

U.S. Consumer Product Safety Commission
LOG OF MEETING

SUBJECT: Meeting of the U.S. TAG to ISO/TC 229 (Nanotechnology)

DATE OF MEETING: October 14-15, 2020

PLACE OF MEETING: Teleconference

LOG ENTRY SOURCE: Joanna Matheson (HSTR)

COMMISSION ATTENDEES: Isaac Mireku (LS), Joanna Matheson (HSTR)

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

SUMMARY OF MEETING:

On Wednesday October 14, 2020 and Thursday October 15, 2020, working groups of the US Technical Advisory Group (US TAG) to ISO Technical Committee 229 (ISO TC/229, Nanotechnology) met for a half-day, via teleconference, to continue the development of ISO/TC 229 projects.

On Thursday afternoon, October 15, 2020, the lead for each US TAG ISO/TC 229 working group provided a summary of the Wednesday or Thursday session discussions. The US TAG remains active in ISO standard development including work on guides on standard terms and definitions for specific nanomaterials (e.g., liposomes), for nano objects and advanced materials as well as a framework for general nomenclature; standards on nanomaterial specifications (e.g., characteristics and measurement methods of silica samples with ordered nanopores and for nanostructured porous silica microparticles for chromatography), standards on characterizing nanomaterials (e.g., carbon nanotube and carbon nanofiber aerosols, cellulose nanocrystals, nano objects and materials that contain them, amorphous carbon, graphene, graphene oxide flakes, nano object release from respiratory masks) as well as methodology characterization (e.g., thermogravimetric analysis, ellipsometry, positron annihilation, SMLS, asymmetrical-flow and centrifugal field-flow fractionation, use of TEM and SEM for

particle size and size distribution, in different matrices [e.g., composites]) and in different forms [e.g., powder, liquid], screening methods for toxicity (e.g., 3D cell culture high throughput screening system, 2D and 3D cell cultures assessing nanoparticle cell uptake, *in vitro* phototoxicity, photocatalytic activity, label-free impedance technology, lung burden measurement of nanomaterials for inhalation toxicity studies, working suspensions of nano-objects for *in vitro* assays, radiotelemetry-spectral-echocardiography based real-time surveillance protocol for *in vivo* toxicity detection and monitoring of engineered nanomaterials) and nanomaterial applications (e.g., antibacterial textiles, nanosensors for biomolecule detection, nanoparticle matrix, superhydrophobic surfaces and textiles, disinfection systems containing nanomaterials [COVID], peroxidase-like activity of metal and metal oxide nanoparticles, and nanosuspensions containing clay nanoplatelets for quorum quenching). There was a call for volunteer U.S. experts to review draft standards and technical reports and to participate in updating of existing standards. In addition, an overview was provided on the recent workshop on advanced materials.