



## Karnataka State Council for Science and Technology

Indian Institute of Science Campus, Bengaluru - 560 012

Telephone: 080-2334 1652, 2334 8848, 2334 8849 ♦ Telefax: 080-2334 8840

Email: office@kscst.iisc.ernet.in, office@kscst.org.in ♦ Website: www.kscst.iisc.ernet.in, www.kscst.org.in

**Dr. S. G. Sreekanteswara Swamy**  
Executive Secretary

28th MARCH 2018

Ref: 7.1.01/SPP/08

The Principal,  
Sapthagiri College of Engineering,  
#14/5, Chickasandra, Hesaraghatta Main Road,  
Bengaluru - 560 057.

Dear Sir,

Sub : Sanction of Student Project (Biofuel) - 41st Series : Year 2017-2018

Your Project Proposal Reference No. :

**41S\_B\_BE\_076**

Ref : Your Project Proposal entitled "

**DESIGN AND LAB SCALE ULTRASOUND BATCH REACTOR FOR THE PRODUCTION OF BIODIESEL FROM THE SLAUGHTER WASTE.**

I am happy to inform that your project proposal referred above, has been approved by the Secretary, KSCST for "Student Project Programme (Biofuel) 41st Series" and has been sanctioned with a budgetary break-up as detailed below:

Student / s	Ms. Niranjana S.	Budget	Amount (Rs)
	and others	Materials/Consumables	7,000.00
Guide/s	Prof. Kavya M. V., Prof. Shobha G.	Labor	-
	& Mrs. Soumya C	Travel	500.00
		Analysis	-
Department	Biotechnology	Miscellaneous	500.00
		Report	500.00
		<b>TOTAL</b>	<b>8,500.00</b>
<b>RUPEES EIGHT THOUSAND FIVE HUNDRED</b>			

The following are the guidelines to carryout the project work :

- The project should be carried out based on the objectives of the proposal sent by you.
- The project should be completed in all respects and **a) One copy** of the hardbound report **b) Softcopy** of the full report (including coverpages, abstract & preliminary pages in a CD (.doc and .pdf format)
- The project report shall mention the name of "**Karnataka State Bioenergy Development Board and Karnataka State Council for Science and Technology**" as sponsored organisations in the title page. Project Title or the objectives can be altered only with prior permission of KSCST. Any change in the project are strictly prohibited and liable for rejection and the amount sanctioned has to be returned back to KSCST. The fund is to be utilised only for the activities to which it has been released.
- Please quote your **project sanction reference number printed above** in all your future correspondences.
- Important:** After completing the project, 2 to 3 page write-up (synopsis) needs to be sent by e-mail [biofuelcell.kscst@gmail.com] and should include following :

- Title of the project
- Name of the College & Department

Sapthagiri College of Engineering  
Chickasandra, Hesaraghatta  
Bengaluru - 560 057



3) Name of the students & Guide(s)

41S\_B\_BE\_076

4) Keywords

5) Introduction / background

(with specific reference to the project, work done earlier, etc) - about 20 lines

6) Objectives (about 10 lines)

7) Methodology (about 20 lines)

(materials, methods, details of work carried out, including drawings, diagrams etc)

8) Results and Conclusions

(about 20 lines with specific reference to work carried out)

9) Scope for future work (about 20 lines).

**(Note: The write-up (Synopsis) should be sent with the approval of project guide. The softcopy of the write-up, in MS Word format, should be sent by e-mail (biofuelcell.kscst@gmail.com). In your e-mail, please also include project proposal reference number and title of the project.)**

e) Best Projects will be awarded in Final Seminar / Exhibition.

The amount sanctioned for the selected projects will be sent by cheque.

**The Mid term evaluation of the sponsored projects evaluation details will be intimated shortly by email / Website announcement..**

Please visit our website for further announcements / information and for any clarifications please email to biofuelcell.kscst@gmail.com

Thanking you and with best regards,

Yours sincerely,

SD/-

Copy to:

- 1) The Head of the Department of  
Biotechnology  
Sapthagiri College of Engineering,  
# 14/5, Chickasandra, Hesaraghatta Main Road,  
Bengaluru - 560 057
- 2) Prof. Kavya M. V., Prof. Shobha G. & Mrs. Soumya C  
Department of Biotechnology  
Sapthagiri College of Engineering,  
# 14/5, Chickasandra, Hesaraghatta Main Road,  
Bengaluru - 560 057
- 3) The Finance Officer, KSCST, Bangalore



