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IDENTIFICATION OF *OCTADECADIENOIC ACID* THAT COMPOUNDS WITHIN EXTRACT METHANOL STEM GOLOBE MARBLES (*ETLINGERA ALBA (BLUME)* A.D POULSEN)

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ABSTRACT

This study discusses the compounds of *Octadecadienoic Acid* contained in the extract of the Golobe Rod (*Etlingera Alba (blume)* A.D Poulsen which has health benefits. The purpose of this study is to identify the compounds contained in the Golobe Trunk by using GC-MS tools.

The results obtained from this study that the true compound *Octadecadienoic Acid* with 3.90% concentration contained in the Bone of Golobe Marbles.

This researcher can draw the conclusion that the stem Golobe Marrow Plants (*Etlingera Alba (Blume*) A.D Poulsen containing *Octadecadienoic Acid* compounds useful for health and potentially as an Antifungi. If the results of this study can be an additional reference for health students, especially pharmacy to increase knowledge about traditional medicinal plants.

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INTRODUCTION

Indonesia is known as a country that has natural wealth with a very high diversity compared to other countries in the world. The wealth of biological resources Indonesia ranks third in the world after Brazil and Zaire so that it is grouped into Mega biodiversity countries. With the potential that exists,

Indonesia has a huge opportunity to develop all the natural wealth, but until now the utilization has not been maximized.

Golobe is a type of plant producing ginger-ginger fruit (*Zingiberaceae*) There are 4 types of Golobe species of North Maluku and Maluku Province, including: Golobe Halmahera milk (Hornstedtia alliacea), Golobe Halmahera or Golobe Ambon (*zingiberaceae alliaceae*), Golobe Rambutan Halmahera (*Amomum sp* .), and Golobe Halia Ambon or Golobe Halmahera. marbles (*Etlingera alba (Blume*) AD Poulsen, which function as antifungal, antibacterial, and antioxidant.

Stearic acid in Indonesian is called stearic acid is part of a group of saturated fatty acids which has many uses. While the IUPAC name of this compound is Octadecanoic Acid.

Name of IUPAC :*Octadecadienoic acid*
Other Name : Stearic Acid
Chemical Formula : $CH_3(CH_2)_{16}COOH$
Molecule Formula : $C_{18}H_{36}O_2$

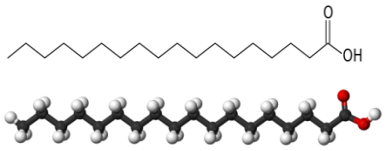

Figure 1. The Sructure of Octadecadienoic acid (Stearic acid).

METHODS

The type of research used in this study is a type of experimental research with a sample of the Golobe Rod Marbles *(Etlingera alba (Blume)* A.D Poulsen).

TOOLS AND MATERIALS

1. TOOLS

a. Analytical scales
b. Oven
c. Blender
d. Jars
e. Sieve
f. Stirring rod
g. Filter paper
h. Aluminum foil
i. Knife
j. Erlenmeyer
k. Beaker glass

2. MATERIALS

The materials that will be used for researchers for this research are:

a) Golobe Rod Marbles *(Etlingera alba (Blume)* A.D Poulsen) obtained from Tongute Goin Village, Central Mother District, West Halmahera Regency.
b) Methanol solvent.

PROCEDURE

Work Procedure for Making Golobe Rod Marbles Extract (*Etlingera alba* (Blume)A.DPoulsen)

Golobe stem marbles (*Etlingera alba* (Blume) A.D Poulsen) were obtained from Tongute Goin Village, Central Mother District, West Halmahera Regency. Golobe Stems Marbles are taken or harvested on stems that are not too young so that the compounds contained in the Golobe Rod Marbles have been formed and are not too old so that the compounds contained in the Golobe Stem Marbles are not lost, then washed with running water, then Chopped and dried under the sun at 7-10 am until the sample is completely dry.

After the drying process, then made into powder using a blender, the powder obtained is sieved with the appropriate mess sieve, after which it is weighed again and then put in a container and labeled. The first step, input the golobe rod that has become powder into the maceration vessel and then pour methanol, then close the maceration vessel and leave it for 5 days in a place protected from light while stirring every day, after 5 days then filter to separate the filtrate and residue, re-macerate for 2 days, then filter and the residue is removed. Next, collect the filtrate and apply it with a rotary evaporator until a thick extract is obtained.

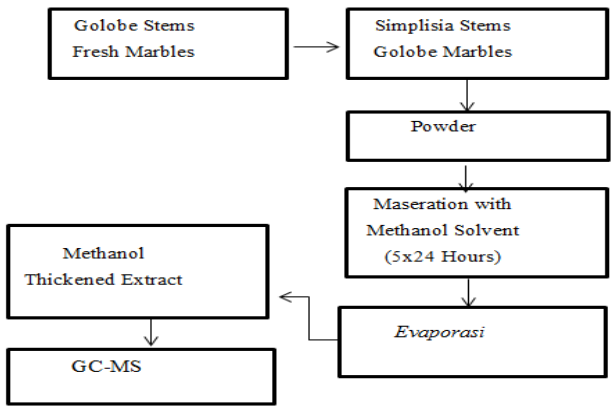

Figure 2. The schema of Making The stem golobe extract (*Etlingera Alba (blume)* A.D Poulsen).

