

MICROFILM DIVIDER

OMB/RECORDS MANAGEMENT DIVISION

SFN 2053 (2/85) 5M



ROLL NUMBER

DESCRIPTION

2317

2007 SENATE JUDICIARY

SB 2317

2007 SENATE STANDING COMMITTEE MINUTES

Bill/Resolution No. **SB 2317**

Senate **Judiciary Committee**

☐ Check here for Conference Committee

Hearing Date: January 31, 2007

Recorder Job Number: 2432

Committee Clerk Signature

Mon & Lalber

Minutes: Relating to including salvia divinorum as a schedule I controlled substance.

Senator David Nething, Chairman called the Judiciary committee to order. All Senators were present. The hearing opened with the following testimony:

Testimony In Support of Bill:

Sen. Nething welcomed the students from Hazen.

Sen. Oehlke, Dist. #15 introduced the bill. I was not aware that this was a problem until I was approached by Sen. Christmann. Spoke of Att. #1 page 3 of 12. He reviewed 5 of 12 and some of the background of the drugs. This plant can be bought from many web sites.

Sen. Fiebiger asked if this plant in moderate doses could be regarded as a "spiritual" plant, like peyote. This is not something we will run into with this bill.

Sen. Randy Christmann, Dist. #33 (meter 6:30) Thanked all who were involved with bill. This bill is to be proactive to a potential problem. He spoke of a school supervisor approaching him on "concerning" activity at the school. Sen. Christmann spoke of the internet "advertising" the kids are looking at.

Justin Ingles, Social Studies Teacher, Hazen High School (meter 9:50) stated that when I was approached by my school superintendent in regards to this bill, I saw it as a two fold opportunity to my students. First, this would be a good example; how in our form of

government, all are welcomed in the ND legislature to speak. Second, upon research of this plant, I found out the dangers of this plant and how easy it was for a person to obtain.

Sen. Olafson was curious on how prevalent this is in ND? Most students have only “heard” about this. I do not think many would admit to anything out of concern.

Testimony in Opposition of the Bill:

None

Testimony Neutral to the Bill:

Howard Anderson, Board of Pharmacy – Referred to 5th page copy (marked 131) of ND Law. – Att #2 Discussed plants in the plant groups. Spoke of Aztec Indians usage and plant cultivation. This plant has no addictive qualities (like Meth) and would be compared to L.S.D.

Sen. Nelson had questions on other state laws and how its scientific name was chosen (meter 18:17) He recommended it be addressed as Salvia A.

Chief Jeff White (meter 19:47) gave further explanation of the science of the plant. If you pass this law we will enforce it as any other law

Sen. Nething asked Chief White his preference of listing the plant (meter 20:00) and **Sen. Lyson** asked how wide spread was he aware of a problem with the plant. One sample has been sent to the crime lab.

The committee discussed the amendment (meter 22:58) pertaining to the wording of the drug.

Senator David Nething, Chairman closed the hearing.

Sen. Nelson made the motion to Do Pass the amendment and **Sen. Marcellais** seconded the motion. All members were in favor and the motion passes.

Sen. Olafson made the motion to Do Pass as amended SB 2317 and **Sen. Lyson** seconded the motion. All members were in favor and the motion passes.

Carrier: **Sen. Nelson**

Senator David Nething, Chairman closed the hearing.

Date: 1-31-07

Roll Call Vote # 1

2007 SENATE STANDING COMMITTEE ROLL CALL VOTES

BILL/RESOLUTION NO. 2317

Senate _____ Judiciary _____ Committee _____

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Pass Amendment for name of Plant

Motion Made By Sen. Nelson Seconded By Sen. Marcellais

Senators	Yes	No	Senators	Yes	No
Sen. Nething	/		Sen. Fiebiger	/	
Sen. Lyson			Sen. Marcellais		
Sen. Olafson			Sen. Nelson		

Total Yes 6 No 0

Absent 0

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Date: 1-31-07

Roll Call Vote # 2

2007 SENATE STANDING COMMITTEE ROLL CALL VOTES

BILL/RESOLUTION NO. 2317

Senate _____ Judiciary _____ Committee _____

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Pass As Amended

Motion Made By Sen. Olafson Seconded By Sen. Lyson

Senators	Yes	No	Senators	Yes	No
Sen. Nething	✓		Sen. Fiebiger	✓	
Sen. Lyson	✓		Sen. Marcellais	✓	
Sen. Olafson	✓		Sen. Nelson	✓	

Total Yes 6 No 0

Absent 0

Floor Assignment Sen. Nelson

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2317: Judiciary Committee (Sen. Nething, Chairman) recommends AMENDMENTS AS FOLLOWS and when so amended, recommends **DO PASS** (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). SB 2317 was placed on the Sixth order on the calendar.

