

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.

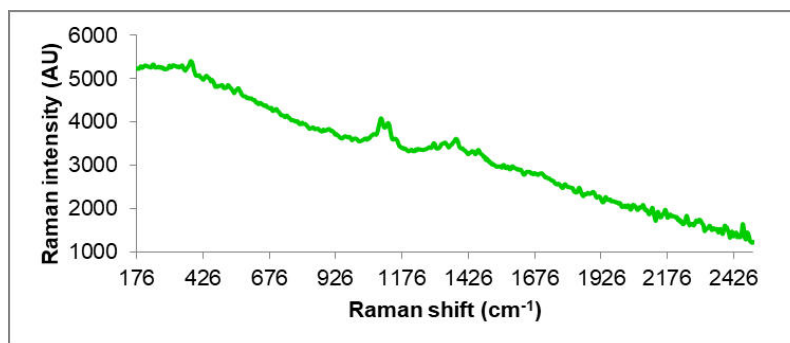


Figure 1. Raman spectrum of a suspected counterfeit Adderall pill collected with a 785 nm handheld Raman system

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.

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

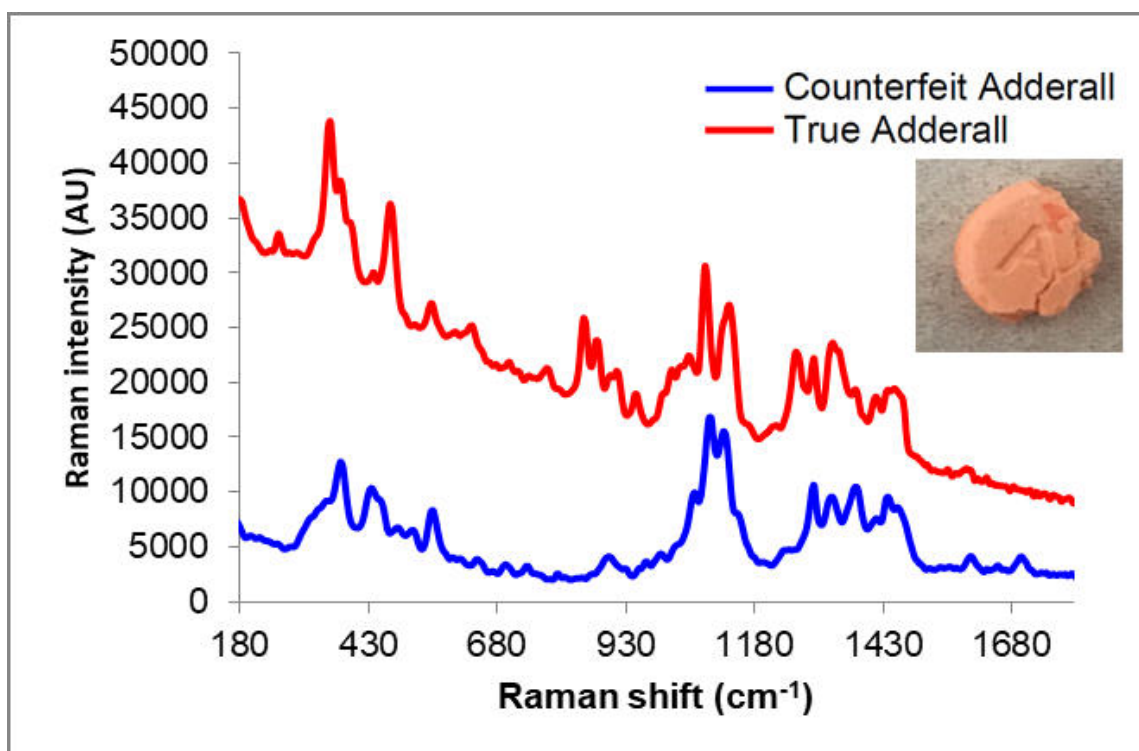


Figure 3. TactiD Mobile spectra of suspected counterfeit Adderall compared with a true Adderall pill (Insert: photo of suspected counterfeit pill. The color and markings match true Adderall pills.)

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、ならび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ブラリを含む、経済的でエルゴノミックな 1064nm ハンドヘルドラマンスペクトロメーターです。安全作業者が現場で容易に操作できるように設計されており、サンプルを透明な容器を通して直接かつ迅速にスキャンでき、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、サンプ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ペクトルライブラリによって識別されます。ポイントオブニード (point-of-need) 識別により、ファーストレスポンスは、サンプル識別を 1 分未満で実行することができ、安全情報 (GHS および NFPA704) を伴い、確実性の高い迅速なレスポンスを得ることができます。

TacticID Mobile 1064 nm 励起レーザーにより、ユーザーは扱いにくい路上サンプル、色付きのサンプル、ならびに不純物のサンプルを、蛍光による妨害の影響を最低限に抑えて識別できます。システムは、保護具を着用した状態でも使用可能なタッチスクリーンとハードボタンのインターフェースで操作することができます。このシステムは、頑丈な IP68 ゴム製の保護を伴うコンパクトな設計で、MIL-STD-810H 落下試験に合格しています。

詳細情報は、画像、位置情報タグ付け、メモ、ならびにその他の識別情報を含むスキャンごとに追加することができ、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ポートが作成されます。ユーザーによって作成されたライブラリおよびカスタマイズも使用可能です。