

**All drug testing is not created equal. As the need for drug monitoring and detection becomes more frequently used within different industries, it is important to know the differences between the testing technologies available.**

Immuno-Assay's (Point of Care Cups & Analyzers)	Liquid chromatography W/ Mass Spectrometry
1. General Class detection	1. Quantitative results
2. Low Specificity	2. Absolute Specificity, no false positives
3. Low Sensitivity	3. High Sensitivity

1. Liquid Chromatography (LC) provides quantitative results for every compound within a drug class. Immuno-Assays (IA) only provide a positive or negative result for the general drug class.

2. Immuno-assays may miss compounds within a drug class (False negative) because of the lower sensitivity and/or specificity provided from these assays. Liquid Chromatography with tandem mass spectrometry provides absolute specificity with greater sensitivity & virtually zero chance of a false positive result.

3. IA tests have less sensitivity, meaning there needs to be more drug present in the patient sample to be detected. This results in a more limited detection window where liquid chromatography provides a longer detection window because it detects a smaller quantity of the drug you are looking for.

Some drugs require high levels of sensitivity and specificity to be detected. Fentanyl is one such drug, because it metabolizes rapidly in a patient's system. Fentanyl's quick breakdown can cause it to escape detection by an Immuno-assay for general opioid detection even with relatively recent use. Liquid chromatography testing allows detection of fentanyl and its metabolites at a lower concentration and can even differentiate them from other fentanyl analogs. Immuno-assays cannot provide this level of detail or certainty.



Immuno-analyzer



Liquid Chromatography Machine

