

DIAGNOSIS OF PREGNANCY IN MARES BY EQUINE CHORIONIC GONADOTROPIN (eCG) HI METHOD

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ABSTRACT

This research was aimed to increase the reproductive efficiency of mare by producing diagnostic pregnancy kit for easy and accurate of detecting pregnancy. Haemagglutination inhibition (HI) method was used for determination of equine Chorionic Gonadotropin (eCG) in the serum. Equine Chorionic Gonadotropin appears in the blood of mares as early as 40 days following conception and its detection has been regarded as evidence of pregnancy. Immunologic diagnosis of pregnancy in mares is based on the principle that eCG, when present in the blood sample, prevents agglutination of sensitized sheep red blood cells (sSRBC) by anti-eCG. A negative result was determined by the prevention of agglutination of sSRBC conversely a positive result was determined by inhibition of agglutination. Agglutination of sSRBC means a negative result (not pregnant mares) and inhibition of agglutination, a positive result. Sample of the research were seven pregnant mares which have tested their pregnancy by rectal palpation as gold standard (first group) and three not pregnant mares (second group). Sera from both, first and second groups of mares were then tested by HI test for detecting eCG. These result of HI test then were compared with gold standard. The result showed that seven pregnant mares that positively diagnosis by HI test were also showed positive by rectal palpation, and three mares that negatively diagnosis by HI test were also showed negative by rectal palpation. In conclusion, test method of HI test was reliable for detecting pregnancy in mares.

Key word : mares pregnancy diagnosis, eCG, HI method