

While legalization of cannabis-containing products proliferates worldwide, the same products remain on the United States DAN Controlled Substances as Schedule I drugs. As a result, 38 states have legalized the medical and/or recreational use of cannabis products and are responsible for establishing testing requirements to ensure consumer safety. Three of the most important safety concerns for using cannabis products are accurate labeling of THC content in cannabis edibles, potency levels of different cannabinoids, and pesticide content.



From brownies and cookies to gummies, cannabis dispensaries provide edibles in a variety of formats. All have a labeled content of Tetrahydrocannabinol (THC), but this has only been estimates based on cannabis material added. Getting an accurate measure of THC content in edibles becomes “sticky” because of all the contents that go into making the “edible” part of the product. However, Gas Chromatography coupled to Mass Spectrometry (GC-MS) has made this process a little less complicated and, with the right sample preparation, can provide more accurate and reliable results. You can read more about the separation process in this application note on the [Extraction and GC/MS Analysis of Cannabinoids from Brownies](#).



Now that cannabis is becoming legal across the country, more producers can get creative with crossing different strains of cannabis plants to produce the best product. Since marijuana has had a sordid past, there was not an easy way to determine content and potency of different cannabinoids that each plant strain contained, which poses a safety issue. Producers can now openly have their products tested for cannabinoid content and potency which is accomplished primarily through High-performance Liquid Chromatography ([HPLC](#)).



As with any crop that is farmed, many cannabis growers use pesticides to prevent the destruction of plants by cumbersome insects. The difference in the past was that cannabis growers could not have their products tested for pesticide content very easily due to legal status. Now, many states require pesticide testing as part of the regulations set forth for cannabis legalization. Consumption of pesticides poses serious health risks and understanding the levels of pesticide content is extremely important when selling a consumable product to the public. Pairing HPLC to MS allows for the analysis of residual pesticides that may be present.

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If detection of cannabinoids or pesticides are of interest to you and your next application, check out the sources below or [Chat with an associate.](#)

[Cannabis Testing Guide](#)

[Sample Preparation Made Simple](#)

[GC-MS Analysis of Cannabinoids from Brownies](#)

[Potency Testing of Cannabinoids by HPLC](#)

[Pesticide Analysis from Cannabis by LC-MS/MS](#)

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