

Community Adoption & Adaptation of ISA-TAB-nano Data Sharing Templates: A brief overview, next steps at CEINT, and an open discussion of priority actions



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ISA-TAB-nano

- JRC / NANoREG ISA-TAB-nano "Logic" reactions
- Bringing in existing datasets
- New assay files for priority functional assays
- Interface design for curation assistance

ISA-TAB-nano

- JRC / NANoREG ISA-TAB-nano "Logic" reactions
 - Where might there be excluded communities?
 - E.g. geochemistry
 - What measurements and dictionary entries are "missing"?
 - E.g. BET for size
 - How can specific parameters be expanded and conceived of in terms of fit-for-purpose
 - E.g. Size – how to characterize for thermodynamic analysis?

ISA-TAB-nano

- Bringing in existing datasets
 - NANoREG eNanoMapper
 - RIVM
 - TBD
 - NanoFASE
 - SERENADE

ISA-TAB-nano

- New assay files for priority functional assays
 - Dissolution
 - Surface affinity/ Attachment efficiency

ISA-TAB-nano

- Interface design for curation assistance
 - Long-term goal to incorporate other tools (e.g. work toward ISA-TAB-nano guidance and TNO PCC data entry tool)
 - Want to incorporate functionality of fit-for-purpose guidance, based on community-sourced insight of what data are desirable to support which types of analyses, as well as which communities are most likely to use which methods/terms/etc

A black and white photograph of a rocky river with a central oval overlay containing the text "Questions?". The river flows over numerous dark, jagged rocks, creating white, frothy rapids. The background shows a steep, rocky bank. The central oval is dark with a thin orange border and a soft green glow around it.

Questions?

Questions and Comments

1. On the example of size: Size is time-dependent, so capturing the temporal aspect of the measurements and enabling raw time series data will be important. Also, with regard to fit-for-purpose, depending on what you want to know, a different point in time might be the only relevant one for your analytical purpose.
2. On the development of curation tools: we should make sure to gather, study and leverage existing resources. NOTE: Anyone with knowledge of this should send to Mervi, Christine and Stacey for inclusion on the NCIPHub ISA-TAB-nano project
3. On the issue of fit-for-purpose: Strong support for a focus on including information about how to connect parameters in the DB to what questions are being interrogated. Not only for guiding what data should be collected during experimental design and connecting across communities with “pre-meditated interoperability”, but for consumers of the combined data, to let them know what analyses are appropriately supported.
4. Need to make sure we are considering what fields allow consideration of system dynamics, kinetic aspects of nanomaterial behavior.

Questions and Comments

5. Comment that we should be cognizant of parallel efforts and avoid overlap by bringing stakeholders. (Overlap in terms of: tool development, terminology development, etc.) Perhaps we could look at a workshop on this, once better defined scope is identified. Idea for how to generate insight on the right scope could be to leverage the NanoREG2 project meeting that is slated to review the JRC-developed templates for “relevance” of fields. Perhaps they could add a small aspect to that exercise to ask respondents to articulate what their analytical purposes would be. So each respondent, rather than thinking of everything they might imagine someone would do, would simply be asked to articulate 1) what is their sector, 2) what is their disciplinary expertise, and 3) what their purpose in collecting or analyzing the data would be (regulatory categorization? Thermodynamic studies? First-principles kinetics investigations? After the fact those could be grouped to see if there are patterns in what parameters would be deemed relevant, and this could be the starting material for future NanoWG meetings or a workshop.