



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

Sector-01, Kamothe, Navi Mumbai - 410 209

Tel 022-27432471, 022-27432994, Fax 022 - 27431094

E-mail : registrar@mgmuhs.com | Website : www.mgmuhs.com

Value Added Course

TISSUE PROCESSING

Dr. Rajesh D. Goel
Registrar

MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)
Navi Mumbai - 410 209

Dr. Shashank D. Dalvi
Vice Chancellor
MGM Institute of Health Sciences
Navi Mumbai - 410209



Mahatma Gandhi Mission's
Medical College

Value Added Course
Tissue processing
[Conducted by Dept of Anatomy]

Tissue processing: An essential step to microscopic world

The history of specimen preparation. Without this, use of the microscope was not productive, but little has been done on the history of the microtome and micro technique, although Bracegirdle has recently investigated the subject in depth. Preserving structure and morphology was quite important; therefore, identifying a proper fixative agent for certain entities, diseases, and tissues was important. Even the proper hardening and preservation of a deceased

person requires the use of a hardening and preserving fluid known as embalming fluid. For the modern fixation is the key that unlocks the door to quality staining.

In 1941 Gray introduced two cycloparaffin polymers that forever changed the character of paraffin wax. These two polymers were "Nervillite" and "Clarite". Used in conjunction with other additives, they formed a low melting point paraffin in which the degree of hardness could be controlled by the proportion of additives, thus allowing paraffins to be adjusted according to the needs of the specimen. Soon "Clarite" was being used to cut 2-3 m sections at room temperature. This was the beginning of present day additions of polymers into paraffin wax, with their secret formulations for current embedding media. The road has been long, and improvements in paraffin wax will still continue as long as microtomes and knives are improved. Also, as long as diseases prevail and remain to be studied, paraffin will continue to provide the cutting edge to improved diagnosis.

Tissue processing is various step technique which has evolved in almost centuries painstaking work by various histologist and pathologist.

Most important steps to be mastered is

1. Tissue preservation, maintaining architecture of tissue.
2. Making suitable for long term preservation:
3. Dehydration, Paraffin wax block making so as make it suitable for long term preservation and able to cut thin sections at the level of single cell thickness.
4. Cutting in micron required microtome and technique to cut and using various microtome.
5. Mounting slides in thin and single layer with keeping stick to surface of slide while staining process is also skill to be acquired.
6. Making tissue ready to staining so as to accept various staining process.
7. This required stepwise training and to get appropriate results both for medical training and accurate diagnosis.

Eligibility:

Medical students (MBBS)


Course schedule:

Sr. No.	Topic	Theory hrs.	Practical hrs.
1	Introduction to Tissue processing	1 hr.	-
2	Need & collection of samples	1 hr.	1 hr.
3	Trimming & tissue fixation	1 hr.	2 hrs.
4	Methods of tissue processing	1 hr.	-
5	Dehydration & clearing agents concepts of Automation	1 hr.	2 hrs.
6	Cooking & Block preparation	1 hr.	2 hrs.
7	Microtome, its types & section making	1 hr.	2 hrs.
8	Preparation of slide	1 hr.	1 hr.
9	Stains, Different staining procedures & their principals	1 hr.	-
10	Introduction to Microscope	1 hr.	-
Total		10 hrs.	10 hrs.

- Evaluation Method – MCQ Test and practical evaluation 1hr.
- Course will be conducted twice a year
- Limited Entries (25 students per course)

Books for Reference:

1. M. Lamar Jones; To Fix, To Harden, To Preserve-Fixation: A Brief History The Journal of Histotechnology / Vol. 24, No. 3 1 September 2001; page 155-162
2. Manual of Histological Techniques by Santosh Kumar Mondal; Jaypee publication.
3. Principles and Techniques in Histology, Microscopy and Photomicrography by D. R. Singh (Author) CBS publication.
4. Cathy Sanderson, * Jeannie Emmanuel, Janson Emmanuel, and Pat Campbell; A Historical Review of Paraffin and its Development as an Embedding Medium; The Journal of Histotechnology Vol. 11, No. II March 1988, page 61-63.
5. Brian Bracegirdle THE HISTORY OF HISTOLOGY: A BRIEF SURVEY OF SOURCES *Hist. Sci.*, xv (1977), 77-101
6. Bancroft's Theory and Practice of Histological Techniques by; Elsevier pub; 8th ed.


Head of Anatomy
 Department
 MGM Medical College
 Aurangabad



MGM Medical College, Aurangabad
VAC - Tissue Processing
Students List - UG
Batch-1, January 4,11,18,25 2020

Sr. No.	Roll No	Name of Student	Class	Gender
1	19003	Akolkar Pranav Nitin	First MBBS	M
2	19034	Dulani Disha Dinesh	First MBBS	F
3	19146	Waghmare Sanskar Narhari	First MBBS	M
4	19110	Rajora Khushi Naresh	First MBBS	F
5	19094	Pandey Vaishnavi Vikas	First MBBS	F
6	19108	Poddar Shlok Ashok	First MBBS	M
7	19131	Singh Rishika Anil Kumar	First MBBS	F
8	19082	Magarkar Shalmali Vilas	First MBBS	F
9	19031	Dhamande Vedika Vinod	First MBBS	F
10	19015	Bura Prasiddha Ganesh	First MBBS	F
11	19002	Agrawal Jaya Prashant	First MBBS	F
12	19016	Charkha Paneri Sharadkumar	First MBBS	F
13	19102	Patel Niharika Pareshkumar	First MBBS	F
		Total - 13 Students		


Dr. G. A. Shroff
Course Co-ordinator
Professor & HOD
Dept of Anatomy
MGM Medical College A'cad.




Dean
MGM Medical College
Aurangabad
MGM'S MEDICAL COLLEGE
AURANGABAD