

U.S. Consumer Product Safety Commission

LOG OF MEETING

SUBJECT: Meeting of the ASTM E56 Committee on Nanotechnology

DATE OF MEETING: November 4-5, 2019

PLACE OF MEETING: Marriott Marquis Houston, Houston, TX

LOG ENTRY SOURCE: Joanna Matheson (HSTR)

COMMISSION ATTENDEES: Treye Thomas (EXHR), John Gordon (HSTR), Isaac Mireku (LS), Joanna Matheson (HSTR); all via teleconference

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

SUMMARY OF MEETING:

On Monday, November 4, 2019, the ASTM E56 Nanotechnology committee met in person and via teleconference. The Executive (E56.90), Nano-enabled Medical Products (E56.08), Environment, Health and Safety (EHS, E56.03), and Physical and Chemical Characterization (E56.02) subcommittees met through the day. International outreach continues exemplified by a meeting held earlier in the fall with the EU's Joint Research Centre. The medical products subcommittee discussed updates on an in vitro test method for quantitative measurement of chemoattractant capacity of a nano particle (currently in ballot); standard method that detects nitric oxide production; a standard guide for the evaluation of nanoparticulate material internalization by phagocytic cells in vitro; a standard guide for visualization and identification of nanomaterials in biological and non-biological matrices using darkfield microscopy with hyperspectral imaging analysis (ballot expected in early 2020); as well as new standard test method work for quantifying PEG coating on the surface of gold nanostructured materials, for cholesterol and lipid quantitation in liposomal drug products (3 methods), and for assessing complement activation in human plasma. Lastly, John Gordon provided information to the subcommittee on a new statistical method (a modified t-test) developed by CPSC and NIST used to calculate positive or negative determinations when analyzing data

from in vitro assays. E56.02 discussed balloted items (i.e., standard guide for characterization of graphene flakes produced by exfoliation; standard test method for measuring nanoparticle size in aqueous media via DLS) and new work items (test method for liposomal drug formulations using MD-AF4; guide for analysis of nanoparticles by SP-ICP-MS; method for the determination of mass fraction of particle-bound gold in colloidal gold suspensions). The additional subcommittee discussed EHS standards requiring review (nanoparticle cytotoxicity to porcine kidney cells and human hepatocarcinoma cells; nanoparticle effects on the formation of granulocyte colonies; and, nanoparticle hemolytic properties).

On Tuesday, November 5, 2019, the Nano-enabled Consumer Products (E56.06) subcommittee met in the morning. The ballot on the work item “Test Method for Determination of Total Silver in Textiles by ICP-OES or ICP-MS Analysis” was reviewed and proposed changes summarized by the Technical Contact; the Technical Contact will follow-up with non-attending members who provided comments to discuss proposed changes before reballot. A new work item, Standard Test Method for Identification of Silver Nanomaterials on Surfaces of Textile Fibers using Scanning Electron Microscopy-Energy Dispersive X-ray Analysis, was proposed and a request made for potential experts within member organizations to assist with writing the draft test method.