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EFFECTIVENESS OF BAJAKAH TAMPALA EXTRACT (*Spatholobus littoralis* Hassk.) AS AN ANTIPYRETIC IN WHITE RATS (*Rattus norvegicus*)

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**STUDY PROGRAMME OF VETERINARY MEDICINE
SCHOOL OF VETERINARY MEDICINE AND BIOMEDICAL SCIENCES
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BOGOR
2026**



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ABSTRACT

VARSHINI SHAVINA DAS MOHANDAS. Effectiveness of Bajakah Tampala Extract (*Spatholobus littoralis* Hassk.) as an Antipyretic in White Rats (*Rattus norvegicus*) Supervised by LINA NOVIYANTI dan ANISA RAHMA.

Fever is a common clinical symptom associated with a wide range of diseases and it is usually treated with antipyretic medications like paracetamol. Nevertheless, excessive or prolonged use of paracetamol may cause hepatotoxicity, therefore natural products have attracted increasing attention as alternative antipyretic agents. Bajakah Tampala (*Spatholobus littoralis* Hassk.) is a possible natural antipyretic agent. The purpose of the study was to identify the active compounds of Bajakah Tampala extract by using phytochemical screening and determine its efficacy and optimal dose as an antipyretic in white rats (*Rattus norvegicus*). Phytochemical screening of Bajakah Tampala extract revealed the presence of flavonoids, alkaloids, tannins/polyphenols, steroids, triterpenoids, and saponins were found. The test of antipyretic efficacy was administered to 16 white rats that were separated into four groups including negative control, positive control, low-dose treatment and high-dose treatment. Peptone solution was used to cause fever and rectal temperature was monitored to determine the effects of treatment. The phytochemical screening confirmed the presence of flavonoids, alkaloids, tannins/polyphenols, steroids, triterpenoids, and saponins in Bajakah Tampala extract. Antipyretic testing demonstrated that the extract significantly reduced rectal temperature in fever-induced white rats compared with the negative control ($p < 0.05$). Both the low-dose and high-dose treatment groups exhibited antipyretic activity, with the high-dose group at (200mg/kg) producing a better reduction in rectal temperature than the low-dose group at (100mg/kg). These findings indicate that Bajakah Tampala extract possesses significant antipyretic activity and supports its potential as a natural antipyretic agent.

Keywords : antipyretic, bajakah tampala, extract, phytochemical test, temperature, white rats.



ABSTRAK

VARSHINI SHAVINA DAS MOHANDAS. Effectiveness of Bajakah Tampala Extract (*Spatholobus littoralis* Hassk.) as an Antipyretic in White Rats (*Rattus norvegicus*) Supervised by LINA NOVIYANTI dan ANISA RAHMA.

Demam merupakan gejala klinis yang dapat dijumpai pada berbagai penyakit dan umumnya ditangani dengan antipiretik, salah satunya parasetamol. Namun, parasetamol hepatotoksik pada dosis tinggi, oleh karena itu dibutuhkan alternatif sumber alami. Salah satu sumber antipiretik alami adalah Bajakah Tampala (*Spatholobus littoralis* Hassk.). Tujuan penelitian adalah untuk mendeteksi senyawa aktif pada ekstrak Bajakah Tampala menggunakan skrining fitokimia dan mempelajari efektivitas serta dosis optimal Bajakah Tampala sebagai antipiretik pada tikus putih (*Rattus norvegicus*). Skrining fitokimia terhadap ekstrak Bajakah Tampala menunjukkan bahwa ekstrak Bajakah Tampala mengandung flavonoid, alkaloid, tanin/polifenol, steroid, triterpenoid, dan saponin. Uji antipiretik dilakukan pada kelompok tikus sebanyak 16 ekor, yang dikelompokkan menjadi empat kelompok, yaitu negatif, positif, dosis rendah, dan dosis tinggi. Demam diinduksi melalui larutan pepton, dan suhu rektal digunakan sebagai indikator penurunan suhu. Hasil skrining fitokimia mengkonfirmasi adanya senyawa metabolit sekunder berupa flavonoid, alkaloid, tanin/polifenol, steroid, triterpenoid, dan saponin pada ekstrak Bajakah Tampala. Pengujian aktivitas antipiretik menunjukkan bahwa ekstrak Bajakah Tampala secara signifikan menurunkan suhu rektal pada tikus putih yang mengalami demam dibandingkan dengan kelompok kontrol negatif ($p < 0,05$). Kelompok perlakuan dosis rendah maupun dosis tinggi sama-sama menunjukkan aktivitas antipiretik, dengan kelompok dosis tinggi (200 mg/kg) menghasilkan penurunan suhu rektal yang lebih besar dibandingkan kelompok dosis rendah (100 mg/kg). Temuan ini menunjukkan bahwa ekstrak Bajakah Tampala memiliki aktivitas antipiretik yang signifikan dan mendukung potensinya sebagai agen antipiretik alami

