



INFORMATION BULLETIN

APRIL 2003

U. S. D E P A R T M E N T O F J U S T I C E

Salvia *divinorum*

The distribution and abuse of *Salvia divinorum* or *S. divinorum*, a plant that contains the hallucinogen Salvinorin A, are becoming an increasing concern for law enforcement officials in the Northeast, Midwest, and Pacific regions of the country. Neither *Salvia divinorum* nor Salvinorin A is federally regulated in the United States or controlled in any other country except Australia, which adopted controlling legislation in 2002. Thus, *Salvia divinorum* is openly distributed via Internet sites and “head shops” located in California, Hawaii, Missouri, New York, Washington, and Wisconsin.

Background

Salvia divinorum (pronounced SAL-vee-ah dee-vin-OR-um)—frequently referred to as “Ska Maria Pastora” and “Diviner’s Sage”—is a perennial herb in the mint family that resembles sage. The plant is native to certain areas of the Sierra Mazateca region of Oaxaca, Mexico, but can be grown in any humid, semitropical climate as well as indoors. Within the United States, the plant primarily is cultivated in California and Hawaii. It grows in large clusters and reaches over 3 feet in height.

Salvinorin A is the active component of *Salvia divinorum*. Other plants with similar properties include *Cannabis sativa*, which contains tetrahydrocannabinol, the primary

psychoactive compound in marijuana and *Artemisia absinthium*, known as wormwood and used to make absinthe. At this time there is no accepted medical use for *Salvia divinorum*; however, Mazatec Indians in Mexico use the plant in traditional healing ceremonies and to induce visions. The manner in which *Salvia divinorum* interacts with the brain to produce its hallucinogenic effect remains unclear.

Abuse

Abusers ingest *Salvia divinorum* using various methods of administration. Like tobacco, *Salvia divinorum* can be smoked or chewed. It also can be brewed and ingested as a tea. When converted into a liquid extract, *Salvia divinorum* also can be vaporized and inhaled. Immediately after ingesting the drug, abusers typically experience vivid hallucinations—including out-of-body experiences, sensations of traveling through time and space, and feelings of merging with inanimate objects. Some abusers experience intense synesthesia, an effect that causes the abusers’ senses to become confused. For example, abusers may describe hearing colors or smelling sounds. The hallucinogenic effects generally last 1 hour or less unlike other hallucinogens like LSD and PCP. High doses of the drug can cause unconsciousness and short-term memory loss.



Salvia divinorum leaf.

The long-term effects of *Salvia divinorum* abuse are unknown, as medical studies undertaken to examine the drug's physiological effects have focused only on short-term effects. However, information provided by abusers indicates that the negative long-term effects of *Salvia divinorum* may be similar to those produced by other hallucinogens such as LSD (lysergic acid diethylamide) including depression and schizophrenia. Some abusers also indicate that long-term abuse can cause hallucinogen persisting perception disorder, or "flashbacks." Numerous individuals report experiencing negative effects during their first experience with *Salvia divinorum* and indicate that they would not use it a second time. Some others report that the drug caused them to become introverted and sometimes unable to communicate clearly.

National surveys conducted to estimate rates of drug abuse do not include questions regarding abuse of *Salvia divinorum*. Thus, current levels of abuse are difficult to determine. Most likely, the abuser population is limited and primarily consists of young adults and adolescents who frequent "head shops" or have been influenced by Internet sites promoting the drug. The percentage of first-time users who become regular abusers of the substance also is difficult to determine; however, one Internet distributor indicated that only 1 in 10 customers places a repeat order for the drug.

Adolescent Abuse of *Salvia divinorum* in St. Peters, Missouri

Law enforcement officials in St. Peters, Missouri, indicate that *Salvia divinorum* abuse by young people in that area is extremely high. Abuse levels among youths are so high that St. Peters became the first community to enact a local ordinance designed to regulate the distribution of *Salvia divinorum*. The ordinance—enacted in January 2003—makes it unlawful "for any person to engage in the sale or distribution of *Salvia divinorum* a/k/a Salvinorin A, or any variation thereof, to an individual who is seventeen years of age or younger." The ordinance does not apply to the distribution of *Salvia divinorum* by a family member on private property. Violations of the city ordinance are punishable by a \$25 fine for the first offense, \$100 for the second offense, and \$250 for the third and subsequent offenses. According to the city's Board of Aldermen, enactment of the ordinance was necessary due to high rates of abuse by adolescents and concerns that the herb poses a threat to the health, safety, and welfare of residents of St. Peters.

Availability

Salvia divinorum most often is distributed via the Internet and at some "head shops" in California, Hawaii, Missouri, New York, Washington, and Wisconsin. Prices for *Salvia divinorum* vary widely but are generally higher for plants grown in Hawaii and Sierra Mazateca (Central Mexico). An ounce of *Salvia divinorum* leaves sells for \$15 to \$120 while *Salvia divinorum* plants generally sell for \$20 to \$45 each. Liquid extract of *Salvia divinorum*—produced by crushing the leaves of the plants and using solvents to extract Salvinorin A—sells for \$110 to \$300 per ounce. Purchased primarily via the Internet, *Salvia divinorum* is transported to customers via package delivery services.

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Salvia divinorum plants.

Federal Legislation

The production, distribution, and abuse of *Salvia divinorum* or Salvinorin A currently are not federally regulated as the drug is not listed under Title 21 U.S. Code § 812 of the Controlled Substances Act. However, HR 5607 (the Hallucinogen Control Act of 2002)—introduced in Congress on October 10, 2002—contains provisions to regulate *Salvia divinorum* and Salvinorin A. This bill was not acted upon when the 107th Congress adjourned, but is expected to be reintroduced during the current session. In response to the introduction of legislation on *Salvia divinorum*, a group has formed to lobby Congress to fight any attempts to regulate the use or availability of *Salvia divinorum* and Salvinorin A in the United States.

Outlook

Increasing numbers of young adults and adolescents most likely will experiment with *Salvia divinorum* as the drug currently is unregulated and readily available via the Internet and “head shops.” *Salvia divinorum* most likely will not become widely abused at social events such as raves and dance parties. The drug often causes some individuals to become introverted, and abusers at such events tend to seek drugs that enhance social interaction such as MDMA (3,4-methylenedioxymethamphetamine, also known as ecstasy). Proposed federal legislation to control *Salvia divinorum* and Salvinorin A may impact its availability, as distributors may be hesitant to sell the drug openly.

Sources

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