Procurement Specifications for a Multihead Thermocycler System

1. Purpose and Background

- Objective: To acquire a single multihead thermocycler capable of replacing three GeneAmp PCR System 9700 machines (each with 96-well capacity). The new system should support at least two (or three) independent PCR runs simultaneously, allowing different protocols, temperatures, and run times on separate blocks/modules without cross-interference. This will streamline workflows for high-throughput PCR testing of veterinary viral pathogens.

-Rationale for Replacement:

The existing GeneAmp 9700 units can no longer be repaired, are over 15 years old, and are single-block, non-modular, and require separate machines for concurrent runs, leading to inefficiencies in space, energy use, and maintenance.

The new system should offer modern features like touchscreen interfaces, faster ramp rates, and software integration for improved productivity and data management.

2. General Requirements

- System Type: Multi-block/modular thermal cycler with interchangeable blocks for flexibility (e.g., 96-well, or dual 48-well formats).

- Capacity and Independence: Minimum of two independently controllable blocks; preferred three (to fully replace three 96 well devices). Each block must operate autonomously, supporting simultaneous runs with unique protocols.

- Compatibility: Must accommodate standard PCR consumables (e.g., 0.2 mL tubes, 96-well plates, strips)

- Throughput: Equivalent to or exceeding 2x96 wells per run cycle.

- Power and Environmental: 100–240V AC, 50/60 Hz; energy-efficient (≤700W max). Operating temperature 15–30°C; humidity 20–80% non-condensing. Compact footprint (≤60 cm width) to fit lab benches.

- Safety and Compliance: CE/UL-certified; overheat protection, lid pressure control, and auto-shutdown. Compliant with ISO 13485 (medical devices) or equivalent for diagnostic use.

- Warranty and Support: Minimum 2-year warranty; on-site installation/training. Annual service contract option; availability of spare parts (e.g., blocks) within 3 weeks.