Page 1, line 7, after "divinorum" insert ", salvinorin A, or any of the active ingredients of salvia divinorum"

Renumber accordingly

2007 HOUSE JUDICIARY

SB 2317

2007 HOUSE STANDING COMMITTEE MINUTES

Bill/Resolution No. SB 2317

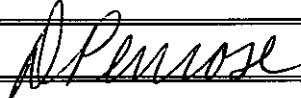
House Judiciary Committee

☐ Check here for Conference Committee

Hearing Date: 3/12/07

Recorder Job Number: 4829

Committee Clerk Signature



Minutes:

Chairman DeKrey: We will open the hearing on SB 2317.

Sen. Dave Oehlke: Sponsor (see attached User's Guide). We are asking that salvia divinorum be placed on the controlled substance list. I didn't know much about salvia divinorum until I was asked to be a sponsor on this and I went on the internet to do some research. You'd be amazed. All you have to do is put in those two little words and if you spell them correctly, you're going to be hit with some amazing websites. This particular user guide, that I made copies of for you, is that this is not a recreational drug. On page 3-24 you will notice that at the very bottom where it has an arrow, it says never, ever attempt to drive under the influence of salvia. This seems like a simple and innocuous plant and believe me I've had emails from people saying this is not a problem but, if you just read this user guide, you will notice it is. I would point out that salvia divinorum is not habit forming, but then as you get down to page 5, it says that you never use this in a public environment because people often become immersed in dream-like inner visionary state of awareness. You should always have a sober sitter present when you are using strong doses, and then it goes through and explains how to use this, you can chew the leaves or make a tea out of it, smoke it, or if you know the proper website, you can find concentrated elements in pill form and tobacco form that you can

order on line and pay good money for rather than grow your own plant. But the long and the short of it is, this probably should be on the controlled substance list. Down on page 13 and 14, it talks about the role of the sitter. I thought that was very interesting, because the sitter is supposed to keep the person safe from falls, head banging, sharp objects, walking into walls, etc., to speak softly and gently to them and keep dangerous objects away from them. When I testified on this over in Senate Judiciary, there was a superintendent from one of the schools in the state, along with some students that were in the room and they did testify that this is available and has been used in the way people will use it, not for a medicinal purpose at all.

Rep. Delmore: Does anyone use this for legitimate reasons, is it sold in any of our nature stores, or do you have to order it online.

Sen. Dave Oehlke: I'm not aware that it is sold in any nature stores. It can be ordered online and I understand that there are studies done by somebody, whether they were doctors or not I don't know, to help maybe for medicinal purposes to get people off other more harmful drugs, perhaps, or to trade this experience for something else. That's all I know about that.

Rep. Delmore: If it is sold online, how effective do you think we can be in outlawing it.

Sen. Dave Oehlke: The beauty of this, the way it is written is, it isn't just the plant, there happens to be a pharmacist at the Judiciary testimony in the Senate and he got up and testified that by having the generic name in there and the drug related name, so that the salvia and its ingredients helps solve that problem, because it would make it illegal to possess it in any form.

Rep. Kretschmar: Do you know if this drug is on the federal controlled substance list.

Sen. Dave Oehlke: I don't know that for sure. There may be someone here that can testify to that.

Rep. Griffin: How many other states currently ban this substance, are there any other states.

Sen. Dave Oehlke: There are states that control it, at this point, I don't have the name in front of me that information was on the website as well. But there are some that do control it, Wisconsin is one that I know for sure banned it.

Rep. Charging: Is this raised in ND, can we see a sample. I don't know what you are talking about.

Sen. Dave Oehlke: It is a plant, it is called a mint or something, and it doesn't look like anything too exciting. It is indigenous more to the Southwest area and in the Mexico area, which is where it originated from. I don't think it is a typical houseplant, but it can be. It looks fairly harmless.

Rep. Charging: How did you find out about it.

Sen. Dave Oehlke: I was contacted by another Senator, Sen. Christmann, and there were some folks in his area that were very concerned about it.

