or transmission electron microscopy, diffraction high resolution, and infrared spectroscopy will be helpful. Synchrotron beamlines are available for a quick and efficient characterization and should offer opportunities to visualize bindings between molecules and the kinetics of those interactions.

24.6.9 Conclusion

In the case of decontamination for humans involved in a chemical exposure, physical removal compared to neutralization is by far easier to set up. It begins with the disrobing and personnel protection equipment. The goal is to remove bulk contamination and remove the user from a suit in a timely, efficient manner. Dry decontamination, based on powders, and adsorptive glove wipe systems should be first considered for chemicals to ensure efficient decontamination, manage the emergency response, and ensure immediate first aid and medical countermeasures.

Wet decontamination, by washing with detergent or not, and then a rinse, is a universal method with some constraints in the organization when mass exposure is involved.

Conversely, neutralization can be considered only after identification of the chemical. Some constraints limit neutralization as the first decontamination method, such as its time consumption, volume dependence, and hazardous potential.

24.7 BEST PRACTICES IN DECONTAMINATION

24.7.1 How the Project of Best Practices Takes Place

Skin decontamination has been widely studied, suggesting consideration of both decontaminants and application processes whose main objective is to reduce contact time with the chemical after exposure and therefore health consequences. These numerous systems cover practically all degrees of efficiency that one wants to achieve. However, fundamental criteria may be met in order to complete decontamination methods.

1. Most of the methods mentioned may be not applicable in the context of chemical incidents involving mass exposure because of expense. Therefore, basic decontaminants available on the world market and easy to execute are usually used or put forward first.
2. Define the expected level for skin decontamination utilizing rigorous methods and safe applications onto skin, including two main factors: the population involved i.e. children, elderly, disabled and the number involved.

A best practices guide, expected to assist the best option in skin decontamination, considering first, the targeted population e.g. soldiers in war position exposed to CWA, civilian exposed unintentionally to TICs, contaminated individuals in disorderly arrival in hospitals, could emerge.

This guide may treat initial crucial actions to prevent contamination of first responders and cross contamination and offer a decision tool to deal with key issues with minimal delay according to decontaminant benefits and drawbacks.

Preventing the extent of contamination is essential to achieve improvement in clean habits, awareness, and avoidance of contamination for responders and populations alike. We suggest criteria in the chronological actions performed before decontamination.

24.7.2 Prevention and Personal Protective Equipement

In order to enable them to initiate rescue efforts and work closely with contaminated casualties, responders have to be equipped with appropriate PPE. Adsorption filter material with high adsorption capacity and low breakthrough behavior is found in Patent US 7, 160,369 B2 (2007), 2.5 times its weight in liquid contaminant, with an infinite shelf-life. The adsorption layer has an inital activated