MEMORANDUM OF UNDERSTANDING

Between

MAEERS PUNE'S

MAHARASHTRA INSTITUTE OF DENTAL SCIENCE AND RESEARCH, LATUR

Vishwanathpuram, Ambajogai road, Latur-413512 (Maharashtra)

and

Dayanand Education Society's

DAYANAND SCIENCE COLLEGE,LATUR

Affiliated to Swami Ramanand Teerth Marathwada University, Nanded

UGC-CPE, DST-FIST, NAAC Re-Accredited "A" Grade College

Scanned by CamScanner

MAEER PUNE'S

MAHATASHTRA INSTITUTE OF DENTAL SCIENCES & REASEARCH, LATUR, INDIA

(Dental College & Hospital)

And

Dayanand Education Society's

Dayanand Science College, Latur

Affiliated to Swami Ramanand Teerth Marathwada University, Nanded

UGC-CPE, DST-FIST, NAAC Re-Accredited "A" Grade College, Best College Award, Best Principal Award

This Memorandum of Understanding has been signed between Maharashtra Institute of Dental Science and Research, Latur and Dayanand Science College, Vishwanathpuram, Ambajogai Road, Latur-413512 Maharashtra and Dayanand Science College, Latur Maharashtra on 4/10/2016

WHEREAS:

Maharashtra Institute of Dental Sciences and Research, Latur established in 2006 is one of the Pioneering education institute in Latur, Maharashtra, dedicated to the cause of medical higher education for urban and rural students. The college is recognized by the Dental Council of India, New Delhi, under sub-section (2) of section 10 of the dentists act. 1948. The college is affiliated by Maharashtra University of Health Sciences, Nashik. The college offers Bachelor of Dental Surgery & Master of Dental Surgery in Prosthodontics, Conservative Dentistry, Periodontics, Oral Surgery, Orthodontics and Pedodontics.

WHEREAS:

Dayanand Education Society's Dayanand Science College, Latur, Maharashtra is an institute working since 1961 in the field of Education. The focused area of the institute is Education, Research and Extension. The college has evolved a **'Dayanand Pattern'** which is widely known as **'Latur Pattern** 'of education which was **recommended by the State Govt.** to implement it all over Maharashtra University honored this institute with the award of **Best College Award (Urban) by SRTMU, Nanded**. The College is recognized by the UGC under section 2 (f) and 12 (B) .The college bagged **"B++" grade** with an institutional score of **81.50 % (16 February 2004) in the accreditation (I Cycle), retained "A" grade (CGPA 3.14).**

The college has ISO 9001-2008 QMS certification and also bagged 'A' grade. The College is implementing **DST-FIST scheme in '50-50' mode**. The College offers B.Sc B.C.S,B.C.A, M.Sc Physics, M Sc Chemistry (Organic), M Sc Microbiology, M Sc Computer science , M Sc Biotechnology ,M Sc Mathematics ,M Sc Physics programs.

Scanned by CamScanner

BOTH THE COLLEGES WISH TO HAVE COLLABORATION FOR FOLLOWING SERVICES:

1. Services:

- Sharing and mobilization of resources infrastructure and utilization of the expertise from the different departments of both the colleges.
- Core research through projects under guidance of experts with faculty and students exchange programs sharing the knowledge bank.
- Collaborative extension programs focusing community services abiding the guidelines of government of India and Maharashtra state government.
- Skill development programs strengthening the interdepartmental interactions to promote the faculty improvement and student placement.
- **Faculty exchange** : A faculty from both colleges may be exchanged for the period of a week per semester with the mutual consent of the faculty and dates.
- Travelling expenses for the faculty will be borne by concerned colleges.
- Accommodation to faculty will be provided by the host colleges.
- Financial liabilities if any will be borne by respective college for their staff & students.

2. Terms:

Both colleges shall perform the services, the period as may be subsequently agreed by the colleges in written form initially for the period of 10 Years.

3. Project Administration:

The client designates **Dr Suresh Kamble, Principal, Maharashtra Institute of Dental Science and Research, Latur** and **Dr J.S Dargad, Principal, Dayanand Science College, Latur** will be responsible for the co-ordination of activities under the contract, for acceptance and approval of the reports and of other deliverables.

4. Performance:

Both the colleges undertake to perform the services with the highest standards of professional and ethical competence and integrity.

5. Law Governing Contract and Language:

Both the colleges shall be governed by the law of Union of India and the language of the contract shall be English/Hindi.

6. Dispute Resolution:

Any dispute arising out of contract, which cannot be amicably settled between the colleges, shall be referred to adjudication/arbitration in accordance with the laws of country.

Scanned by CamScanner

Dr. Suresh Kamble
Authorized Signatory:
Principal,
Maharashtra Institute of Dental Sciences and Research, Latur.

