ABSTRACT
In this study, a new trivalent vaccine was developed and evaluated the efficacy with adjuvants (Freund’s Complete Adjuvant and glucan) and non-adjuvanted vaccine in rainbow trout (20g) against to pathogens; L. garvieae, V. anguillarum and Y. ruckeri. For this purpose, four experimental groups were formed including control. The vaccine was prepared formalin-killed bacteria and then combined with adjuvants that were given into fish by intraperitoneal injection. Control fish were received only phosphate buffered saline-PBS. A booster was applied the fish which were vaccinated with a non-adjuvanted vaccine 21 days post-injection. All the groups were challenged against three pathogens at day 30th, 90th, 120th and 270th post vaccination. The results showed that fish had a high level of protection of pathogens in the vaccinated groups up to 9 months. The level of protection was calculated by obtaining the Relative Percent Survival (RPS). RPS was determined as in the non adjuvanted plus a booster injected group: Y. ruckeri 96,77%, V. anguillarum 100%; L. garvieae 96,66%, Glucan: Y. ruckeri 93,54%; V. anguillarum 96,77%, L. garvieae 93,33 %, FCA : Y. ruckeri 100%, V. anguillarum 87,09 %, L. garvieae 93,33% at 270th day. The efficacy of the vaccine has been found to provide long-term protection against to three pathogens in the experimental condition.
Key Words: Rainbow trout, Yersinia ruckeri, Lactococcus garvieae, Listonella(Vibrio) anguillarum