

Novel Psychoactive Substances Q2 - 2021 Summary

Aegis offers healthcare providers the opportunity to evaluate their patients' substance use more completely by offering testing for numerous classes of novel psychoactive substances (NPS). Without advanced testing, NPS use by individuals may go undetected, which can interfere with prescribed therapy and could result in severe adverse events, including overdoses.

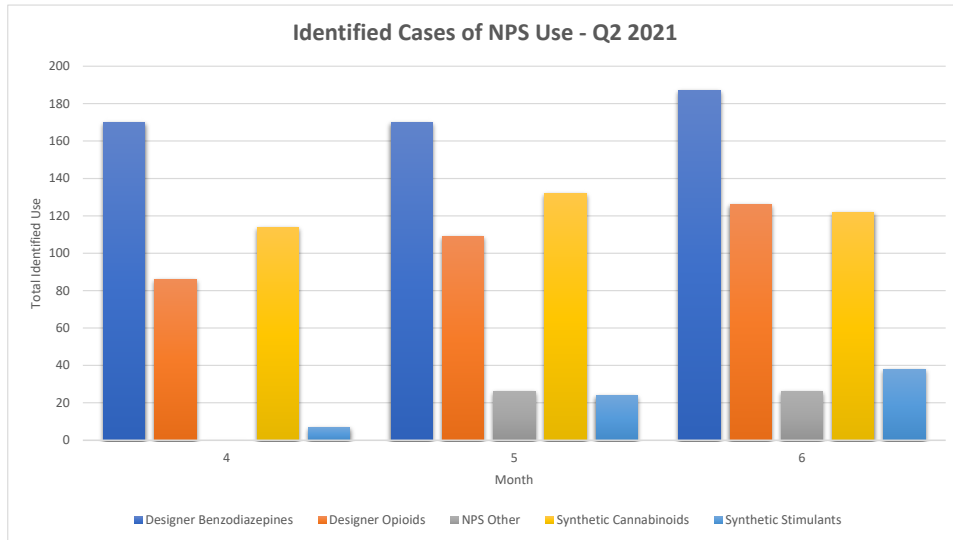


Figure 1. In the second quarter of 2021, Aegis detected NPS use in over 1,300 healthcare samples. Designer benzodiazepines were detected most frequently, followed by synthetic cannabinoids, designer opioids, synthetic stimulants, and other NPS. In many instances, samples included multiple analytes from one drug class and/or analytes from multiple classes, such as designer benzodiazepines and designer opioids.

The following figures are intended to provide a detailed analysis of the NPS detected as part of Aegis' enhanced drug testing options:

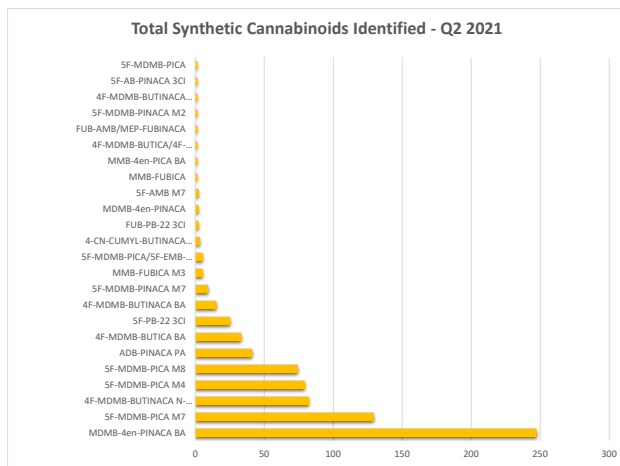


Figure 2. At least one synthetic cannabinoid marker was identified in 368 samples in the second quarter. MDMB-4en-PINACA continues to be the most detected synthetic cannabinoid, detected in 247 samples in the second quarter. This falls in line with trends seen by external forensic laboratory sources. 5F-MDMB-PICA, 4F-MDMB-BUTINACA, ADB-PINACA, and 4F-MDMB-BUTICA round out the top five cannabinoids detected.

