

Counterfeit Adderall Pills Identification with TacticID Mobile

Adderall is a combination medicine that is designed to treat attention deficit hyperactive disorder (ADHD) in children and adults. Adderall can improve attentiveness and alertness, and may improve behavior issues. Adderall contains amphetamine and dextroamphetamine salts and is a Schedule II substance in the United States, meaning that it is a narcotic that has a medical use, but also has high potential for abuse and physical and psychological

dependence.[1]

In March 2021 the U.S. Drug Enforcement Agency issued a warning for the New England region stating that counterfeit Adderall pills being circulated throughout New Hampshire contain the highly addictive drug methamphetamine.[2] The pills are purposely manufactured to appear the same as real Adderall tablets, including matching the color of the pill and the proprietary markings.

The TacticID Mobile® handheld Raman system from B&W Tek employs a 1064 nm laser, and can be used to quickly identify illicit substances in the field with the push of a button. The TacticID Mobile is able to suppress fluorescence and can identify more substances than traditional 785-nm Raman systems. In this case study, a suspected counterfeit Adderall pill was measured with a TacticID Mobile and a traditional 785-nm handheld Raman system. The pill was measured directly using a point-and-shoot adapter on both systems.



RESULTS

Figure 1 shows the spectrum of the suspected counterfeit pill measured with a 785-nm handheld Raman system. The spectrum is overwhelmed by

fluorescence, and the system does not yield any match to the library.

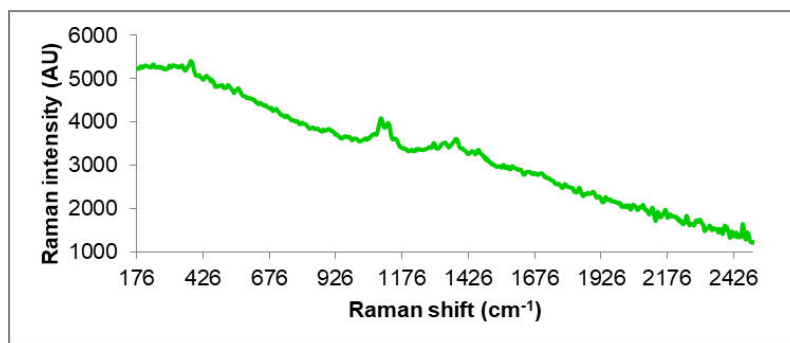


Figure 1. Raman spectrum of a suspected counterfeit Adderall pill collected with a 785 nm handheld Raman system

RESULTS

The counterfeit Adderall tablet was then measured on the TacticID Mobile. The result returned was a mixture of cellulose and caffeine, another stimulant not used in the manufacturing of Adderall (Figure 2).

Figure 3 shows the spectral comparison of the suspected counterfeit pill and a confirmed Adderall pill found to contain lactose, the main excipient in the pill.

With its state-of-the-art fluorescence suppression, the TacticID Mobile gives those on the front lines a tool in the fight against dangerous counterfeit drugs.

Scan Report



Scan Index: 12
Mode: Normal/Mixture

TOS version: 2.0.983

Chemical:	cellulose
Classification:	common chemical, nonhazardous
CAS#:	9004-34-6
Spectral Weight:	58.5%
Chemical:	caffeine
Classification:	stimulant
CAS#:	58-08-2
Spectral Weight:	18.12%

