate was a better fixing agent than alum, because it intensified the color of the extract. It can be concluded that the mangosteen husk extract can effectively be used as an alternative, environment-friendly dye.