|  |
| --- |
| **STANDARD OPERATING PROCEDURE** |
| |  |  | | --- | --- | | **Title: Mass Spectrometry, 4000 QTRAP** | | | **SOP#: MS-01** |  | | **Version #: 1** | **Author: Paulovich Lab** | | **Date Approved:** | **Date Modified:** | |

1. PURPOSE

The purpose of this document is to describe the mass spectrometry (MS) method for quantitative analysis.

1. SCOPE

This procedure encompasses the setup of the MS and method parameters.

1. RESPONSIBILITIES

It is the responsibility of person(s) performing this procedure to be familiar with laboratory safety procedures. The interpretation of results must be done by a person trained in the procedure and familiar with such interpretation.

1. Equipment

Source: ADVANCE CaptiveSpray Source for ABI/Sciex (Michrom Bioresources, )

Emitter tip: CaptiveSpray tapered tip 20m ID (Michrom Bioresources, SS9/2500/20)

LC-to-source connection: IntegraFrit connected directly to source union

1. Materials
2. Reagents
3. Procedure
4. Source/Gas Parameters:
   1. Curtain Gas (CUR): 0
   2. IonSpray Voltage (IS): 1300
   3. Ion Source Gas 1 (GS1): 0
   4. Ion Source Gas 2 (GS2): 0
   5. Interface Heater Temperature (IHT): 110
5. Scheduled MRM Parameters:
   1. MRM detection window (sec): 120
   2. Target Scan Time (sec): 0.5
6. MS Parameters:
   1. Declustering Potential (DP): from regression/optimization
   2. Entrance Potential (EP): 10 or part of method
   3. Collision Energy (CE): From regression/optimization
7. Advanced MS Parameters:
   1. Resolution Q1: Unit
   2. Resolution Q3: Unit
   3. Intensity threshold (total count): 0
   4. Settling time (ms): 0
   5. Pause between mass ranges (ms): 5
8. Referenced Documents

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| QTRAP SOP checklist | | | | |
| **Source/Gas parameters** | |  |  |  |
|  | □ | IonSpray voltage | 1300 V |  |
|  | □ | Curtain gas | 0 |  |
|  | □ | Nebulizer gas (GS1) | 0 |  |
|  | □ | IHT | 110 |  |
|  | □ | Collision Gas (CAD) | Medium |  |
|  | | Entrance Potential (EP) | constant or part of MRM method | 10 |
| **MS detector** | |  |  |  |
|  | □ | Duration (min) | 38 |  |
|  | □ | Scheduled MRM target cycle time | 0.5 sec |  |
|  | □ | MRM detection window | 120 sec |  |
|  | □ | Number of transitions monitored |  |  |
|  | □ | Q1/Q3 Resolution | unit/unit |  |