**NACRW Reference Materials Working Group**

**Guidance Document Draft Outline**

**Revised November 21, 2019**

Title: Best Practices for Use and Handling of Reference Materials

1. Introduction (Need author)
   1. Scope
   2. Manufacturer/Producer Requirements
      1. ISO 17034
      2. ISO 17025
2. Glossary of Terms (Melissa P. & working group)
3. Reference Documents (Need author)
4. RM & CRM Handling Tips (Francesca M. & Joe K. Review)
5. Certificates of Analysis (Joe K. & Francesca M. Review)
6. Starting Material Characterization (Patti A. w/ Kathy S. & Mario S. to Review)

(Joe – ask Melissa to add to Glossary)

* 1. Traceability
  2. Purity
  3. Identity

1. Stability (Kelly D., Alex K. – Alok Kumar, Mario S. to Review)
   1. Neat vs. Solution vs. Mixtures
   2. Detection – MS vs. UV
   3. Monitoring breakdown products
   4. Storage Conditions

(Kelly and Alex will consider combining this chapter with #10 below)

1. Expiration (Kyle H.)
   1. Requalification/Recertification
   2. Responsible re-use
   3. SANTE Guidelines
   4. Disposition
2. Application & Use of RMs (Need Author)
   1. Calibration vs. Incurred
      1. Solvent-based
      2. Incurred in Matrix
   2. Method Development & Performance
   3. Method Validation
   4. Method Expansion
   5. Qualitative vs. Quantitative Analysis
   6. QC Check or Verification
   7. Identification
   8. Method Comparability

(Kate will send her presentation on this topic)

1. Interactions upon Mixing (Kelly D., Alex K.)

(May combine this chapter with chapter 7 above due to overlap)

* 1. Degradation Products & Precursors
  2. Solvent Types & Combinations
  3. Matrix Interactions
  4. Detection System Influence
  5. Challenging Compounds – Reactive
  6. Storage Stability

1. Second Source Reference Materials (Jo Marie C.)
   1. History
   2. Definition
   3. How to Use

(Joe – ask Jo Marie to add resources to our web page)

1. Measurement Uncertainty (Need Author) (Joe will add NIST guidance docs on measurement uncertainty onto project page)
   1. NIST Guidance Resources
   2. Reference Material Provider Resources
      1. Patti – SPEX White Paper
      2. CoA definitions, equations
   3. Stressed vs. unstressed Uncertainty