ASSEMBLY THIRD READING
AB 1088 (Bains)
As Amended April 21, 2025
Majority vote

SUMMARY

Adds kratom products and products containing 7-hydroxymitragynine (7-OH products), as defined, to the Sherman Food, Drug, and Cosmetic Law (Sherman Law). Prescribes specified quantities of alkaloids present in kratom products and 7-OH products. Prohibits the sale of kratom products and 7-OH products to those under 21 years of age. Requires the packaging of kratom products and 7-OH products to be child resistant and prohibits the sale and manufacture of a kratom product or 7-OH product that is attractive to children.

COMMENTS

Background. Kratom (Mitragyna speciosa) is a tree in the coffee family, found in Thailand and neighboring countries. These leaves are crushed and then smoked, brewed with tea, or placed into gel capsules. Kratom has a long history of use in Southeast Asia, where it is commonly known as thang, kakuam, thom, ketum, and biak. Traditionally, in Southeast Asia, people have chewed its leaves or made them into a tea that is used to fight fatigue and improve work productivity. Kratom has also traditionally been used during religious ceremonies and to treat symptoms such as pain and diarrhea, sometimes as a substitute for opium. In this bill, kratom leaf refers to the leaf of a kratom plant. The alkaloid content refers to the sum of the various alkaloids that are present in the leaf material that contribute the effect of the plant, including mitragynine, paynantheine, speciogynine, speciociliatine, and 7-hydroxymitragynine.

Effects of kratom usage. Kratom leaves contain two major psychoactive ingredients, mitragynine and 7-hydroxymitragynine, which interact with opioid receptors in the brain. People who use kratom have reported both stimulant-like effects (increased energy, alertness, rapid heart rate) and effects like those of opioids and sedatives (relaxation, pain relief, confusion). Per the United States Drug Enforcement Administration (DEA), consumption of kratom tree leaves produces a stimulant effect in low doses, and a sedative effect in high doses. Consumption of kratom in high doses can also lead to psychotic symptoms, and psychological and physiological dependence.

According to the National Institutes of Health Center for Complementary and Integrative Health (NCCIH), people may use kratom to try to overcome opioid addiction, kratom itself may have the potential to be addictive. People have reported using kratom to manage opioid withdrawal symptoms and cravings, and researchers are studying whether kratom is helpful for this purpose. However, kratom has not been shown to be safe and effective for this or any other medical use. Regular kratom users may experience withdrawal symptoms if they stop using it.

NCCIH notes that a variety of side effects of kratom have been reported. They include mild effects, such as nausea, constipation, dizziness, and drowsiness, and rare but serious effects such as seizures, high blood pressure, and liver problems. Fatal overdoses from kratom alone appear to be extremely rare. The use of kratom in combination with other drugs has been linked to deaths and severe adverse effects such as liver problems. More research is needed on drug interactions involving kratom.

NCCIH highlights that the long-term effects of kratom use are not well understood. Harmful contaminants such as heavy metals and disease-causing bacteria have been found in some kratom products.

According to the DEA, the abuse of kratom has increased markedly in recent years. Several cases of psychosis resulting from use of kratom have been reported, where individuals addicted to kratom exhibited psychotic symptoms, including hallucinations, delusion, and confusion.

Research on kratom use. According to a 2019 study titled, *"Current perspectives on the impact of Kratom use",* the national poison center reporting database documented 1,807 calls related to kratom exposure from 2011 to 2017. The Centers for Disease Control and Prevention analyzed data on unintentional and undetermined opioid overdose deaths from the State Unintentional Drug Overdose Reporting System. Kratom was detected on postmortem toxicology testing in 152 cases of 27,338 overdose deaths from data collected from 11 states from July 2016 to June 2017 and 27 states from July 2017 to December 2017. Kratom was identified as the cause of death by a medical examiner in 91 of the 152 kratom-positive deaths, but was the only identified substance in just seven of these cases. Presence of additional substances in these seven kratom-only cases cannot be ruled out. The co-occurring substances in the 91 cases where kratom was identified as the cause of death include fentanyl (including analogs), heroin, benzodiazepines, prescription opioids, cocaine, and alcohol. Multi-substance exposures involving kratom, predominantly in combination with opioids, are associated with a greater odds ratio of admittance to a health care facility and occurrence of a serious medical outcome when compared to kratom-only exposure.

These data highlight that kratom use is associated with a complex population of poly-drug users and especially with opioid use disorder. The data further suggests that a deeper investigation into the toxicity of kratom is needed, especially focusing on drug–herb interactions.

Please see the Assembly Health Committee analysis for a more detailed discussion of kratom at a national level and in other states.

Kratom in California. Some estimates show that nearly 25% of all kratom sales in the United States are in California. In March 2024, the city of Newport Beach approved an ordinance to prohibit the sale and distribution of kratom. The City of San Diego and Oceanside banned the use and sale of kratom in 2016. It has been reported that some manufacturers have created stronger and more potent kratom concentrates to put into their products. According to a 2023 study titled, "*Kratom availability in California vape shops,"* kratom was available in two-thirds of vape-and-smoke shops throughout California.

