

Score: _____ Date Evaluated: _____

Module 6: Nanotechnology Safety

Name _____

Position _____

Department _____

Phone Number _____

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1. Studies have established that the comparatively large surface area of inhaled nanoparticulates can increase their t_____.
2. The nanoparticulate form of some materials shows unusually high reactivity especially for _____, _____, and catalytic reactions.
3. Nanomaterials will be treated as though they are toxic and otherwise hazardous material unless and until evidence shows otherwise.
True or False
4. Which is the least protective negative pressure engineering control?
 - a. An enclosure that is sealed and under negative pressure (glove box).
 - b. An enclosure that operates at a negative pressure relative to the worker's breathing zone (ventilation fume hood).
 - c. A local exhaust system (a snorkel hood).
5. When working with the potential that nanomaterial could become airborne, the use of high efficiency particulate air (HEPA) filtration is recommended.
True or False

6. Under the administrative control of work practices, transfer of nanomaterial samples between workstations must be in _____ containers, such as marked and sealed bottles or "Zip-Locked" bags.

7. Under the administrative control of labeling indicate on the container labels that the contents are in _____, e.g., "nanoparticulate zinc oxide" rather than simply "zinc oxide."

8. If nanomaterials are present, the Principle Investigator, in conjunction with the NDSU Safety Office personnel will conduct a hazard evaluation to determine the selection and use of appropriate personal protective equipment.
True or False

9. To decrease exposure to nanomaterials, give an example of personal protective equipment (PPE) used in the laboratory.

10. "Dust masks" shall be worn in the place of a half mask respirator with a P-100 cartridge.
True or False

11. Concerning worker training; a worker is considered an "engineered nanoparticulate worker" if which of the following are his/her job duties.
 - a. Handles engineered nanoscale particulates that have the potential to become dispersed in the air.
 - b. Routinely works in an area in which engineered nanoparticulates have the potential to become dispersed in the air.
 - c. Works on equipment that is believed to be contaminated and could foresee ably release engineered nanoparticulates during servicing or maintenance.
 - d. a and b
 - e. a and c
 - f. a, b or c

12. Training for nanoparticulate workers should cover all of the following except.
- a. Engineered controls employed
 - b. Use of PPE
 - c. Cleaning of potentially contaminated surfaces
 - d. Formatting of safety standard operating procedures (SOP's)
 - e. Steps to be taken in the event of an exposure incident or spill
 - f. Specific nanomaterial-related health and safety risks
 - g. Alerting visiting personnel to potential hazards and to NDSU policies regarding nanomaterials.
13. Concerning medical surveillance, employees with jobs involving the potential for [or "reasonably anticipated"] respiratory or skin exposure to nanomaterials must have their name added to the list of NDSU nanomaterial workers. The list of employees shall be sent by the Principal Investigator to the Safety Office.
True or False
14. Do not place nanomaterials in the regular trash.
True or False
15. Do not dry sweep spilled accumulations of dry nanomaterials. Use only HEPA-filtered vacuum cleaners to clean up nanoparticulates.
True or False