

ACTIVITY No-1.

EXTENSION LECTURE IN CHEMISTRY

ON 31st OCTOBER, 2025

ON TOPIC

"Synthesis and application of Sweet bullets for targeting bacteria and viruses."

BY

DR. VINOD KHATRI

ASSISTANT PROFESSOR

TDL GCW MURTHAL (SONIPAT)

PARTICIPANTS:-

All students of class B.Sc.-I LS & PS
B.Sc.-II LS & PS
B.Sc.-III Med. + N.Med.

with faculties of Physics, Chemistry and Mathematics.

To

The Principal

Govt. College for Women

Gohana (Sonipat)

Dated: 27.10.2025

Subject: Regarding permission to Organize Extension Lecture in Chemistry by

Dr. Vinod Khatri , Assistant Professor , GCW Murthal (Sonipat)

Respected Mam,

This is for your kind information that Chemistry Department of our College is planning to organize Extension lecture in Chemistry on 31st October 2025 on **"Synthesis and application of sweet bullets for targeting bacteria and Viruses"** . So, you are requested to permit us for the same.

Thanking You

Yours Faithfully

Dr. Rajesh Kumar



Dr. Rekha Devi



Mr. Devender Singh



Mr. Ravit Kumar



Meenakshi
27/10/25

Office of the Principal Govt. College For Women, Gohana

To

The Principal

Govt. College for Women

Murthal (Sonipat)


Memo No. :- GCWG/2025/ 1527

Date: 27-10-2025

Subject:- Invitation for Dr. Vinod Khatri, Assistant Professor in Chemistry as
Resource Person

We are pleased to invite Dr. Vinod Khatri, Assistant Professor in Chemistry as resource person to deliver an extension lecture on **“Synthesis and application of sweet bullets for targeting bacteria and Viruses”** in Govt. College for Women Gohana on 31st October , 2025. Our students are eagerly waiting for him.

So you are requested to relieve him on said date and oblige us.


Principal
Govt. College for Women
Govt. College for Women, Gohana

Copy to:

1. Dr. Vinod Khatri , Assistant Professor in Chemistry ,GCW Murthal (SNP)

Principal
Govt. College for Women, Gohana

Govt. College for Women, Gohana

NOTICE

Dated: 27.10.2025

Chemistry Department of the College is organizing an Extension Lecture by Dr. Vinod Khatri, Assistant Professor in Chemistry , GCW Murthal, (Sonipat) on the topic **"Synthesis and application of sweet bullets for targeting bacteria and Viruses"** on 31st October, 2025 at 10:00 am in Seminar Hall aiming to develop scientific aptitude in students. All the students are directed to attend the lecture.

Dabhi
27.10.25
Organizer

(Chemistry Department)

Neehal
Principal
Govt. College for Women
Gohana (Sonapat)
GCW Gohana



Acknowledgements

Prof. Dr. Rainer Haag
 Dr. Sumati Bhatia
 Late Professor Ashok

Collaborators

Bacteria project
 Magdalena Birkle (AG Wizenrath)

Virus project
 Talita Palmer (AG Luster)
 Dr. Daniela Nienmeyer (AG Luster)



Capillary rise method

Capillary action occurs due to γ & θ

Upward force = $2\pi r \cdot \gamma \cos \theta$

Downward force = $m \cdot g$

$2\pi r \cdot \gamma \cos \theta = \rho \pi r^2 h \cdot g$

$2 \cdot \gamma \cdot \cos \theta = \rho \cdot r \cdot h \cdot g$

Measurement of γ :

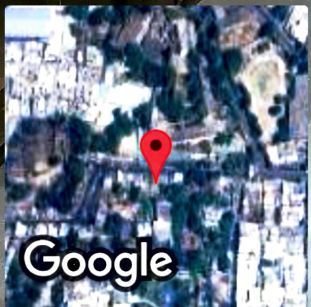
$\gamma = \frac{m \cdot g}{2 \cdot r \cdot \cos \theta}$


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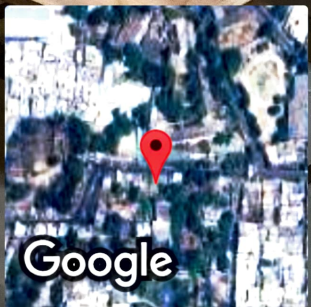
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Acknowledgements

Prof. Dr. Rainer Haag
 Dr. Sumati Bhatia
 Late Professor Ash...

Collaborators

Bacteria project
 Magdalena Burkle (AG Witzentrath)

Virus project
 Talha Palmer (AG Lauster)
 Dr. Daniela Nemeyer (AG Polster)

Capillary rise method

Measurement of γ :

Capillary action occurs due to γ & $\cos \theta$

Upward force = $2\pi R \cdot \gamma \cos \theta$

At eqm Upward force = wt = $2\pi R \cdot \gamma \cos \theta = mg$

$2\pi R \cdot \gamma \cos \theta = \rho \pi R^2 h g$

$2 \cdot \gamma \cdot \cos \theta = \rho R h g$

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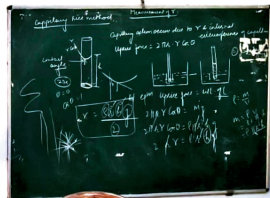
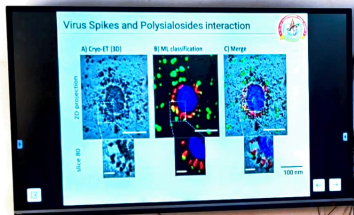




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Research project
Magnum's Bunka (JG Wazirani)
Dr. Anand
Tanya Parmer (JG L. Luciani)
Dr. Suman Prasad (JG Wazirani)

Capillary rise method
Measurement of γ
Capillary action occurs due to γ & contact angle
Upward force = $2\pi r \gamma \cos \theta$
Downward force = $m g$
 $2\pi r \gamma \cos \theta = m g$
 $2\pi r \gamma \cos \theta = \rho V g$
 $2\pi r \gamma \cos \theta = \rho \pi r^2 h g$
 $\gamma = \frac{\rho r h g}{2 \cos \theta}$











Acknowledgements
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Dr. Sumati
Dr. ...
Dr. ...

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Moussona Ezzaki (UCI, Wisconsin)
...
Tasha Palmer (UCI, Leuven)
Dr. ...

Funding
G ...

Capillary rise method

Measurement of γ

capillary action occurs due to γ & θ

Upward force = $2\pi r \gamma \cos \theta$

Downward force = $\rho g V$

at eqm upward force = weight

$2\pi r \gamma \cos \theta = \rho g V$

$2\pi r \gamma \cos \theta = \rho g \pi r^2 h$

$2 \gamma \cos \theta = \rho r h$