Attractiveness to children. The Kratom Consumer Advisory Council (KCAC) put out a position statement in October 2024 highlighting their concerns regarding the marketing of kratom products that may appeal to children intentionally or unintentionally. KCAC noted that some products are sold in forms resembling popular candies, such as gummies, lollipops, chocolate bars, and cookies. These products often feature bright colors, mascots, and flavors that could attract young children or be mistaken for regular candy. KCAC noted that the ease of access to these products and their resemblance to well-known candy items raise concerns about accidental ingestion by younger children. This bill prohibits kratom products sold or distributed from being attractive to children.

What is 7-OH? According to a 2019 study titled, "*7-Hydroxymitragynine is an Active Metabolite of Mitragynine and a Key Mediator of its Analgesic Effects,"* mitragynine is the major active alkaloid found in kratom, and that it is converted to the much more potent mu-opioid receptor agonist 7-OH in the liver. The study found that brain concentrations of 7-OH are sufficient to explain most or all of the opioid-receptor-mediated analgesic activity of mitragynine. At the same time, mitragynine was found in the brains of mice at very high concentrations relative to its opioid receptor binding affinity, suggesting that it does not directly activate opioid receptors. The results suggest a metabolism-dependent mechanism for the analgesic effects of mitragynine. This bill prohibits the sale of a kratom product or 7-OH product with a level of 7-hydroxymitragynine that is greater than 2% of the total kratom alkaloids in the product.

According to the Author
As a physician specializing in addiction treatment, I have grown increasingly concerned about the use of Kratom and especially its derivative 7-OH. We have reached the point that state and federal regulators can no longer ignore these products. Until the federal government does its job, California must act to protect our residents and especially our children. AB 1088 is a reasonable first step to age gate these products as we consider additional regulatory protections to put in place.

Arguments in Support
The California Narcotic Officers' Association (CNOA) supports this bill and writes, synthesized 7-hydroxymitragynine (7-OH) products, referred to as "legal morphine," are developed from kratom and have become 30 times more potent than morphine. CNOA continues that 7-OH produces opioid-like effects and can cause fatal overdoses, making their abuse a serious public health and safety concern. CNOA continues other adverse effects of 7-OH include psychotic symptoms, and psychological and physiological dependence. CNOA notes that natural kratom products generally contain no more than 66% of mitragynine as the main alkaloid and 2% of 7-hydroxymitragynine in the alkaloid fraction of the extract. CNOA continues that a number of states including Arizona, Oklahoma, Texas, and Utah have enacted bans on synthetic 7-OH exceeding 2% of total alkaloid content in products. CNOA notes that in California, natural kratom products remain unregulated and unrestricted. CNOA states that any one of any age can purchase kratom and synthesized 7-OH products. CNOA states that this addresses safety concerns about natural kratom and 7-OH products by implementing some common-sense measures to protect the public and our youth by establishing a: minimum age of 21 to purchase; requirement for child-resistant packaging; ban on marketing that appeals to children; limit on 7-OH content not to exceed 2% of the product's total alkaloid content. CNOA concludes that AB 1088 will protect better consumers and our youth from dangerous products that have resulted in addiction and death in our state and across the country.

Arguments in Opposition
The Holistic Alternative Recovery Trust (HART) opposes this bill on the grounds that a cap of 2% of the total alkaloids allowed in a kratom leaf is so de minimis as to be meaningless when manufacturing a 7-OH product. HART directs readers to their April 1, 2025 letter where they expanded on their concerns. Highlights from the previous letter: HART's belief that exploring the potential applications of 7-OH could contribute to discussions on addressing opioid misuse and strategies; evolving research on 7-OH; and concerns that the percentage cap is a fatally-flawed measure noting that bad actor manufacturers who wish to create a high mg 7-OH product can easily adhere to the percentage cap and add the corresponding amount of mitragynine, thereby releasing a dangerous but compliant product. HART concludes by stating that it hopes

that a realistic approach to regulating 7-OH that is focused on the potential benefits to California consumers.

FISCAL COMMENTS

According to the Assembly Committee on Appropriations, the California Department of Public Health (DPH) estimates annual General Fund costs of $2.63 million beginning in fiscal year (FY) 2026-27 for 13 full time staff positions to conduct inspections, ensure compliance, conduct investigations, test kratom products, and compile and provide educational materials to industry. DPH anticipates additional General Fund costs of $829,000 in FY 2026-27 for initial peace officer training and laboratory supplies for testing.

VOTES

ASM HEALTH: 16-0-0
YES: Bonta, Chen, Addis, Aguiar-Curry, Rogers, Carrillo, Flora, Mark González, Krell, Patel, Patterson, Celeste Rodriguez, Sanchez, Schiavo, Sharp-Collins, Stefani

ASM ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: 7-0-0
YES: Connolly, Ellis, Bauer-Kahan, Castillo, Lee, McKinnor, Papan

ASM APPROPRIATIONS: 14-0-1
YES: Wicks, Arambula, Calderon, Caloza, Dixon, Elhawary, Fong, Mark González, Hart, Pacheco, Pellerin, Solache, Ta, Tangipa
ABS, ABST OR NV: Sanchez

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CONSULTANT: Eliza Brooks / HEALTH / (916) 319-2097 FN: 0000745