

Contamination and decontamination of personnel

Extremities of the body are most likely to have accidentally collected contamination– ie top of head elbows and shoulders



The STS 812 Ram Gene simulator provides a contamination only simulation. To monitor remove the cap, the led will light to show CPS has been selected. The subject may now be monitored by moving the instrument slowly over the clothing keeping the unit within 1 cm of the surface.



Care should be taken to ensure deeply creased areas are carefully monitored, armpits and crutch particularly where material folds over may cover contamination.

Pay particular attention to the backs of hands where material may have been transferred from contact.

Both the tops and soles of feet need to be checked for contamination

Setting up a contamination scenario using a suited person.

When setting out to attempt to replicate a contaminated individual using the STS system there are some general points to remember which should help to produce as realistic a scenario as possible.

STS LS1 simulant spray will easily adhere to suits of cloth material and less well so to plasticised suits. Due to the woven nature of fabrics the simulant will be held in the material of cloth suits and release over a relatively long period. Plasticised suits are more likely to see shorter lifespan of the simulant due to more rapid evaporation due to the simulant being spread over a smaller and smoother surface area.

The LS1 is easily cross contaminated and this should be used as a means of moving the simulant over parts of the suit where you wish to show contamination but want to demonstrate lower concentration and therefore more difficult to monitor areas.

Areas such as the insides of armpits, backs of the knees and crutch are less likely to come into direct contact with a source of contamination but are still liable to contamination from movement of the material deposited on the suit. The hands, elbows, shoulders, knees and feet are likely to be the areas where contamination levels may be the highest and should be treated accordingly by applying LS1 spray directly to these areas. Please note a little spray goes a long way and it is probably better training if the contamination is harder to find rather than saturating all areas.

Monitoring for contamination and demonstrating cross contamination during disrobing.

Having set up the subject for monitoring an appropriate STS simulator may be used to monitor and detect the contamination simulant. The STS 800 series includes both meters with cabled probes and integrated units such as the Ram Gene. All devices work on the same principle that the monitoring must be conducted slowly, methodically and within 1 cm of the surface—in this instance the clothing. Moving the probe too quickly or too far away from the surface will lead to the contamination being missed, trainees should be shown the correct method prior to starting the procedure and the trainer should highlight mistakes where areas known to be contaminated have been missed by poor monitoring.

The LS1 simulant will act in the same way as a radioactive contaminant, it can easily be shown therefore at the end of a monitoring procedure that the instrument itself may have become contaminated by being in contact with the suit, or that the person monitoring may in deed have become contaminated whilst monitoring.

Having established that the subject is contaminated your approved disrobing procedure should be followed, again the simulant will cross contaminate any interaction between the suit, gloves, facemask etc being removed and the person removing them. Having removed the suit and other items the person can again be monitored to see if cross contamination has occurred, clearly at this point areas such as the hands and arms are most likely to have come into contact with the outside of the suit.

A final consideration is that the environment in which the disrobing has taken place may now also have become contaminated, items such as tables, chairs etc can be checked to identify if any material has been transferred. If it has been the simulant may be removed using wipes or cloths, and again the area can be rechecked to ensure removal - remembering of course that the cleaning materials are now also contaminated.