Rep. Charging: There are several varieties of sage and in my background, when we talk about sage and/or derivatives of sage, we use them in Native American uses and practices.

Chairman DeKrey: Thank you. Further testimony in support.

Sen. Randy Christmann: Sponsor (see attached information from Wikopedia). The handout is from a webpage, but there are many web pages on the internet. On page 9, it mentions Missouri, Louisiana, Tennessee and Delaware where it has been regulated. The bill came from a school principal in my district who contacted me. It is a problem that is starting to develop and these plants are kind of a decorative houseplant that you can probably buy or at least order through a greenhouse and could be grown in your own home even. People are now figuring out how it can be used as a drug and is being used. We want to stop this before it becomes a big fad and someone will get hurt. It apparently has some sort of LSD type effect

on people; especially if they use it and are out driving, etc. We thought this was no real good reason or need for this plant, and we want to take care of it before it becomes a big fad.

Rep. Delmore: Are these plants grown in North Dakota, or is there a greenhouse here in Bismarck, where we could go over and look at one.

Sen. Randy Christmann: I don't know, apparently they are getting it somewhere.

Rep. Charging: I understand it is grown in Nevada and everywhere you go you see where sage is used. I am just curious is it grown here.

Sen. Randy Christmann: That is why I went through and printed out this attachment. I was trying to find out whether it was used in any centuries old traditions in the state here, and I never found any reference to that, so I really don't think that's an issue. It just seems like it is a houseplant that they figured out works as a drug.

Rep. Charging: I am not an expert, but sage is practically used daily in the Native American culture.

Sen. Randy Christmann: I realize that, that's why I checked into that. I never saw any reference to this. It mentions a lot of information on it but I never found a connection to any Native American cultures.

Rep. Koppelman: What would be the effect of adding this to the schedule 1, as a controlled substance, would it be illegal to possess, what would be the effect.

Sen. Randy Christmann: It would be illegal to use or possess.

Chairman DeKrey: Thank you. Further testimony in support. Testimony in opposition or neutral.

Howard Anderson, Executive Director of the Board of Pharmacy: We are neutral. We have the responsibility for the controlled substances act and this scheduling is not our idea and we aren't for or against it. We did suggest some amendments in the Senate side in order to

include the active ingredients if you want it on the schedule. When you asked some questions about what states and so forth, there is a schedule. There are some other states that schedule it. The federal government uses this statement right now, "Salvia divinorum, salvinorin A, and divinorum A, are not listed in the controlled substances act. If sold for human consumption, salvia may be subject to control under the analog statutes, because if it is functional for chronological similarities to other seeds, hallucinogens like tetrahydrocannalvia". It isn't scheduled federally in the US yet, in a few states, there are actually a few states that have scheduled it and have exempted it if it is grown in your house or as a houseplant. I'm not sure that is necessary. The plant is really a cultural, that is, the shamans from the old Aztec religion have been cultivating it for hundred, maybe thousands of years. There are very few wild areas where it grows; southern Mexico is one of the places where the literature says they think they may be able to find some wild plants, but most of it has been cultivated over the years and propagated by the people that use it for their medicinal purposes. So it is available, because people grow it. I think BCI indicated on the Senate side, that they had one sample at the state lab.

Rep. Kretschmar: Is it recognized by modern medicine that it has some benefit for certain diseases.

Howard Anderson: No, as far as modern medicine, I think the shaman use it in some of their ritualistic practices. I would be awfully surprised if it grows anywhere in the US, maybe in Mexico.

Rep. Delmore: Why is it in schedule 1, there are five schedules.

Howard Anderson: Schedule 1 is those that have no accepted medical use in the United States. This would fall into that category. Schedule 2, 3, 4 and 5 are drugs with various addiction potential but have some use in medicine in the United States.

2007 HOUSE STANDING COMMITTEE MINUTES

Bill/Resolution No. SB 2317

House Judiciary Committee

☐ Check here for Conference Committee

Hearing Date: 3/14/07

Recorder Job Number: 5023

Committee Clerk Signature



Minutes:

Chairman DeKrey: We will take a look at SB 2317. What are the committee's wishes.

Rep. Griffin: I move a Do Pass.

Rep. Koppelman: Second.

