

---

Presentation to Virginia State  
Crime Commission

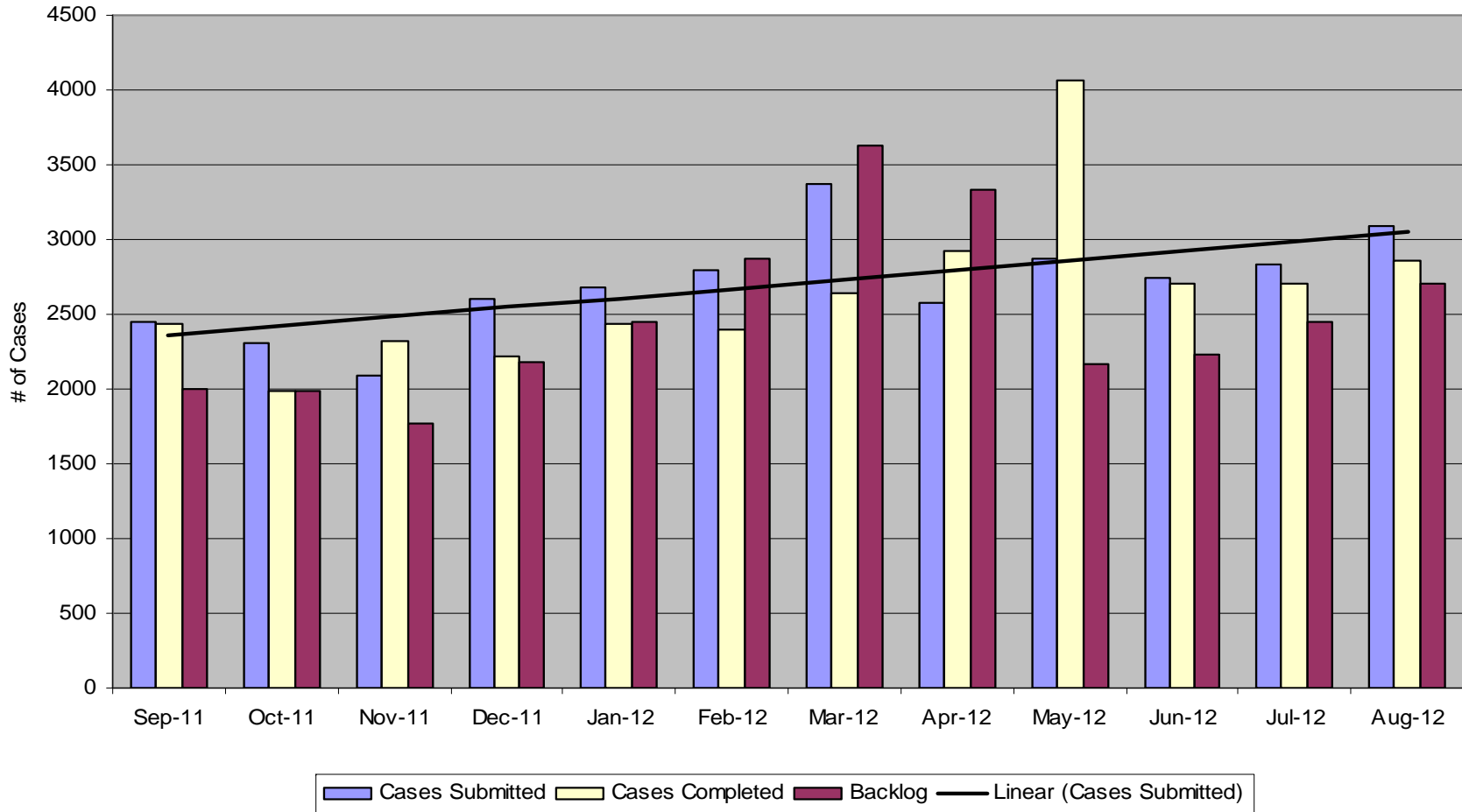
# DFS Update: Managing the Drug Case Workload

---



Linda Jackson  
Chemistry Program Manager  
Virginia Department of Forensic Science  
October 3, 2012

