Direct Analysis of Drugs in Pills and Capsules with No Sample Preparation

The AccuTOF™ equipped with Direct Analysis in Real Time (DART™) is capable of analyzing drugs in pills and capsules with no sample preparation. In most cases, the pill can simply be placed in front of the DART and the active ingredients can be detected within seconds. This application note shows a wide variety of pills that have been analyzed by using DART. The examples include prescription drugs, over-the-counter medicines, and illicit drugs that were confiscated by a law-enforcement agency.

Examples of Pills and Medicines that Have Been Analyzed Directly by DART

**OTC Medicines**
- Ibuprofen (anti-inflammatory)
- Naproxen sodium (anti-inflammatory)
- Aspirin (anti-inflammatory)
- Acetaminophen (“Tylenol” painkiller)
- Sudafed® (pseudoephedrine decongestant)
- Melatonin (sleep aid)
- ChlorTrimeton (antihistamine)
- Cough syrup (guaifenesin and dextromethorphan)
- Codeine with Tylenol® (painkiller)

**Prescription Drugs**
- Generic Wellbutrin® (Bupropion antidepressant)
- Zantac® (ranitidine: histamine H2-receptor antagonist) Sealed capsule.
- Lipitor® (atorvastatin: treatment of hypercholesterolemia)
- Endocet® (oxycodone plus acetaminophen)
- Levsin® sublingual tablet (Hyoscyamine anticholinergic)

**Dietary Supplements and Herbal Medicines**
- Coenzyme Q10 with Vitamin E and Di- and Triglycerides
- Magnolia Bark (Chinese herbal medicine)
- Conjugated Linoleic Acid (“CLA” weight-loss formulation)

**Confiscated Illicit Drugs**
- Dimethoxyamphetamine plus methamphetamine
- Methylenedioxyamphetamine (”Ecstasy” or MDMA)
- OxyContin®

*All brand names are registered trademarks of their respective manufacturers.*

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