Principal  
Sapthagiri College of Engineering  
14/5, Chickasandra, Hesaraghatta Main Road,  
Bengaluru - 560 057



Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road,  
Bangalore-560 057

# **DESIGN OF LAB SCALE ULTRASOUND BATCH REACTOR FOR THE PRODUCTION OF BIODIESEL FROM THE SLAUGHTER WASTE**

**A Project Report submitted to the Karnataka State Council For  
Science And Technology  
(KSCST-2017-18)**

**Submitted By**

**Niranjana Srikrishnan**

Department of Biotechnology  
Sapthagiri College of Engineering

**Under the guidance of**

**Mrs Kavya M V**

Assistant Professor  
Department of Biotechnology  
Sapthagiri College of Engineering


**Mrs. Shobha G**

Assistant Professor  
Department of Biotechnology  
Sapthagiri College of Engineering

**Mrs. Soumya C**

Assistant Professor  
Department of Biotechnology  
Sapthagiri College of Engineering

Submitted to  
**KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY  
INDIAN INSTITUTE OF SCIENCE CAMPUS,  
BENGALURU - 560012  
Karnataka**

  
Principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road,  
Bangalore-560 057

# SAPTHAGIRI COLLEGE OF ENGINEERING

#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560 057



## DEPARTMENT OF BIOTECHNOLOGY

### CERTIFICATE

This is to certified that the project work entitled “Design of lab scale ultrasound batch reactor for the production of biodiesel from the slaughter waste” has been carried out by Ms. Niranjana S, bonafide student of VIII semester B.E in Biotechnology of Sapthagiri College of Engineering, under scheme of The Karnataka State Council For Science And Technology during the academic year 2017-2018. The research is a record of original work carried out by them, in Department of Biotechnology, Sapthagiri College of Engineering, Bangalore, Karnataka, under our guidance and supervision and it has not formed the basis for the award of any Degree.

Signature of Guides

1.

2.

3.

Signature of HOD

Signature of Principal

Principal

Sapthagiri College of Engineering  
Chikkasandra, Hesaraghatta Road  
Bangalore-560 057



## KSCST PROJECTS

### UTILIZATION CERTIFICATE

**KSCST Student project program 41<sup>st</sup>series- 2017-18**

Sl No	Title of the project	Amount	Certified that KSCST has provided partial financial support of <b>RS 29,000/-</b> towards Biofuel and SPP student project program 41 <sup>st</sup> series  Sum of <b>Rs29,000/-</b> only has been utilize for the purpose Biofuel and SPP student project program for which it was sanction
1	Investigation on Performance and pollution level on n-butanol blended petrol fuelled IC engine (10% to 50% blending)	11000/-	
2	Real time free parking slots tracking using IOT technology	4500/-	
3	Women Security System	5000/-	
4	Design and Lab scale ultrasound batch reactor for the production of biodiesel from the slaughter waste	8500/-	

Certified that I have satisfied myself that condition on which the grant in aid sanctioned has been duly/are be fulfilled and that I have excise the following check to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of check exercised

1. Cash book
2. Vouchers

  
 Principal  
 Sapthagiri College of Engineering  
 14/5, Chikkasandra, Hesaraghatta Main Road  
 Bangalore - 560 057



Sl. No	Project proposal ref no	Title of the project	Dept./Guide	Amount Sanction by KSCST	Amount utilized by the college	Balance if any to be refunded to KSCST
1	41S_B_BE_062	Investigation on Performance and pollution level on n-butanol blended petrol fuelled IC engine (10% to 50% blending)	ME/ Prof. Raghuthama Rao	11000/-	11000/-	0
2	41S_B_BE_2016	Real time free parking slots tracking using IOT technology	ISE/ Prof. Prerana Chaitra	4500/-	4500/-	0
3	41S_B_BE_0470	Women Security System	EC/ Dr. Ashwatha Kumar S	5000/-	12,000	0
4	41S_B_BE_076	Design and Lab scale ultrasound batch reactor for the production of biodiesel from the slaughter waste	BT/ Prof. Kavya V M Prof. Shobha G Prof. Soumya C	8500/-	8,500/-	0

Signature of the Principal with seal

Date:

Signature of Auditor with seal

Date:

Principal  
 Sapthagiri College of Engineering  
 Chikkasandra, Hesaraghatta Road  
 Bangalore-560 057

## KSCST PROJECTS

### UTILIZATION CERTIFICATE