There are two main types of tests used to determine whether an illegal drug is present in a substance: presumptive tests and confirmatory tests. Presumptive tests are less precise and indicate that an illegal substance may be present. Confirmatory tests provide a positive identification of the substance in question.

Presumptive testing may be conducted in the field by law enforcement officers or in the laboratory once the seized material is accepted. Confirmatory tests involve a battery of instrumental tests using techniques such as Gas Chromatograph-Mass Spectrometry (GC-MS) or infrared spectroscopy that separate individual compounds in the substance and positively identify the chemical signature of the illegal substance(s) within the material.

Presumptive testing is usually colorimetric, meaning the test will indicate that the suspected substance is present or not present by changing color. If the substance is present, the test kit will turn one color, if not, it turns a different color. Presumptive testing by law enforcement is typically followed up with laboratory tests that confirm with certainty the presence of the suspected substance. Presumptive testing is also performed in the laboratory as part of the analysis process.

With color spot tests, a portion of an unknown powder/residue/crushed tablet is combined with a chemical reagent which may produce a color change. The color change is a presumptive indication of what the unknown could be. For example, the color test for cocaine is Cobalt Thiocyanate; addition of cocaine will produce a rapid blue color change. Another example of a color spot test is the Marquis test, which will produce a purple color with the addition of certain drugs such as Heroin.