



NATIONAL SEMINAR



Dr B. Ananda Kumar, Lecturer in Chemistry, Sri YN College (A), Narsapur, has attended and presented a paper entitled “Biodegradable studies of rice husk - wheat husk as activated carbons in the remediation of heavy metals from oil refinery waste water” at National Seminar on Advances in Chemical and Biological Sciences organized by Department of Chemistry (PG & UG), S.V.K.P & Dr. K. S. Raju Arts & Science College (A), Penugonda. W.G. District, Andhra Pradesh on 21-12-2022.

S.V.K.P. & Dr. K.S. RAJU ARTS & SCIENCE COLLEGE (AUTONOMOUS)
(Accredited by NAAC with Grade 'A' & Recognized by UGC as 'College with Potential for Excellence')
PENUGONDA – 534320, W.G. Dt., A.P.



**NATIONAL SEMINAR ON
ADVANCES IN CHEMICAL AND BIOLOGICAL SCIENCES
21ST DECEMBER 2022
CERTIFICATE**

This is to certify that Prof. / Mr. / Ms. / Mrs. /Dr. B. Ananda Kumar
Professor / Associate/Assistant Professor / Student of Sri. Y.N college (A), Narsapur
_____ has participated / presented a paper entitled Biodegradable studies of
rice husk - wheat husk as activated carbons in the remediation of heavy metals from
oil refinery waste water.
“ADVANCES IN CHEMICAL AND BIOLOGICAL SCIENCES” organised by the Department of Chemistry (PG & UG),
S.V.K.P. & Dr. K.S. Raju Arts & Science College (A), Penugonda on 21st December, 2022.

Ch. D. Prasad
Dr. CH. DURGA PRASAD
Convener

Dr. Y. V. V. Appa Rao
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Principal & Seminar Chairman

Biodegradable studies of rice husk - wheat husk as activated carbons in the remediation of heavy metals from oil refinery wastewater

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Abstract

Using rice husk and wheat husk activated carbon as an adsorbent for effluent treatment, now a day researchers have explored heavy metal adsorption from refinery effluent. Activated carbon has wide range of applications including the removal of different contaminants from water and wastewater. This was utilized to investigate a batch adsorption approach in which six different heavy metals (Cd, Cr, Cu, Pd, Ni, and Zn) were adsorbing at the same time. At different pyrolysis and impregnation proportions, actuated carbons were created. On the surface of both rice husk and wheat husk, the architect displayed a well-defined pore space. For rice husk and wheat husk, the Freundlich and Langmuir designs were also used, also with order of adsorption being Cu>Pb>Cr>Zn>Ni>Cd and Ni>Cr>Pb>Zn>Cu>Cd, respectively. The sorption data where the R² known determination coefficient approaches unity is represented by the Freundlich and Langmuir isotherms. For example, the percentage of heavy metals removed was maximized, reaching 100%. SEM, XRD and EDX investigations were used to characterize the adsorbent surface. According to the findings, rice husk and wheat husk activated carbon can be effectively used for pollutant remediation in the aqua state. Overall, it was found that rice husk - wheat husk activated carbon has great potential for different applications which can be further explored at real scales, i.e., for industrial applications in the future.

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Organized by

DEPARTMENT OF CHEMISTRY (PG & UG)

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ABOUT THE COLLEGE

S. V. K. P. & Dr. K. S. Raju Arts & Science College (A) was established in the year 1974 and is affiliated to Adikavi Nannaya University, Rajamahendravaram. The College offers UG & PG courses and has a total strength of 2000. It is one of the biggest Autonomous Aided Colleges in the AKNU area. The Management is magnanimous and has been a source of inspiration in organizing academic seminars.

The college has been receiving grants from the University Grants Commission and Grant-in-Aid from the Government of Andhra Pradesh. Three Cycles of NAAC accreditation have been successfully completed and accredited the institution with grade 'A' in 2017. The College has been recognised by UGC as "College with Potential for Excellence" for a period of 5 years. Chemistry Department was established during the academic year 1978 with the aim of bringing young talent in rural area in the field of Chemistry. The P. G. Dept of Chemistry was established in the year 1993 by introducing M. Sc. Industrial Chemistry course. In the year 2005 M. Sc. Organic Chemistry was also introduced.