



भा.कृ.अनु.प.-राष्ट्रीय मांस अनुसंधान संस्थान

(पूर्व भा.कृ.अनु.प.-राष्ट्रीय मांस अनुसंधान केंद्र)

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Green Nano -Antibacterial Technology: Chitosan encapsulated nanosilver entrapped cinnamaldehyde and thymol to combat multi-drug-resistant bacteria

Inventors: Dr. Deepak B. Rawool, Dr. S. B. Barbuddhe, Dr Jess Vergis and Dr Nitin V. Kurkure

Brief Description: The unique features of the technology are as follows. (1) The developed technology (compound) can be used for rearing antimicrobial resistance-free broiler birds. (2) The developed compounds (EAgT and EAgC) were found safe as per OECD 425 guidelines, and also stable at room temperature (6 months). (3) The innovative product is intended for targeted delivery (released maximum >80% at alkaline pH i.e. in the intestine), hence dose required would be less and also it reduces overall production costs. (4) No residues of compounds were found in vital organs and breast muscles of treated poultry ensuring consumer safety. (5) The microbes may have a very rare or almost negligible chance of developing resistance against the developed product (EAgT and EAgC). (6) The developed product can be used either as a therapeutic as well as from a preventive perspective in the poultry industry. Routine use of developed compound may aid in the production of antibiotic residue-free chicken from a public health/ food safety perspective



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