

# Palm PCR™ ASF Fast POCT System

Sample to Result within 40 min

*Ultra-Fast & Highly Sensitive*

*Direct Prep without DNA Extraction*

*Simple to Use & Fully Portable*



## Total Solution for On-Site Diagnosis of ASF

### ASF Fast POCT Kit

- **Palm PCR™ ASFV Direct Prep Kit** for ultra-fast  $\leq 15$  min direct preparation of ASFV DNA from plasma and serum samples of suspected pigs
- **Palm PCR™ ASFV Fast PCR Kit** for ultra-fast  $\leq 25$  min PCR and real-time detection

### Fully-Mobile Equipment

- **Palm PCR™ S1/S1e** Ultra-fast Mobile Real-time PCR System for ultra-fast  $\leq 25$  min hot-start real-time PCR using Palm PCR™ ASFV Fast PCR Kit
- **Ahram™ RX1** Portable Centrifuge for on-site preparation of blood samples and real-time PCR mix

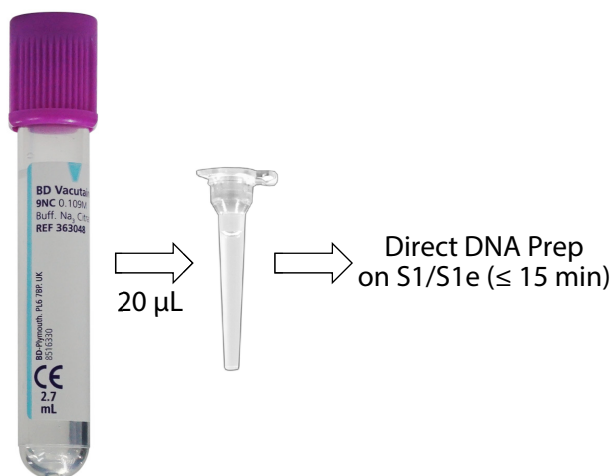
Ahram Biosystems, Inc.

# Palm PCR™ ASF Fast POCT System

## Simple, Convenient & Fast Workflow

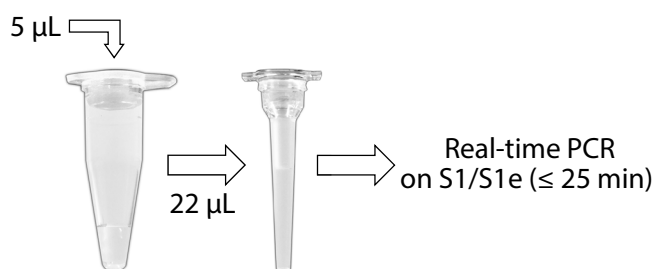
### Step 1. ASFV Direct Prep

1. Add 20  $\mu\text{L}$  of a plasmid or serum sample into an ASFV Direct Prep tube.
2. Perform 2-step isothermal incubation on *Palm PCR™* S1/S1e device.
3. Centrifuge the incubated Direct Prep tube for 2 min at 8,500 RPM on Ahram™ RX1 Portable Centrifuge, and use 5  $\mu\text{L}$  of the clear supernatant for real-time PCR diagnosis.



### Step 2. ASFV Real-time PCR Diagnosis

1. Add 5  $\mu\text{L}$  of the clear supernatant into a 0.2 mL tube containing 17  $\mu\text{L}$  premix of *Palm PCR™* ASFV Fast PCR Kit, and mix well.
2. Transfer all 22  $\mu\text{L}$  of the mixed solution into a Type IIA *Palm PCR™* sample tube and close with an optical cap.
3. Centrifuge the *Palm PCR™* sample tube for 2 min at 8,500 RPM on Ahram™ RX1 Portable Centrifuge, and perform hot-start real-time PCR on *Palm PCR™* S1/S1e device.



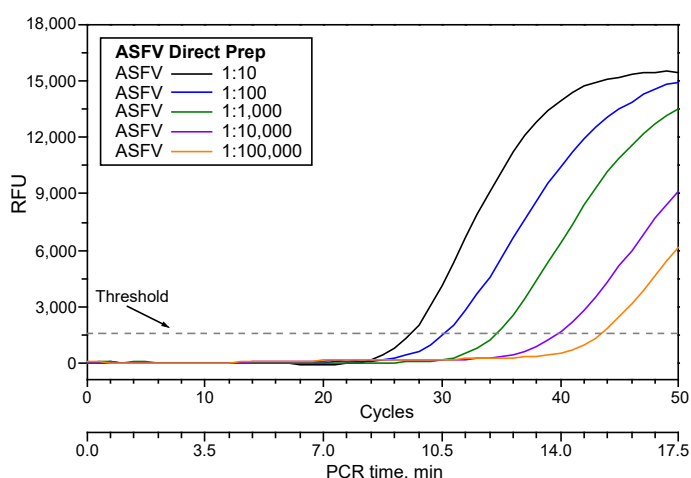
## Ultra-Fast MDx with Extreme Sensitivity

### Sensitivity of the ASF Fast POCT System

Fast POCT diagnosis of ASF using the Direct Prep method can deliver accurate results in a short turnaround time (within 40 min) with very high sensitivity that is equivalent to typical DNA extraction methods.

Sensitivity of the Direct Prep method is tested using the URL-ASF reference sample (ASFV positive serum) obtained from the European Union Reference Laboratory for ASF (EURL-ASF), CISA-INIA, Spain. The URL-ASF reference sample was serially diluted with an ASFV negative serum and each diluted serum sample was processed with *Palm PCR™* ASFV Direct Prep Kit. The processed sample was tested using *Palm PCR™* ASFV Fast PCR Kit on *Palm PCR™* S1/S1e device.

Shown on the right are results of the ASF Fast POCT diagnosis using the Direct Prep method. As shown, the ASF Fast POCT diagnosis successfully detect ASFV DNA at 1/10,000 dilution with 100% hit rate, and at 1/100,000 dilution (about 2.5 copies/reaction) with about 70% hit rate. Serial dilutions with an ASFV negative plasma also delivered identical results (data not shown).



< Results of ASF Fast POCT Diagnosis >

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