

# KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru - 560012

## LIST OF B.E. PROJECTS SANCTIONED UNDER 40th SERIES OF STUDENT PROJECT PROGRAMME: 2016 - 2017

### 102) SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU

SI No.	Project proposal Ref. No.	TITLE OF THE PROJECT	BRANCH	NAME OF THE GUIDE/S	STUDENT1 & TEAM LEADER	SANCTIONED AMOUNT (Rs.)
399)	40S_BE_0183	ISOLATION AND IDENTIFICATION OF MICROLABS FOR ABSORPTION AND CONVERSION OF AMMONIA, NITRATES AND NITROGEN USING AQUAPONICS SYSTEM	BIOTECHNOLOGY ENGINEERING	MRS. BLESSY BABY MATHEW, MRS. SARANYA D, MR. ANANDA H V, DR. ANANDA S	MR. MOHAN KUMAR N	6,500.00
400)	40S_BE_2312	FOREST MONITORING SYSTEM BASED ON GPRS AND POWERED BY IOT	ELECTRONICS AND COMMUNICATION ENGINEERING	PROF. SUMA V SHETTY	MS. MANASA J.	7,500.00

  
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## Title of the Project

ABSORPTION AND CONVERSION OF AMMONIA AND NITRITES  
BY USING *NITROBACTER* AND *NITROSOMONAS* IN AQUAPONICS  
SYSTEM FOR THE DEVELOPMENT OF PATHOS

Reference number- 40\_BE\_0183

Name of the College & Department

Department of Biotechnology, Sapthagiri College of Engineering,  
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### Acknowledgement:

1. Dr. Ananda S, Professor and HOD
2. Mrs. Blessy Baby Mathew, Assistant Professor
3. Mrs. Sharanya D, Assistant Professor

### Keywords

Aquaponics, Aquaculture, Nitrite, Nitrate, Ammonia, nitrobacter, nitrosomonas, pathos

### 1. INTRODUCTION:

- Aquaponics is a food production system that combines intensive aquaculture (raising aquatic animals in tanks) with hydroponics (cultivating plants in a nutrient solution).
- In Aquaponic system, Fish feed passes through fish and provides nutrients for plant growth.
- Aquaponic systems are recirculation aquaculture systems that incorporate the production of plants without soil.
- Plants grow rapidly with dissolved nutrients that are excreted directly by fish or generated from the microbial breakdown of fish wastes.

  
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### 3.10 Instruments Used:

SI No.	Instruments		
1.	Hot air Oven	6	Fish tank
2.	Incubator	7	Motor
3.	Amonia test strips	8	Titration set up
4.	Autoclave	9	Thermoineter
5.	Shaker	10	Buffers
		11	pH meter

Table No.1: Instruments utilized

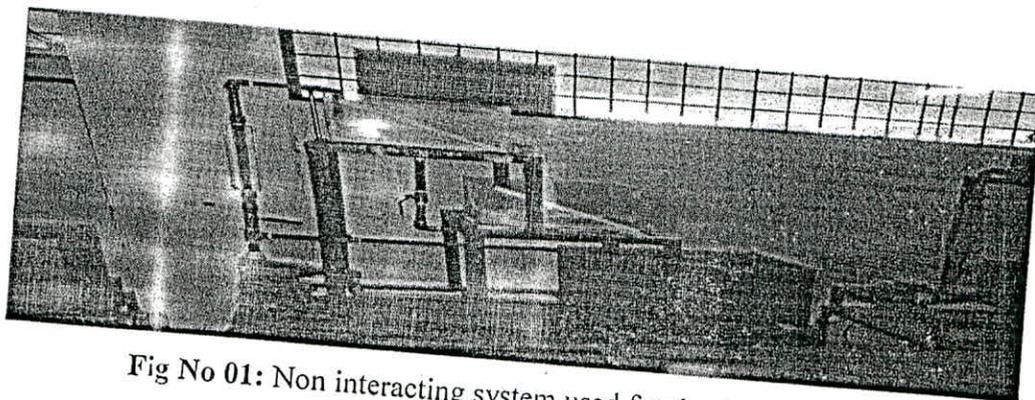
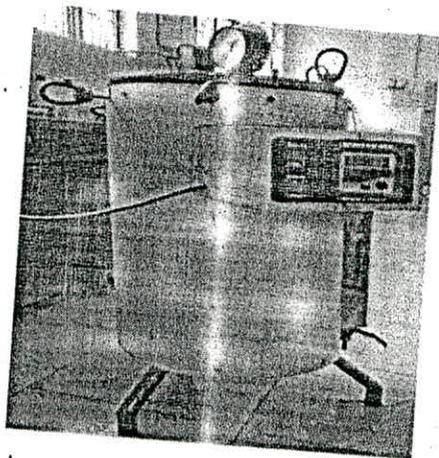


