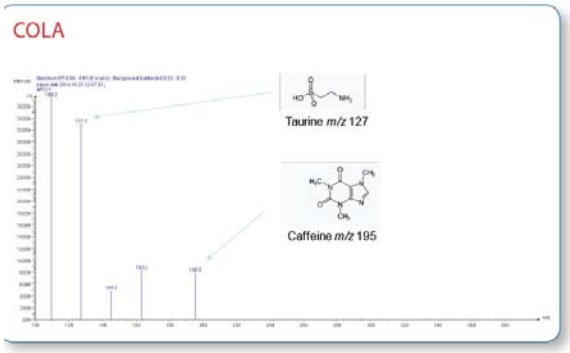
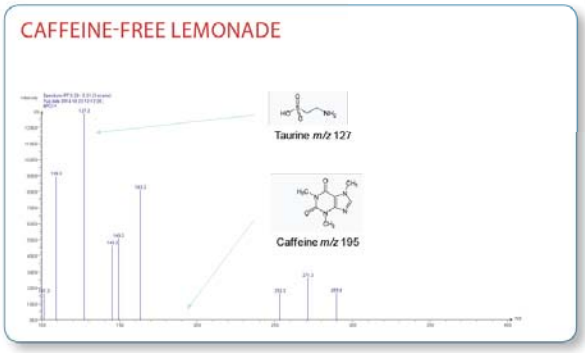
Application Data: Fast Compound ID of Caffeine

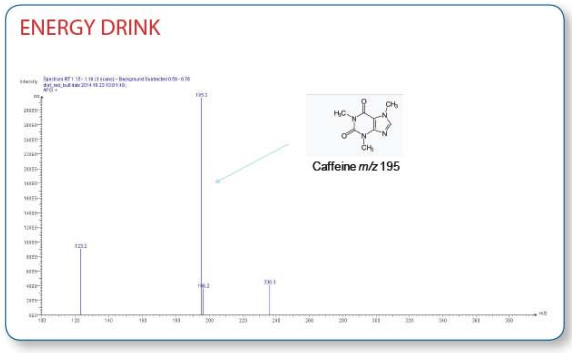
Identify compounds in seconds with the ASAP probe:

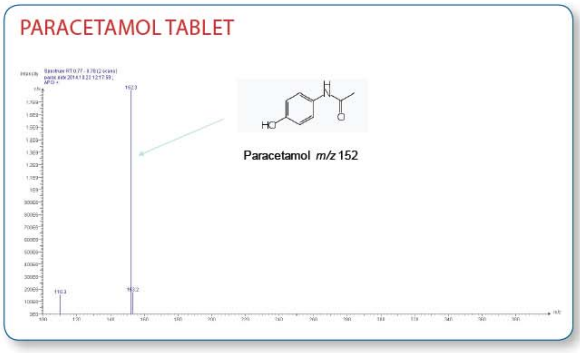
The ASAP probe can ID compounds quickly, with no sample preparation. Simply dip the closed end of the glass melting point capillary into an unidentified fizzy drink or sample. Wipe of the excess and insert the direct analysis probe into the mass spectrometer for analysis.

Here, the caffeine (or lack thereof) in a variety drinks is quickly and easily identified in a matter of seconds.









A Complete Benchtop Solution

The expression CMS with the AVANT HPLC, the Plate Express TLC plate reader, the ASAP and iASAP probes for liquids, solids and even inert compounds, plus a direct injection interface - all at the bench.

Application Data: Analysis of Two Reaction Products

Identification of Products in a Reaction Mixture:

To show the utility of the ASAP probe, we show the identification of products of a reaction where two products are possible, the alkylation of both aniline and cyclohexylamine and benzylbromide

