The fillet constitutes up to 41% of its weight and is a good indication of yield. The average processing yield of different components of silver pompano is represented in Table 1.

Owing to its similarity to high value fish, pomfret in terms of shape and meat quality, pompano is an alternate species. Hence developing processing protocols for such farmed species is the need of the hour.

Antimicrobial activity of Silver nanoparticles (AgNPs) against human significant pathogens

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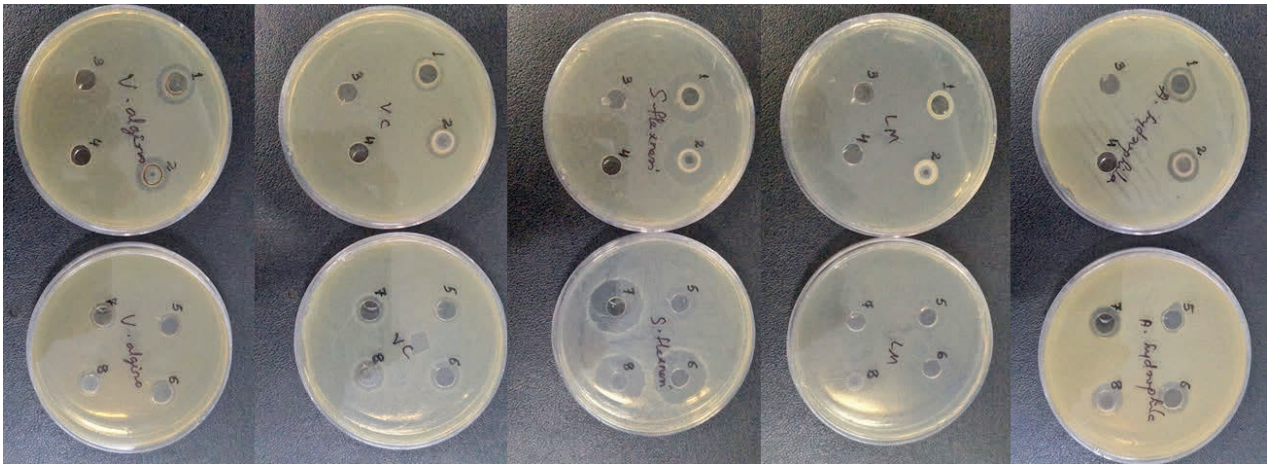
There is a quest for searching new antimicrobial agents as there are frequent reports on the multidrug resistance of many pathogens. Currently many researchers and pharmaceutical companies are examining novel antibacterial agents to save millions of lives (CDC, 2015; Rai *et al*., 2009). Nanotechnology is a rapidly growing field with its various applications for the purpose of manufacturing new materials at the nanoscale level (Albrecht *et al*., 2006). Nanoscale materials have been used as novel antimicrobial agents due to their high surface area to volume ratio and the unique chemical and physical properties (Kim *et al*., 2007). Since centuries silver has been used for the treatment of burns and chronic wounds as well as for water treatment (Richard *et al*., 2002; Castellano *et al*., 2007). It is also being used in many food varieties, cosmetics and ayurvedic preperations. Nano-silver particles present several advantages which make them as useful antimicrobial agents. They possess very high activity against a broad range of microbes and parasites, even at very low concentrations. Silver causes very little systemic toxicity toward humans, and is relatively inexpensive and available commonly (Le Ouay and Stellacci, 2015).

In the present study we have assessed the antimicrobial effect of silver nanoparticles (AgNPs) against eight different pathogens. Different reducing agents like high molecular weight chitosan, low molecular weight chitosan, trisodium citrate, ascorbic acid, ethylene glycol, combi-



Inhibition zone of pathogens with synthesized AgNP

nations of trisodium citrate and cetyl trimethyl ammonium bromide (CTAB), ascorbic acid and CTAB, ethylene glycol and CTAB were used separately for AuNP synthesis. Young cultures of *Listeria monocytogenes*, *S. flexineri*., *P. aeruginosa*, *Y. enterocolitica*, *V. parahaemolyticus, V. cholerae*, *A. hydrophila*, *V. alginolyticus* and *S. aureus* were used in the study. Antimicrobial assay was performed on Muller Hinton agar (MHA) plates and the plates were observed after overnight incubation at 35±2 °C. Most of the AgNPs prepared showed good antimicrobial properties against all the pathogens studied. Highest zone of inhibition was observed for AgNPs prepared using combination of TSC and CTAB against *L. monocytogenes*. For *P. aeruginosa* and *Y. enterocolitica*, AgNPs prepared using high molecular weight chitosan exhibited maximum antimicrobial properties whereas for *V. cholerae*, AgNP prepared using low molecular weight chitosan was found better. Among all the different reducing agents, AgNP prepared using combination of trisodium citrate and CTAB was found effective against all the pathogens studied. AgNPs prepared using trisodium citrate and ascorbic acid did not show any antimicrobial activity against all the pathogens studied. The results indicate that silver nanoparticles can be used effectively to control the growth of pathogens. As there is growing concern on the direct use of nanoparticles in food, possible applications for this may include cleaning solution for food processing machineries and utensils and for disinfection of hospital waste etc.

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