

# DETERMINATION OF DIRT CONTENT, ASH CONTENT, VOLATILE MATTER AND PLASTICITY RETENTION INDEX OF CRUMB RUBBER

*Project report submitted in partial fulfillment  
of the requirement for the award of the degree of  
Bachelor of Science in Chemistry*

*Submitted by*

**Geona Prothasis**

Reg.No. 210021024177

**Josmi Maria John**

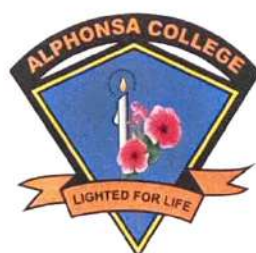
Reg.No. 210021024179

**Nandana R Nair**

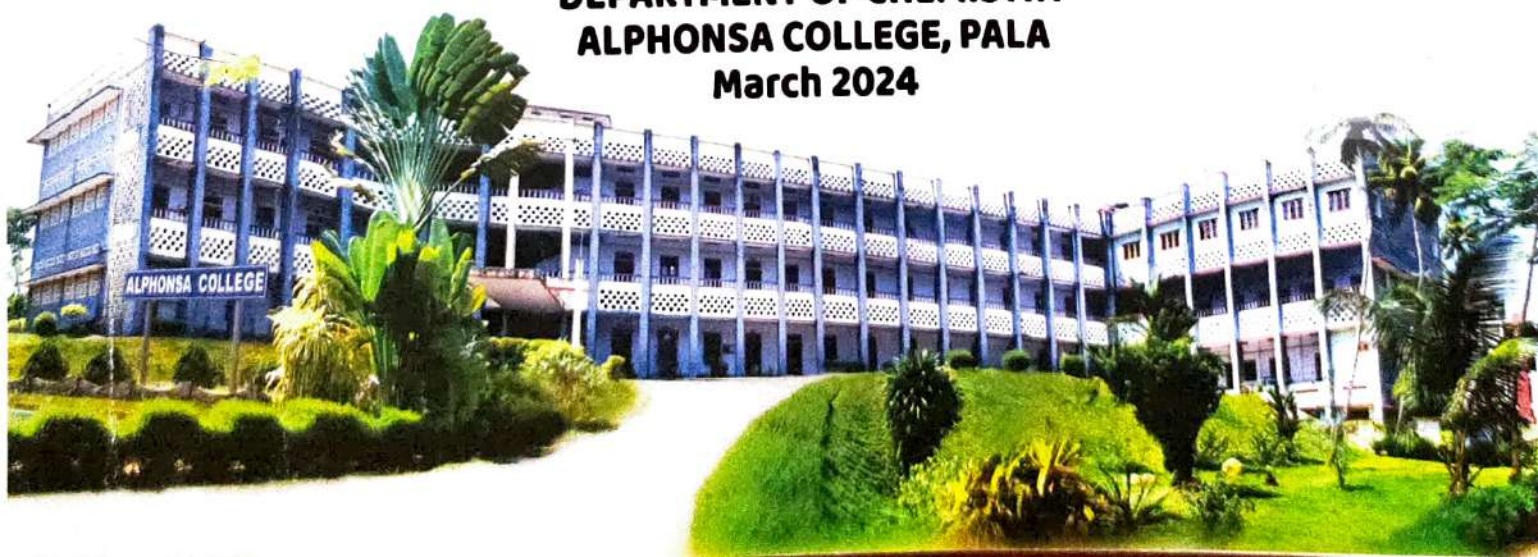
Reg.No. 210021024167

*Under the Guidance of*

**Dr. Sr. Jilly James**



**DEPARTMENT OF CHEMISTRY  
ALPHONSA COLLEGE, PALA  
March 2024**



## CERTIFICATE

This is to certify that the project report entitled "*Determination of Dirt Content, Ash Content, Volatile Matter and Plasticity Retention Index of Crumb Rubber*" is an authentic record of the project work carried out by **Sr. Geona Prothasis, Kum. Josmi Maria John and Kum. Nandana R Nair** in partial fulfillment of the project work, for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University, under my guidance and supervision during 2023-2024.

  
**Dr. Sr. Jilly James**

Head, Department of Chemistry,

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# LOW COST AND FAST PRODUCTION OF NANOSILICA FROM RICE HUSK ASH

*Project report submitted in partial fulfillment  
of the requirement for the award of the degree of  
Bachelor of Science in Chemistry*