13 YES 0 NO 1 ABSENT

DO PASS

CARRIER: Rep. Heller

Date: 3/14/07
Roll Call Vote #: 1

2007 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2317

House JUDICIARY Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Pass

Motion Made By Rep. Giffin Seconded By Rep. Koppelman

Representatives	Yes	No	Representatives	Yes	No
Chairman DeKrey	✓		Rep. Delmore	✓	
Rep. Klemin	✓		Rep. Griffin	✓	
Rep. Boehning	✓		Rep. Meyer	✓	
Rep. Charging			Rep. Onstad	✓	
Rep. Dahl	✓		Rep. Wolf	✓	
Rep. Heller	✓				
Rep. Kingsbury	✓				
Rep. Koppelman	✓				
Rep. Kretschmar	✓				

Total (Yes) 13 No 0

Absent 1

Floor Assignment Rep. Heller

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE (410)
March 14, 2007 10:44 a.m.

Module No: HR-48-5266
Carrier: Heller
Insert LC: . Title: .

REPORT OF STANDING COMMITTEE

SB 2317, as engrossed: Judiciary Committee (Rep. DeKrey, Chairman) recommends DO PASS (13 YEAS, 0 NAYS, 1 ABSENT AND NOT VOTING). Engrossed SB 2317 was placed on the Fourteenth order on the calendar.

2007 TESTIMONY

SB 2317

H# # /

1-31-07

Salvia divinorum

From Wikipedia, the free encyclopedia

Salvia divinorum, also known as **Diviner's Sage**^[2], **Magic Mint**^[2], **ska María Pastora**^[3], **Sally D**, or simply **Salvia** (although the genus name is shared among many plants), is a powerful psychoactive plant, a member of the sage genus and the Lamiaceae (mint) family^[4]. It has long been used as an entheogen by the indigenous Mazatec shamans for healing during spirit journeys^[1]. The plant is found in isolated, shaded and moist plots in Oaxaca, Mexico^[1]. It is thought to be a cultigen^[5].

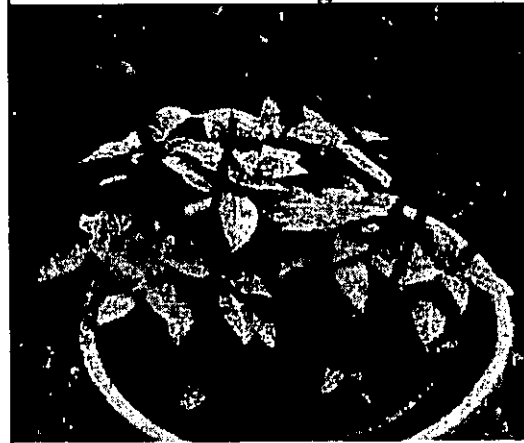
The Latin name *Salvia divinorum* literally translates to "Sage of the seers".^[6] The genus name *Salvia* is derived from the Latin *salvare*, meaning "to heal" or "to save".^[7]

The primary psychoactive constituent is a diterpenoid known as *salvinorin A*.^{[8][9]}

Contents

- 1 History
- 2 Botany
- 3 Chemistry
- 4 Ingestion
 - 4.1 Traditional methods
 - 4.2 Modern methods
 - 4.3 Attainment of effect
 - 4.4 Duration of effect
- 5 Experience
 - 5.1 Expression
- 6 After effects
 - 6.1 Short term
 - 6.2 Longer term
- 7 Scientific studies
- 8 Controversy
- 9 Legal status
- 10 See also
- 11 Citations
- 12 References
 - 12.1 Media stories
- 13 External links
 - 13.1 Botany
 - 13.2 Law
 - 13.3 Forums

Diviner's sage



Three well established *Salvia divinorum* plants.

Scientific classification

Kingdom: Plantae
 Division: Magnoliophyta
 Class: Magnoliopsida
 Order: Lamiales
 Family: Lamiaceae
 Genus: *Salvia*
 Species: *S. divinorum*

Binomial name

Salvia divinorum

Epling & Játiva^[1]

History

Salvia divinorum was first recorded in print by Jean Basset Johnson in 1939 as he was studying Mazatec shamanism^[10]. R. Gordon Wasson later documented its usage and reported its effects through personal testimonials^[11]. It was not until the 1990s that the psychoactive mechanism was identified by a team led by Daniel Siebert^[12].

