

Shellino Education Society's ARUNAMAI COLLEGE OF PHARMACY

Gat No 285, Vidgaon Road, Mamurabad, Jalgaon, (MS) 425002
 Approved by PCI, New Delhi & Affiliated to KBC North Maharashtra University, Jalgaon
 www.acopmamurabad.com | o jalpharmaedu@gmail.com | o 9403739090 | 9403710774

Nanasaheb R. G. Patil (President) Dr. T. A. Deshmukh (Principal)

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

Sr.No	Name of the teacher	Title of the book/chapters published	Calendar Year of publication	Name of the publisher
1	Dr.Tushar A. Deshmukh	Instrumental method of analysis	2018	S.Vikas & Company
2	Dr.Tushar A. Deshmukh	A Text book of Herbal drug technology	2019	Nirali Prakashan
3	Dr.Nilesh B.Chaudhari	Practical Handbook of Pharmaceutical Organic Chemistry-I	2017	Success Publication Pune, Edition



PRINCIPAL Shellino Education Society's Arunamai College of Pharmacy Mamurabad, Tal. Dist. Jalgaon

AS PER PCI REGULATIONS THIRD YEAR B. PHARM



SEMESTER-VI

162-41



LUD/IVID

Acc. No.: BPH-16241

Dr. SANTRAM LODHI Dr. TUSHAR A. DESHMUKH

Dr. Md. RAGEEB Md. USMAN UKH VAIBHAV M. DARVHEKAR Dr. MOHAN LAL KORI



A Text Book of HERBAL DRUG TECHNOLOGY

As Per PCI Regulations

THIRD YEAR B. PHARM. Semester VI

Dr. Santram Lodhi

M. Pharm., Ph.D. Professor Department of Pharmacognosy Sri Sathya Sai Institute of Pharmaceutical Sciences, Bhopal, (M.P.), India

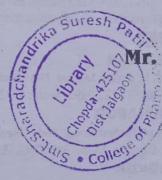
Dr. Tushar A. Deshmukh

M. Pharm., Ph.D. Principal Shellino Education Society's Arunamai College of Pharmacy, Mamurabad, Jalgaon, Maharashtra and BOS Member of Pharmacognosy KBC North Maharashtra University, Jalgaon

Dr. Md. Rageeb Md. Usman

16241

M. Pharm., FAPP, FICPHS, FSRHCP, FRSH, FSPER Associate Professor Department of Pharmacognosy Smt. S. S. Patil College of Pharmacy, Chopda, Maharashtra and Joint Secretaries SPER Central Branch and President IPA/APP/RSH/SRHCP Maharashtra State Branch



r. Vaibhav M. Darvhekar

M. Pharm. Associate Professor Department of Pharmacognosy College of Pharmacy Kannur Medical College, Anjarakandy, Kannur Kerala

