In a commercial rainbow trout farm located in the Aegean region, an outbreak characterized with haemorrhages in the eyes and fins, uni/bi lateral exophthalmia and darkening of skin was observed. Ten samples each were taken from clinically symptomatic fish and from healthy fish kept in separate ponds and these fish were grouped and marked as Diseased (D1-10) and Control (C1-10), this was followed by bacteriological examinations. Pathogenic bacteria was not isolated from asymptomatic fish but *Lactococcus garvieae* was isolated and identified with conventional and molecular methods from all clinically symptomatic fish samples. Along with bacteriological examinations, blood samples of both groups were analyzed for certain parameters with an automated blood count device calibrated for fish blood. As a result of the analyses; values for White Blood Cell (WBC), Red Blood Cell (RBC), Haemoglobin (Hb), Platelet Total (PLT), Mean Platelet Volume (MPV) and Platelet Distribution Width (PDW) in the diseased group were found to be lower than the control group (p<0.01, p<0.001).