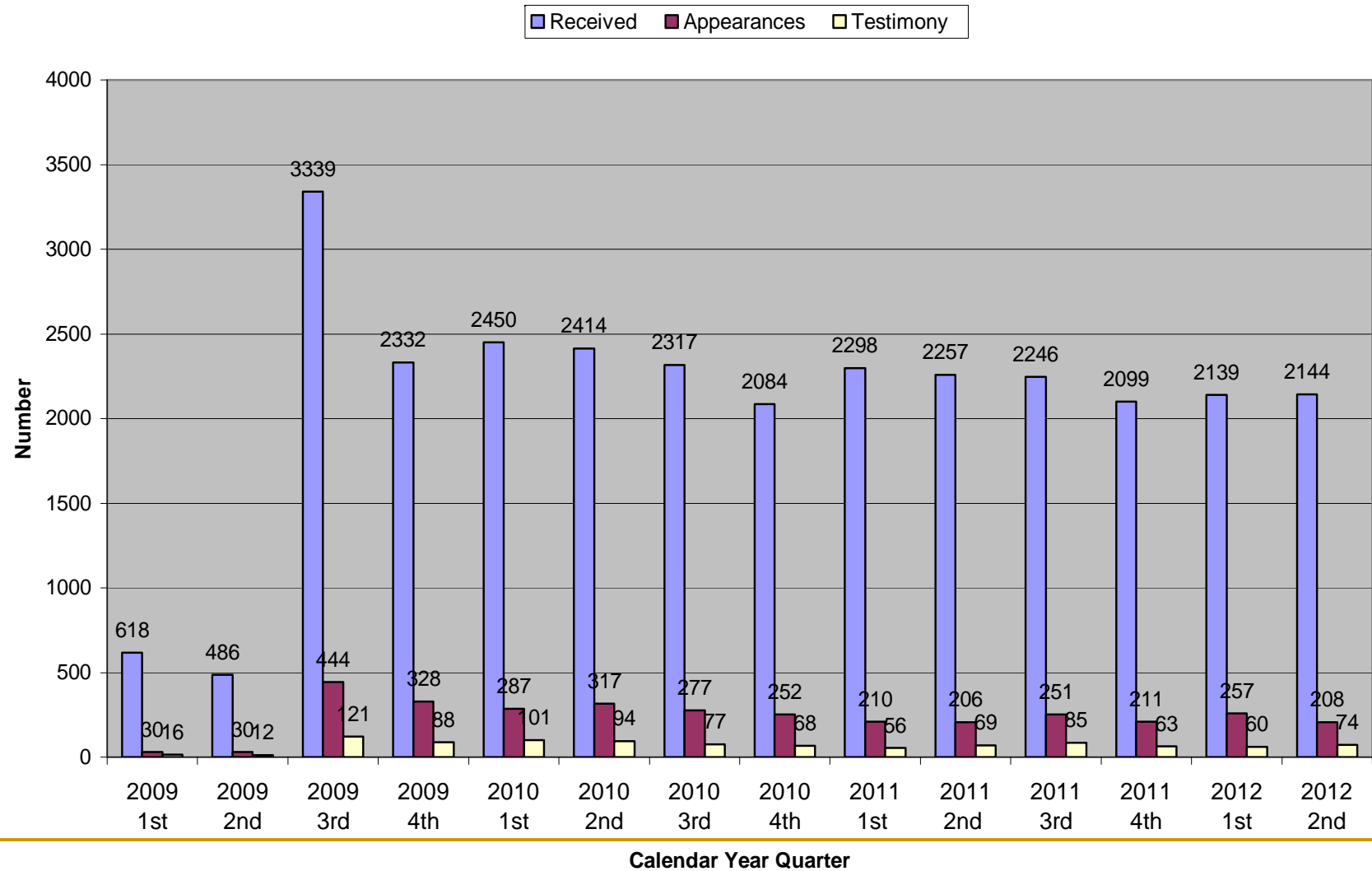
# Increasing Case Submissions - Controlled Substances



