

Infection Prevention and Control



needle**smart**
PROFESSIONAL (PRO)

Infection Prevention

- Provides Microbial and Viral safety.
- Heats the needle to 1300°C and destroys completely viruses, bacteria and other microorganisms.
- Independently validated at Glasgow Caledonian University with further independent TMQA oversight.

Aerosolization

- Virus study using a thermoresistant Parvovirus and Retrovirus, serving as a model for the AIDS virus.
- Air surrounding the device was sampled during the destruction of ~50 needles containing over one million infectious viruses of each type.
- **Conclusion:** No infectious virus particles (PPV or MuLV) were detected in the wash bottle connected to the extraction hood, indicating that **the NeedleSmart device does not produce infectious aerosolized particles when contaminated needles are destroyed.**
- Swabs from inside the device also test negative for infectious (PPV & MuLV) virus.



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Needle Sterility

- Study conducted to determine if bacteria on the outside of the needle are destroyed.
- A high concentration of thermoresistant bacteria were drawn in to the needle and coated the outside of the needle.
- After NeedleSmart treatment at 1300°C no infectious bacteria were detected on the melted needle.
- NeedleSmart treatment denatures all proteins including prions.

The Experimental Set Up at Glasgow Caledonian University



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