

Changing characteristics of *Staphylococcus aureus*

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Staphylococcus aureus is now a significant pathogen for research analysis in the world wide. Presumptive 100 samples of *S aureus* were collected from California Mastitis Test (CMT) positive bovine milksamples of Sylhet, Bangladesh. All the samples were cultured on mannitol salt agar (MSA) media as a selective medium for *Staphylococcus aureus* and 44 were indicated positive after 24 hours of incubation at 37 °C. Only the pure single colonies of presumptive bacterial isolates were selected from each positive sample for further characterization. The main objective of this paper was to detect the changing morphological and biochemical characteristics of *Staphylococcus aureus* between 15 day's time lag. Under morphological characterization every single colonies displayed the actual phenotypic characteristics of *Staphylococcus aureus* but observing in biochemical tests, they showed various result although maintaining proper safety and procedure. Isolated 44 positive presumptive *S. aureus* indicated about 100%, 80% and 85% in Mannitol salt agar test, Triple salt agar test, Citrate agar test accordingly. Moreover, in MR-VP test, oxidase test they indicated 70% and 90% whereas in serological test presumptive bacteria performed positive for coagulase test 16% and 50% for β -hemolysis test. To comparing the results, all tests were screened for the same sample after 15 days for further analysis while 63% samples indicated positive both in citrate test and triple sugar test, 52% samples positive for MR test whereas, in VP test for only 38%. Only 2% changes occurred in MSA test, oxidase test and of coagulase test while the tests of β -hemolysis, catalase and indole result were remain the same. This experiment was carried out in Basic Biotechnology Lab in faculty of Biotechnology and Genetic Engineering and Microbiology Lab in Sylhet Agricultural University. This experimental analysis would be beneficial for any further metabolic and evolutionary analysis of *Staphylococcus aureus*.

Biography:

Shah Rucksana Akhter Urme has completed her Bsc in Biotechnology and Genetic Engineering from Sylhet Agricultural University and continue Msc from the same University. She has attended National and International Conference. She is enthusiastic member of voluntary organization. She researched more than one year about pathogenic bacteria and now she enroll in a Environmental project work in National Institute of Biotechnology. She is very passionate about microbial scientific research.