# Melendez-Diaz Effect

## Controlled Substances Subpoenas

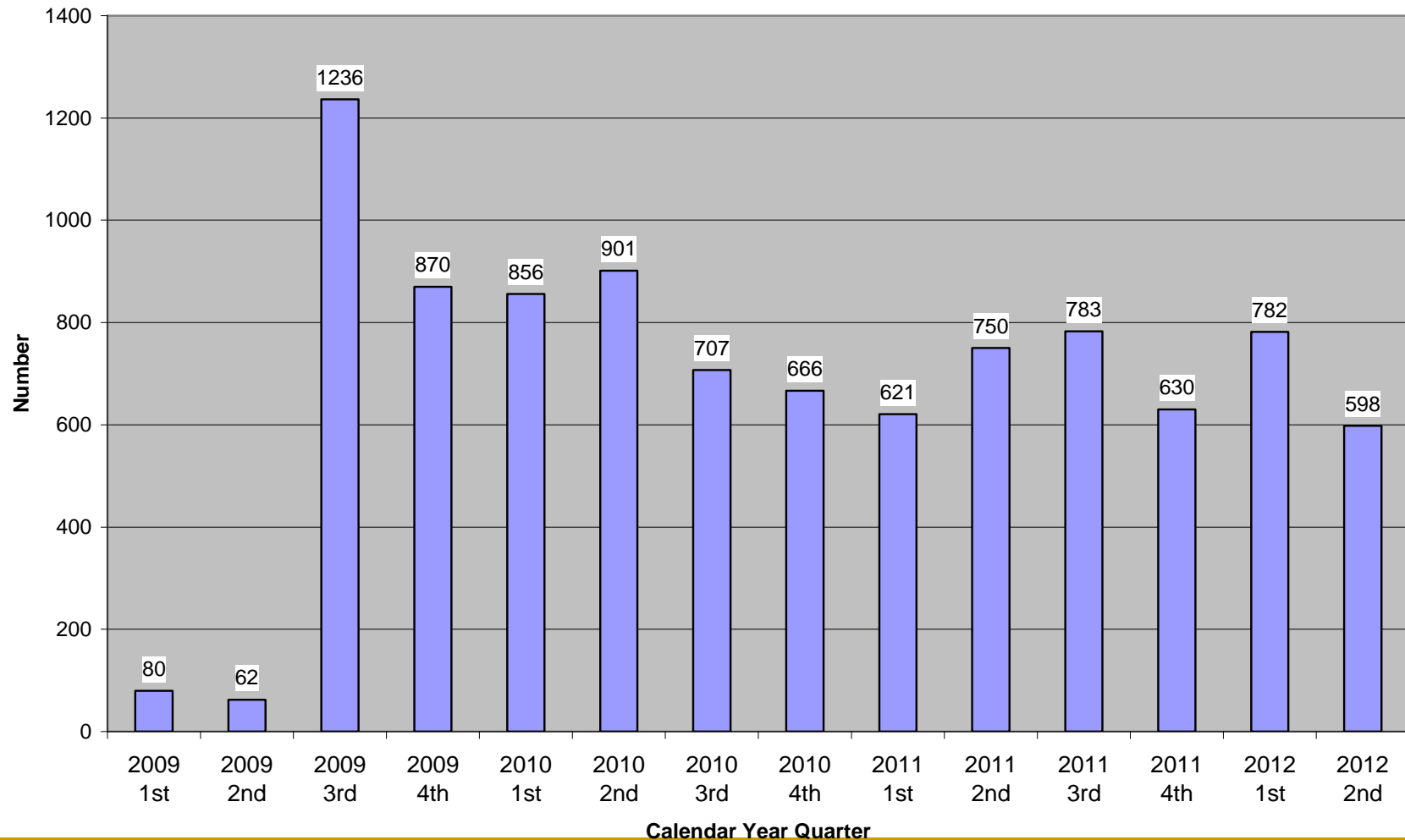
Controlled Substances Subpoenas



# Melendez-Diaz Effect

## Controlled Substances Hours Out of Lab

Controlled Substances Hours Out of Laboratory



---

# Legislative Actions to Manage Court Testimony – Post *Melendez-Diaz*

- 2009 Special Session: Notice and Demand
  - 2009 Special Session: Moved language regarding Breath Alcohol evidential instrument six month accuracy testing (Certification) requirements from 18.2-268.9(B) to 9.1-1101(B)(3) Powers and duties of the Department.
-

---

# Court Testimony

- 2010 – Video testimony – two-way video conferencing
  - DUI days have been established in some jurisdictions to maximize effectiveness of Toxicology resources
-

---

# Changes to Controlled Substances Caseload

- Synthetic cannabinoids
  - Research chemicals
  - Methamphetamine clandestine laboratories
-