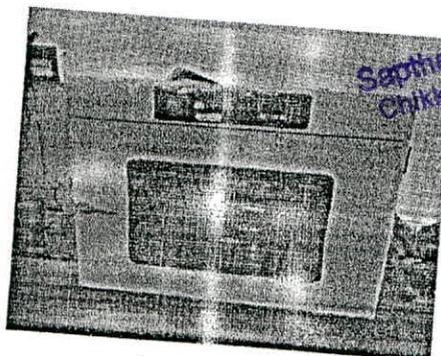
Fig No 01: Non interacting system used for the Aquaponics set up



Autoclave

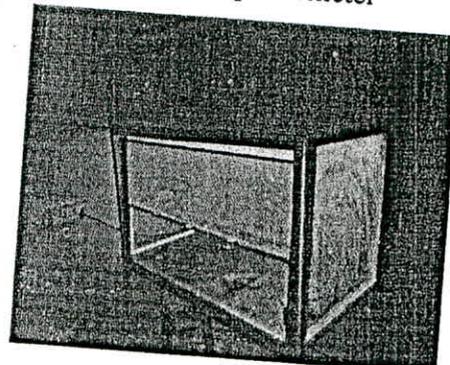


UV Spectrophotometer



Incubator

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**KSCST PROJECTS**

**UTILIZATION CERTIFICATE**

**KSCST Student project program 40th series -2016-2017**

Sl No	Title of the project	Amount	Certified that KSCST has provided partial financial support of <b>RS 36000/-</b> towards Biofuel and SPP student project program 40 <sup>th</sup> series  Sum of <b>Rs36000/-</b> only has been utilize for the purpose Biofuel and SPP student project program for which it was sanction
1	Isolation & identification of Micro labs for absorption and conversion of ammonia, nitrates and nitrogen using Aquaponics system	6,500/-	
2	Forest Monitoring System based on GPRS and powered by iot	7,500/-	
3	Performance and emission analysis of single cylinder si engine varying ethanol blends with petrol	10,000/-	
4	Redaction of pollution levels in the atmosphere by the use of methanol blended petrol fuel in automobile IC engine and study of its effects on the performance of the engine	12,000/-	

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

*[Signature]*  
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Creating Tomorrow

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	40S_B_0183	Isolation & identification of Micro labs for absorption and conversion of ammonia, nitrates and nitrogen using Aquaponics system	BT/ Prof. Saranya D / Prof. Ananda H V/ Prof. Blessy Baby Mathew	6,500/-	6,500/-	0
2	40S_B_2312	Forest Monitoring System based on GPRS and powered by iot	EC/ Prof. Suma V Shetty	7,500/-	7,500/-	0
3	40S_B_049	Performance and emission analysis of single cylinder si engine varying ethanol blends with petrol	ME/ Prof. Raghuthama Rao	10,000/-	10,000/-	0
4	40S_B_064	Reduction of pollution levels in the atmosphere by the use of methanol blended petrol fuel in automobile IC engine and study of its effects on the performance of the engine	ME/ Prof. Raghuthama Rao	12,000	12,000	0



Signature of the Principal with seal

Signature of Auditor with seal

Date: \_\_\_\_\_  
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