



ISSN No. : 2321-9653

# IJRASET

**International Journal for Research in Applied  
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : [www.ijraset.com](http://www.ijraset.com), E-mail : [ijraset@gmail.com](mailto:ijraset@gmail.com)

ISRA  
JIF

ISRA Journal Impact  
Factor: 7.429



45.98  
INDEX COPERNICUS



THOMSON REUTERS  
Researcher ID: N-9581-2016



TOGETHER WE REACH THE GOAL  
SJIF 7.429

## Certificate

*It is here by certified that the paper ID : IJRASET60043, entitled  
**Understanding Pathways, Substrates, and Media Optimization to Maximize Microbial  
Biosurfactant Production***

*by  
**Nikhil Rawal***

*after review is found suitable and has been published in  
Volume 12, Issue IV, April 2024  
in*

*International Journal for Research in Applied Science &  
Engineering Technology*

*(International Peer Reviewed and Refereed Journal)*

*Good luck for your future endeavors*

By 

Editor in Chief, IJRASET



ISSN No. : 2321-9653

# IJRASET

**International Journal for Research in Applied  
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : [www.ijraset.com](http://www.ijraset.com), E-mail : [ijraset@gmail.com](mailto:ijraset@gmail.com)

ISRA  
JIF

ISRA Journal Impact  
Factor: 7.429



45.98  
INDEX COPERNICUS



THOMSON REUTERS  
Researcher ID: N-9581-2016



TOGETHER WE REACH THE GOAL  
SJIF 7.429

## Certificate

*It is here by certified that the paper ID : IJRASET60043, entitled  
**Understanding Pathways, Substrates, and Media Optimization to Maximize Microbial  
Biosurfactant Production***

*by*

***Rukhsar Ansari***

*after review is found suitable and has been published in  
Volume 12, Issue IV, April 2024  
in*

*International Journal for Research in Applied Science &  
Engineering Technology*

*(International Peer Reviewed and Refereed Journal)*

*Good luck for your future endeavors*

*By [Signature]*

Editor in Chief, IJRASET