GFORSS LEARNING

Food Safety Laboratory Capacity Building

Module 6 Quiz – Answer Key

1. Identify some of the challenges of pesticide residue analysis. (select all that apply)

a. Low concentration
b. Large number of residues
c. Many different matrices
d. Very few applicable methods
e. Column particle size

2. Which of these relationships apply in mass spectrometry? (select all that apply)

a. Precursor and product ions
b. Higher pressure and higher peaks
c. Corona pin and ionization
d. Corona pin and APCI
e. Corona pin and ESI (E corona pin is not used in ESI mode)

3. What is an adduct?

a. An ion combining an analyte of interest and an additive (only used in MS mode, but not in MS-MS mode)
b. An ion combining an acid, a base and a product ion
c. An additive used in a mobile phase
d. None of the above

4. What is the process of drying droplets in the source called?

a. Dissolution
b. Desolvation
c. Distanciation
d. Dosing

5. How many rods are present in a quadrupole?

a. 1
b. 2
c. 3
d. 4
e. 5

6. What is a specific advantage of the MALDI source?

a. It provides high resolution
b. It works on a solid
c. It is faster than ESI
d. It is more specific because a single ion is produced

7. Why are veterinary drugs usually not amenable to GC analysis? (select all that apply)

a. They are large molecules
b. They are heat sensitive
c. They are heat resistant
d. They are polar

8. Where are product ions formed?

a. The first quadrupole
b. The second quadrupole
c. The ionization source
d. The collision chamber
e. The TOF chamber

9. What is different between MALDI and ion trap MS?

a. One is a high-resolution technique and not the other
b. One is a source and not the other
c. One is fast and not the other
d. One is for heat resistant analytes and not the other

10. What is a (or are) reason(s) for using MS/MS for mycotoxins? (select all that apply)

a. Can analyze multiple mycotoxins in the same test
b. Can detect low concentrations (Yes and NO, it will depend on your HPLC sensitivity)
c. Faster than individual analyzes
d. Doesn't require natural fluorescence