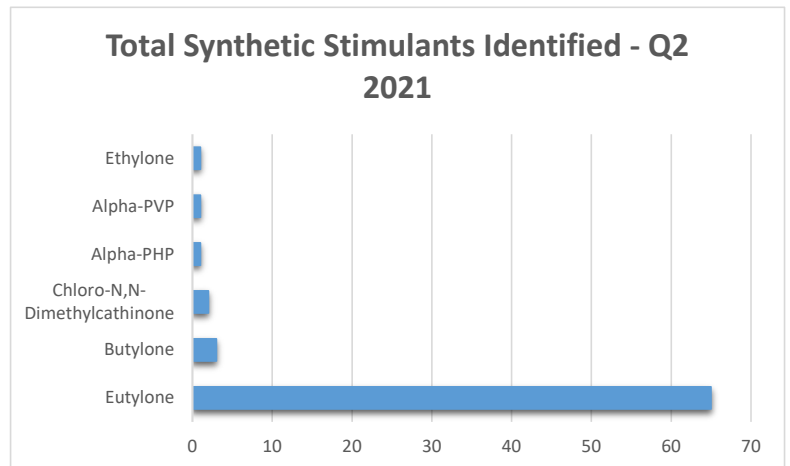


Figure 3. Eutylone was the most detected stimulant identified in the second quarter, accounting for 89% of all stimulant positives. Eutylone has been the most reported stimulant for approximately two years in forensic sources. Butylone and Chloro-N,N-Dimethylcathinone round out the top three stimulants detected.

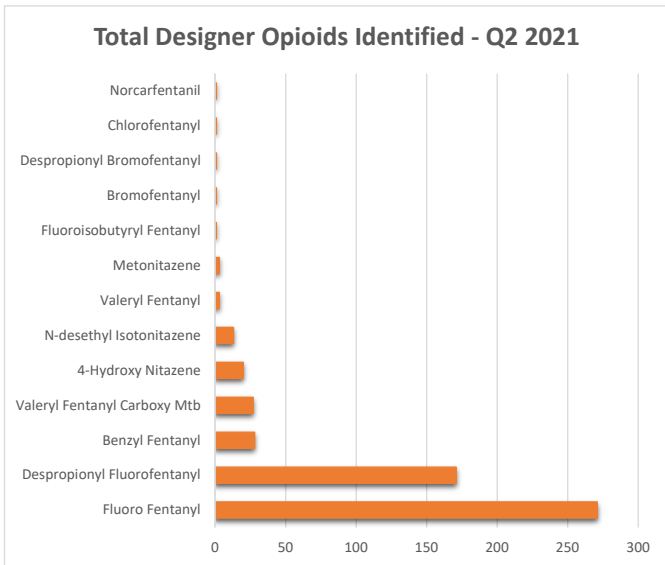


Figure 4. The designer opioids are most commonly referred to as fentanyl analogs, or fentalogs; however other non-fentalogs are increasingly observed. Fluoro fentanyl was detected in 271 samples in the second quarter. Despropionyl fluorofentanyl is often detected with fluoro fentanyl and is believed to be either a process impurity from manufacture or metabolite of fluoro fentanyl. Of particular interest, markers of isotonitazene and metonitazene have been detected in the second quarter. Over the last year, there have been increasing reports of non-fentanyl opioids found in the illicit drug supply. This is believed to be a response by clandestine labs to circumvent increased regulation of the fentalogs by both US and international drug scheduling bodies.

