U.S. Consumer Product Safety Commission

LOG OF MEETING

SUBJECT: Meeting of the ISO/TC 229 Committee (Nanotechnology)

DATE OF MEETING: November 2-13, 2020

PLACE OF MEETING: Teleconference

LOG ENTRY SOURCE: Joanna Matheson (HSTR)

COMMISSION ATTENDEES: Treye Thomas (EXHR), Joanna Matheson (HSTR)

NON-COMMISSION ATTENDEES: Contact ANSI for a complete list.

SUMMARY OF MEETING:

ISO TC/229 (Nanotechnologies) working groups 3 (Health, Safety and Environmental Aspects of Nanotechnologies) and 5 (Products and Applications) met via teleconference on November 2-13, 2020 to discuss high priority projects and new project proposals.

WG3

Revisions are needed for standard ISO/TS 12901-1 *Occupational risk management applied to engineered nanomaterials -- Part 1: Principles and approaches*. A call for volunteers occurred during the WG3 meeting and work is expected to begin in January. The draft revisions to ISO 19337 *Characteristics of working suspensions of nanoobjects for in vitro assays to evaluate inherent nano-object toxicity* were distributed prior to the November workgroup meetings. Comments provided by experts were considered and resolved during the meeting and an updated draft is expected to be distributed to experts in early 2021. Comments were received from various experts and resolved during the November meeting on ISO/TR 23463 *CNT and CNF aerosol characterization for inhalation toxicity testing*; the document was considered by the meeting attendees as ready to proceed to ballot. An update was provided on ISO PWI 4962 *In vitro nanoparticle phototoxicity assay* and a draft document distributed for review and comment. The interlaboratory studies are expected to begin shortly. An update was also provided on ISO/TS 5094 *Assessment of peroxidase-like activity of metal and metal oxide nanoparticles* and an updated draft document distributed. Recent publications require additional consideration on whether catalytic activity is present with these nanomaterials.

An update was provided on the preliminary work item 4963 *Radiotelemetry-spectralechocardiography based real-time surveillance protocol for in vivo toxicity detection and monitoring of engineered nanomaterials*. The project leader will distribute a background document to the expert group.

Inaugural meetings were held on two new proposals ISO PWI 5265 *Method for characterizing and quantifying nanomaterials released from wood products* and ISO/TR 5387 *Lung burden measurement of nanomaterials for inhalation toxicity studies*. Participants discussed scope and potential products and additional experts were identified. Presentations were given on four potential new work items: *Disinfectant suspensions containing nanomaterials – surface removal covid-19- performance assessment; A test method for determination of nano-object release from respiratory masks; Development of an evaluation method for chronic inhalation toxicity based on lung burden of nanomaterials*; and, *Engineered nanoparticles simulating atmospheric nanoparticles*.

During the Strategy Study Group meeting, Advanced Materials and COVID-19 were added as sections to the WG3 Roadmap.

WG5

Updates were provided on several work items (TS 23366 *Performance evaluation requirements for quantifying biomolecules using fluorescent nanoparticles in immunohistochemistry*; TS 23367 *Performance characteristics of nanosensors for chemical and biomolecule detection*, TS 23650 *Evaluation of the antimicrobial performance of textiles containing manufactured nanomaterials)*. Revised draft documents were circulated, comments discussed and updated documents will be distributed to the experts.

The interlaboratory study with participants from Japan, Germany, Korea, Singapore, and the US is expected to begin shortly for TS 23366 once the reference materials and protocol are distributed.

The new work item ballot for TR 23652 *Considerations for radiolabeling methods of nanomaterials for performance evaluation* was approved and a revised draft circulated prior to the November meetings, but no expert comments were received. The revised draft will be redistributed for comment. Two preliminary work items (PWI 23653 *Overview methods to evaluate the nanoparticle in cellular uptake between 2-dimensional and 3-dimensional cell cultures* and PWI 4971 *Performance evaluation of nanosuspension containing clay nanoplates for quorum quenching*) are seeking project participants.

Presentations were given on four potential new work items: *Functionality test of sunscreens containing TiO2 & ZnO; Nano-enabled superhydrophobic coating: characteristics and performance assessment; Matrix of nanoproducts*; and, *Superhydrophobic textiles containing nanomaterials, characteristics and performance assessment*.