The cleaning verification process for NFPA 1851-2020 edition

What is NFPA 1851?

NFPA 1851 is the standard on selection, care and maintenance of protective ensembles for structural fire fighting and proximity fire fighting.

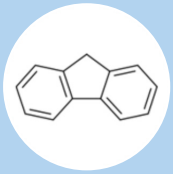
Why are firefighters at a higher risk of developing cancer?

When first responders respond to an active fire, their turnout gear is exposed to various contaminants that are found in the air at the emergency site. When they return from the call, if the contaminated personal protective equipment (PPE) is not properly cleaned, the contaminants remaining can lead to multiple exposures that occur every time they wear their PPE. This creates a concern for long-term firefighter health.

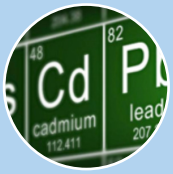
How does NFPA 1851 help first responders?

Scientific evidence shows that firefighters are at a significantly higher risk of developing cancer compared to the general population. NFPA 1851 aims to address these concerns in the form of new cleaning efficacy methods that work to evaluate the effectiveness of the PPE cleaning facilities who decontaminate turnout gear.

Cleaning efficacy testing helps to confirm the removal of the following contaminants:

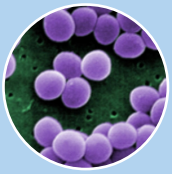


50% removal of volatile organic compounds



50% removal of heavy metals

A $Log_{10}3$ reduction (99.9%) of klebsiella pneumoniae

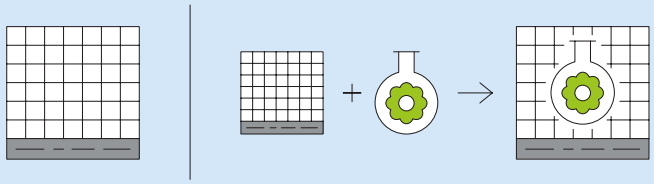


A $Log_{10}3$ reduction (99.9%) of staphylococcus aureus

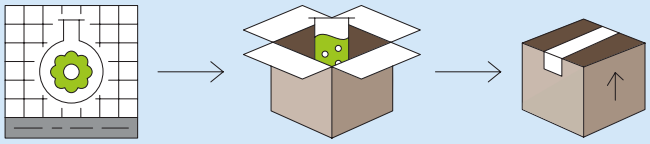
Cleaning efficacy testing process

Let us help you verify your cleaning efficacy process through testing. While we are testing your samples, we will also evaluate your quality systems to ensure your compliance with the NFPA 1851 standard.

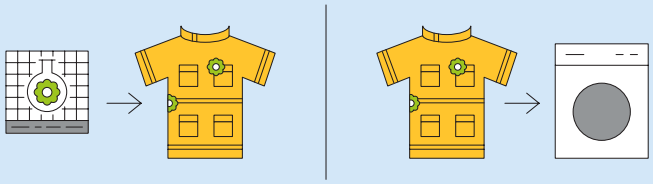
Step 1:
A representative contaminant sample is prepared. Each of the contaminates are added to sample swatches within our laboratories.



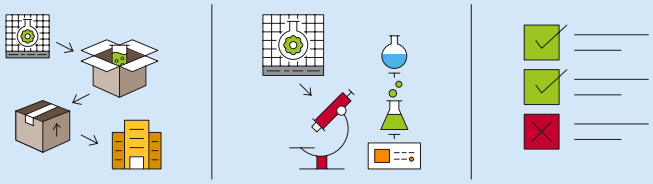
Step 2:
The samples are packed and shipped to the cleaning facility in temperature controlled packaging.



Step 3:
The samples are placed inside surrogate turnout gear clothing in preparation for laundering. The samples contained within the surrogate clothing are then washed according to the laundering facilities normal cleaning process.



Step 4:
The washed samples are packed and shipped to UL, where they are analyzed for remaining containment levels. Results are provided showing the effectiveness of the cleaning process.



Optional sanitization prescreen

Due to the significant changes in NFPA 1851, there has been uncertainty regarding how current cleaning processes perform. UL offers a preliminary screening option will help you understand if your pretreatment method, detergent, etc. have a better chance of passing the tests after you perform the cleaning at your facility and send samples to UL. This basic understanding can help you save time and cost associated with scheduling site visits, running your cleaning method and testing samples if your initial results were non-compliant.

To learn more about the cleaning efficacy of firefighter turnout gear,
Visit us at **UL.com/nfpa1851** or watch our webinar: **Overview of NFPA 1851 Verification**

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