Frostbite occurs when skin tissues freeze. Skin tissues freeze when temperatures drop below the freezing point of skin. In conditions of prolonged cold exposure, your body sends signals to the blood vessels in your arms and legs telling them to constrict (narrow). By slowing blood flow to the skin, your body is able to send more blood to the vital organs, supplying them with critical nutrients, while also preventing a further decrease in internal body temperature by exposing less blood to the outside cold.

**Prevention**

Be aware of factors that contribute to frostbite such as extreme cold, wet clothing, high wind, and poor circulation. Frostbite can be caused by tight clothing or boots, cramped positions, fatigue, certain medications, smoking, alcohol use, and diseases that affect the blood vessels such as diabetes and Raynaud's disease.

Wear suitable clothing in cold temperatures and protect susceptible areas. When possible wear mittens over gloves; wind-proof, water-resistant, multi-layered clothing; two pairs of socks (cotton next to skin, then wool); and a stocking hat to cover the ears (to avoid substantial heat loss through the scalp).

Don't drink alcohol or smoke, and get adequate food and rest when you expect to be exposed to cold temperatures. Alcohol, caffeine and nicotine leave the skin more prone to thermal injury. Caffeine causes narrowing of the blood vessels in the hands and feet. When blood vessels are narrowed, less blood flows to these areas, causing the hands and feet to feel cold.

- Inform your supervisor or room operator if you've previously experienced frostbite, nerve damage, or trauma to body parts;
- Wear gloves, mittens and boots that fit well but are not too tight. Tight gloves or mittens restrict blood flow to fingers and toes;
- Be sure clothing is not too tight. Tight clothing restricts blood flow and makes it more difficult to keep your body warm;
- Contact laundry personnel or your supervisor if you cannot find the proper PPE;
- Room operators – ensure your crew don proper PPE before start up.
- Maintain coldrooms at the temperature specified in the SOP, MPR or Batch Record.

**Note:** If you’re new to a coldroom, exit the coldroom after an hour or so to look at your fingers and toes. Frostbite will make the skin hard, pale and cold. As the area thaws, the flesh becomes red and painful.

**If you show signs of frostbite:**

- **IMMEDIATELY** stop what you’re doing and inform your room operator, or supervisor.
- Get out of the cold.
- Warm your hands by tucking them under your arms.
- Warm severely frostbitten hands or feet in warm, **not hot**, water… don’t rub the affected area.
- Warm the nose, cheeks or ears by covering them with warm hands or by applying warm cloths.
- Seek medical attention if numbness remains after warming.

**Note:** "If you’ve experienced frostbite or similar trouble resulting from cold exposure in the past, or you feel you may be prone to cold exposure troubles, inform your supervisor to help ensure all appropriate protective measures are taken to prevent future recurrences.”