Dr. Mohan Lal Kori

M. Pharm., Ph.D Dean and Professor Faculty of Pharmacy, RKDF University, Bhopal (M.P.), India.

Price ₹ 285.00



N4085

ISBN 978-93-88108-01-9 Herbal Drug Technology October 2019 **First Edition** The text of this publication, or any part thereof, should not be reproduced or transmitted in any form or stored in any computer storage system or device for distribution including photocopy, recording, taping or information retrieval system or reproduced on any disc, tape, perforated media or other information storage device etc., without the written permission of Authors with whom the rights are reserved. Breach of this condition is liable for legal action. Authors. reserved. Breach of this condition is hable for legar action. Every effort has been made to avoid errors or omissions in this publication. In spite of this, errors may have crept in. Any mistake, error or discrepancy so noted and shall be brought to our notice shall be taken care of in the next edition. It is notified that neither the publisher nor the authors or seller shall be responsible for any damage or loss of action to any one, of any kind, in any manner, therefrom. Polyplate **Published By** : **Printed By :** YOGIRAJ PRINTERS AND BINDERS NIRALI PRAKASHAN Abhyudaya Pragati, 1312, Shivaji Nagar, Works: Sr. No. 10\1,Ghule Industrial Estate, Off J.M. Road, PUNE - 411005 Nanded Village Road, Tel - (020) 25512336/37/39, Fax - (020) 25511379 TAL-HAVELI, DIT-PUNE 411041. Email: niralipune@pragationline.com Mobile - 9850046517, 9404225254 > **DISTRIBUTION CENTRES** PUNE Nirali Prakashan 119, Budhwar Peth, Jogeshwari Mandir Lane, Pune 411002, Maharashtra (For orders within Pune) Tel: (020) 2445 2044, Mobile: 9657703145 Email: niralilocal@pragationline.com Nirali Prakashan S. No. 28/27, Dhayari, Near Asian College Pune 411041 (For orders outside Pune) Tel : (020) 24690204 Fax : (020) 24690316; Mobile : 9657703143 Email : bookorder@pragationline.com MUMBAI Nirali Prakashan 385, S.V.P. Road, Rasdhara Co-op. Hsg. Society Ltd., Girgaum, Mumbai 400004, Maharashtra; Mobile : 9320129587 Tel: (022) 2385 6339 / 2386 9976, Fax: (022) 2386 9976 Email : niralimumbai@pragationline.com BRANCHES JALGAON Nirali Prakashan 34, V. V. Golani Market, Navi Peth, Jalgaon 425001, Maharashtra, Tel: (0257) 222 0395, Mob: 94234 91860; Email: niralijalgaon@pragationline.com KOLHAPUR Nirali Prakashan : New Mahadvar Road, Kedar Plaza, 1st Floor Opp. IDBI Bank, Kolhapur 416 012 Maharashtra. Mob : 9850046155; Email : niralikolhapur@pragationline.com NAGPUR Nirali Prakashan Above Maratha Mandir, Shop No. 3, First Floor, Rani Jhanshi Square, Sitabuldi, Nagpur 440012, Maharashtra Tel : (0712) 254 7129; Email : niralinagpur@pragationline.com DELHI Nirali Prakashan 4593/15, Basement, Agarwal Lane, Ansari Road, Daryaganj Near Times of India Building, New Delhi 110002 Mob: 08505972553 Email : niralidelhi@pragationline.com BENGALURU Maitri Ground Floor, Jaya Apartments, No. 99, 6th Cross, 6th Main, Nirali Prakashan Malleswaram, Bengaluru 560003, Karnataka; Mob : 9449043034 Email: niralibangalore@pragationline.com Other Branches: Hyderabad, Chennai Note: Every possible effort has been made to avoid errors or omissions in this book. In spite this, errors may have crept in. Any type of error or mistake so noted, and shall be brought to our notice, shall be taken care of in the next edition. It is notified that neither the publisher, nor the author or book seller shall be responsible for any damage or loss of action to any one of any kind, in any manner, therefrom. The reader must cross check all the facts and contents with original Government notification or publications.

niralipune@pragationline.com | www.pragationline.com Also find us on 👔 www.facebook.com/niralibooks

About the Authors



Dr. SANTRAM LODHI is Graduate of Department of Pharmaceutical Sciences, Dr. Hari Singh Gour University Sagar (M.P.) India with Bachelors of Pharmacy (2003), Master of Pharmacy (2006) and Doctor of Philosophy in Pharmaceutical Sciences (2008-2011). He has published widely in the fields of natural products for wound healing, anti-inflammatory and antiulcer activity. He received UGC Junior Research Fellowship during his Master of Pharmacy (Pharmacognosy). He is also recipient of Indian Council of Medical Research, Senior Research Fellowship (2008-2011). He has credit of more than 28 research publications in National and International Journals. His interesting research area is isolation of phytoconstituent, formulation development and their biological assay. He is reviewer of

many reputed Journal like Journal of Ethnopharmacology, Pharmaceutical Biology, Biomedicine and Pharmacotherapyetc. Dr. Lodhi, currently working as Professor of Pharmacognosy, Sri SathyaSai Institute of Pharmaceutical Sciences, Bhopal, (M.P.), India.



Dr. Md. RAGEEB Md. USMAN currently working as Associate Professor (Pharmacognosy) at Smt. Sharadchandrika Suresh Patil College of Pharmacy, Chopda. He is highly Professional academician and Researcher in Pharmacy field. Dr. Md. Rageeb has over more than 11 Year's Experience in Teaching, Research and authorship of books. He has to his Name more than 45 books, 2 chapters in book, 90 Research/Review publications and 200 Presentation/Participation of National/International Conferences. He is Life Member: Asscn. of Pharmaceutical Teachers of India, Soc. of Pharmaceutical Education & Research (Joint Secretary, Central Br), Asscn. of Pharmacy Professionals (President,