# Synthetic Cannabinoids

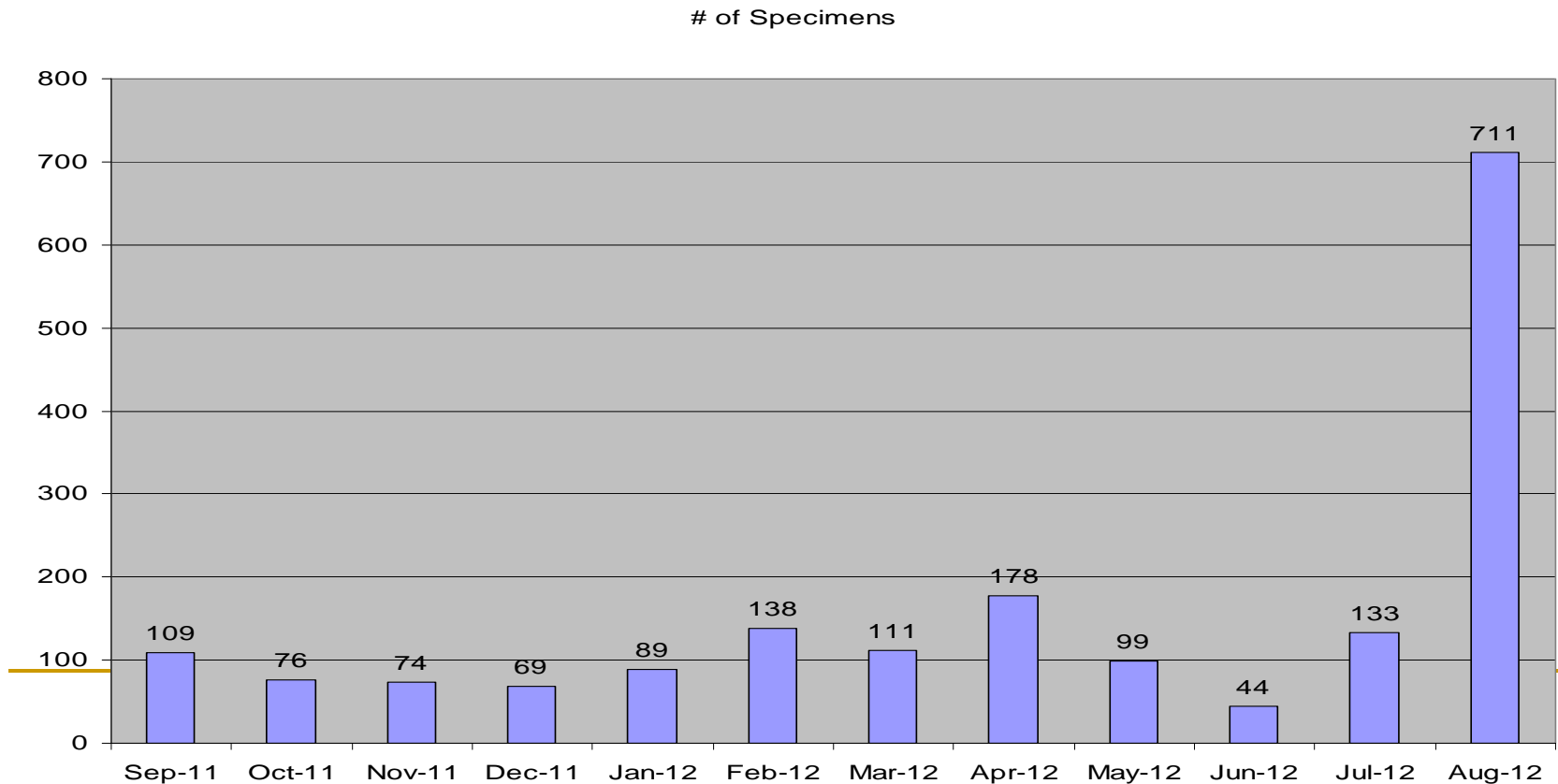
- Marketed as an herbal incense and utilized as a “legal” high
  - K2, Spice, Potpourri, etc.
  - Often mixtures
  - Synthetic cannabinoids found in specific brand names changes





# Synthetic Cannabinoids

- More complex analytical protocols than other more frequently received drugs of abuse
- Begin tracking with LIMS after July 1, 2012



## Slide 9

---

**lj2**

I attribute the reduction of syn can case items in June to officers waiting for the new legislation to go into effect. Starting in July, I am going to try and distill this information from LIMS instead of the spreadsheet.

ljackson, 7/20/2012

# Synthetic Cannabinoids

Substance Identified	July	Aug
<b>AM-2201</b>	<b>37</b>	<b>579</b>
<b>JWH-018</b>	<b>1</b>	<b>1</b>
<b>JWH-122</b>	<b>4</b>	<b>1</b>
<b>JWH-210</b>	<b>1</b>	<b>0</b>
<b>AM-2233</b>	<b>1</b>	<b>0</b>
<b>UR-144</b>	<b>0</b>	<b>7</b>
<b>XLR-11</b>	<b>0</b>	<b>5</b>
<b>No controlled substances or synthetic cannabinoids</b>	<b>96</b>	<b>112</b>

---

# Synthetic Cannabinoids

- Synthetic Cannabinoid definition:
    - Any substance that contains one or more cannabimimetic agents
    - ‘Cannabimimetic agent’ is any substance
      - within any of seven defined structural classes
      - specifically listed under § 18.2-248.1:1(A)(1)
-

---

# Synthetic Cannabinoids

- Added an additional ten specifically listed synthetic cannabinoid compounds

(Total listed now = 22)

- Controlled Substances:

“0.254 gram of plant material, found to contain 1-pentyl-3-(1-naphthoyl)indole (JWH-018) (a synthetic cannabinoid listed in § 18.2-248.1:1).”