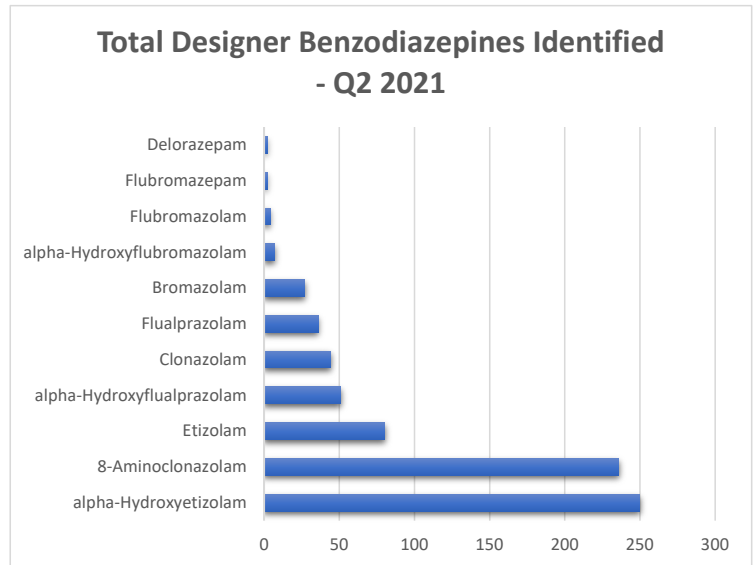


Figure 5. Designer benzodiazepine(s) were detected in 527 samples in the second quarter. Etizolam and clonazolam are detected most frequently, followed by flualprazolam and bromazolam. As with most other NPS classes, these analytes are also commonly detected by forensic laboratories. Designer benzodiazepines are often found as counterfeit versions of commonly recognized prescription benzodiazepines, such as alprazolam 2mg “bars”. In many cases, more than one designer benzodiazepine is present in these counterfeit tablets.

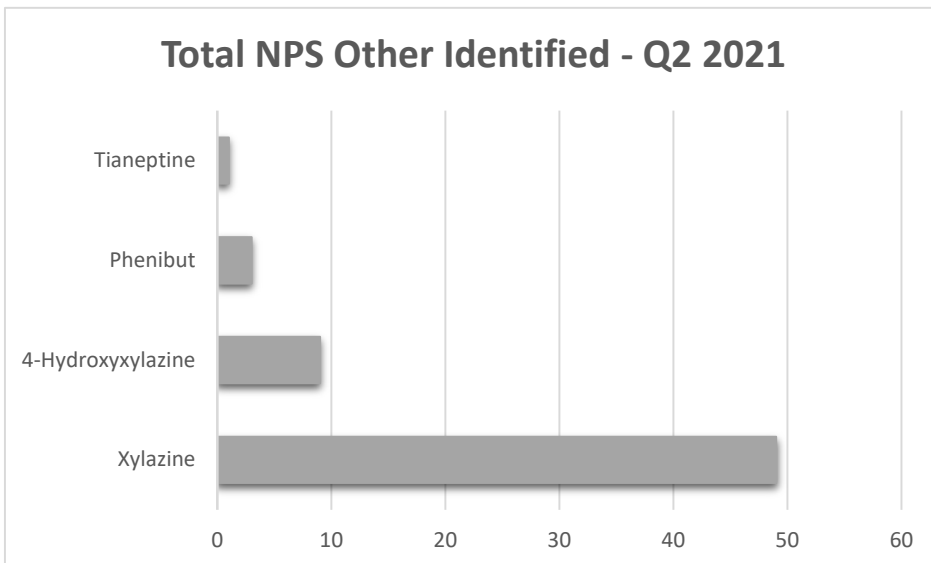


Figure 6. Aegis began offering testing for tianeptine, phenibut and xylazine in the second quarter of 2021. While testing has only been available for a few months, one of these analytes was detected in 62 samples in the months of May and June combined. Xylazine, which is approved as a veterinary tranquilizer, has been most often detected in Aegis samples. It is a common adulterant found in heroin and fentanyl, sometimes referred to as “tranq-dope”, and is increasingly identified in overdose deaths involving illicit opioids. Tianeptine is used as an approved antidepressant elsewhere in the world but is only available in the US as a supplement. It is typically abused for its action at opioid receptors. Phenibut is also approved outside of the US but is used in the US as a supplement for its action at GABA receptors, with a similar action as benzodiazepines.