



पेटेंट कार्यालय, भारत सरकार

The Patent Office, Government Of India

पेटेंट प्रमाण पत्र

Patent Certificate

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)


पेटेंट सं. / Patent No. : 527587
आवेदन सं. / Application No. : 201841012852
फाइल करने की तारीख / Date of Filing : 04/04/2018
पेटेटी / Patentee : Amrita Vishwa Vidyapeetham
आविष्कारकों का नाम / Name of Inventor(s) : 1.VIJAYAN NAIR, Sobha 2.RAMACHANDRAN NAIR, Prakash Chandran 3.NAIR, Bipin

प्रमाणित किया जाता है कि पेटेटी को, उपरोक्त आवेदन में यथाप्रकटित *DETERGENT COMPATIBLE ASSAY FOR PROTEIN ESTIMATION* नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख अप्रैल 2018 के चौथे दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled *DETERGENT COMPATIBLE ASSAY FOR PROTEIN ESTIMATION* as disclosed in the above mentioned application for the term of 20 years from the 4th day of April 2018 in accordance with the provisions of the Patents Act, 1970.

अनुदान की तारीख : 15/03/2024
Date of Grant :




नरेश जी मंडित
पेटेंट नियंत्रक
Controller of Patents

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, अप्रैल 2020 के चौथे दिन को और उसके परवर्तन प्रत्येक वर्ष में उसी दिन देय होगी।

Note - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 4th day of April 2020 and on the same day in every year thereafter.



US011125754B2

(12) **United States Patent**
Nair et al.

(10) **Patent No.:** US 11,125,754 B2
(45) **Date of Patent:** Sep. 21, 2021

(54) **DETERGENT COMPATIBLE ASSAY FOR PROTEIN ESTIMATION**

FOREIGN PATENT DOCUMENTS

CA 2649835 C 1/2016

(71) Applicant: **AMRITA VISHWA VIDYAPEETHAM**, Kollam (IN),

OTHER PUBLICATIONS

(72) Inventors: **Sobha Vijayan Nair**, Kollam (IN); **Prakash Chandran Ramachandran Nair**, Kollam (IN); **Bipin Nair**, Redmond, WA (US); **Kalyani Ajayan**, Kollam (IN)

Antharavally B.S., et al., "Quantitation of Proteins using a Dye-Metal-based Colorimetric Protein Assay," *Analytical Biochemistry*, Elsevier, Feb. 15, 2009, vol. 385(2), pp. 342-345.

* cited by examiner

(73) Assignee: **Amrta Vishwa Vidyapeetham**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(h) by 362 days.

Primary Examiner — Jennifer Wecker

Assistant Examiner — Michael Paul Shimek

(74) *Attorney, Agent, or Firm* — Donald R. Boys; Central Coast Patent Agency LLC

(21) Appl. No.: 16/366,865

(22) Filed: Mar. 27, 2019

(57) ABSTRACT

(65) **Prior Publication Data**

US 2019/0219591 A1 Jul. 18, 2019

The invention discloses a detergent-compatible protein assay method, composition and kit based on bio-conjugation reaction between protein and Meldrum's acid activated furfural. The method includes adding MAF in dimethyl sulfoxide (DMSO) to a protein sample solution. The amine functionalities present on the amino acid residues reacts with the MAF instantaneously at room temperature to yield deep purple colored solutions of the corresponding conjugated proteins. The reagent composition added to protein may be in the range of 90-450 mM. The intensities of purple colored solutions were proportional to the protein concentration captured by spectrophotometric measurements. The assay is sensitive in the range of 0.125-15 mg/mL, is compatible with commonly used detergents and reducing agents in protein solutions and may be employed for estimation of protein samples in the presence of detergents and reducing agents.

(51) **Int. Cl.**
G01N 33/68 (2006.01)

(52) **U.S. Cl.**
CPC *G01N 33/6842* (2013.01); *G01N 33/6839* (2013.01)

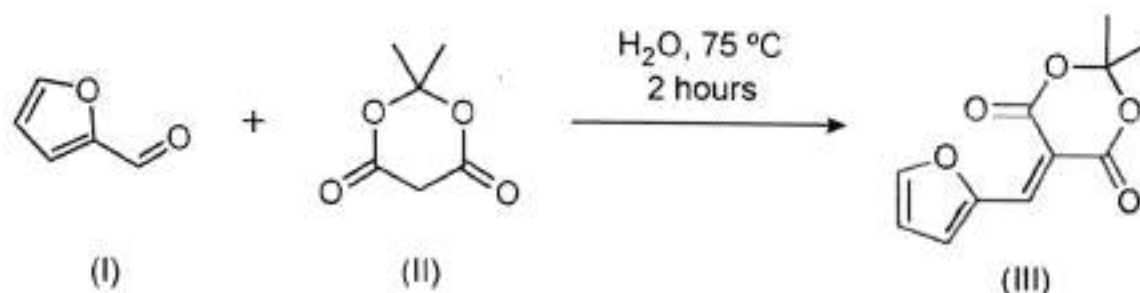
(58) **Field of Classification Search**
CPC *G01N 33/6842*; *G01N 33/6839*
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,553,869 B2 6/2009 Czerny et al.
7,745,153 B2 6/2010 Mallia et al.
2009/0197348 A1* 8/2009 Mallia *G01N 33/683*
436/501