*Submitted by*

**Amrutha Biju**

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**Sreelakshmi Suresh**

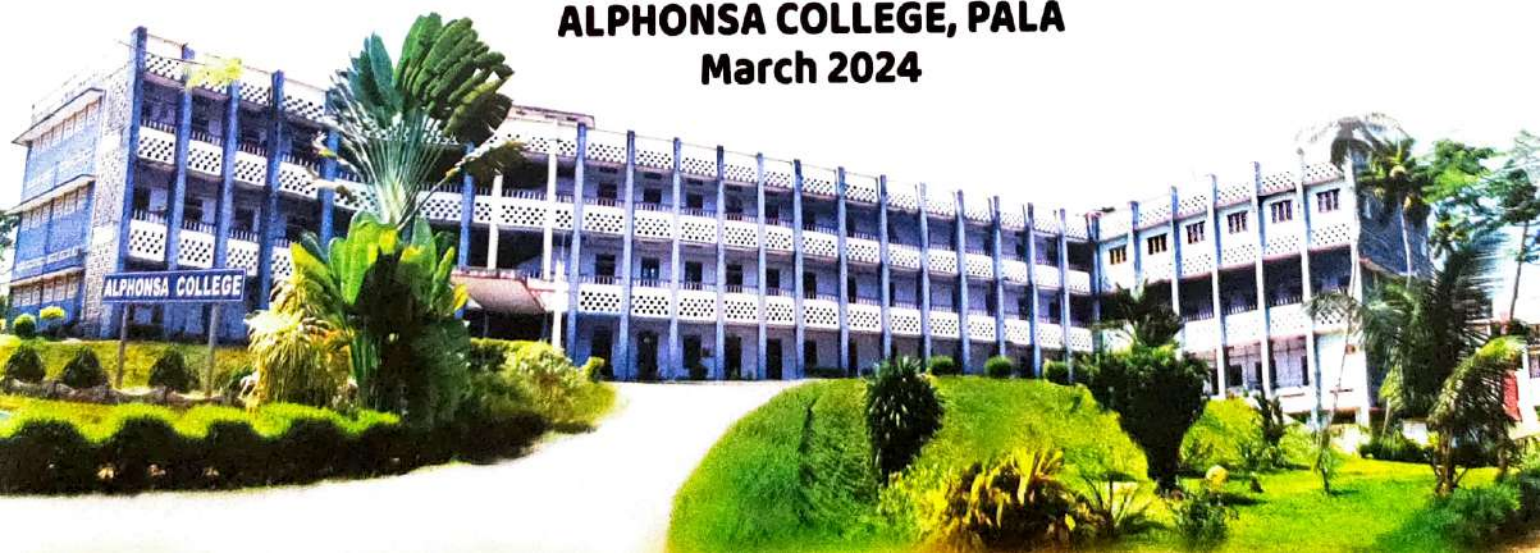
Reg.No. 210021024183

*Under the Guidance of*

**Dr. Sr. Jilly James**



**DEPARTMENT OF CHEMISTRY  
ALPHONSA COLLEGE, PALA  
March 2024**



## CERTIFICATE

This is to certify that the project report entitled "*Low Cost and Fast Production of Nanosilica from Rice Husk Ash*" is an authentic record of the project work carried out by **Kum. Amrutha Biju, Rona Sebastian & Sreelakshmi Suresh** in partial fulfillment of the project work, for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University, under my guidance and supervision during 2023-2024.

  
**Dr. Sr. Jilly James**

Head, Department of Chemistry,

Alphonsa College, Pala.

**SYNTHESIS, CHARACTERIZATION AND  
ANTIBACTERIAL APPLICATIONS OF ZINC OXIDE  
NANOPARTICLES**

*Project report submitted in partial fulfillment  
of requirement for the award of the degree of  
Bachelor of Science in Chemistry.*

Submitted By

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Under the guidance of  
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**DEPARTMENT OF CHEMISTRY,  
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## CERTIFICATE

This is to certify that the project report entitled 'SYNTHESIS, CHARACTERIZATION AND ANTIBACTERIAL APPLICATIONS OF ZINC OXIDE NANOPARTICLES' is an authentic record of the project work carried out by ARYA RAMACHANDRAN , DAYANAMOL DEEBU, RAJALAKSHMI K S in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2023-2024.

  
27/3/2024  
**Dr. Diana Elizabeth Jose**

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Pala

27/03/2024



**A STUDY IN DETERMINING THE QUANTITY OF  
CALCIUM CARBONATE IN VARIOUS BRANDED  
TOOTHPASTES**

*Project report submitted in partial fulfilment  
of requirement for the award of the degree of  
Bachelor of Science in Chemistry.*

Submitted By

**ROSE MARIYA ROY (210021024182)**

**ALANA SHAJU (210021024164)**

**DEVIKA.D (210021024175)**

Under the guidance of

**Dr. DIANA ELIZABETH JOSE**

DEPARTMENT OF CHEMISTRY,

ALPHONSA COLLEGE, PALA

March 2024

## CERTIFICATE

This is to certify that the project report entitled 'A STUDY IN DETERMINING THE QUANTITY OF CALCIUM CARBONATE IN VARIOUS BRANDED TOOTHPASTES' is an authentic record of the project work carried out by **ROSE MARIYA ROY, ALANA SHAJU, DEVIKA.D** in partial fulfilment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2023-2024.



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27/03/2024