---

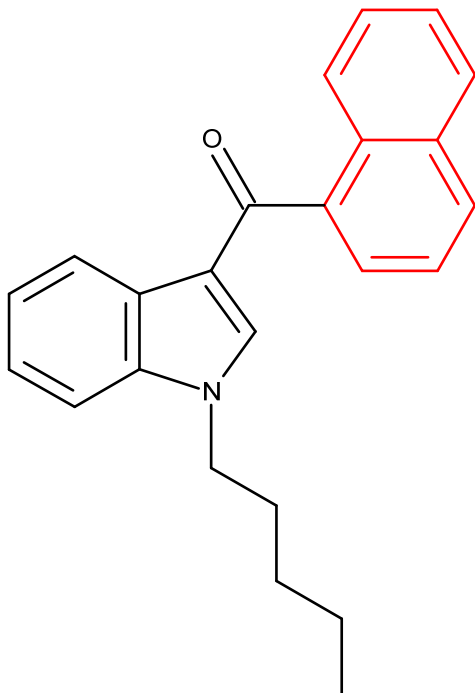
---

# Synthetic Cannabinoids

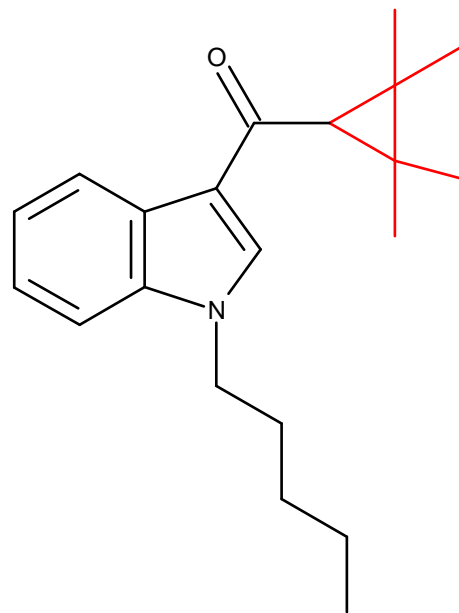
- § 18.2-248.1:1(A) defined seven structural classes under 5 subdivisions
    - Seven Structural classes include:
      - a. Cyclohexylphenols
      - b. Naphtoylindoles  
Naphthylmethyindoles
      - c. Napthoylpyrroles
      - d. Napthylmethyindenes
      - e. Phenylacetyindoles  
3-Benzoylindoles
-

