



## Clinical Update: January 2020

### Kratom: New Year, New Insights

**Q:** What is the latest information Aegis can provide about kratom? What other drugs are most commonly present in urine specimens testing positive for kratom?

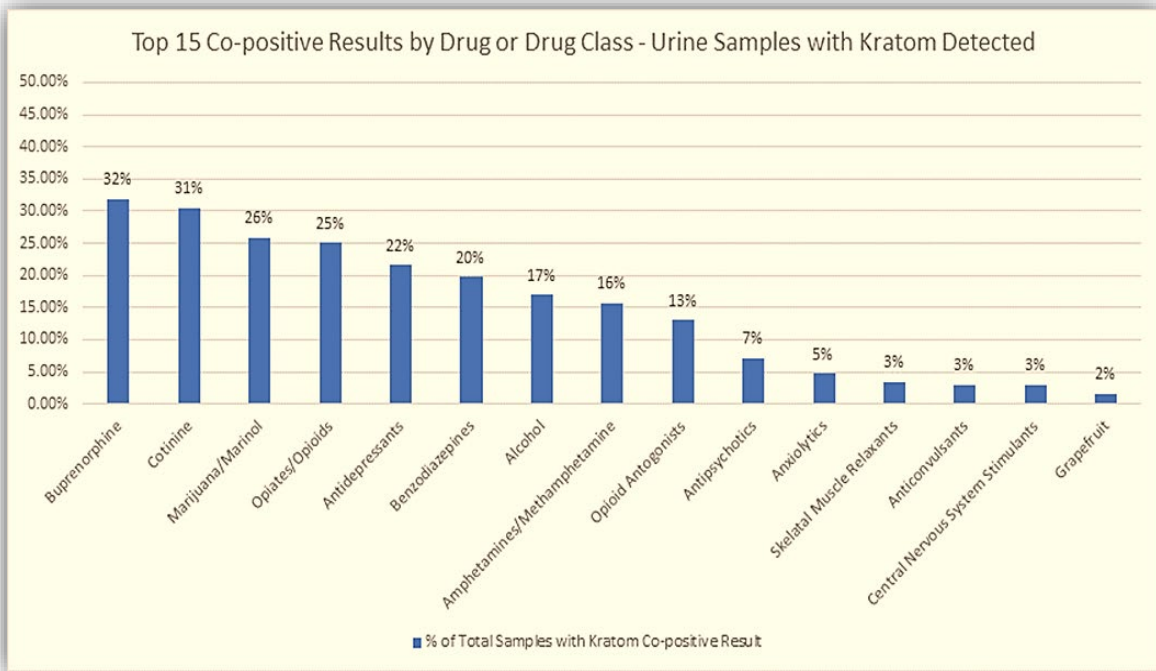
**A:** Kratom availability is becoming increasingly widespread. Most states allow the sale and use of kratom. Research continues to better understand use prevalence, complications and deaths from use, and associated drug use trends. Aegis is actively monitoring other positive test results in kratom-positive specimens.

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The medical community and the general population are becoming increasingly aware of the wide-spread availability of kratom.<sup>1-3</sup> Even though kratom is currently flagged by the United States Drug Enforcement Agency as a drug of concern, most states do not prohibit selling or purchasing the substance as a dietary supplement, as long as no claims are made about its ability to cure or treat any disease.<sup>1-2</sup> Some patients are actively pursuing self-care with kratom in place of or in addition to FDA-approved pharmacotherapy for pain or substance use disorder.<sup>1-3</sup> However, due to the increasing popularity of kratom and availability of kratom detection in urine drug testing, Aegis Sciences Corporation is taking a closer look at trends of use and co-positivity rates with other prescription and illicit drugs. For more information about the history and effects of kratom, please reference our previously published clinical update: [Kratom Correlation](#).

Online drug forums and other sources describe a wide range of use patterns by patients who report occasional use, all the way up to multiple doses per day.<sup>4</sup> The American Kratom Association has estimated that more than 1 million people in the United States may be using kratom.<sup>1</sup> With additional emphasis on conservative opioid prescribing and the wide array of kratom marketing, many patients may be seeking out kratom as an alleged opioid alternative or to mitigate opioid withdrawal.<sup>1-3</sup> Some patients may believe kratom is undetectable by drug testing and are seeking an alternative to commonly-detected drugs in hopes of passing a drug test.<sup>2</sup>

A better understanding of the types of patients who are using kratom may be derived by reviewing additional co-occurring positive results. A recent analysis of approximately 1500 samples tested by Aegis Sciences Corporation revealed positive results for kratom, with buprenorphine, cotinine (metabolite of nicotine), and marijuana being the top three co-positive results. Of note, this analysis did not consider buprenorphine prescription information.



This is somewhat different from a 2017 study by Smith and Lawson, which reviewed lifetime substance use, past 12-month substance use, and drug preferences among kratom users and non-users.<sup>2</sup> Kratom users in this study showed greater preference for heroin and amphetamines. These individuals also had higher rates of non-prescribed Suboxone® (buprenorphine/naloxone) use and indicated a greater preference for Suboxone® versus non-kratom users, which echoes findings in Aegis-tested samples. The variation in co-positive results and substance preferences may also be influenced by the type of benefit that patients are seeking from kratom and any previous history of substance use. Kratom-positive samples tested by Aegis come from a variety of patient populations and may not all fit the inclusion criteria outlined in the Smith and Lawson study.

The Smith and Lawson study was published in the journal *Drug and Alcohol Dependence* and reviewed a sample of 500 patients (58.4% men, average age 35 years) who were enrolled in a treatment program and had a history of substance use disorder.<sup>2</sup> Approximately 20% of the patients reported lifetime kratom use. Those who reported use were younger than non-users, were predominantly single and most often had a college degree. Also, more kratom users reported homelessness and had more treatment episodes in their past medical history.

Interestingly, fewer kratom users were on probation or parole; however, they did report more separate incarceration instances with a similar overall number of years incarcerated as compared to non-users. Kratom users reported higher rates of mental health-related problems than non-users.<sup>2</sup> This fits with known statistics regarding the positive correlation between substance abuse and psychiatric conditions. Approximately half of those with a substance use disorder will experience some form of mental illness in their life, and about 18% of patients with mental illness also have a substance use disorder.<sup>5-7</sup>

Mitragynine has agonist activity at mu-opioid receptors which may lead to some degree of dependence.<sup>3</sup> There have also been reports of neonatal abstinence syndrome and withdrawal symptoms associated with kratom exposure. Reports to the National Poison Data System in which kratom was the only drug exposure reported describe serious opioid toxicities such as seizures, agitation, and death. Further research continues to ascertain the prevalence of kratom use and kratom-related toxicities and deaths in the United States. It is evident that kratom is not a benign substance, and further patient counseling may be warranted when kratom is detected in a urine specimen.

**Please call our client services team at 1-800-533-7052 if you require additional information.**

**NOTICE:** The information above is intended as a resource for health care providers. Providers should use their independent medical judgment based on the clinical needs of the patient when making determinations of who to test, what medications to test, testing frequency, and the type of testing to conduct.

#### **References:**

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5. Ross S, Peselow E. Co-occurring psychotic and addictive disorders: neurobiology and diagnosis. *Clin Neuropharmacol*. 2012;35(5):235-243. doi:10.1097/WNF.0b013e318261e193.
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