Title: On-site detection of equid alphaherpesvirus 3 in perineal and genital swabs of mares and stallions

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On-site detection of equid alphaherpesvirus 3 in perineal and genital swabs of mares and stallions.

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Highlights

- The iiPCR and the real-time PCR for EHV-3 had comparable detection limits.
- The LoD95% of the EHV3 iiPCR was 6 copies genome equivalents per reaction.
- The EHV3 iiPCR did not react with any of 6 non-targeted equine pathogens.
- Regarding the diagnostic performance, the two methods had 98.82% agreement.
- The high sensitivity and specificity supports its use as an on-site screening test.

Summary

Equine coital exanthema (ECE) is an infectious, venereally transmitted muco-cutaneous disease affecting mares and stallions, caused by equid alphaherpesvirus 3 (EHV3). Diagnostic tools for rapid identification of EHV3 are of primary importance to diminish the risk of EHV3 dissemination at the time of breeding. In the last years, it has been shown that the performance of the insulated-isothermal polymerase chain reaction (iiPCR) is comparable to virus isolation, nested PCR and real-time PCR (qPCR) in detecting pathogens of various animal species. Analytical sensitivity and specificity of the iiPCR