

# ASEPTIC GOWNING – A MEASURE OF CONTROL IN BARRIER BREEDING ROOM

Nur Zahfirah, Amiratul Afifah, Hua Jiawei, & Bethur, N,  
Dept. Production, Invivos Pte Ltd, Singapore

## Abstract:

Aseptic gowning is crucial to contamination control in a standard barrier room which requires very high health status and restricted & authorized staff entry. Therefore, aseptic gowning is required for a clean room to maintain a high health status especially in a large scale barrier breeding room. A specific set of instructions are to be carried out before entering the barrier room and all clothing including personnel jewelry, watches and mobile phones etc. should be left in the changing area. Autoclaved personal protective equipment (PPE) supplied by the company are to be worn prior to entering the barrier room to ensure no contamination occurs while following the instructions. In conclusion, aseptic gowning is an important first step to avoiding contamination in clean rooms and helps to maintain the animals in the room at a high health status and minimize contamination of the barrier surfaces.

## Introduction

To maintain sterility in a barrier room, aseptic gowning is an essential first step to prevent any outbreak. Gowning acts as a barrier between human to animal skin contact. To preserve high quality of animals, it is required for staff to wear Personal Protective Equipment (PPE) to prevent any growth of microorganisms. PPE to be donned includes autoclaved gloves, hairnet, face mask, undergarments, uniform, head bonnet and shoe covers. By gowning up aseptically and following standard procedures, we are safeguarding the animal's health status.

## Methodology & Results:

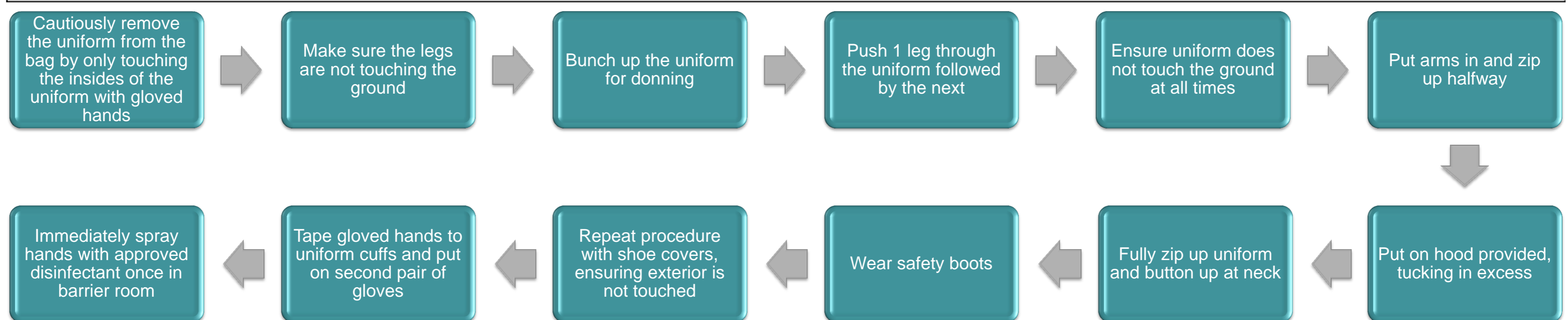
### Showering

- To minimize microbial growth
- Besides soaping, clean underneath nails with brush provided to remove trapped dirt

### Pre-Gowning

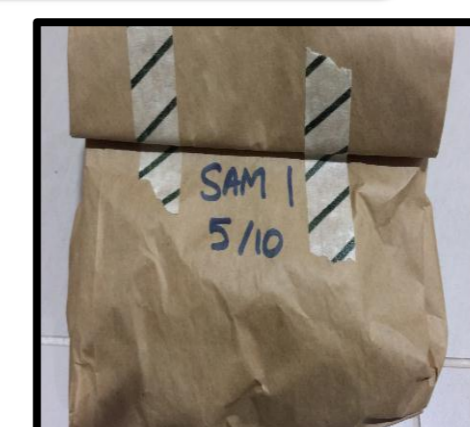
- Donning of autoclaved gloves, undergarments, socks, hairnet and face mask
- Autoclave tape turning black signifies that the undergarments are completely sterilized

### Gowning (Predefined Steps: SOP)



Our Quality Control (QC) department have done studies to check the effectiveness of aseptic techniques using Replicate Organism Detection and Counting (RODAC) plates. The surface of the uniform and booty were then sampled and incubated at 35°C for 48 hours. No colonies were found on either of the samples.

The sanitation effectiveness testing, done quarterly for our barrier rooms have been consistently excellent so far. Health status of the animals in the room are good with no health outbreak.



▲ Autoclaved Undergarment Bag



▲ Uniform in Bag



▲ Fully gowned up staff

## Discussion & Conclusion:

A typical human sheds billions of skin cells a day. Therefore, it is important for proper gowning to protect animals from coming in contact with human skin. Aseptic gowning not only protects the animals, it improves their quality and prevent opportunistic microorganism to be introduced to the animals. Staff training on gowning procedures is also crucial to prevent contamination in barrier rooms. This gowning practice have been proven successful in maintaining sterility of barrier rooms through the proven sanitation effectiveness testing and health records.

## References:

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- [3] Guide for Care and Use of Laboratory Animals: Eighth Edition
- [4] Effectiveness of Shoe Covers for Bioexclusion within an Animal Facility
- [5] SOP-02-Aseptic Gowning
- [6] SOP-08-Entry of personnel into Production Corridor
- [7] SOP-09- Gowning Procedure