The history of the plant is not known, but there are three possibilities as to its origin. Since it is found in one, small area and only one indigenous group use it, it is either native to this area, is a cultigen of the Mazatecs or is a cultigen of another indigenous group.^[6] Wasson theorized that this plant was the mythological pipilzintzintli, the "Noble Prince" of the Aztec codices.^[3] However, this theory is not without dispute. The Aztecs were extremely knowledgeable in plant identification, and their records report that *pipilzintzintli* has both male and female varieties. *Salvia divinorum*, however, is monoecious, meaning it produces flowers of both sexes on a single plant. Skeptics of this theory report that the Aztecs would have known the difference between male and female flowers. Wasson gains validity, however, as a number of Aztec historical accounts classify plants as male or female in a metaphorical, rather than botanically anatomical manner.



Flowering *Salvia divinorum*

Botany

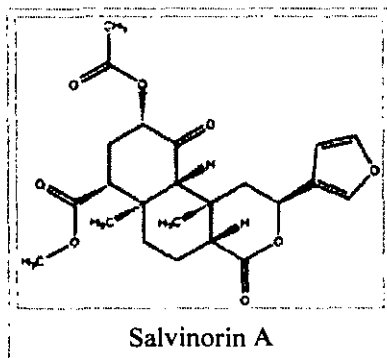
Unlike other species of salvia, *Salvia divinorum* produces few seeds, and those seldom germinate. For an unknown reason, pollen fertility is reduced. There is no active pollen tube inhibition within the style, but some event or process after the pollen tube reaches the ovary is aberrant^[13]. Partial sterility is often suggestive of a hybrid origin, although no species have been recognized as possible parent species. The ability to grow indistinguishable plants from seeds produced by self pollination also weakens the hybrid theory of origin, instead implying inbreeding depression, or an undiscovered incompatibility mechanism. The plant is mainly propagated by cuttings or layering. Although isolated strands of *S. divinorum* exist, these are thought to have been purposely created and tended by the Mazatec people. For this reason, it is considered a true cultigen, not occurring in a wild state.^[5]

All known specimens are clones from a small number of collected plants. Two strains are in major circulation: the Wasson/Hofmann strain, obtained upon request from a Mazatec shaman in Oaxaca in 1962, and the Blosser ('Palatable') strain, obtained around 1980. The 'Palatable' strain is said to have a more acceptable taste than the Wasson/Hofmann strain, although most reports suggest that there is little difference.

Additional 'commercial' strains are in circulation, but all seem to be similar in potency, effect, and growth. The numerous different names that can be found have more to do with marketing than with the formal identification of botanically distinct strains.

Chemistry

For more details on this topic, see *Salvinorin A*.



The active constituent is a *trans*-neoclerodane diterpenoid known as **Salvinorin A**, chemical formula $C_{23}H_{28}O_8$ ^[14]. Unlike other known opioid-receptor ligands, salvinorin A is not an alkaloid — it does not contain a basic nitrogen atom^[15].

Salvinorin A is the most potent naturally-occurring psychoactive compound known.^[16] It is active at doses as low as 200 μ g.^{[12][14]} Recent research has shown that salvinorin A is a potent and selective κ (kappa) opioid receptor agonist.^[14] It has been reported that the effects of salvinorin A in mice are blocked by kappa opioid receptor antagonists^[17]. This makes it unlikely that another mechanism contributes independently to the compound's effects.

Salvinorin A is unique in that it is the only naturally occurring substance known to induce a visionary state via this mode of action. Salvinorin A has no actions at the 5-HT_{2A} serotonin receptor, the principal molecular target responsible for the actions of classical hallucinogens.^[18]

Salvinorin's potency should not be confused with toxicity. Rodents chronically exposed to dosages many times greater than those to which humans are exposed did not show signs of organ damage.^[19]

Many other terpenoids have been isolated from *S. divinorum*, including other salvinorins and related compounds named divinorins and salvinicins. None of these compounds has shown significant (sub-micromolar) affinity at the kappa opioid receptor, and there is no evidence that they contribute to the plant's psychoactivity.

Ingestion

Traditional methods

Mazatec shamans use two methods of ingestion. Often they simply eat the fresh leaves by chewing and swallowing them. Sometimes they crush the leaves to extract the leaf juices, which they then drink (usually mixed with water). Reportedly, dosages vary from as few as 6 leaves to as many as 120 when using these methods.

Modern methods

Dry leaves can be smoked in a pipe but most users prefer the use of a water pipe to cool the smoke. The temperature required to release salvinorin A from the plant material is quite high (about 240°C). A regular flame will work, but the direct application of something more intense, such as the flame produced from a butane torch lighter, is often preferred.