Maharashtra State Br.), Indian Hospital Pharmacists Asscn, Indian Pharmacy Graduates Asscn, Indian Pharmacists Asscn. (President, Jalgaon Br.), Research Scholar Hub (Maharashtra State Br.), Soc. of Researchers & Healthcare Professionals (President, Maharashtra State Br), Indian Pharmaceutical Asscn; Member: Indian Soc. of Pharmacognosy, Asscn of Biotechnology and Pharmacy, International Natural Hygiene Soc.; Assoc. Editor/Editor of several professional journals and magazines. Dr. Md. Rageeb guided more than 50 students for project. He conferred Fellowship Award 2013 (twice), 2014, 2015 (twice), Appreciation Award for Poster 2013, Young Performer Award 2013, Young Pharmacy Teacher Award 2014, 2016, 2017, Best Oral Presentation Award 2014, Young Innovative Researcher Award 2014, Appreciation Award for Oral Presentation 2014, Young Talent Award 2014 (twice), 2016, Young Pharmacist Award 2015, Young Excellent Academic Award 2016, Life Time Achievement Award 2016, Eminent Teacher Award 2017, Young Scientists Award 2018 and Mrs. Sudha Nagaich Memorial Award 2019. Dr. Md. Rageeb Biography has been included in the renowned directory "Who's Who in the World 2016", "Learned India Educationists Who's Who in the World 2017" and "Famous India: Nation's Who's Who 2018".



Dr. TUSHAR A. DESHMUKH is presently working as Principal and Head of Department of Pharmacognosy at Shellino Education Society's Arunamai College of Pharmacy, Mamurabad, Jalgaon, Maharashtra. He has years of experience in teaching and research in pharmacognosy. Prof. (Dr.) Tushar has published more than 50 research papers in National and international journals of repute. He is also serving as reviewer on various National and International Journals. He is an approved PG and Ph.D. Guide and BOS Member of Pharmacognosy Department in KBC North Maharashtra University, Jalgaon. 25 M. Pharm students and 3 Ph.D student have completed their research project under his guidance. Presently 7 Ph.D students are registered under his guidance. Prof. (Dr.) is a life member of APTI

and he is registerd with Maharashtra state pharmacy, council.



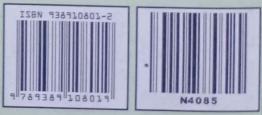
Prof. VAIBHAV M. DARVHEKAR presently working as Associate Professor, Department of Pharmacognosy, College of Pharmacy, Kannur Medical College, Anjarakandy. He has graduated B. Pharm in 2006 from S.G.B.A.U Amravati University and M.Pharm (Pharmacognosy) in 2008 from N. M. University, Jalgaon. He has 10 years of teaching experience. He was attended 32 National and International conferences conducted by various institutions across India and he has presented 13 posters and 3 oral presentations in several national and international conferences. He was conferred various awards as Stood Award, Best Poster Presentation Award, Best Oral Presentation Award, Best Student Award and Best Performer Award. He has 5 national and 3 international papers in his account and 2 books

are credited on his Name. Presently he is the Secretary of Society of Pharmaceutical Education and Research and Joint Secretary of Association of Pharmacy Professionals for Maharashtra State.



Dr. MOHAN LAL KORI is Graduate of Department of Pharmaceutical Sciences, Dr. Hari Singh Gour Central University Sagar (M.P.) with Bachelors of Pharmacy (1997), Master of Pharmacy (1999) and Ph. D. in Pharmaceutical Sciences (2007). He received JRF from UGC during his M. Pharm and CSIR-SRF during Ph.D. He has successfully mentored 10, Ph. D. and 100 Postgraduate students. He has more than 75 research and review articles publication in National and International Journals to his credits. He has attended more than 150 National and International conferences. He has

