**Annex 8. Item 3.1.1. – Chapter 3.1.5. Crimean–Congo haemorrhagic fever**

MEETING OF THE WOAH BIOLOGICAL STANDARDS COMMISSION

**Paris, 4–8 September 2023**

**USA COMMENTS IN RED FONT**

C H A P T E R 3. 1.5 .

# CR IM EAN – CONG O H AEM OR R H AG IC FEV E R

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## B. DIAGNOSTIC TECHNIQUES

***Table 1.*** *Diagnostic test formats for Crimean–Congo haemorrhagic fever virus infections in animals*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Method** | **Purpose** | | | | | |
| Population freedom from infection | Individual animal freedom from infection prior to movement | Contribute to eradication policies | Confirmation of clinical cases in animals | Prevalence of infection – surveillance | Immune status in individual animals or populations post- vaccination |
| **Detection and identification of the agent(a)** | | | | | | |
| **Real-time RT-PCR** | – | ++~~+~~ | – | * ~~+++(b)~~ | +(c) | – |
| **Virus isolation in cell culture** | – | – | – | +(b) | – | – |
| **Detection of immune response** | | | | | | |
| **IgG ELISA** | +++ | + | – | ++(d) | +++ | – |
| **Competitive ELISA** | +++ | + | – | ++(d) | +++ | – |
| **IgM ELISA** | – | ++ | – | ++(e)- | ~~–~~++ | – |

Key: +++ = recommended for this purpose; ++ recommended but has limitations;

+ = suitable in very limited circumstances; – = not appropriate for this purpose.

RT-PCR = reverse-transcription polymerase chain reaction; ELISA = enzyme-linked immunosorbent assay. (a)A combination of agent identification methods applied on the same clinical sample is recommended. (b)Molecular testing/isolation can be used to confirm acute infection in rare cases in animals showing clinical signs as viraemia tends to be transient.

(c)RT-PCR is used for the screening of tick populations in the context of surveillance studies.

(d)Serological evidence of active infection with CCHFV has been demonstrated by seroconversion based on a rise in total or IgG antibody titres on samples taken at 2–4 weeks apart.

(e)Serological evidence of active infection with CCHFV has been demonstrated by the detection of IgM antibodies specific to CCHFV using two different ELISAs based on two different antigens.

**RATIONALE:**

For the Real-time RT-PCR method, for the purpose of Individual animal freedom from infection prior to movement, recommend changing from +++ to ++ due to transient nature of viremia.

For the Real-time RT-PCR method, for the purpose of Confirmation of clinical cases in animals, this column is not a good metric and should be negative throughout. Animals, including ruminants, are typically asymptomatic to infection, although could be transiently viremic.

For the Real-time RT-PCR method, for the purpose of Prevalence of infection – surveillance, recommend changing from – to ++ due to short persistence of IgM antibodies in response to acute infections, but that has limitations as it may not be detected when the it (IgM) wanes.