

TOBASA'S BATIK FROM EXTRACT MELASTOMA SEED (*Melastoma malabathricum* L.)

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Had been done a research aims to extract blue-purple pigment from Sanduluk (*Melastoma malabathricum* L.) to be used as Toba Samosir's batik dye. *Melastoma* or sanduluk is a plant which is grows up in many places in Indonesia, especially in plantae that contains secondary metabolit. In Sigumpar, senduluk is called sanduduk. This seed is often eaten directly by the shepherds or farmers because it sweet and after eaten, the tongue and lips become dark blue. The purpose was to determine whether an effective senduluk seed extract is used as a dye batik Tobasa and fastness. The last result of this research is extract of *Melastoma* seed could produce very dark blue-purple solution. After heated with water heater, the extract will be viscous. Based on the test that had been done for some solutions, the best ink for batik is Sanduluk with alcohol 70%. Color that gotten from extract *Melastoma* is similar with the blue color on batik of government employees' (PNS) in Toba Samosir. It's depends on the comparison of batik dye with researchers' teacher uniform.

Key words: Batik, Melastoma, Sanduluk

Introduction

Indonesia's batik, as the whole of technic, technology, and the developing of motif and the culture, by UNESCO, had been decided as the *Masterpieces of the Oral and Intangible Heritage of Humanity* since 2 October 2009. Sanduduk (*Melastoma malabathricum* L.) grows up in places that get enough sunrise. The ripe seed will bloom and separated into some parts, the color is dark blue-purple. Small seeds, brown, and can be eaten. The government of Toba Samosir regency obligated the government employees' to wear the batik as the uniform every Friday. The basic color of Tobasa's batik is dark blue and red.

Experiment Design Method

Preparing Melastoma seed 1 kg and separating its seed from the shell. After that, refined it by pounded and then dissolved with different solvents, those are water, normal hexane, alcohol 60%, alcohol 70% with comparison 10 gr Melastoma seed : 300 ml solvent and then it saved in closing bottle alluminium foil in 48 hours. Extract was separated

with residue and heated using water heater until it was viscous. After drying, observed and washed with water to test whether it is fade.

Result and Discussion

Based on fitochemical, the blue color in *Melastoma malabathricum* L is secondary metabolit named *Antosianin*. Polar solvent would be dissolved into polar solvent, because generally, secondary metabolit compound has polar characteristic so that the chosen solvent is polar.

The result of extract Melastoma seed with using different solvents can be seen from table below:

No.	Solvent (300 ml)	+ Observation
	<i>Melastoma malabathricum</i> L (10 gram)	
1.	Water	Purplish red
2.	Normal Hexane	Blue purple
3.	Alcohol 60 %	Less dense blue
4.	Alcohol 70 %	Dark blue purple



After testing with dipping the batik into extract *Melastoma* and drying, based on the observation of researcher the most result and the best color in extract *Melastoma* is with solvent alcohol 70%.

The process of extract *Melastoma* seed with 70% was to separate pigment from its seed. This process had been done with some concentrates alcohol and water. After the researcher analyzing the test result, the best extract based on its color and viscosity is using alcohol 70%. Heating toward the extract *Melastoma* seed aimed to decrease the water degree and increase pigment concentrate. Natural dyes safe for the environment, the pigment in *Melastoma* seed produces purplish blue color. After the silk fabrics in Mordanting before the dye into senduluk extract. Purple and blue cloth after dried Fixer with alum and quicklime. Best are the results with alum fixer. Based on this research, the spreading of color from result of batik dye was even. After washing with water, the dissolved color just a few and the last result which got was bright and the blue color so similar with the blue in government employees' batik which is usually wore by the teachers in Toba Samosir.

natural dyes have a high market potential as the leading commodity Indonesian products enter global markets with appeal to the unique characteristics, ethnic and exclusive. natural dyes advantages: environmentally friendly than synthetic dyes

Conclusion

Having analyzed the data, it was found that extract *Melastoma* seed produced dark blue purple solvent. After heating become viscous, the best batik ink was sanduduk seed with alcohol 70% as the solvent. The ink which gotten from extract *Melastoma* seed was so similar with blue color in government employees' uniform in Toba Samosir. This was based on comparing batik dye with the reserachers' teacher uniform. In fastness test, the first washing faded and the next does not fade again.

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THE OBSERVATION		
WATER	Purplish red	
N HEXANE	Blue Purple	
ALCOHOL 60%	Less dense Blue	
ALCOHOL 70%	Dark Blue Purple	