Figure 2. TacticID Mobile mixture results from suspected counterfeit Adderall

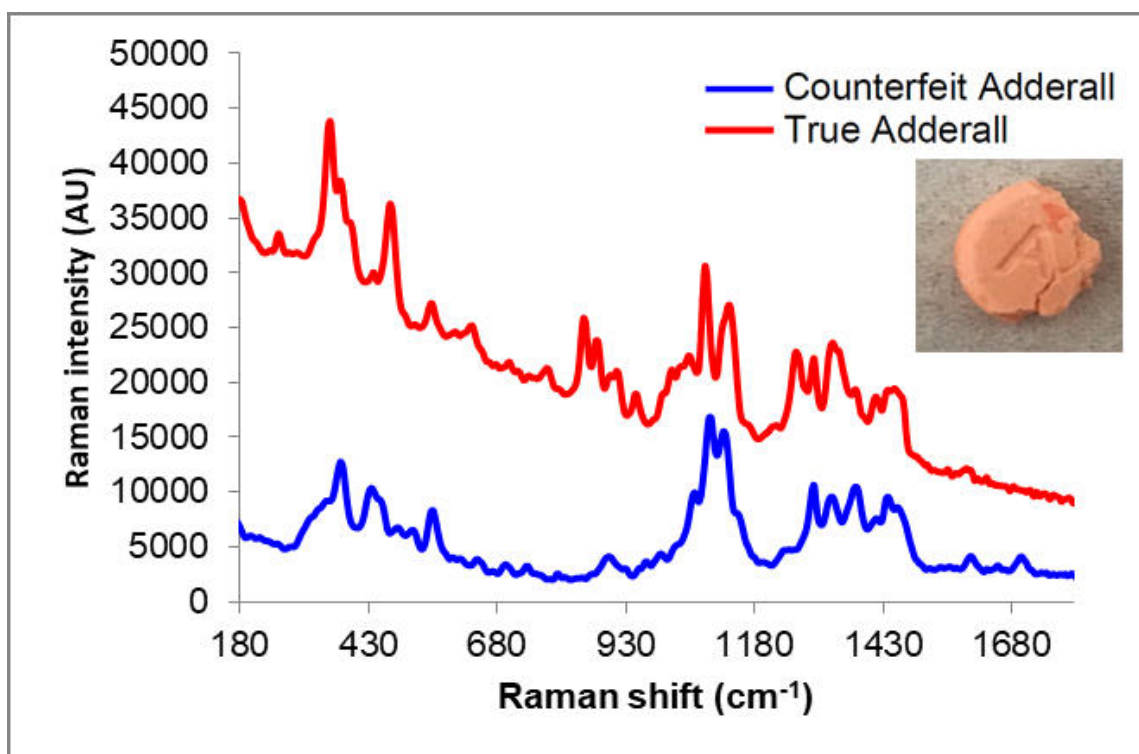


Figure 3. TacticID Mobile spectra of suspected counterfeit Adderall compared with a true Adderall pill (Insert: photo of suspected counterfeit pill. The color and markings match true Adderall pills.)

REFERENCES

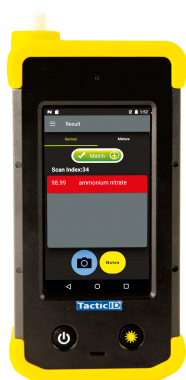
1. U.S. Department of Justice/Drug Enforcement Agency Diversion. Control Division. Controlled Substance Schedules.
<https://www.deadiversion.usdoj.gov/schedule> s/ (accessed April 2021)
2. WMUR9. Methamphetamine pills designed to look like Adderall found across New Hampshire.
<https://www.wmur.com/article/methamphetamine-pills-designed-to-look-like-adderall-found-across-new-hampshire/35867602> (accessed April 2021)

CONTACT

Metrohm France
13, avenue du Québec - CS
90038
91978 VILLEBON
COURTABOEUF CEDEX

info@metrohm.fr

CONFIGURATION



TacticID Mobile

Le TacticID® Mobile est un spectromètre Raman portable de 1064 nm économique et ergonomique, doté de bibliothèques ciblées pour l'identification rapide et non destructive des stupéfiants, des produits chimiques dangereux et des matières suspectes. Conçu pour une utilisation simple par le personnel de sécurité sur le terrain, les échantillons peuvent être rapidement scannés directement au travers de conteneurs transparents, et les résultats de l'identification sont clairement affichés sur le grand écran tactile haute luminosité et haute résolution.

Le TacticID Mobile utilise la spectroscopie Raman pour mesurer l'empreinte moléculaire d'un échantillon identifié à l'aide de la bibliothèque de spectres intégrée comprenant des stupéfiants, précurseurs, produits chimiques toxiques et courants, médicaments, explosifs etc. Avec l'identification au point d'intervention, les premiers intervenants obtiennent en moins d'une minute une identification de l'échantillon exploitable, accompagnée d'informations de sécurité (SGH et NFPA704), ce qui permet une réponse rapide d'une plus grande certitude.

Avec le laser d'excitation à 1064 nm du TacticID Mobile, les utilisateurs peuvent identifier des échantillons de rue difficiles, des échantillons colorés et des échantillons non purs avec une interférence minimum de la fluorescence. Le système s'utilise avec l'écran tactile et l'interface matérielle par boutons, même à travers un équipement de protection. Il est de conception compacte avec une protection robuste en caoutchouc IP68, conforme au test de chute de la norme MIL-STD-810.

Des informations supplémentaires peuvent être ajoutées à chaque scan (dont images, repères d'emplacement, notes et autres informations d'identification) formant un rapport complet au moyen d'un seul document contenant toutes les informations pertinentes. Sont également disponibles des bibliothèques créées par l'utilisateur et des options de personnalisation.