EXAMPLE

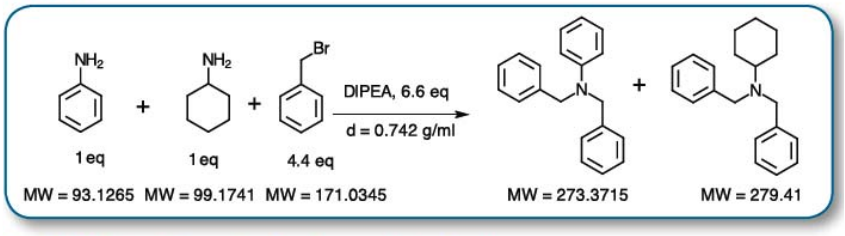


Figure 2: Alkylation of Aniline and cyclohexylamine with benzylbromide

TIME	CYCLOHEXYLAMINE REACTION		ANILINE REACTION
	ROOM TEMPERATURE	ICE BATH	ROOM TEMPERATURE
1	95.91 ± 2.20	0.00 ± 0.00	1.66 ± 1.46
5	99.44 ± 0.13	74.53 ± 10.39	11.11 ± 2.98
10	99.60 ± 0.09	95.38 ± 1.79	18.55 ± 2.52
30	98.91 ± 0.59	97.82 ± 1.03	60.66 ± 8.13
60	99.47 ± 0.23	98.85 ± 1.22	73.24 ± 5.29
120	99.68 ± 0.21	99.70 ± 0.03	82.15 ± 14.87
180	99.76 ± 0.04	ND	89.81 ± 5.95

Table 1: Aniline and cyclohexylamine with benzylbromide analyzed at time points by ASAP enabled APCI source on CMS.

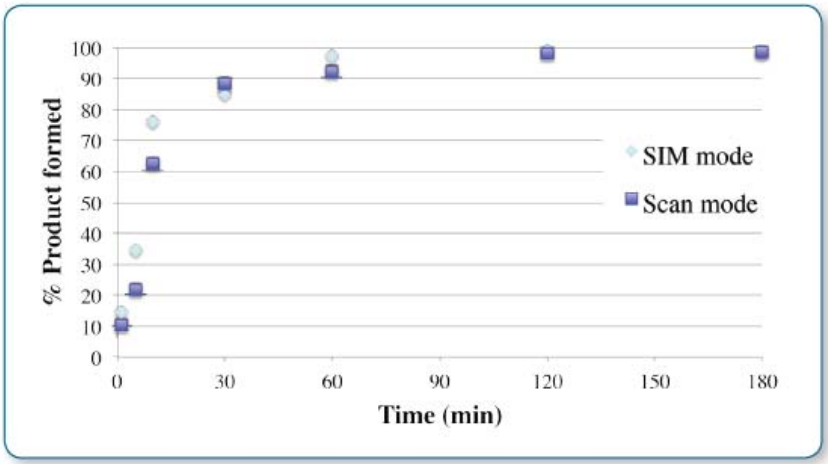
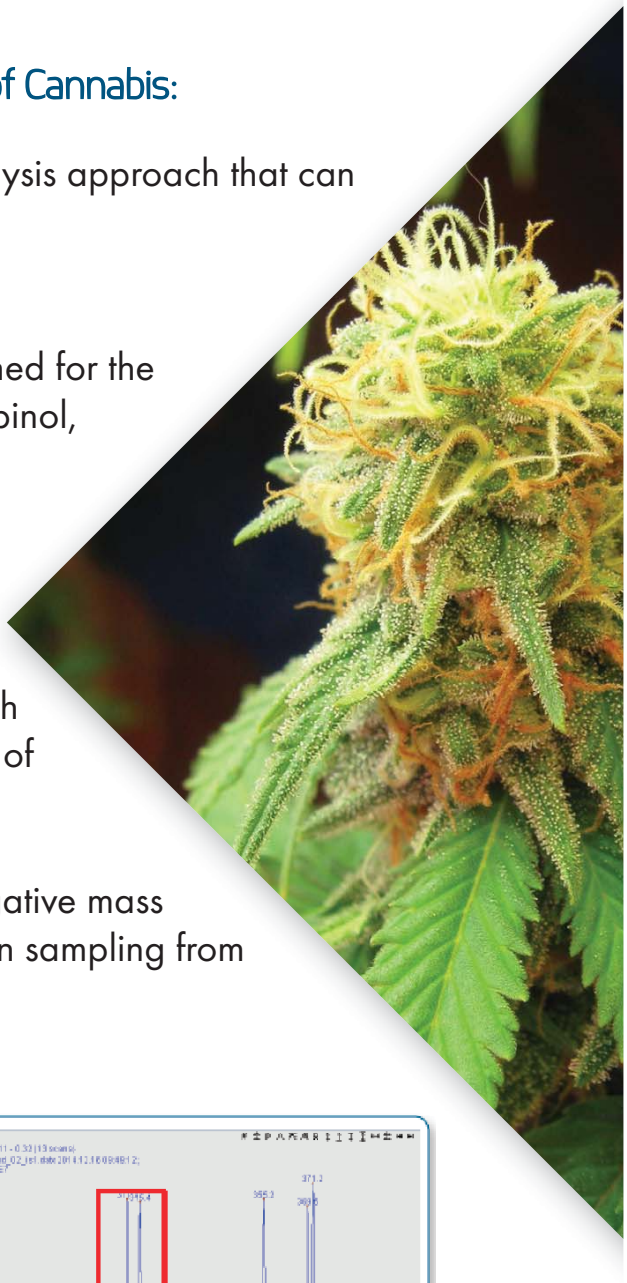


