

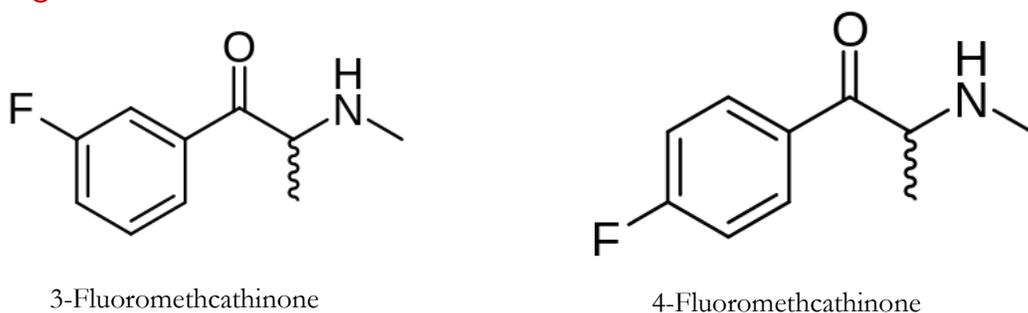
IRD 3 Application Note

Fluoromethcathinone

Introduction

In 2008, Flephedrone (4-fluoromethcathinone) and its positional isomer 3-fluoromethcathinone began showing up in several designer and recreational drugs. Marketed as plant feeder, flephedrone has been controlled by several US States and foreign countries while 3-fluoromethcathinone remains uncontrolled in most countries. Figure 1 shows the structure for these two compounds.

Figure 1.



Product Overview

The IRD 3 is designed from the chromatographer's point-of-view and is the only analytical infrared instrument that seamlessly combines the separating power of the Gas Chromatography with the molecular identification of FTIR.

- Dedicated FTIR for use with GC
- Low maintenance and easy to use
- Small footprint
- Software interfaces with GC control software
- Seamless integration with MS

The IRD 3 is the perfect tool for the chromatographer looking to obtain more information about unknown samples. Using a heater light pipe flow cell, the sample is kept in a vapor state while interacting with IR. This allows the molecules to freely rotate in a low energy environment. Keeping the molecular geometry in tack during analysis provides unique and highly reproducible spectra.



Figure 2.

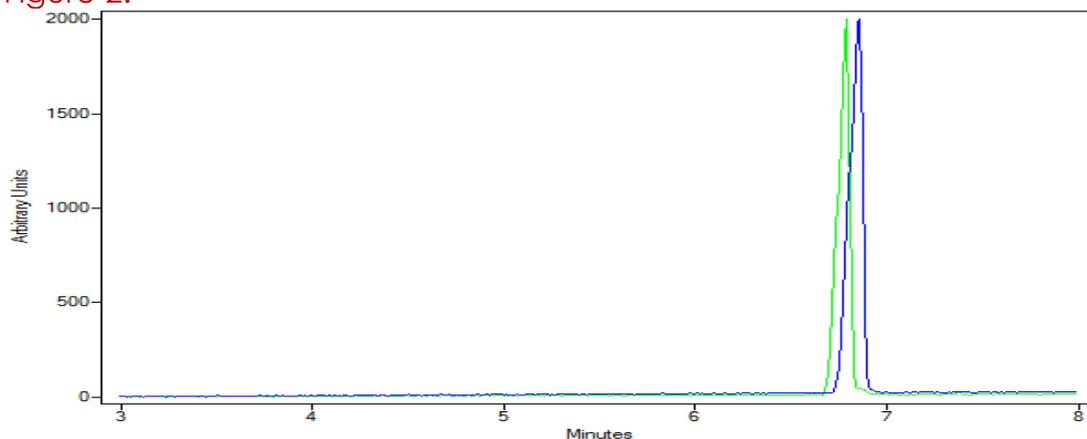
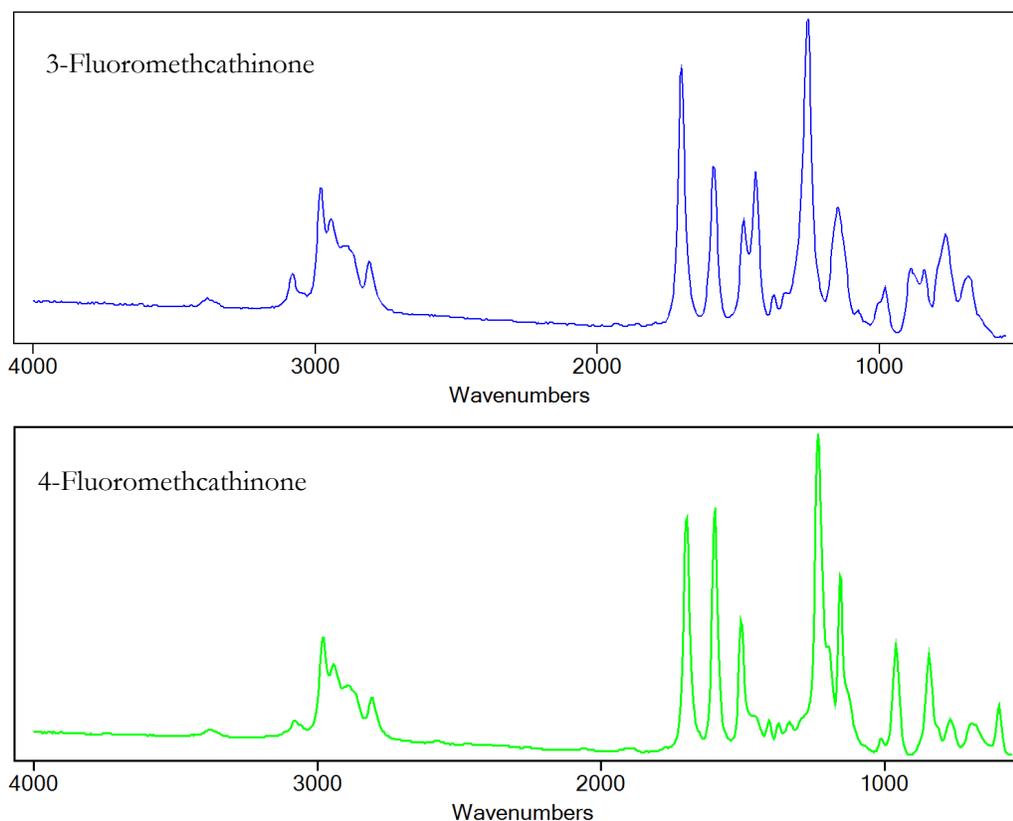


Figure 3.



Conclusion

This example illustrates the tremendous power of the IRD to distinguish between compounds which are very similar structurally. It also points out the excellent complementary information that the IRD and MSD provide. The combination of these two instruments provide exceptional capability for qualitative analysis at a very high confidence level.