



GEMS ARTS AND SCIENCE COLLEGE

An ISO 9001 : 2015 Certified Institution

(A unit of Global Education and Management Studies Co-operative Ltd., No. M. 782)

(Affiliated to University of Calicut and UGC Recognized under Section 2 (f) of UGC Act 1956)

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PATENT FILED



PATENTS APPLIED TO NRDC

GEMS Arts and Science College (Affiliated to University of Calicut) has been filed two patents at Indian Patent Office through National Research Development Corporation, a Government of India Enterprise for the inventions arisen from the student project works. The below mentioned are the details of patents.

Patent 1: Single cell Protein and its process preparation

Patent Application number: 202341058836

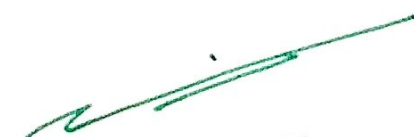
Summary: The present study describes a process of producing single cell protein (SCP) from the inexpensive and widely available substrate *Cucumis sativus* under submerged fermentation using *Saccharomyces cerevisiae*. SCP primarily targets athletes, youngsters who are malnourished, and people with low immunity. Optimization of the production was carried out using OFAT approach (One Factor at a Time approach). The parameters considered were incubation time, temperature, initial pH, carbon source, nitrogen source and the metal additives. Significant improvement in the production of SCP was observed after optimization. The present work can be extended to industrial scale production of SCP, which can be used as a nutritional supplement. They serve as a food or feed supplement and can be an alternative to conventional protein with all essential nutrients. SCP from *Cucumis sativus* can be produced with the least input of cost and considered to be economically feasible.

Patent 2: Nanofertilizer and its process preparation

Patent Application number: 202341058794

Summary: The present invention provides an efficient nanofertilizer, based on common household food waste onion peel (*Allium cepa*), and its process of preparation. Preparation of nanofertilizer from onion waste is important because it not only help to reduce waste accumulation but also improve the crop quality. The present study is carried out as a small attempt to utilize the onion peel waste for synthesizing nanoparticle. Application of this synthesized Nano fertilizer in seed germination resulted in increased germination rate at varying concentration compared to the control. The Improvement has been observed in terms of the plant growth parameters such as seed germination, shoot length, root length, fresh weight, and dry weight. The fold increase of each parameter after addition of varying concentrations of nanofertilizer was found to be significant. This study can be extended to agriculture sector for significant crop improvement.




Dr. NAVEEN MOHAN
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STUDENTS APPLIED FOR PATENT



Name: Ashfena C

Class: S4 MSc. Biotechnology

Patent title: Single cell Protein and its process preparation

Patent Application number: 202341058836



Name: Safceda K

Class: S4 MSc. Biotechnology

Patent title: Nanofertilizer and its process preparation

Patent Application number: 202341058794




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सत्यमेव जयते

G.A.R.6
 [See Rule 22(1)]
 RECEIPT



Docket No 88880

Date/Time 2023/09/01 17:02:16

RANJAN NARULA RNA, IP
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Sr. No.	App. Number	Ref. No./Application No.	Amount Paid	C.B.R. No.	Form Name	Fee Payment	Remarks
1	E-106/6370/2023/CHE	202341058794	0	-1	FORM28	Full	
2	202341058794	TEMP/E-1/68290/2023-CHE	1600	39581	FORM 1	Full	NANOFERTILIZER COMPOSITION AND ITS PROCESS OF PREPARATION

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
N-0001210148	Online Bank Transfer	0109230040161	1600.00	1475001020000001

Total Amount : ₹ 1600.00

Amount in Words: Rupees One Thousand Six Hundred Only

Received from RANJAN NARULA the sum of ₹ 1600.00 on account of Payment of fee for above mentioned Application/Forms.

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G.A.R.6
[See Rule 22(1)]
RECEIPT

Docket No 88945

Date/Time 2023/09/01 17:59:47

To
RANJAN NARULA

UserId: RNAIP

RNA, IP Attorneys 401-402, 4th Floor,
Suncity Success Tower, Sector - 65, Golf
Course Extension Road, Gurgaon - 122 005,
National Capital Region (Haryana), India

CBR Detail:

Sr. No.	App. Number	Ref. No./Application No.	Amount Paid	C.B.R. No.	Form Name	Remarks
1	202341058836	TEMP/E-1/68319/2023-CHE	1600	39611	FORM 1	SINGLE CELL PROTEIN AND ITS PROCESS OF PREPARATION
2	E-106/6384/2023/CHE	202341058836	0	----	FORM28	----

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
N-0001210259	Online Bank Transfer	0109230044903	1600.00	1475001020000001

Total Amount : ₹ 1600.00

Amount in Words: Rupees One Thousand Six Hundred Only

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