## Abstract

This study aimed to isolate and characterize β-galactosidase producing bacteria from dairy products and vegetables from Lahore and Shakargarh. Out of 16 isolates, *Lactobacillus* species were identified through biochemical tests, evaluating their X-gal hydrolysis capability. Six colonies (S1-S6) with a dark green-blue color on 5-bromo-4-chloro-3-indolyl-β-D-galactosdase (X-gal) plates were molecularly characterized by using the 16S rRNA gene. All these bacteria showed maximum growth at 37°C for 30-35 hours and pH 6. Isolated bacterial strains showed maximum growth in NaCl (range 0.5-6%) but growth declined with an increase in concentration except for S2 and S6 which showed little effect. S3 showed maximum growth (OD=1.5 at 600nm) when treated with 0.9% bile salt followed by S5, S2, S6, S4, and S1. The strains having probiotic potential were assessed using the antibiotic disc. All bacterial strains showed resistance against Ampicillin and penicillin antibiotics and showed resistance against ciprofloxacin and streptomycin.