

# Response to the STRP Final Report

## 2022-S-0003

### Standard Practice for the Identification of Compounds Related to Organic Gunshot Residue (OGSR) by Liquid Chromatography-Mass Spectrometry (LC-MS)

#### Scientific and Technical Merit

1.1. This document is not designed to aid in the rendering an opinion on the presence or absence of OGSR, just the identification of compounds that are related to OGSR.

#### Human Factors

2.1. Regarding Section 8.3.2.4. (background subtraction), this section has been removed because background or baseline subtraction is not always necessary in LC-MS analysis.

2.2. Regarding 8.3.2. we have updated the language to respond to the questions posed by the STRP. The language in Section 8.3.2 is clarified.

8.3.2.2. The measured  $m/z$  value of the ions shall be within the instrument manufacturer's tolerance (mass accuracy) of the theoretical value of the target compound.

8.3.2.2.1. When MRM techniques are used, the precursor and product ions shall be the same for both the reference and unknown compounds.

8.3.2.2.2. When HRMS techniques are used, the exact mass shall be the same for both the reference and unknown compounds within the instrument's tolerance.

2.3. To respond to the comment about the differences in the relative abundance of fragmentation peaks we provided similar language as what was written in the GC-MS document, see below.

8.3.2.3. The fragmentation patterns and relative abundances of target ions in the mass spectra of the unknown sample and the reference OGSR sample must not have unexplainable differences across the majority of the ions.

8.3.2.3.1. Analysts must document reasons for considering or not considering differences between the spectra.

#### Quality Assurance

3.1. The committee agrees with the STRP panel

#### Scope and Purpose

4.1. The committee agrees with the STRP panel

## **Terminology**

5.1. The committee agrees with the STRP panel

## **Method Description**

6.1. The committee agrees with the STRP panel. The committee has updated the document to reflect the Human Factors comments.

## **Report Results**

7.1. The committee agrees with the STRP panel