

Simple and highly sensitive detection kits for foot-and-mouth disease virus that can be used in the Asia-Monsoon region

Production

Implementation

Item: Livestock

Transboundary disease prevention

Outline

The foot-and-mouth disease virus (FMDV) antigen detection kit can be used in the field without the need for any special equipment to rapidly detect FMDV antigens in the lesions of the tongue and oral cavities of cattle, pigs, goats, and sheep with foot-and-mouth disease (FMD) with high sensitivity.

Background/effect/note

Considering the importance of initial disease control during FMD outbreaks, rapid first-line on-site testing is useful for preventing highly contagious FMD (Fig. 1).

The detection kit is expected to prevail not only in Japan but also in countries with insufficient social infrastructure and large areas of national land.

Additionally, a monoclonal antibody-based typing kit that can be used to detect and distinguish all seven serologically different types of FMDV has already been developed. If implemented, this kit would enable simple and quick serotyping. Detailed information on the FMD epidemic situation in neighboring countries will be available through a survey using the detection kit.

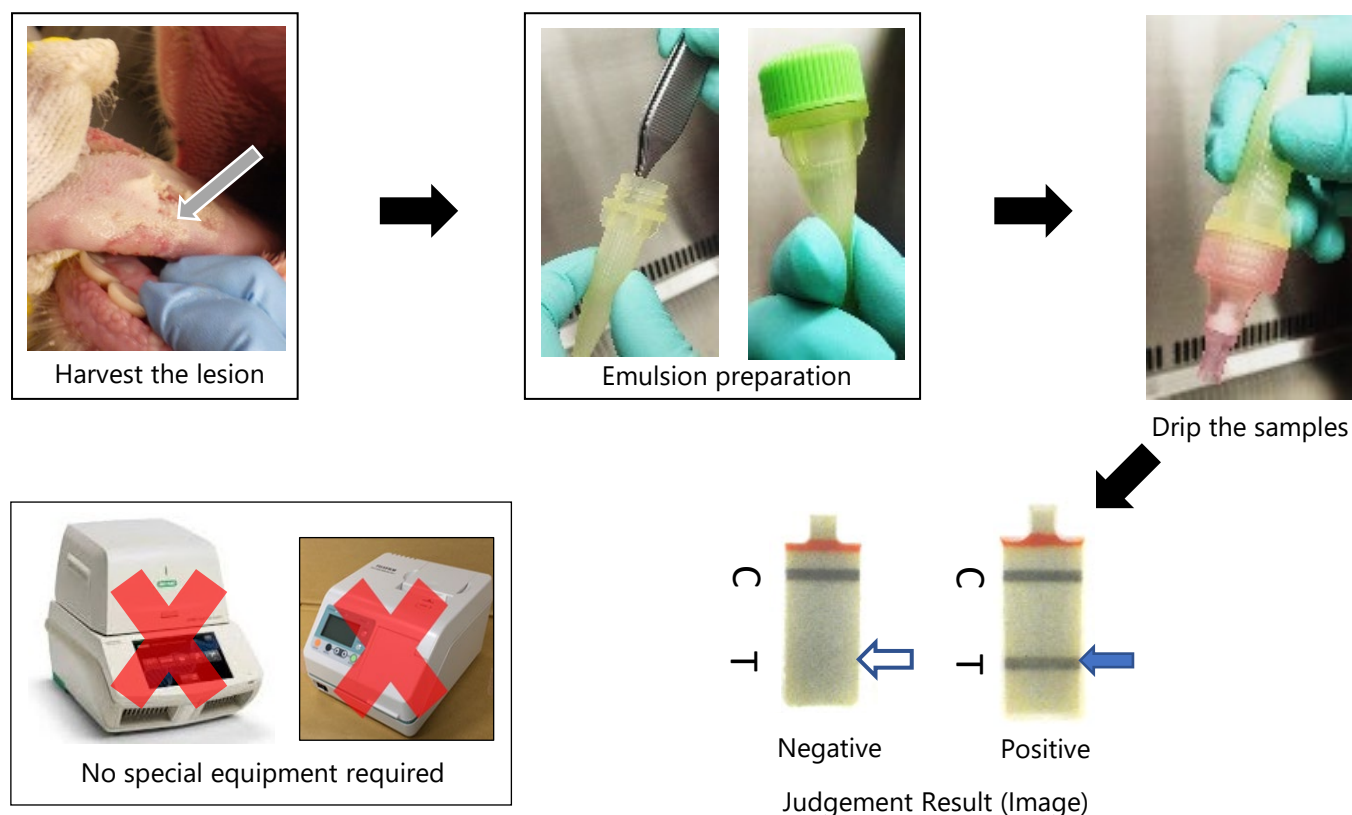


Fig. 1. Flow of detecting foot-and-mouth disease virus using the kit



Technical details:

https://www.naro.go.jp/project/results/4th_laboratory/niah/2019/19_051.html [Japanese]

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