M.I.D.S.R. Dental College, LATUR

Designation /seal

Date: 4/10/2016

Witness

Dr. Yatishkumar Joshi
Associate Professor

Dr. Yogesh Kale
Professor & HOD,
Dept of Pediatric and Preventive Dentistry

Dr. J. S. Dargad
Authorized Signatory:
Principal,
Dayanand Science College,
Latur

DAYANAND SCIENCE COLLEGE LATUR

Designation /seal

Date: 4/10/2016

Witness

Dr. S. S Bellale
IQAC Coordinator

Dr. R. A. More
Head, Dept of Microbiology

Scanned by CamScanner

Dayanand Education Society's
Dayanand Science College
Latur, Maharashtra (India)
(DST-FIST Sponsored College)
(Best College Award by S.R.T.M.U., Nanded)

Establishment : June 1961 *(Affiliated to - Swami Ramanand Teerth Marathwada University, Nanded)*
Independent : 1967
NAAC Reaccreditated : A

Phone No : (02382) 221149, 222929 **Fax No :** (02382) 221149
E-mail : daya_scin1@rediffmail.com **Website :** www.dsclatur.org

Laxmiraman Lahoti	Dr. J.S. Dargad	Ramesh Biyani
President	Principal	Secretary

Ref. No. : 68/2020-21/659 *Date :* 29/12/2020

Certificate

The research work titled **Evaluation of antimicrobial efficacy of Trachyspermum ammi (Ajwain) oil and chlorhexidine against oral bacteria: An in vitro study** by research fellow/ P.G. Student/ Faculty **Dr. Snehal Dhore** has been conducted in our college, Dayanand Sciences College, Latur in collaboration with MIDSR Dental College, Latur during year 2016-2018 under the guidance of **Dr. Mahesh V. Dadpe.**

This work was facilitated under the guidelines of Memorandum of Understanding signed between the two institutes on 04/10/2016.

Head,
Department of Microbiology
Research Centre

Principal
Principal
Dayanand Science College
LATUR - 413 531

Scanned by CamScanner

[Downloaded free from http://www.jisppd.com on Wednesday, May 29, 2019, IP: 103.25.155.234]

Original Article

Evaluation of antimicrobial efficacy of *Trachyspermum ammi* (Ajwain) oil and chlorhexidine against oral bacteria: An *in vitro* study

Mahesh V Dadpe, Snehal V Dhore, Prasanna T Dahake, Yogesh J Kale, Shrikant B Kendre, Ayesha G Siddiqui[1]

Department of Pedodontics and Preventive Dentistry, MIDSR Dental College and Hospital, [1]Department of Microbiology, Dayanand College, Latur, Maharashtra, India

ABSTRACT

Introduction: Plaque removal is of utmost importance for control of dental caries and other associated diseases of oral cavity. However, various natural agents have proven their efficacy over chemotherapeutic agents in terms of antibacterial activity against various microorganisms. The effect is mainly due to polyphenol as its major constituent. **Aim:** In this *in vitro* study, we aimed to determine the antibacterial efficacy of *Trachyspermum ammi* oil at different concentrations against five oral bacteria. **Hypothesis:** Herbal compound, *T. ammi* oil is effective in reducing five oral plaque-forming bacteria. **Materials and Methods:** We determined the antimicrobial activity of *T. ammi* oil (test material) against chlorhexidine (gold standard). Pure cultures of *Streptococcus mutans* MTCC No 497, *Streptococcus oralis* MTCC No. 2696, *Lactobacillus acidophilus* MTCC No. 10307, *Lactobacillus fermentum* MTCC No. 903, and *Candida albicans* MTCC No. 183 were obtained and grown in selective culture media. Minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) of both materials were evaluated by serial dilution and disc diffusion method, respectively. **Results:** Our results revealed that *T. ammi* oil moderately inhibits bacterial growth with mean MIC of 250, 125, 250, 125, and 250 µg/ml, respectively. Mean MBC for *T. ammi* oil obtained was 18.60 ± 0.65, 11.60 ± 1.14, 14.10 ± 0.55, 11.50 ± 0.61, and 15.10 ± 0.74 mm. The MIC and MBC values were higher as compared to chlorhexidine gluconate and it was statistically significant. **Conclusion:** *T. ammi* (ajwain) can serve as a potential, natural, nontoxic, and economical therapeutic antiplaque agent.