Kata kunci : antipiretik, bajakah tampala, ekstrak, uji fitokimia, suhu, tikus.



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**EFFECTIVENESS OF BAJAKAH TAMPALA EXTRACT
(*Spatholobus littoralis* Hassk.) AS AN ANTIPYRETIC IN WHITE
RATS (*Rattus norvegicus*)**

VARSHINI SHAVINA DAS MOHANDAS

Undergraduate thesis
As one of the requirements to obtain a Bachelor's degree
At the School of Veterinary Medicine and Biomedical
Sciences

**STUDY PROGRAMME OF VETERINARY MEDICINE
SCHOOL OF VETERINARY MEDICINE AND BIOMEDICAL SCIENCES
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May this scientific work be beneficial to those in need and contribute to the advancement of knowledge.

Bogor, July 2026

Varshini Shavina Das Mohandas



TABLE OF CONTENTS

TABLE OF CONTENTS	xi
LIST OF TABLES	xii
LIST OF FIGURES	xiii
LIST OF APPENDIX	xiv
I INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement	1
1.3 Objectives	2
1.4 Benefits	2
II LITERATURE REVIEW	3
2.1 Antipyretic	3
2.2 Bajakah Tampala	3
2.3 White Rat	4
III METHODOLOGY	6
3.1 Time and Place	6
3.2 Procedure	6
3.2.1 Equipment, Materials, and Experimental Animals	6
3.2.1 Maintenance and Acclimazation of Animals	6
3.2.3 Preparation of Simplicia and Extract of Bajakah Tampala	6
3.2.4 Phytochemical Screening of Bajakah Tampala Extract (modified method of Harborne 1987)	7
3.2.5 Preparation of Peptone Solution	8
3.2.6 Antipyretic Test Experimental Design	8
3.2.7 Preparation of Paracetamol Suspension	8
3.3 Data Analysis	8
IV RESULTS	10
4.1 Phytochemical Screening for Identification of Bioactive Compounds in Bajakah Tampala (<i>Spatholobus littoralis</i> Hassk.) Extract	10
4.2 Effectiveness Test of Bajakah Tampala Extract as an Antipyretic	10
V DISCUSSION	12
VII CONCLUSION AND SUGGESTION	16
6.1 Conclusion	16
REFERENCES	17
RESEARCH APPENDIX	19
BIOGRAPHY	22



LIST OF TABLES

1	Experimental Design of Treatment Groups	8
2	Results of Phytochemical Screening for Identification of Bioactive Compounds in Bajakah Tampala Extract	10
	Average Temperature of Treatment Groups	11

LIST OF FIGURES

Bajakah Tampala (<i>Spaatholobus littoralis</i> Hassk.)	4
Sprague Dawley male white rat	5
Mechanism of fever induction	13

LIST OF APPENDICES

1	Approval of the Animals Ethics Committee	19
2	Documentation of phytochemical tests identifying active compounds in Bajakah Tampala (<i>Spatholobus littoralis</i> Hassk.)	20
3	Results of one-way analysis of variance (ANOVA) and Tukey test using Minitab22®	21