

Dragon, Karen E. (CDC/NIOSH/EID)

From: Robert McDonald [rmcdonald@ginerinc.com]
Sent: Thursday, January 03, 2008 9:19 AM
To: NIOSH Docket Office (CDC)
Subject: 115 - NIOSH Interim Guidance Nanoparticles

Dear Sir or Madam,

Thank you for beginning the important effort to address potential health hazards of nanoscale materials. Here are some initial thoughts:

We are engaged in applied research to applied nanomaterials to battery materials, fuel cell catalysts, gas sensors.

I have started a file on nanomaterial safety to provide our safety people with information.

I am concerned that there is a lack of guidance from vendors and government agencies on precautions to be taken for handling carbon nanotubes, nanooxides and nanometal powders.

The first thought that comes to mind for nanoscale hazards is the entrapment of particles in the lung alveoli and entry through the lung alveoli/blood boundary.

But, noticed some work being done by Leslie Orr at the University of Rochester Medical School, in which rat studies showed movement of nanoscale MnO₂ from the nasal cavity, across a membrane into the olfactory bulb of the brain.

This material spread to other parts of the brain and eventually to the lung.

I would suggest the NIOSH put added resources into the development of sound laboratory and manufacturing practices for handling nanoscale materials which certainly become airborne. This should include design and functional improvements in laboratory hoods and work spaces.

Sincerely yours,

Bob McDonald

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