KEYWORDS: Chlorhexidine, dental caries, minimum inhibitory concentration and minimum bactericidal concentration, *Trachyspermum ammi* oil

Address for correspondence:
Dr. Prasanna T Dahake,
Department of Pedodontics and Preventive Dentistry, MIDSR Dental College and Hospital, Latur, Maharashtra, India.
E-mail: prasannadahake@gmail.com

Access this article online

Quick response code

Website: www.jisppd.com

DOI: 10.4103/JISPPD.JISPPD_65_18

Introduction

Dental caries is the most common and transmissible disease of childhood having high prevalence all over the world is a multifactorial disease caused due to occurrence and interaction between dental biofilm and oral microflora. This microflora includes primary colonizers as well as secondary colonizers, of which *Streptococcus mutans* and *Streptococcus oralis* are one of the early colonizers responsible for plaque formation. *S. mutans* is considered as bacteria with

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Dadpe MV, Dhore SV, Dahake PT, Kale YJ, Kendre SB, Siddiqui AG. Evaluation of antimicrobial efficacy of *Trachyspermum ammi* (Ajwain) oil and chlorhexidine against oral bacteria: An *in vitro* study. J Indian Soc Pedod Prev Dent 2018;36:357-63.

Scanned by CamScanner

Dayanand Education Society's
Dayanand Science College
Latur, Maharashtra (India)
(DST-FIST Sponsored College)
(Best College Award by S.R.T.M.U., Nanded)

Establishment : June 1961 *(Affiliated to - Swami Ramanand Teerth Marathwada University, Nanded)*
Independent : 1967
NAAC Reaccreditated : A

Phone No : (02382) 221149, 222929 **Fax No :** (02382) 221149
E-mail : daya_scin1@rediffmail.com **Website :** www.dsclatur.org

Laxmiraman Lahoti	Dr. J.S. Dargad	Ramesh Biyani
President	Principal	Secretary

Ref. No. : 68/2020-21/661 *Date :* 29/12/2020

Certificate

The research work titled **In vitro evaluation of antimicrobial property of silver nanoparticles and chlorhexidine against five different oral pathogenic bacteria** by research fellow/ P.G. Student/ Faculty **Dr. Nikita Panpaliya** has been conducted in our college, Dayanand Sciences College, Latur in collaboration with MIDSR Dental College, Latur during year 2016-2018 under the guidance of **Dr. Prasanna T. Dahake.**

This work was facilitated under the guidelines of Memorandum of Understanding signed between the two institutes on 04/10/2016.

Head,
Department of Microbiology
Research Centre

Principal
Dayanand Science College
LATUR - 413 531

Scanned by CamScanner

Saudi Dental Journal (2019) 31, 76–83

King Saud University

Saudi Dental Journal

www.ksu.edu.sa
www.sciencedirect.com

ORIGINAL ARTICLE

In vitro evaluation of antimicrobial property of silver nanoparticles and chlorhexidine against five different oral pathogenic bacteria

Nikita P. Panpaliya [a], Prasanna T. Dahake [a,*], Yogesh J. Kale [a], Mahesh V. Dadpe [a], Shrikant B. Kendre [a], Ayesha G. Siddiqi [b], Ulka R. Maggavi [c]

[a] *Department of Pedodontics and Preventive Dentistry, MIDSR Dental College and Hospital, Latur, Maharashtra 413531, India*
[b] *Department of Microbiology, Dayanand College, Latur, Maharashtra 413531, India*
[c] *Department of Microbiology, Maratha Mandal's NGH Institute of Dental Science & Research Centre, Belgum, Karnataka 590010, India*

Received 22 April 2018; revised 28 October 2018; accepted 28 October 2018
Available online 2 November 2018

KEYWORDS

Biofilm;
Chlorhexidine;
Oral bacteria;
Pathogenic;
Silver nanoparticles

Abstract *Introduction:* Numerous antimicrobial agents are used to eliminate oral biofilm. However due to emergence of multi drug resistant microorganisms, the quest to find out biologically safe and naturally available antimicrobial agents continues.

Aim: To evaluate antimicrobial efficacy of silver nano-particles against five common oral pathogenic bacteria.

Objective: To determine antimicrobial activity of silver nanoparticles and chlorhexidine gluconate against oral pathogenic bacteria.

Material and Method: We used strains of Streptococcus mutans (MTCC 497), Streptococcus oralis (MTCC 2696), Lactobacillus acidophilus (MTCC 10307), Lactobacillus fermentum (MTCC 903), and Candida albicans (MTCC 183). We used commercially available silver nanoparticles (experimental group) and chlorhexidine gluconate (positive control). We determined minimum inhibitory concentration (MIC) minimum bactericidal concentration (MBC) of both agents and analyzed the data using paired 't' test, one way ANOVA and Tucky's post Hoc HSD.

* Corresponding author.
E-mail address: prasannadahake@gmail.com (P.T. Dahake).
☆ Scientific Paper presented at 39th Indian Society of Pediatric and Preventive Dentistry conference, Chennai, Tamil Nadu, India – on 14th Sept – 2017.

Production and hosting by Elsevier

Peer review under responsibility of King Saud University.

https://doi.org/10.1016/j.sdentj.2018.10.004
1013-9052 © 2018 The Authors. Production and hosting by Elsevier B.V. on behalf of King Saud University.
This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Scanned by CamScanner