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Microbiological examination of fish pond biofilms and fish pond water from selected fish ponds, Okigwe, Imo state, Nigeria**Chukwu Vince Anyim**

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The microbiological examination of fish pond biofilms and fish pond water in Okigwe town, Imo State, Nigeria was carried out in this study using standard procedures. The bacterial species isolated were *Escherichia coli*, *Enterobacter*, *Staphylococcus*, *Streptococcus*, and *Salmonella*. Others were *Pseudomonas* species, *Proteus* species, *Shigella*, *Bacillus*, *Citrobacter* and *Klebsiella* species. The fungi isolated include *Aspergillus* species, *Candida*, *Penicillium*, *Fusarium* and *Mucor* species. *Bacillus* spp. and *Mucor* spp were the most frequently distributed (100%), followed by *Staphylococcus aureus*, *E. coli*, *Pseudomonas* spp., *Proteus* spp., *Shigella* spp and *Candida* species (80%). *Salmonella* spp., *Klebsiella* spp., *Citrobacter* spp, *Enterobacter* spp, *Fusarium* spp and *Penicillium* spp had the same rate of 60%, respectively while the least occurrence was seen in *Streptococcus* spp. and *Aspergillus* species with the rate of 40%, respectively. The highest total bacterial count ($7.2 \pm 0.0 \times 10^7$ cfu/ml) of the biofilm samples was observed in sample C while sample D had the least count of $5.8 \pm 0.5 \times 10^{10}$ cfu/ml. Sample C had the highest total coliform count ($6.2 \pm 0.0 \times 10^4$ cfu/ml) while sample B produced the least count of $4.8 \pm 0.1 \times 10^3$ cfu/ml. The highest total coliform fecal count of $4.8 \pm 0.1 \times 10^5$ cfu/ml was observed in sample E, while the least count of $3.6 \pm 1.5 \times 10^2$ cfu/ml was seen in sample B. Sample E had the highest total fungal count of $5.2 \pm 0.0 \times 10^2$ cfu/ml while the least count was seen in sample D ($4.0 \pm 0.2 \times 10^2$ cfu/ml). The total viable counts of the fish pond water samples ranged from $8.2 \pm 0.8 \times 10^8$ cfu/ml (sample A) to $5.0 \pm 0.0 \times 10^7$ cfu/ml (sample C) while the total coliform counts ranged from $6.0 \pm 0.0 \times 10^3$ cfu/ml (sample A) to $4.2 \pm 0.2 \times 10^1$ cfu/ml (sample E). The highest total fecal count of $5.5 \pm 0.2 \times 10^3$ cfu/ml was observed in sample A, while the least count was seen in the sample E $3.0 \pm 0.1 \times 10^5$ cfu/ml. Total fungal count ranged from $5.8 \pm 0.2 \times 10^3$ cfu/ml (sample A) to $4.0 \pm 0.2 \times 10^2$ (sample D). The results of this study have shown that pond water if not properly checked could endanger both the fish and the potential consumers particularly if the fish harvested from these ponds are not properly cooked.

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