Counterfeit Adderall Pills Identification with TacticID Mobile
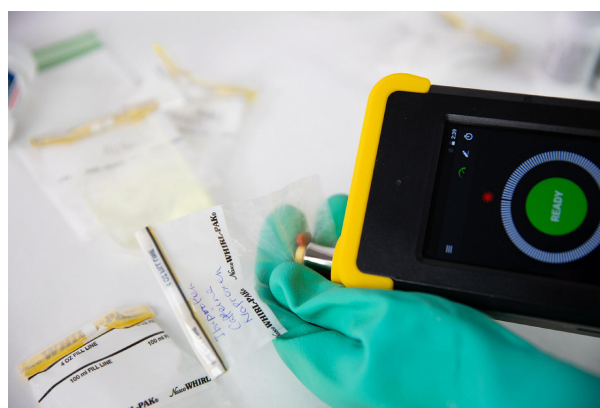
Adderall is a combination medicine that is designed to treat attention deficit hyperactive disorder (ADHD) in children and adults. Adderall can improve attentiveness and alertness, and may improve behavior issues. Adderall contains amphetamine and dextroamphetamine salts and is a Schedule IIN substance 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.
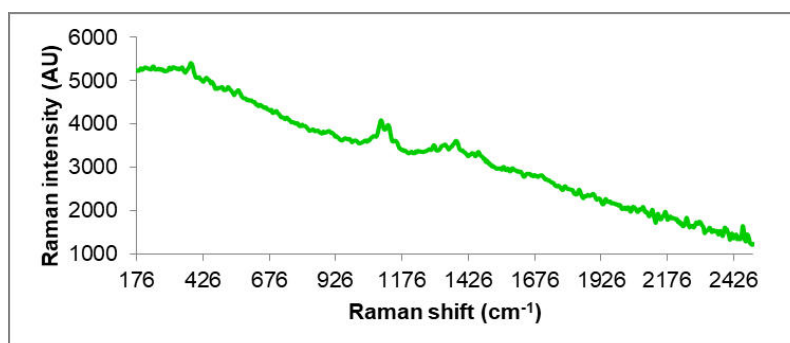
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Figure 1. Raman spectrum of a suspected counterfeit Adderall pill collected with a 785 nm handheld Raman system

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.

Figure 2. TacticID Mobile mixture results from suspected counterfeit Adderall
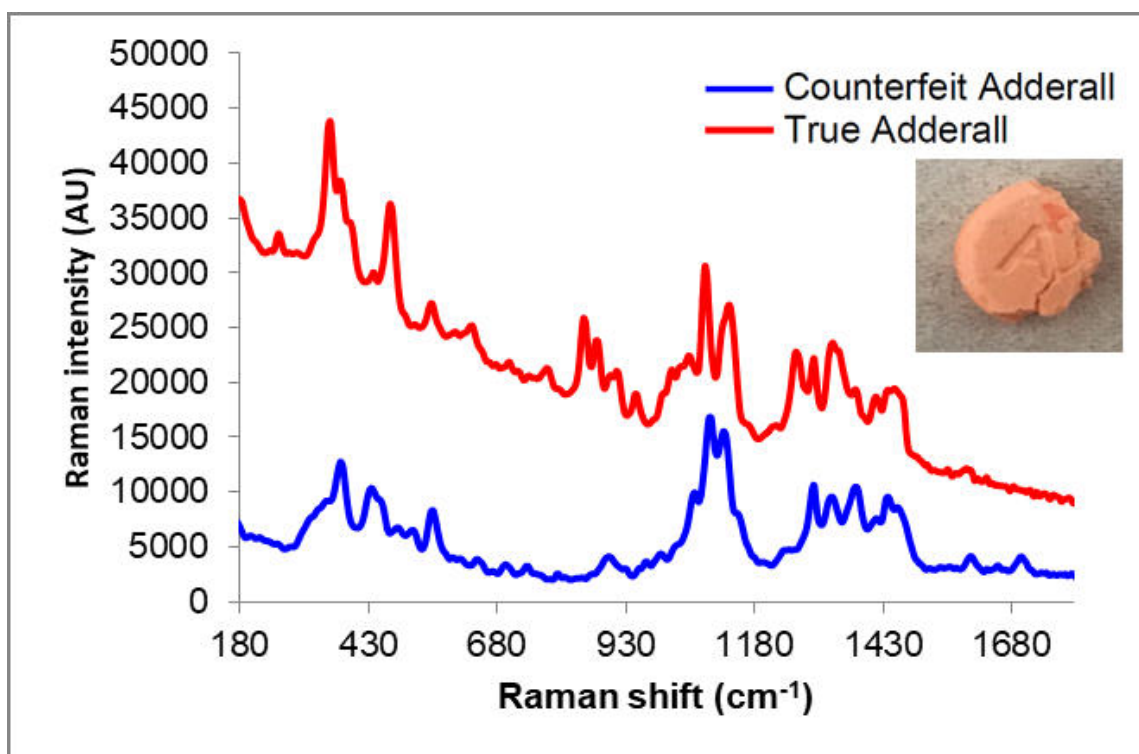
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Figure 3. TacticID Mobile spectra of suspected counterfeit Adderall compared with a true Adderall pill (Insert: photo of suspected counterfeit pill. The color and markings match true Adderall pills.)

REFERENCES

1. U.S. Department of Justice/Drug Enforcement Agency Diversion. Control Division. Controlled Substance Schedules. https://www.deadiversion.usdoj.gov/schedules / (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)

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CONFIGURATION

TacticID Mobile

TacticID Mobile は、麻薬、有害化学薬品、ならひにその他の疑わしい物質の迅速かつ非破壊的な識別に対象を絞ったライフラリを含む、経済的てエルコノミックな 1064nm ハントヘルトラマンスヘクトロメーターてす。安全作業者か現場て容易に操作てきるよう設計されており、サンフルを透明な容器を通して直接かつ迅速にスキャンてき、識別結果は大型の高輝度・高解像度タッチスクリーンに鮮明に表示されます。

TacticID Mobile は、サンフルの分子指紋を測定するためにラマン分光法を使用し、分子指紋は麻薬、前駆物質、有毒化学物質、一般的化学薬品、医薬品、爆発物やその他の組み込みスヘクトルライフラリによって識別されます。ホイントオフニート (point-of-need) 識別により、ファーストレスホンターは、サンフル識別を 1 分未満て実行することかてき、安全情報 (GHS および NFPA704) を伴い、確実性の高い迅速なレスホンスを得ることかてきます。

TacticID Mobile 1064 nm 励起レーサーにより、ユーサーは扱いにくい路上サンフル、色付きのサンフル、ならひに不純物のサンフルを、蛍光による妨害の影響を最低限に抑えて識別てきます。システムは、保護具を着用した状態ても使用可能なタッチスクリーンとハートホタンのインターフェースて操作することかてきます。このシステムは、頑丈な IP68 コム製の保護を伴うコンハクトな設計て、MIL-STD-810H 落下試験に合格しています。

詳細情報は、画像、位置情報タク付け、メモ、ならひにその他の識別情報を含むスキャンことに追加することかてき、1 つの文書に関連する全ての情報をまとめた包括的なレホートか作成されます。ユーサーによって作成されたライフラリおよひカスタマイスも使用可能てす。

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