# Differences

Add Class ?:  
Cyclopropoylindoles



**Class: Naphthoylindoles**



**UR-144**

Does not fit in class

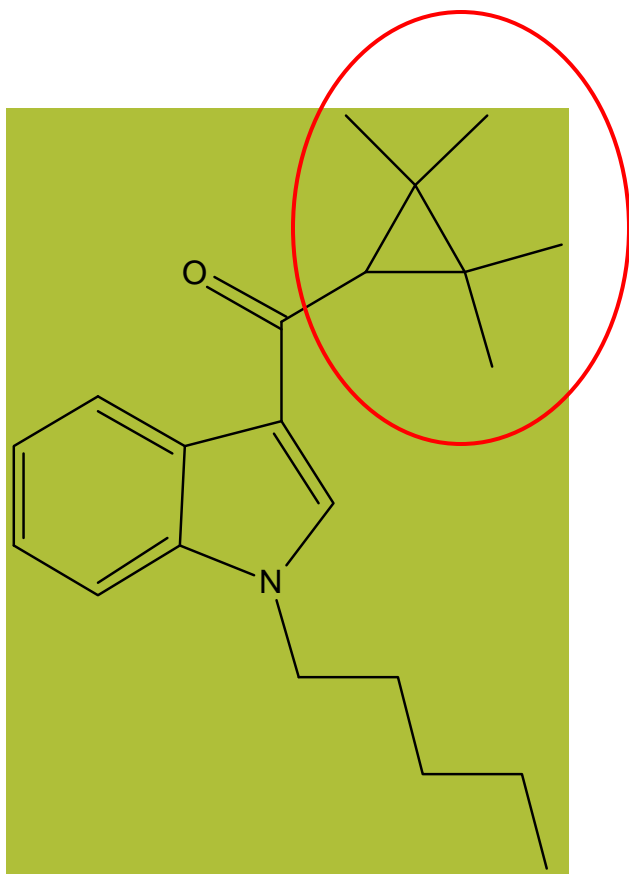
---

# Section F

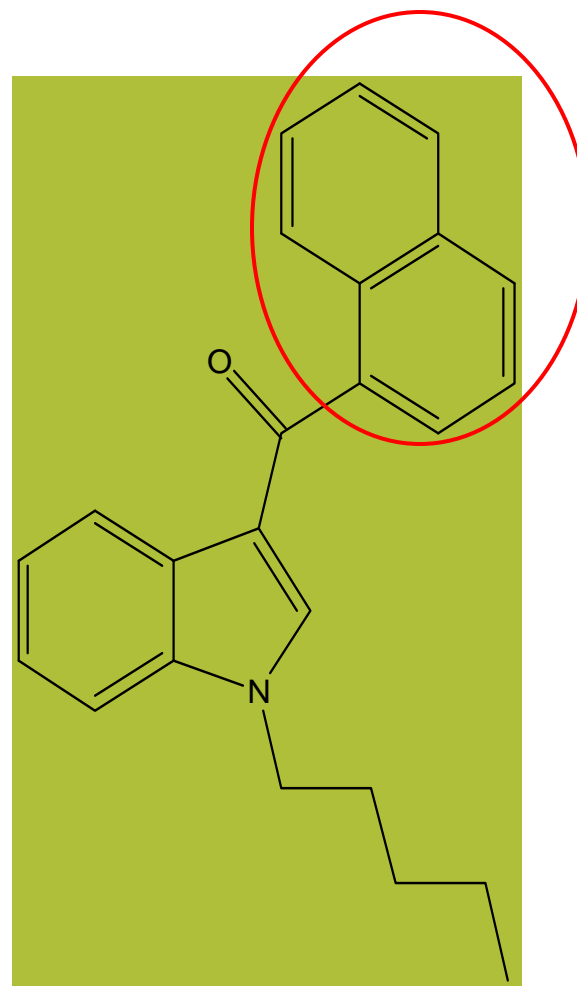
- § 18.2-248.1:1. F. Any drug not listed in this section or the Drug Control Act (§ 54.1-3400 et seq.), which is privately compounded, with the specific intent to circumvent the criminal penalties for synthetic cannabinoids, to emulate or simulate the effects of synthetic cannabinoids **through chemical changes such as** the addition, subtraction or rearranging of a radical or **the addition, subtraction or rearranging of a substituent**, shall be subject to the same criminal penalties as for synthetic cannabinoids.
-



# Example



UR-144



JWH-018

---

# Controlled Substances - Report Wording

- 0.254 gram of plant material, found to contain 1-pentyl-3-(2,2,3,3-tetramethylcyclopropylmethanone)indole (UR-144). This compound is not listed or within a defined structural class in § 18.2-248.1:1(A).
-

# Research Chemicals

- Amphetamine or Ecstasy-like
- AKA:
  - ❑ Bath Bubbles
  - ❑ Bath Salts
  - ❑ Pond Cleaner
  - ❑ Ladybug Attractant
  - ❑ Glass Cleaner
  - ❑ Plant Food
  - ❑ Plant Vitamin



