



YAYASAN UNIVERSITAS ISLAM MADURA  
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**FAKULTAS KESEHATAN**

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**English Final Test**  
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**Determination of Quercetin Content in Preparation of Powder Extract of Starfruit Leaves (*Averrhoa bilimbi* L.) by TLC-Densitometry**

**ABSTRACT**

Quercetin is a flavonoid from *Averrhoa bilimbi* Linn. which has a variety of potential therapeutic. Therefore, this research is needed to determine the quercetin content in *Averrhoa bilimbi* L.'s extract powder. Method Validation is performed to ensure that an analytical method meets the criteria and requirements of a good analysis method. Method Validation used was the first category with parameters of selectivity, linearity, accuracy, and precision. The quercetin content in *Averrhoa bilimbi* L.'s leaf was small, requiring a parameter Limit of Detection (LOD) and Limit of Quantitation (LOQ). The analysis method was by TLC-Densitometry with Silica gel 60 F254, eluent of toluene: ethyl acetate: formic acid (7:3:1) as mobile phase with a resolution of 1.67 and 1.60 respectively. The result showed linear regression of  $y = 8122.4899x + 1181.9943$  ( $r: 0.9976$ ;  $V_{x0} 4.88\%$ ). The accuracy was  $90.2\% (w/w) \pm 5.89$ ; the coefficient of variation of precision was  $1.35\%$ ; LOD and LOQ were  $0.0064 \mu\text{g}$ , and  $0.0215 \mu\text{g}$  respectively. The determination result showed that quercetine content in the leaf extract in ethanol of *Averrhoa bilimbi* L. was  $0.58\% (w/w) \pm 0.04$  and the determination quercetin from  $4.0 \text{ g}$  extract powder of *Averrhoa bilimbi* L. leaf showed that average content of quercetine was  $6.05 \pm 0.09 \text{ mg}$ .

**Answer the Questions Below with the Correct Answer!**

1. What is the abstract about?
2. Why the purpose of the study?
3. How does the researcher conduct the study?
4. What is the result of this study?
5. What is Quercetin?

**A. Fill in the Blank by Using the Appropriate Word Provided on the Box!**

Was talking      While      Structured      Is going to take      Is talking  
Taught      Came      Will take

1. Mr. Faruk \_\_\_\_\_ us how to mix medicine.
2. She stepped on a nail \_\_\_\_\_ walking around the construction site.
3. Curriculum vitae should be short, clear, and \_\_\_\_\_
4. Alexander \_\_\_\_\_ his driver's test next week.
5. When I \_\_\_\_\_ into busy office, the secreatry \_\_\_\_\_ on the phone with a customer.

**~ Good Luck ~**