10 Claims, 6 Drawing Sheets



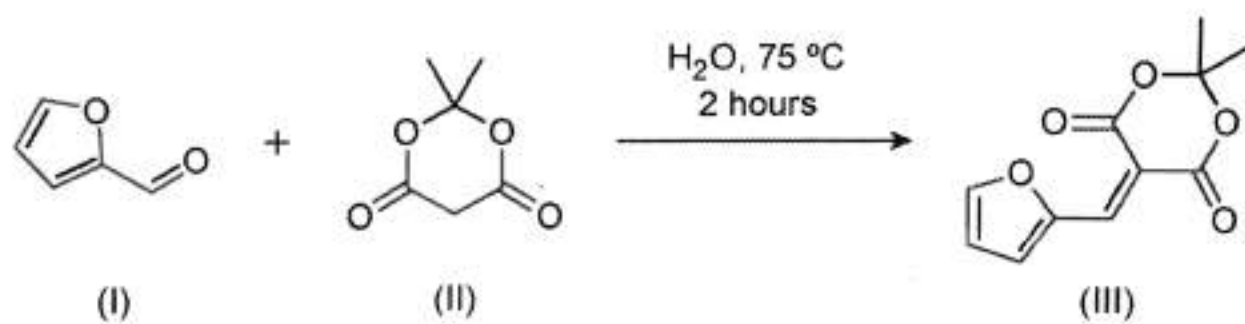


FIG. 1

OFFICE OF THE DISTRICT ELECTION OFFICER
Civil Station, Kollam-691 013

CERTIFICATE OF APPRECIATION

Presented to

Dr. Lulu S. Kump.

F.H.C. - Coordinator.

M.N.N.S.S. College, Kottiyam

With sincere appreciation of your valuable contribution
in co-ordinating the enrolment activities in connection with the

Special Summary Revision of Electoral Roll 2023

Atsana Perween
Atsana Perween IAS
District Election Officer &
District Collector, Kollam



Kollam
25 Jan. 2023

SPECIAL SUMMARY REVISION OF ELECTORAL ROLL 2023







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Kerala Development Innovation Society for Children
Innovate Kerala

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pvunni31@gmail.com

No. YIP/2019/Notification1 dated 13/12/2019

Dear Mahima C V,

We are happy to inform that your idea ID No. IDEA/2019/836 (One Back pack for Textbooks App) has been provisionally selected as one among the successful ones at the first round of the Young Innovators Challenge 2019-22. Congratulations. The state level evaluations are scheduled from 16th December to 31st December 2019. We will be contacting you soon regarding this.

You may, however, kindly note that the district level selection will not qualify you for the challenge unless you successfully complete the state level selection. Kindly prepare yourself for the state level selection which would be focusing more on the thematic aspect of your idea.

Looking forward to your active involvement in the next stage of our event.

Yours Sincerely,

Dr P V Unnikrishnan

Mahima C V

05.08.2020

CERTIFICATE

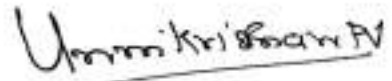
This is to certify that the following team has participated in the State level evaluation held on 28/12/2019 at CDC, Trivandrum.

Idea ID: IDEA/2019/836

Idea Title : One Back pack for Textbooks App

Participants:

Arun Krishnan S



Dr P V Unnikrishnan



**ENTREPRENEURSHIP DEVELOPMENT CELL
UNIVERSITY OF KERALA
YOUNG ENTREPRENEURSHIP CONCLAVE - 2018**

Certificate

This is to certify that Dr./Mr./Ms. Aban Krishna S of MM NSS College, Kottiyam, Kollam

.....has participated as delegate in the Young Entrepreneurship Conclave - 2018 organized by

Entrepreneurship Development Cell, University of Kerala on 31 July 2018 at Senate Chamber, University of Kerala.

Dr. Ambeesh Mon. S
Co-ordinator - ED Cell



Dr. M. Jayaprakas
Director- College Development Council



**NATIONAL SERVICE SCHEME
UNIVERSITY OF KERALA**

Certificate of Merit

The University of Kerala, in recognition of social services, hereby confers upon **Sri. Anandan A.,**
M.M.N.S.S. College, Kottiyam the **Best NSS**
Volunteer Award for the year **2019-20** for exemplary
services rendered through NSS and promoting the
spirit of volunteerism.