RESULTS

Sampling of Golobe Rods Marbles (Etlingera Alba (Blume) A.D Poulsen)

Golobe Trunk Marbles were obtained from Tongute Goin Village, Central Mother District, West Halmahera Regency on June 23, 2018 at 11:15 WIT. Golobe Rods Marbles are taken or harvested in parts that are not too easy so that the compounds contained in the Golobe Rod Marbles are formed and not too old so that the compounds contained in the Golobe Rod Marbles are not lost.

After that Golobe Rod Marbles washed with running water after weighed washed obtained a wet weight of 750 grams, after weighing carried out and then placed on the appropriate container, then dried under the sun at 7:00 to 10:00 in the morning until the sample is completely dry . After being dried again weighed 200 grams dry weight was obtained.

Making of Golobe Stem Methanol Extract (*Etlingera Alba (Blume*) A.D Poulsen)

Dry weight of 200 gram sample was crushed using a blender to obtain fine powder. After blending, the sample was sifted using a sieve then weighed and weighed 100 grams of fine powder, then dissolved in methanol with a ratio of 1:10 (1 gram of sample in 10 ml of methanol), for 5 days then filtered methanol extract of Batang Golobe Marbles , the filtrate is taken and the residue is removed. After that, it was evaporated using a water bath until a thick extract of the Golobe Rod Marbles was obtained.

Table 1. The Table Of GC-MS Test Of Stem Golobe marbles (*Elingera Alba (Blume*) A.D Poulsen).

SAMPLE	COMPUND	CONTENT (%)
Stem Golobe Marbles	*Methoxyeugenol*	16,81
	(2,3,4,6-Tetrafluoro-5-Methoxyphenyl) Metanol	1,57
	2,2-Diethylamino-Oxazolimo-1,3,5-Triazine	30,69
	5-Isoprophenyloxymethylene-3-3-dimethyl-cyclohexanone	3,00
	1-(4-Methoxyphenyl)-3-Phenyl-2-Pyrazoline	10,83
	9,12-Octadecadienoic acid(z-z)	3,90
	Hexadecadienoic *acid*	4,56
	Phytol	2,94
	2-Choloro-3-flupro-2-Quinolone	1,25
	4H–pyridol[1,2-a]pyrimidine-3 carboxylic acid,1,6.7,8,9,9a-hexahydro-1,6-dimethyl-4-oxo-ethyl ester	1,22

DISCUSSION

The material used in this study is the Golobe Rod Marbles (*Etlingera Alba (Blume*) AD Poulsen, the Golobe Rod. Marbles are harvested at 11:15 WIT. Golobe Stems Marbles are harvested or harvested in parts that are not too easy so that the compounds contained in the Golobe Rod Marbles have been formed and are not too old so that the compounds contained in the Golobe Rod Marbles are not lost.

Solvents used in the extraction of Golobe Rod Marbles are solvents of methanol, because methanol solvents can dissolve in polar, semi-polar and non-polar substances. The tool used to identify the compounds contained in the Golobe Rod Marbles is by using GC-MS tools because the advantages of this GC-MS tool are faster analysis, do not damage the sample, high sensitivity so that it can separate various compounds that are intermixed and able to analyze various compounds although in low concentrations. By using the GC-MS tool, it was proven that the compounds of Octadecadienoic Acid contained in the Golobe Rod Marbles.

Based on the results of the Golobe Stem methanol extract test, the marbles shown in the table above show that the compound concentration of Octadecadienoic Acid is 3.90%. Compound Octadecadienoic Acid or another name Stearic acid in Indonesian is called stearic acid which is commonly found among people because the compounds of

Octadecadienoic Acid or stearic acid are part of a group of saturated fatty acids which have many uses that are used for making soap, cosmetics and others that function as Anti fungi.

Based on previous research conducted by Ama Tualeka et al., In methanol extract Halmahera langsat fruit seeds found Octadecadienoic Acid compounds that have the potential to prevent Alzheimer's disease. And based on other studies conducted by Merinli FI Tony et al. Acid 24.60% which has the potential to treat cholesterol.

CONCLUSION

Based on the results of the study, Golobe Rod Marbles (Etlingera Alba (Blume) AD Poulsen) using GC-MS tools, it was concluded that the results of the analysis contained Octadecadienoic Acid compounds (stearic acid) with a concentration of 3.90% used in the cosmetics, soap making Potential as anti-fungi and anti-bacterial.

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