

White spot syndrome virus (WSSV) Rapid detection kit

The global shrimp market value is estimated to be around \$ 25 billion by 2026. World shrimp production in 2019 exceeded 4.5 million tons. More than 25 years have passed since the beginning of the shrimp industry in Iran. The amount of fishery production in the country in 2020 was about 1,200,000 MT of which the total aquaculture production has reached approximate 550,000 MT. Out of this amount, 49,000 MT were related to shrimp production. The shrimp production area in 2019 was more than 11.000 ha with a turnover of 220 million \$ and it is estimated it will reach 15.000 ha in 2023. Shrimp aquaculture is an important industry in Iran and plays an important role in aquaculture production. White spot syndrome virus (WSSV), the causative virus of disease, is found in most shrimp farming areas in Iran, and it cause large economic losses to the shrimp farming industry. The rate of farm involvement with white spot disease (WSD) has been 10-14% of all farms in the country. With this calculation, approximate 5,000 MT of the Iran shrimp production is removed from the country's production circuit annually due to mainly shrimp diseases. White spot syndrome virus is highly virulent in shrimp farms and can spread quickly and cause up to 100% mortality within 3-7 days. The virus is a very large, enveloped, double stranded DNA (ds DNA) and assigned by ICTV to a new genus Whispovirus and belong to Nimaviridae family. In Iran WSSV first appeared in Khuzestan Province in the south of Iran and later on it appeared in other provinces such as Bushehr, and Sistan and Baluchistan, Hormozgan and Golestan . The wet mount methods where a fresh smear of target tissue, organ or feces is prepared or stained using 0.05% malachite green for checking the virus. The impression smear method is used to compare diagnostic sensitivity to standard histopathological methods applied to the diagnosis of WSSV infection in post larvae and Juvenile shrimp. However this is a time consuming and tedious method.

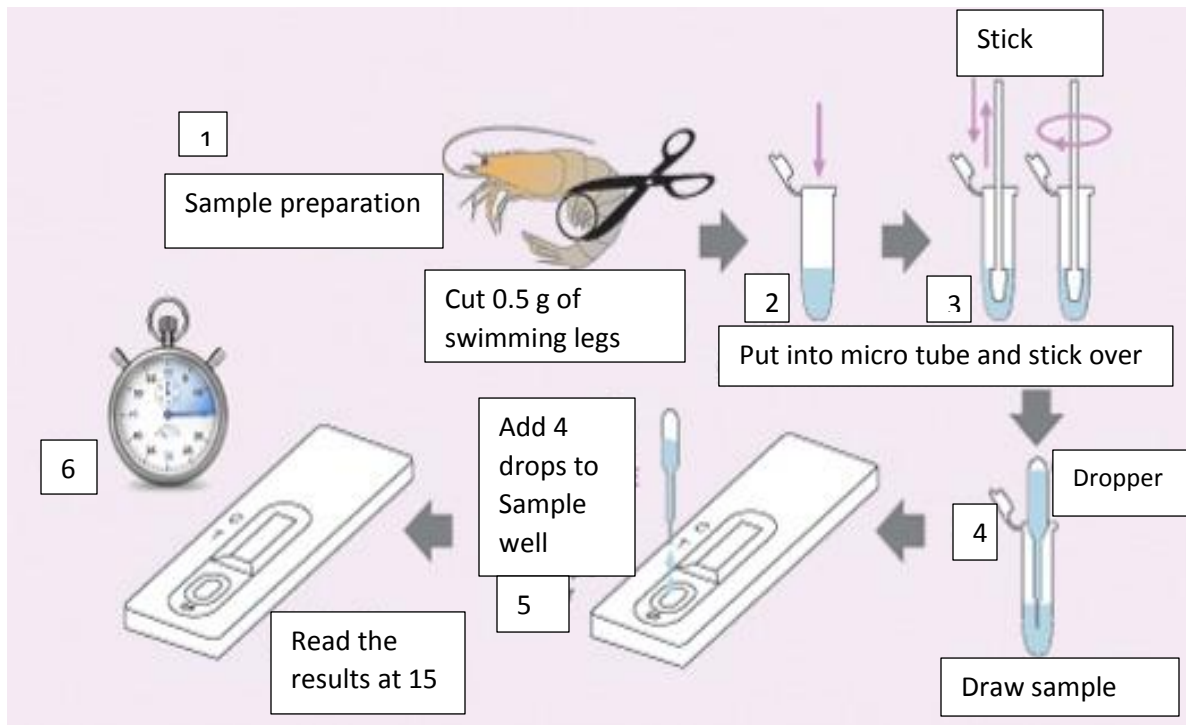


Several studies have estimated that the economic losses caused by shrimp diseases reached US\$ 20 billion in Asian countries over the past decade. Particularly, WSSV has reportedly caused approximately two-thirds of all annual economic losses, accounting for roughly US\$ 1 billion and a 15% loss in global shrimp production.

We in Rojan Azma research and manufacturing company developed a simple immune-chromatographic rapid test which can detect the virus at spot in a short time of 10 minutes with high specificity.

Please contact us at
www.roianazma.ir

Test performance



Clean with clean water some of shrimps that look sick or unhealthy, and prepare the testing sample such as 1) 0.5 g of swimming legs and put them into a micro tube (use scissors). When cutting off the swimming legs is done by hands, wash your hands well beforehand. 2) After putting the shrimp specimen into the tube, 3) stick at it over 10 times with the stick and sufficiently stir the crushed specimen with the stick. Leave the sufficiently mixed specimen alone for 5 minutes 4) Take out, with the dropper, about 0.15ml of the supernatant liquid that forms and put 4 drops of it through the hole of specimen well.

5) You will see a red band activated at the point marked "C" on control line region. This shows the dropped liquid is well dispersed in test. 6) When the red band is activated at the point "T" within 15 minutes, the diagnosis is positive (WSSV)

