



Biju Dharmapalan <biju@macfast.org>

Msg from Dr. Majeed

6 messages

Mail1 <mail1@samilabs.com>

To: Biju Dharmapalan <biju@macfast.org>

Sat, Apr 14, 2018 at 11:48 AM

April 14, 2018

Dear Biju,

Attached please find the **internal report on the work done by the students on the mouth wash**. We can discuss this further.

Best wishes,

C Dr. Majeed

 Scan1550.pdf
358K

Biju Dharmapalan <biju@macfast.org>

To: Mail1 <mail1@samilabs.com>

Sat, Apr 14, 2018 at 11:55 AM

Dear Sir,

Thanks for sending the detailed report of the project. **I do look forward to continue the work**. Please tell me how we should proceed further. We can send the students to your lab ,if needed.

Warm regards,

Biju

[Quoted text hidden]

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Biju Dharmapalan

Head

School of Biosciences

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Biju Dharmapalan <biju@macfast.org>

To: AMAL PK <amalpk93@gmail.com>, Pinchu Thomas <pinchu@macfast.org>


Sat, Apr 14, 2018 at 1:57 PM

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https://mail.google.com/mail/u/0/?ui=2&ik=10b1ba7c75&jsver=uln2IVdyjuk.en.&cbl=gmail_fo_180502.07_p5&view=pt&q=mail1%40samilabs.com&qs=true&search

2018

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AMAL PK <amalpk93@gmail.com>
To: Biju Sir MACFAST <biju@macfast.org>

Sat, Apr 14, 2018 at 3:35 PM

Today Dr.Muthuraman sir (Scientist SAMI LAB) send a mail to me.He asked to send ' Elengi ' bark for further studies.
[Quoted text hidden]

Biju Dharmapalan <biju@macfast.org>
To: AMAL PK <amalpk93@gmail.com>

Mon, Apr 16, 2018 at 10:08 AM

please do it as early as possible
[Quoted text hidden]

AMAL PK <amalpk93@gmail.com>
To: Biju Sir MACFAST <biju@macfast.org>

Mon, Apr 16, 2018 at 10:10 AM

Ok, I will do it sir
[Quoted text hidden]

To: Dr. M. Majeed

From: Dr. S. Natarajan

Date: 13/04/2018

Dear Doctor,

This is regarding your mail on the Project work done by MACFAST Students.

Project on a Herbal Formulation for Oral Hygiene

Introduction: Four students and one Asst. Professor (From MACFAST-Mar Athanasious College for Advanced Studies, Tiruvalla) came to Sami Labs for a project work on a Herbal formulation for ORAL CARE. They worked on a small project for a week only in December, 2017.

The Following students and staff comprised the team.

Ms. Pinchu Elizabeth Thomas, Asst. Professor, M.Sc. Food Science & Technology

Ms. Jessie Jacob, B.Sc Botany . Doing M.Sc in Phytomedical Science & Technology

Ms. Anu Anna Joy, B.Sc Zoology. Doing M.Sc in Phytomedical Science & Technology

Dr. Amal P.K, BAMS. Doing M.Sc in Phytomedical Science & Technology

Ms. Athera Thomas, B. Sc Botany. Doing M.Sc in Phytomedical Science & Technology

Activity Report:

1. They wanted to develop a Herbal formulation for use as a Mouth Wash. The formulation consisted of : Elangi, Cinnamon, Cardamum, and Clove in a ratio of 10:2:2:2. In their college, they have arbitrarily initiated a formulation, taken a crude extract and brought a sample for Anti-Microbial activity and acceptability to be used as a mouth wash. This sample was given to Sami Labs Microbiology Department for testing. It was found to be somewhat active against certain bacterial cultures normally found in the Mouth.

2. On 14/12/2017, we had a discussion with the visiting Team and understood their requirements. We discussed about how to go about it scientifically for developing a product with good activity. We wanted to do a proper extraction using not only water but also with hydroalcohol. For this we needed the raw materials. Mr. Amal P.K arranged for getting this from his college..

3. We observed that there was no rationale for proposing the selected composition of their Mouth wash formula. Due to lack of facilities, they could not use proper equipments for making the extract. They even took the raw materials as such without making them in a powder form. They used a large volume of water (2 Litres for 160 g of the herbal blend). Extraction was done for 30 minutes and filtered through muslin cloth. The extract was not clear but turbid. They concentrated the extract by heating it on a gas-stove to about 700 ml.

5. After knowing what they have done in their lab, we proposed to improve the extraction process. The procedure we wanted to adopt in Sami Labs is:

- a. The raw materials will be checked for extraneous matter and then powdered .
- b. The powder will be passed through 40 Mesh sieve. 100 g of this sieved powder will be charged into an RB flask
- c. 4 volumes of Water or 50: 50 Hydroalcohol will be added and the flask will be kept on a water bath at 60-70 deg C for 1 hr under reflux.
- d. The hot extract will be filtered through a bed of hyflo supercel. The clear extract will be collected and cooled to RT. The spent material again will be extracted with 4 volumes of water (or hydroalcohol) and processed as described above. The clear second extract will be mixed with the first extract in each case.
- e. The extracts, thus obtained will be concentrated to half their volume using a Rotavapour at 60 to 70 deg.C.
- f. The concentrated extract will be submitted for Microbial analysis – Total aerobic microbial count, for the absence of pathogenic micro organisms including Staphylococcus, candida albicans etc., etc.
- g. The activity of the prepared extract in inhibiting the oral pathogens will also be tested by plate method for both the extracts (aqueous and HA).
- h. The TLC profile of the two extracts will be recorded and a comparison (between aqueous and hydro alcohol) will also be noted.

Other physical parameters such as pH, specific gravity, TDS and Refractive index will also be recorded. As these students do not have much time, the results will be sent to them after completing the analysis. A tentative approximate costing (per litre of the mouth wash liquid) will also be done.

i. The extract will be tested for colour, taste and odour for consumer acceptance. If required, Samilabs will suitably advise them for any process improvement.

j. Since this is going for a mouth wash application, the concentrated solution of the extract will be suitably diluted to the desired consistency taking into consideration the minimum concentration (MIC) for effective activity.

k. It will also be advised, for the students to prepare a note on the Rationale for the selected composition of the herbal ingredients. This will be added to their Final Project Report.

6. Two students did the extractions, under the guidance of Dr.Muthuraman and two other students were associated with the microbiological testing under the guidance of Ms.Jamsheeda.

7. The students recorded also the yield, polyphenol content, Tannins and pH of 1% solution of the water extract and the aqueous ethanolic extracts.

8. As per the antimicrobial test results, it was found that the Aqueous Ethanol extract was found to have significant inhibition against *S. aureus*, *Candida albicans* and *S. Mutans*.

9. With these results, the students completed their project work and went back to their College.

10. Having observed some significant and promising anti-microbial activity in the formulation, We (Sami Labs) wants to do a real product (for A Potent Herbal Mouth Wash) development work in our R & D with approval from Dr. Majeed.




Fr. Dr. CHERIAN J KOTTAYIL
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