

OMB Control #0693-0033

Expiration Date: 06/30/2019

The purpose of this survey is to collect information, from the community, regarding potential reference grade tissue materials (e.g., tissues offered, what species, and how much tissue should we provide per vial). We want to make sure to provide materials that have value to the community and will be useful.

In addition, using the developed reference grade materials, we also aim to conduct an interlaboratory comparison exercise for both lipids and metabolites. The core interlaboratory exercise will be to analyze, in triplicate, two prototype tissue-based reference grade materials (brain and liver) for lipids, metabolites, and/or both (whatever your laboratory routinely measures). Several questions below will let us know your interest in these activities, as well as provide feedback regarding how the exercises are designed.

1. PI name (none of the responses will be made public, this is just so we can follow-up with interested laboratories)

2. For the healthy brain tissue reference grade material, what species do you find ideal?

- Mouse
- Rat
- Pig
- Human
- All listed are suitable
- Other (please specify)

3. How much brain tissue (in mg) do you use (or would anticipate using) per single lipidomic/metabolomic analysis? We ask this question to help us determine the amount of tissue we should provide per vial.

4. Would you find it useful to have a diseased brain tissue material as well?

- Tumor
- Dementia or Alzheimer's
- No Interest
- Other (please specify)

5. For healthy liver tissue reference grade material, what species do you find ideal?

- Mouse
- Rat
- Pig
- Other (please specify)
- Bovine
- Human
- All are suitable

6. How much liver tissue (in mg) do you use (or would anticipate using) per single lipidomic/metabolomic analysis?

7. Would you find it useful to have a diseased liver tissue as well? If so, which condition?

- Yes
- No
- Other (please specify)

8. Is there another tissue you think we should also offer?

9. Do you have a preference as to how you would like the reference grade tissue materials offered?

- Frozen powdered tissue
- Lyophilized tissue
- Both
- Other (please specify)

10. Do you find any value in NIST offering pre-extracted tissue lipid/metabolite materials as well?

- Yes
- No
- Other (please specify)

* 11. Are you interested in participating in an interlaboratory exercise focused on evaluating these tissue materials (quantitatively)? Note that while your answer is not binding, by selecting yes, you agree to receive updates regarding the initiation of this exercise.

- Yes
- No

12. If yes, what will your laboratory measure?

- Lipids
- Metabolites
- Both

13. How long would you need to make triplicate measurements of these tissue reference materials? Note that we are anticipating/projecting to have the materials ready to distribute by the beginning of 2018.

14. Would you also be interested in participating in a longitudinal study using these tissue materials? To evaluate the effectiveness of these reference grade materials over time, we are asking for a select number of laboratories to be willing to make triplicate measurements of these materials once per year for 3 years.

- Yes
- No
- Maybe

15. Other activities are planned for the upcoming year and beyond. Please let us know your interest, if any. If interested, we will put you on our list and you will receive updates on the progress of these potential activities. Select those that you are interested in (more than one option may apply)

- Create reference materials for emerging matrices (saliva, sputum, feces, bronchoalveolar lavage, bile, cerebrospinal fluid).
- Create a reference material for dried blood spot cards and perform a follow-up interlaboratory exercise.
- Evaluate a NIST plasma SRM using a set/specific internal standard mixture and/or lipidomic/metabolomic workflow.
- Interlaboratory exercise focused on evaluating lipidomic/metabolomic data

16. For the laboratories that perform metabolomics, would you be interested in quantitatively analyzing the metabolome of SRM 1950 (in triplicate)? Or if you have already analyzed SRM 1950 in this manner, would you be willing to provide us your data (and/or concentration values) and methods? The intention of this request, is to calculate consensus means with associated uncertainties for the metabolome in SRM 1950, similar to the lipidomic quantitative analysis of this material. The community-derived consensus means (using submitted data) will be publicly accessible and could serve as benchmarks to promote harmonization within the community.

- Yes, I would be willing to analyze the metabolome of SRM 1950 (providing concentration values in triplicate and method information)
- Yes, I have quantitative metabolomic data for SRM 1950 that I would be willing to send (concentration values from a triplicate analysis) along with method information
- Yes, I have metabolomic QC data for SRM 1950 that I would be willing to send with methods
- No, I do not want to participate

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