

# Application Forum

## Decontamination of Gilson® Pipettes Using High Intensity UV LED (part 2)

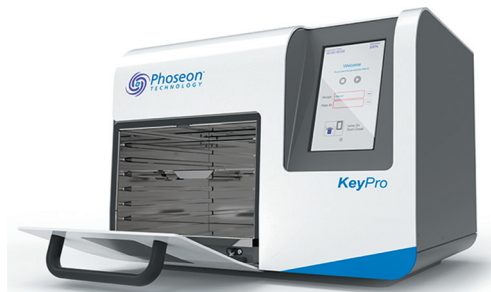
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### BACKGROUND

Having clean pipettes is a consistent need in any laboratory. The cleaning process is often time-consuming and utilizes expensive chemicals that can leave residue and eventually cause corrosion. Thus, laboratories are in need of a quick and cost-effective way to decontaminate their pipettes.

### CONCLUSION

Achieve complete inactivation of RNase A on Gilson pipettes using Phoseon's KeyPro™ UV LED Decontamination Instrument. Pipettes were separated into two pieces – white shaft and blue handle – suspended over a reflector tray, and exposed to two short scans in KeyPro™.



### METHODS

Two Gilson pipettes, one P20 and one P200, were disassembled into the white shafts and blue handles. Components were sealed so as to only treat the outside of the pipette and subsequently soaked in 0.02 u/μL RNase A-doped water for 10 min. Each pipette component was suspended over a reflector tray, set on the KeyPro™ shelf, and exposed to two 4 min 54 second scans. The white shafts were exposed at 80% 275 nm (1.6 W/cm<sup>2</sup> at the window) and 90% 365 nm (900 mW/cm<sup>2</sup> at the window) intensity with the shelf placed 30 mm from the glass window. The blue handles were exposed at 80% 275 nm (1.6 W/cm<sup>2</sup> at the window) and 70% 365 nm (700 mW/cm<sup>2</sup> at the window) intensity with the shelf placed 40 mm from the window. Components were subsequently soaked in nuclease-free water for 30 min and the resuspension solution was assayed in triplicate (one sample each from the top, middle, and bottom of the soaking vessel). RNase A activity was measured via fluorimetry (Gemini XPS) using the RNaseAlert assay (IDT).

### RESULTS

Complete inactivation of RNase A on Gilson pipette achieved after two 4 min 54 second passes in KeyPro™ using the reflector tray. Intensities were 80% 275 nm with either 90% 365 nm (white shaft) or 70% 365 nm (for blue handle). Results were confirmed over three separate experiments (sampled in triplicate each time). Below is a representative example for each pipette component.

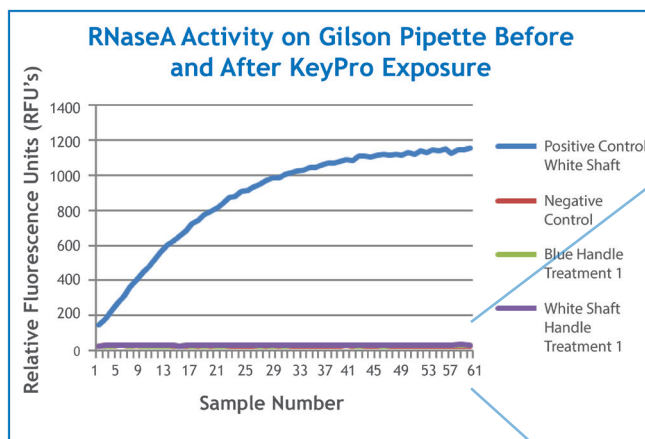


Figure 1

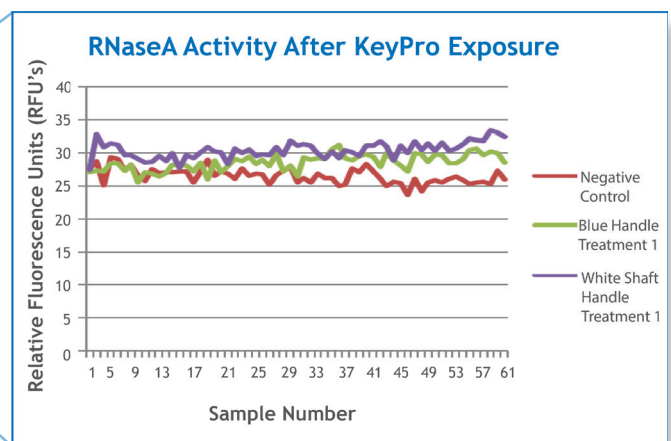


Figure 2