Many people find that smoking the unprocessed dried Salvia leaf produces only light or unnoticeable effects, perhaps due to the large volume of plant material that must be smoked to produce psychoactive effects. However, responses vary widely. A concentrated preparation of Salvia leaf called Salvia extract, with relative strength suggested by terms such as 5x, 10x, 15x, 20x, 40x, etc, may be smoked in place of natural strength leaves; this reduces the total amount of smoke inhaled for a given dosage of salvinorin overall, and facilitates more powerful experiences.

Sublingually ingested tinctures constitute another form of prepared Salvia. The effects ramp up over a period of 10-20 minutes, and die down after about 50-60 minutes, contrasted with the relatively short duration of smoked Salvia.

The traditional Mazatec method may also be employed. However, salvinorin A is generally considered to be inactive when simply ingested as the chemical is effectively deactivated by the gastrointestinal system [1] (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=7526076&dopt=Citation). Therefore, the 'quid' of leaves is held in the mouth as long as possible in order to facilitate absorption of the active constituents through the oral mucosa. Chewing consumes more of the plant than smoking, and also produces a longer-lasting experience.

Some choose to tincture or use a quid, and then smoke leaves or extract after the first sensations are felt, typically around the 15-20 minute mark. This produces an experience resembling the oft overwhelming quality of smoked extract, while also stretching the intense sudden nature of smoked Salvia to the duration of a tincture or quid, around 50-60 minutes. This is not recommended for inexperienced users of Salvia, as if the effects are unpleasant or frightening, they are not over shortly, as they would be for a smoked method of administration.

Attainment of effect

Some types of people seem to be particularly resistant to the effects even after repeated attempts. Others find their sensitivity quite variable from one experience to the next. Regardless of sensitivity which may be established in the longer term, many people fail to achieve significant effects with their initial attempts. Anecdotal reports suggest for some the possibility of increasingly stronger effects with repeated use of similar amounts of Salvia. This could be attributable to the practice and learning of more efficient ingestion techniques. Some suggest however that 'reverse tolerance' or increased sensitisation may otherwise be a phenomenon of the active principle.

Onset of the effects may be subtle and not immediately noticeable. There is often a few seconds of preceding latency. In any case, caution is advised if considering further ingestion before time has been allowed for prior amounts to clear the system.

Duration of effect

If Salvia is smoked the main effects are experienced quickly. The most intense 'peak' is reached within a minute or so and lasts for about 1-5 minutes, followed by a gradual tapering back. At 5-10 minutes, less intense yet still appreciable effects typically persist, but giving way to a returning sense of the more everyday and familiar until back to recognisable baseline after about 15-20 minutes. [2] (http://www.erowid.org/plants/salvia/salvia_effects.shtml)

Chewing the leaf makes the effects come on more slowly, over a period of 10-15 minutes, the experience then lasting for about 40-50 minutes but produce much milder and lighter effects than other methods of dosing. The bitter taste of the leaf is usually so objectionable most individuals will not chew the leaf long enough to obtain any kind of psychedelic effect.

Experience

Psychedelic experiences, in relating by definition to realms of mind, are necessarily somewhat subjective. Individual variations in reported effects are to be expected. However, from the many experience accounts posted to the Internet (Erowid has almost 700 entries (http://www.erowid.org/experiences/subs/exp_Salvia_divinorum.shtml)) some general trends can be vouched.

Most people find that the effects of salvinorin are not conducive to socializing, thus those with any experience with the plant emphasize that Salvia is not a 'party drug'. External stimuli can be distracting. The experience can be disorienting and dissociative. Motor-control is negatively affected. It is advisable to have a sober trip sitter present, particularly for initial experiences, prior to possible assessment of individual sensitivity.

The effects of Salvia are regarded by many to be highly spiritual. Many find Salvia useful for meditation. Consciousness is retained until the highest doses, but body control, awareness of the external environment, and individual personality may be affected with even modest amounts. Even those experienced with the use of other psychoactive substances may feel confused and out of control.

At lower doses spontaneous laughter, mild closed-eye visuals, stuttering or strobing visual effects, changes in depth perception, and a heightened sense of color and texture may be experienced.

