

SUMMARY

Identification of Encountered Bacterial Pathogens Related With Streptococcosis Cases By Using Multiplex Polymerase Chain Reaction (mPCR) In Trout

For this research a number of 220, weighing in 50-60 g rainbow trout (*Oncorhynchus mykiss* Walbaum 1792) samples from 4 different fish farm were examined by multiplex PCR (mPCR).

At the end of multiplex PCR study, *Streptococcus spp.* and *Lactococcus spp.* target pathogens were identified at the rate of 62.71% from whole samples. The percentage distribution according to identified species were at the rate of *L. garvieae* 52.17%, *S. parauberis* 27.54% and *S. difficilis* 20.29%.

The identified target pathogens by multiplex PCR percentage distribution according to fish farms, *L. garvieae* was isolated at the highest rate of 45.45% from 1st fish farm. In general fish farm evaluations (1st, 2nd, 3rd, 4th) showed that performed isolations were at the rate of 38.41%; 25.36%; 16.67% and 19.56%, respectively.

In our study, *Lactococcus garvieae*, *Streptococcus parauberis* and *Streptococcus difficilis* presences in rainbow trout (*Oncorhynchus mykiss* Walbaum 1792) were determined by multiplex PCR. *Streptococcus iniae*; the main agent of streptococcosis which causes economic losses with mortality in rainbow trout (*Oncorhynchus mykiss* Walbaum 1792) was not identified. Moreover, *Lactococcus garvieae*, *Streptococcus parauberis* and *Streptococcus difficilis* were found out by multiplex PCR which are main pathogens in streptococcosis.

Keywords: *S. difficilis*, *S. parauberis*, *L. garvieae*, *S. iniae*, rainbow trout, identification, mPCR.