Figure 3: The analysis indicates that there is close correspondence between the results obtained using either full scan or SIM monitoring.

Application Data: Detecting THC/Cannabinoids by ASAP/CMS

Direct Sample Analysis for Rapid Screening of Cannabis:

ASAP-APCI-CMS is a rapid mass spectral analysis approach that can screen a variety of samples and surfaces for presence of cannabinoids



- Dried plant material can readily be screened for the presence of cannabinoids such as Cannabinol, THC/CBD or THC/CBD-acid
- Alternating acquisition of positive and negative ion mass spectra improves prediction certainty when sampling from complex samples such as skin contaminated with small quantities of plant material
- Alternating acquisition of positive and negative mass spectra improves prediction certainty when sampling from complex samples such as skin

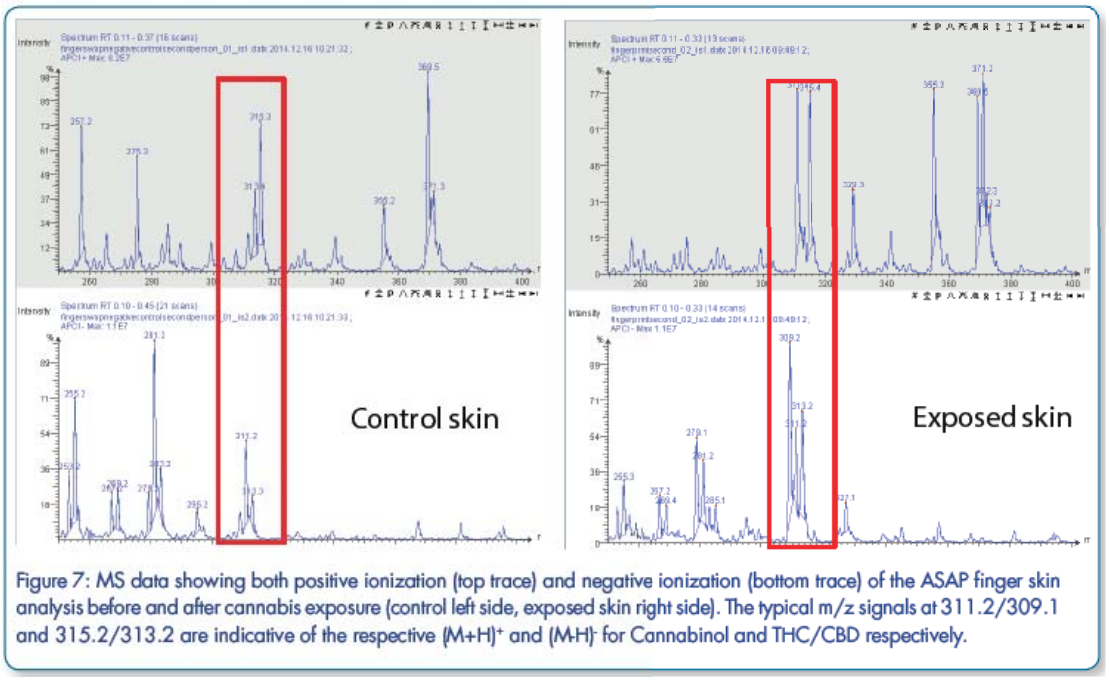


Figure 7: MS data showing both positive ionization (top trace) and negative ionization (bottom trace) of the ASAP finger skin analysis before and after cannabis exposure (control left side, exposed skin right side). The typical m/z signals at 311.2/309.1 and 315.2/313.2 are indicative of the respective $(M+H)^+$ and $(M-H)^-$ for Cannabinol and THC/CBD respectively.