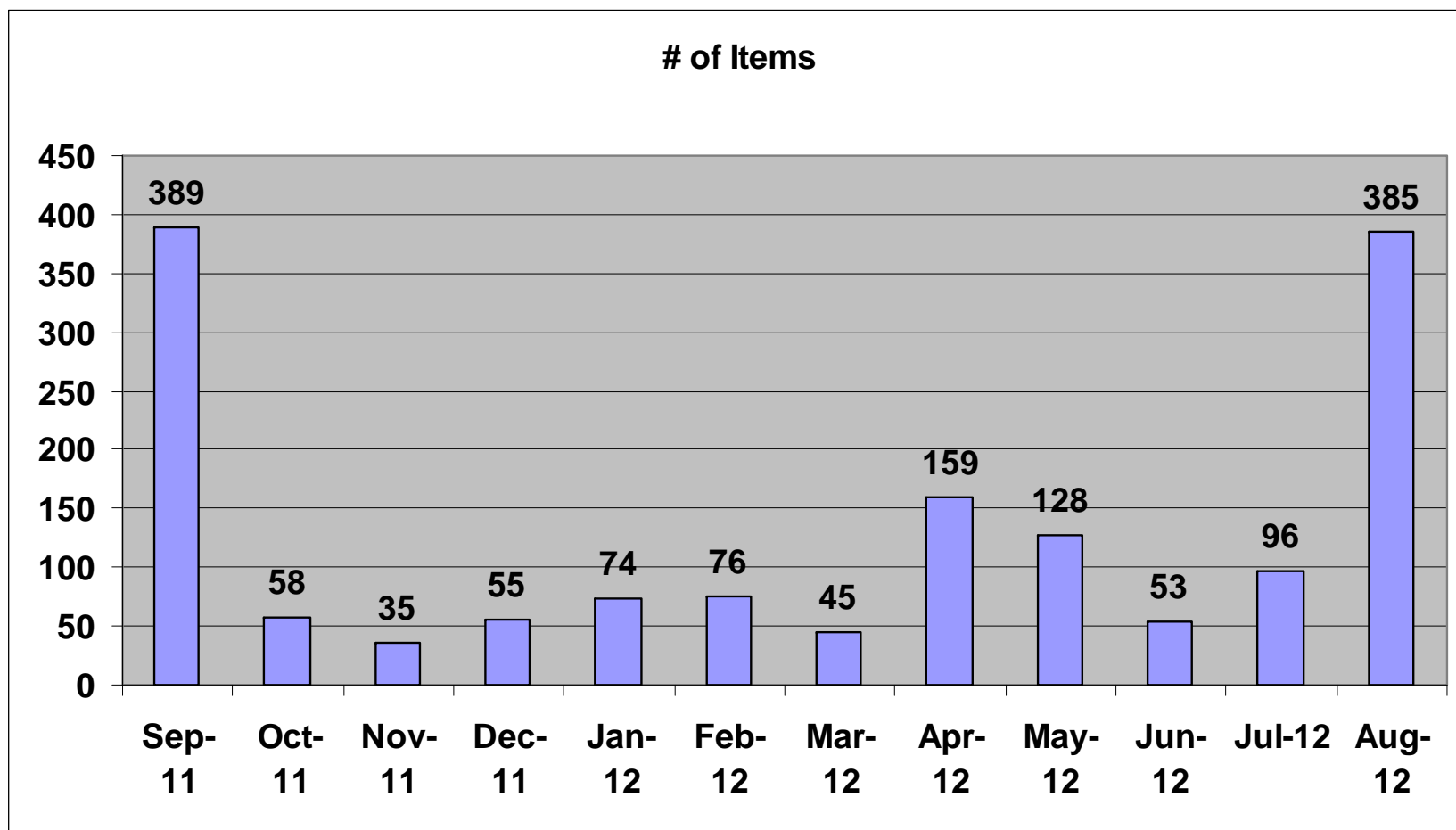
# Research Chemicals

- Added 28 additional compounds to § 54.1-3446 Schedule I
  - Most have been encountered in evidence submitted to DFS labs prior to July 2012



# Research Chemicals

through August 31, 2012



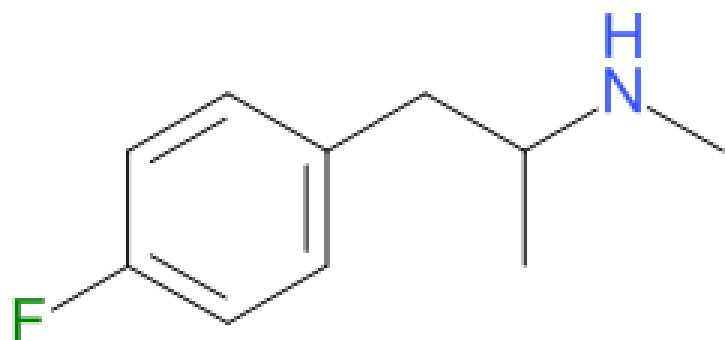
# Research Chemicals (“Bath Salts”)

<b>Substance Identified</b>	<b>July</b>	<b>August</b>
<b>MDPV</b>	<b>55</b>	<b>251</b>
<b>2C-E</b>	<b>3</b>	<b>3</b>
<b>25i-NBOMe</b>	<b>4</b>	<b>5</b>
<b>2C-I</b>	<b>0</b>	<b>1</b>
<b>4-MEC</b>	<b>3</b>	<b>8</b>
<b>alpha-PVP</b>	<b>7</b>	<b>31</b>
<b>Methoxetamine (MXE)</b>	<b>0</b>	<b>1</b>
<b>Methylone</b>	<b>22</b>	<b>66</b>
<b>5-MeO-DALT</b>	<b>0</b>	<b>0</b>
<b>Pentedrone</b>	<b>1</b>	<b>0</b>
<b>Pentylone</b>	<b>1</b>	<b>19</b>