Dr. Shaji A.
Programme Co-ordinator

Prof. (Dr.) V.P. Mahadevan Pillai
Vice Chancellor

20th November 2021



NATIONAL SERVICE SCHEME UNIVERSITY OF KERALA

Certificate of Appreciation

The University of Kerala, in recognition of the social services, hereby confers upon *Ashtik Sufar, MCV NSS College Kottayam* the *Best NSS Volunteer Award* for the year 2018-19 for exemplary services rendered through NSS and promoting the spirit of volunteerism.

Dr. Shaji A

Dr. Shaji A
Programme Co-ordinator

Prof (Dr) V P Mahadevan Pillai
Vice Chancellor

Thiruvananthapuram
20 November 2019

NSS AWARD 2018-19



7 Kerala Bn NCC, Kollam <co7kbn.ncc@kerala.gov.in>

Mon, Jan 7, 2019 at 5:01 PM

To: "BJM Govt college ,Chavara" <bjmgovtcollege@gmail.com>, "BJM Govt college ,Chavara ANO" <ksuresh403734@yahoo.in>, AKM HSS Maylapure <akmhss2000@gmail.com>, AKM HSS Maylapure ANO <email2maheshhrs@gmail.com>, GBHS CHAVARA ANO <jolsila@gmail.com>, Govt BHS Chavara <41012chavara@gmail.com>, "Govt VHSS ,Chathannoor" <41006klm@gmail.com>, "Govt VHSS ,Chathannoor ANO" <deepuggopinathanpillai@gmail.com>, "MGD HS for Boys , Kundara" <mgdboyshskundara@gmail.com>, "MGD HS for Boys , Kundara ANO" <pmeskr85@gmail.com>, "MMNSS College ,Kottiyam" <mmnssc@yahoo.com>, "MMNSS College ,Kottiyam ANO" <krissyam@gmail.com>

Sir/Madam,

Under mentioned cadets of your institution has been awarded "Chief Minister's Scholarship 2018-19,

Sno	Rank	Name	Institution
1	CPL	Akshaya Mohan	BJM College Chavara
2	CDT	Adheena SR	GBHS Chavara
3	UO	Anoop S Pillai	MMNSS College Kottiyam
4	CDT	Aparna Pradeep	AKM HSS Mylapure
5	CPL	Kishore KR	MGD HSS Kundara
6	CDT	Bhadra S	GVHSS Chathannoor

You are requested to ensure respective cadets to collect their scholarships from NCC Group HQ office between **14 Jan 2019 to 19 Jan 2019**. Cadets must carry an identity proof and any NCC certificate in original for produce in front of authority.

Sd/-
OC, 7(K) Bn NCC



K-DISC
Kerala Development and Innovation
Strategic Council



CERTIFICATE OF PARTICIPATION



THIS CERTIFICATE IS AWARDED TO

Anandhu M S

Ideator Id: 20YIP10251

Mannam Memorial Nss College Kottiyam Kollam

for having participated in the Second Level evaluation of the Young Innovators Program (YIP 2020) conducted by the Kerala Development and Innovation Strategic Council.

Anandhu M S

has also attended the training program on **Introduction to Design Thinking and Pitch Deck Preparation** conducted during 7th April and 5th May 2021.

Date: 2021 June 21

Dr. P.V. Unnikrishnan
Member Secretary





K-DISC
Kerala Development and Innovation
Strategic Council



CERTIFICATE

This certificate is awarded to

Anandhu M S

Idea_ID : 20YIP10251

who has attended the Immersion Boot Camp held from 26th July 2021 - 08th September 2021 and also the State Level Evaluation of the Young Innovators Programme 2021 conducted by the Kerala Development and Innovation Strategic Council from 29th September 2021 - 16th November 2021.

2021 November 19



Dr. P.V. Unnikrishnan
Member Secretary, K-DISC



K-DISC
Kerala Development and Innovation
Strategic Council



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THIS CERTIFICATE IS AWARDED TO

Sree Lekshmi M S

Ideator Id: 20YIP07561

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for having participated in the Second Level evaluation of the Young Innovators Program (YIP 2020) conducted by the Kerala Development and Innovation Strategic Council.

Sree Lekshmi M S

has also attended the training program on **Introduction to Design Thinking and Pitch Deck Preparation** conducted during 7th April and 5th May 2021.

Dr. P.V. Unnikrishnan
Member Secretary

Date: 2021 June 21





Swachh Bharat Summer Internship 2018



This is to certify that ANOOP S PILLAI a student of
BSc Physics with unique ID KL16 SDA 115062 has
successfully completed the Swachh Bharat Summer Internship during 2018-19.

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