

*Aspergillus rugulosa*. The highest similarity (100%) was observed between *Aspergillus flavus* with *Aspergillus oryzae* and *Aspergillus nidulans* with *Aspergillus rugulosa*. The least genetic similarity was found between *Aspergillus flavus* with *Aspergillus rugulosa* and *Aspergillus oryzae* with *Aspergillus rugulosa*. The phylogenetic tree revealed that two clade were formed among the fungal species with one clade belongs to *Aspergillus flavus*, *Aspergillus rugulosa* and *Aspergillus sydowii* and the another with *Aspergillus flavus* and *Aspergillus oryzae*. The present study shows the presence of different pathogenic fungal species which can be from different sources of contamination at various stages of dry fish processing.

SF OR 13

### Prevalence of *Salmonella* in seafood collected from the local markets

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**S**almonella is a serious food-borne pathogen which belongs to enterobacteriaceae family. All *Salmonella* groups other than *Salmonella typhi* and *S. paratyphi* refers to as NTS (Non-Typhoidal *Salmonella*) which causes diseases from mild gastroenteritis to life threatening cases and it is becoming a great public concern worldwide recently. Nearly 165 sea food samples from local markets of Cochin were screened for the *Salmonella* and it is found that the prevalence is 27.3%. The 45 positive samples include many commercially important fishes, shellfishes and molluscs. All isolates were confirmed as positive by bio

typing and by PCR targeting *invA* gene with 284bp. Serotyping of these isolates confirmed the presence of various Non Typhoidal *Salmonella* (NTS) strains like *Salmonella typhimurium*, *S. salamae*, *S. urbana*, etc. Some of the isolates were rough type which cannot be serotyped. Antibiogram profiling was performed against twenty antibiotics like imepenem, ciprofloxacin, tobramycin, moxifloxacin, ofloxacin, ceftazidime, levofloxacin, norfloxacin, cotrimoxazole, colistin, nalidixic acid, augmentin, ceftoxitin, gatifloxacin, gentamycin, amikacin, aztreonam, ceftriazone, cefpodoxime, nitrofurantoin etc. The *Salmonella* isolates showed the resistance towards third generation cephalosporins, carbapenem and nitrofurantoin groups.

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### Fluoride removal from water using chitosan coated activated carbon and cuttle bone carbon in combination with alumina

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**F**luoride contamination of ground water is a globally important concern both in health and environmental aspect. High content of fluoride in drinking water can result in many health issues including skeletal and dental fluorosis. As there is a serious requirement for defluoridation of drinking water, activated carbon and Cuttle bone carbon was modified with chitosan (chitosan coated activated carbon – CCAC and chitosan coated Cuttle bone carbon - CCBC) and used in combination with alumina for defluoridation. Characteristics of CCAC and CCBC were studied using SEM