

DRAFT NIOSH Survey of Nanomaterial Risk Management Practices

- 1) Does your company handle (i.e. manufacture, use, test, repackage, distribute) engineered nanomaterials (ENMs)?
 - Yes
 - No (EXIT Survey)

- 2) What is the total number of workers at this company/facility/organization?
 - 1-9 workers
 - 10-49 workers
 - 50-249 workers
 - 250-499 workers
 - 500-1000 workers
 - More than 1000 workers

- 3) Does your company/facility/organization manufacture engineered nanomaterials?
 - Yes
 - No

- 4) Which of the following best describes your business as it relates to engineered nanomaterials (ENMs)? (Please select all that apply)
 - Research & Development
 - Manufacture and sell engineered nanomaterials
 - Manufacture and incorporate engineered nanomaterials into other products
 - Buy engineered nanomaterials and incorporate these into products
 - Engineered nanomaterials characterization or other consultancy
 - Other (please specify): _____

- 5) ***ONLY ANSWER THIS QUESTION IF Q3 is YES***At what scale of production are the engineered nanomaterials? (Please select all that apply)
 - At a small scale (<1,000 grams per batch)
 - At the pilot scale (1000 grams – 10 pounds)
 - At the full or commercial scale (>10 pounds)

- 6) How many workers have direct contact (i.e., handle, produce, or research) with engineered nanomaterials in your company/facility/organization?
- 1-9 workers
 - 10-49 workers
 - 50-249 workers
 - 250-499 workers
 - More than 500 workers
- 7) What is the physical form of the engineered nanomaterials? (Please select all that apply)
- Dry, dispersible nanoparticles, nanoparticle agglomerates/aggregates (powder form)
 - Nanoparticles suspended in a liquid
 - Solid material with bound (embedded) nanoparticles or have nanoparticles fixed to surface
 - Nanomaterials mixed with polymer or other substances (paste or solid mixture)
- 8) Does your company/facility/organization implement a formal health and safety program?
- Yes
 - No (Go to Q11)
- 9) Does your health and safety program specifically address engineered nanomaterials?
- Yes
 - No (Go to Q11)
- 10) What are the elements of your health and safety program for engineered nanomaterials? (Please select all that apply)
- Identification of processes and job tasks where workers may be exposed
 - Determining routes of exposure
 - Hierarchical use of exposure controls (elimination, substitution, engineering, administrative, PPE)
 - Procedures for determining the need for proper PPE
 - Maintenance of engineering controls (i.e., dust collection systems)
 - Systematic review and update of safe use procedures
 - Training and education of employees
 - Nanomaterial exposure monitoring
 - Medical screening and surveillance
 - Evaluation of new processes/procedures for hazards
 - Spill cleanup procedures
 - Waste management/disposal procedures
 - Other (please specify): _____

RISK CHARACTERIZATION/REGULATION/GUIDELINES

- 11) Does your company/facility/organization use government guidelines and regulations (e.g. NIOSH, OSHA, EPA, FDA) to manage health and safety risks associated with engineered nanomaterials?
- Yes
 - No (Go to Q19)

12) Please indicate how helpful the following government guidance was to your organization/company)

		Very helpful	Somewhat helpful	Not very helpful	Did not use
A	NIOSH "Approaches to Safe Nanotechnology" If "not very helpful" → Q13 If "Did not use" → Q14	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B	NIOSH "General Safe Practices for Working with Engineered Nanomaterials in Research Laboratories" If "not very helpful" → Q15 If "Did not use" → Q16	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C	NIOSH "Current Strategies for Engineering Controls in Nanomaterial Production and Downstream Handling Processes" → Q17 If "Did not use" → Q18	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D	OSHA Fact Sheet "Working Safely with Nanomaterials"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E	EPA "Control of Nanoscale Materials under the Toxic Substances Control Act"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F	FDA Nanomaterial Guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G	Other (Please Specify) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13) Why was the NIOSH "Approaches to Safe Nanotechnology" not very helpful? (please select all that apply)

- Guideline not clear (too technical, not enough information on necessary equipment)
- Guideline is confusing
- Other (please specify): _____

14) Why was the NIOSH “Approaches to Safe Nanotechnology” not used? (please select all that apply)

- Not aware of guideline
- Guideline not clear (too technical, not enough information on necessary equipment)
- Guideline is confusing
- Guideline not applicable to my process
- Guideline not necessary based on amount of material used/form of material
- Only follow mandatory OSHA and EPA regulatory requirement and not non-regulatory guidelines
- Other (please specify): _____

15) Why was the NIOSH “General Safe Practices for Working with Engineered Nanomaterials in Research Laboratories” not very helpful? (please select all that apply)

- Guideline not clear (too technical, not enough information on necessary equipment)
- Guideline is confusing
- Other (please specify): _____

16) Why was the NIOSH “General Safe Practices for Working with Engineered Nanomaterials in Research Laboratories” not used? (please select all that apply)

- Not aware of guideline
- Guideline not clear (too technical, not enough information on necessary equipment)
- Guideline is confusing
- Guideline not applicable to my process
- Guideline not necessary based on amount of material used/form of material
- Only follow mandatory OSHA and EPA regulatory requirement and not non-regulatory guidelines
- Does not apply to this company (not research lab)
- Other (please specify): _____

17) Why was the NIOSH “Current Strategies for Engineering Controls in Nanomaterial Production and Downstream Handling Processes” not very helpful? (please select all that apply)

- Guideline not clear (too technical, not enough information on necessary equipment)
- Guideline is confusing
- Worker exposure goals not defined—lack of occupational exposure limits
- Other (please specify): _____

18) Why was the NIOSH “Current Strategies for Engineering Controls in Nanomaterial Production and Downstream Handling Processes” not used? (please select all that apply)

- Not aware of guideline
- Guideline not clear (too technical, not enough information on necessary equipment)
- Guideline is confusing
- Guideline not applicable to my process
- Guideline not necessary based on amount of material used/form of material
- Only follow mandatory OSHA and EPA regulatory requirement and not non-regulatory guidelines
- Currently controlling exposures through use of personal protective equipment (e.g., gloves, respirators)
- Other (please specify): _____

19) What other resources have been used by your company/facility/organization to manage health and safety risks associated with engineered nanomaterials? (Please select all that apply)

- Internal guidelines
- Industry guidelines / Material Safety Data Sheets
- Scientific literature
- Other (please specify) _____
- None

Thank you for your participation.