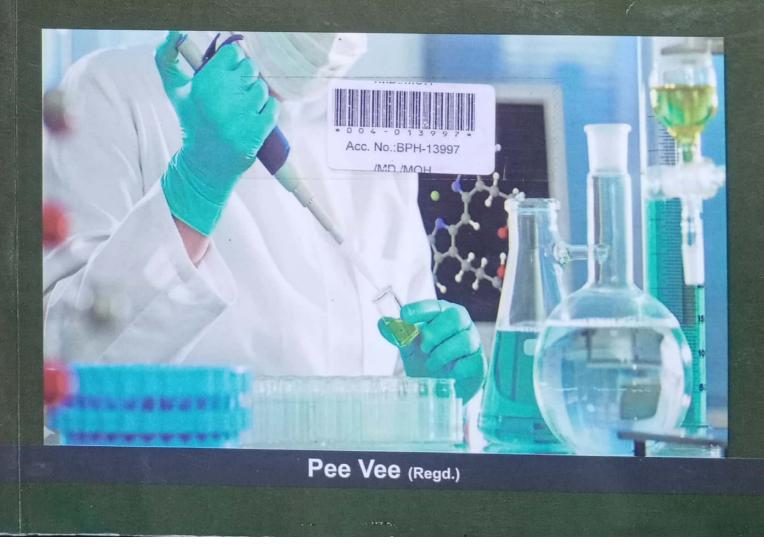
life membership of APTI, IPA, ISP, SP, ISC, IPGA, APP, InPharm Association, Society of Ethnopharmacology and MPPGA. He is also active member of various Committees, BOS, BOM, and Academic Council of University. He is State Coordinator of Society of Pharmacognosy and President of APTI, MP State Branch. Presently, Dr. Kori is working as Dean and Professor, Faculty of Pharmacy, RKDF University, Bhopal (M.P.).





Prof. (Dr.) Mohammed Imran Prof. Md. Rageeb Md. Usman Prof. (Dr.) Sufiyan Ahmad Prof. (Dr.) Tushar A. Deshmukh

Practical INSTRUMENTAL METHOD OF ANALYSIS (As Per PCI Regulations)





Practical INSTRUMENTAL METHOD OF ANALYSIS

(As Per PCI Regulations)

13997 1

Prof. (Dr.) Mohammed Imran

M. Pharm., PhD. Associate Professor KBH SS Trust's Institute of Pharmacy, Malegaon, Maharashtra

Prof. Md. Rageeb Md. Usman

(M. Pharm., FAPP, FICPHS, FSRHCP, FRSH, FSPEH) Assistant Professor Smt. S. S. Patil College of Pharmacy, Chopda, Maharashtra & Joint Secretaries SPER Central Branch

& President IPA/APP/RSH/SRHCP Maharashtra State Branch

Prof. (Dr.) Sufiyan Ahmad

(M. Pharm., Ph.D.) Vice-Principal & HOD NES Gangamai College of Pharmacy Nagaon, Dhule

Prof. (Dr.) Tushar A. Deshmukh

M. Pharm., PhD. Principal Shellino Education Society's Arunamai College of Pharmacy. Mamurabad, Jalgaon, Maharashtra



S. VIKAS & CO. (Publishing House) JALANDHAR

3

An Imprint of

S.VIKAS & COMPANY (Medical Publishers) INDIA

ND-106, BIKRAMPURA, TANDA ROAD, JALANDHAR CITY-144008 PH : 0181-5054798, 94786-64645

Fax : 0181-2280798 email : pv_books @yahoo.com

C Copyrights Reserved

All rights reserved. No part of this publication may be reproduced or used in any form or by any meansphotographic, electronic or mechanical including photocopying, recording, taping or information storage and retrieval systems-without the written permission of the publishers.

ISBN 978-15-43342-61-1

TradeMark No. 1350444

Edition 2018

PRICE : ₹ 155/-

Illustrators : Carl Merry Printed and bound in India by Rahul Art Press

Exclusively marketed and distributed by **PV books** For sale only in India, Nepal, Bangladesh, Sri Lanka and U.A.E.

The publishers make no representation, express or implied with regard to the accuracy of the information contained in this book and cannot accept legal responsibility for any errors or omissions.



11

S.VIKAS AND COMPANY (MEDICAL PUBLISHERS)

ADMIN : ND-106, BIKRAMPURA, JALANDHAR CITY-144 008 (PUNJAB), INDIA SALES : ND-227, TANDA ROAD, JALANDHAR CITY-144 008 (PUNJAB), INDIA PRODUCTION : ND-226, TANDA ROAD, JALANDHAR CITY-144 008 (PUNJAB), INDIA PHONE : 0181-5054798, 5092798, 094786-64645 CUSTOMER CARE : For any queries, please contact - 094786-14148 EMAIL : pv_books@yahoo.com Online Shop : www.pvbooks.in Also Buy at amazon.in



Practical Handbook of PHARMACEUTICAL ORGANIC CHEMISTRY - I

F.Y.B.Pharm. (Sem. - II)



Mohammed Rageeb Mohammed Usman Mr. Nilesh B. Chaudhari