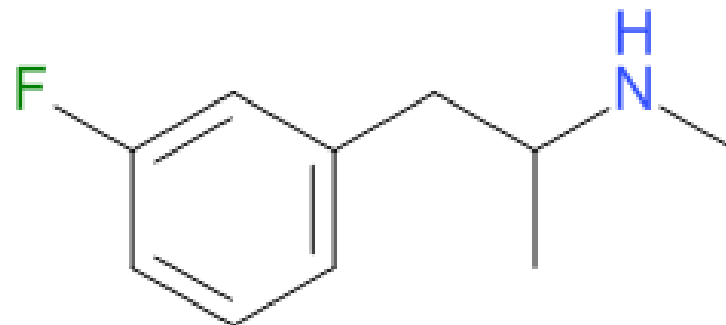
---

# Research Chemicals

- Purchased new instrumentation to be implemented in October to assist in differentiating between similar compounds.



4-Fluoromethamphetamine  
(Listed)



3-Fluoromethamphetamine  
(Positional Isomer)

---

---

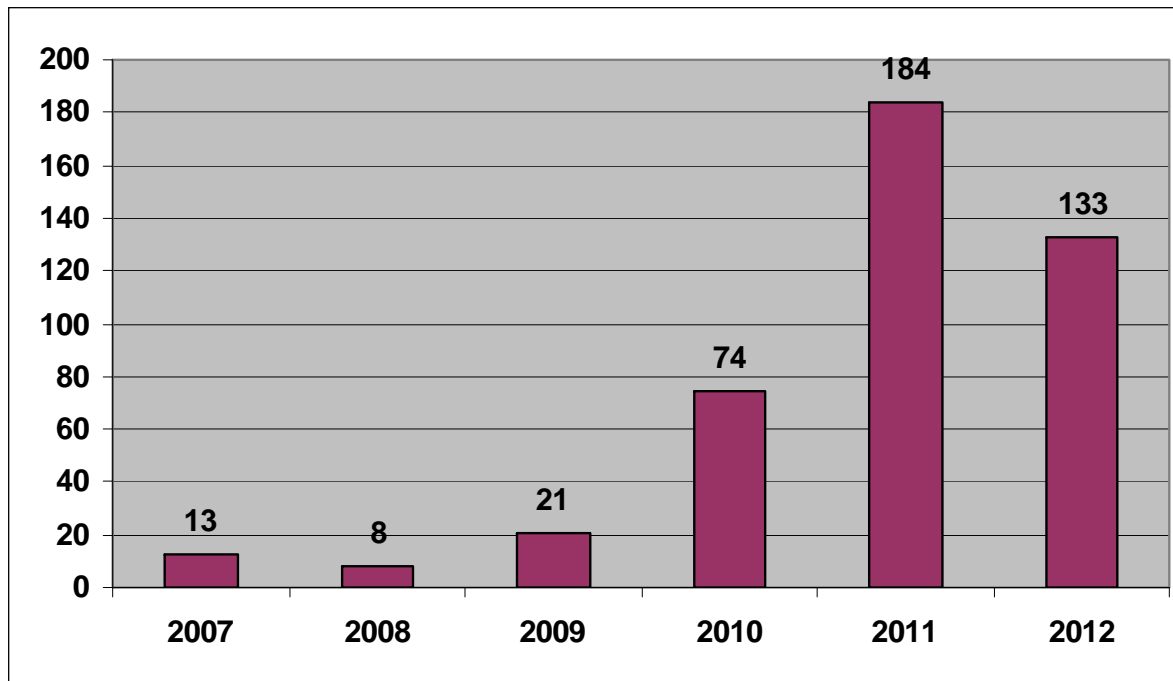
# Field Test Kits

- Sirchie
    - NARK 20024 MDPV Bath Salts Reagent
      - Approved for MDPV
    - NARK 20025 Mephedrone Bath Salts Reagent
      - Approved for Mephedrone
  - Detection of Synthetic Cannabinoids
    - No kits have been evaluated or approved
-



# Methamphetamine Clandestine Labs

- 2012 submission as of August 31, 2012
- Clan lab numbers and complexity impact turnaround time
- Western Laboratory received most clan labs, although Eastern has also seen an increase in submissions recently



---

# Clandestine Laboratory Team

- Most Clandestine Laboratory cases require both Controlled Substances and Trace Evidence analysis
  - Controlled Substances
    - Methamphetamine
    - Precursors: Pseudoephedrine / Ephedrine
  - Trace Evidence
    - “J” Chemicals (§ 18.2-248(J)): sodium hydroxide, hydrochloric acid, iodine, etc.
  - Team: 4 Forensic Scientists trained in both



# Questions?