Moderate doses appear trance-like. Time distortion and open-eye visuals become increasingly apparent. Fractal patterns and geometric shapes may be noticeable with eyes open, and can be confusing. Many people experience sensations of falling, similar to, but more pronounced than what is occasionally felt at the onset of sleep. The user may experience fully formed visions of other places, people, and events, especially with eyes closed.

At high doses the effects become more powerful and may additionally include reports of perceptions of dimensional distortion, vertigo, feelings of intense exhilaration and/or panic, sensations of wind or physical pressure, hearing voices, flanging of sound, significant open and closed-eye visuals, loss of speech, life changing experiences, dissociation and various hallucinations of experiencing alternate realities, out-of-body experiences, visiting parallel universes, dissolution of one's ego, as well as perceived contact with beings or entities. Many users report twisting or splitting feelings. Ordinary objects appear to morph into powerful visually animated creatures. It is also not unusual that, while experiencing the effects, a person will not remember that they have taken Salvia, which can cause the user to panic. A strong feeling of déjà vu is commonly reported as an effect of large doses of Salvia.

The experience is quite different from that of most other psychoactives and may be overwhelming, even with a conducive, reassuring and comfortable set and setting. Most Salvia practitioners recommend darkness and silence as the best environment; however, minimal, ambient or relaxing music can be helpful.

According to experience reports at Erowid (http://www.erowid.org/experiences/subs/exp_Salvia_divinorum.shtml) and elsewhere, Salvia seems to produce visions which have a somewhat higher level of consistency than other substances. Reports of contact with an entity supposedly associated with the plant, ("the Shepherdess/Salvia Goddess") again with fairly consistent characteristics, are also common.

Many Salvia users, during high-dose out-of-body experiences, may suddenly 'merge' with objects. With

the significant time distortion typical of Salvia, participants may report the feeling of living a lifetime as another person, or as an inanimate object, such as a wall or a piece of furniture.

The experiences can be pleasant, or frightening and confusing [3] (<http://www.erowid.org/plants/salvia/salvia.shtml>).

Interestingly, the effects of Salvia divinorum are often mistakenly described as 'LSD-like' by people who have not tried it, most notably politicians (http://politics.nexcess.net/pressrelease/2006/04/assemblymen_jack_conners_and_h_1.html) and reporters (http://www.longislandpress.com/?cp=162&show=article&a_id=4377). Actual users on the other hand more often describe its effects as unique (38.4%), and more like meditation, yoga or a trance (23.2%). This compares to only 17.7% of users who liken it to any of the other serotonergic psychoactives (mescaline, psilocybin, LSD, etc.).^[20]

Expression

Salvia can shift perception into altered states of consciousness and sensation. Such powerful experiences may be interpreted as enlightening, frightening, or just plain strange. Many take time to integrate and try to make sense of their experience in the hours, days or weeks following. Some find it useful to be alone for an hour or so to gather thoughts and absorb the experience. Others find it is useful to talk through, sharing the imagery and ideas with another person. For some the experience is so far removed from everyday reality they find it difficult to describe. Recall may be likened to that of an elusive dream, with memory quickly fading on waking.

Many feel compelled to communicate details of their experiences to a wider audience, as evidenced by the numerous reports posted on the Internet on various websites and forums. As well as such firsthand phenomenological accounts some may go on to write more extensive prose and/or poetry [4] (<http://www.sagewisdom.org/greengnosis.html>). A remarkable example of such inspired writing is Dale Pendell's Salvia divinorum chapter from his book Pharmakopoeia (<http://www.sagewisdom.org/pharmakopoeia.html>) which won the 1996 Firecracker Alternative Book Award.[5] (http://www.literature-awards.com/firecracker_alternative_awards.htm)

Although Salvia experiences can be quite conceptual and abstract for some, many people describe their visions more pictorially. Rather than using words, for some temperaments the strong visual motifs are best rendered in the form of drawing or painting. Examples of such Salvia inspired artwork can readily be found on the Internet, [6] (<http://www.salvia-divinorum-scotland.co.uk/salvia/images/artwork.htm>) [7] (<http://www.sagewisdom.org/arts.html>) [8] (<http://www.mpm7.com/>). Others claim musical inspiration from the plant. Some examples of this include the songs "Salvia Divinorum" by 1200 Micrograms, "Rosetta Stoned" by Tool, "Salvia" by Deepwater Sunshine [9] (<http://www.redfizz.com/rf/song.aspx?&songid=342543>), and "8 Foot Sativa" by 8 Foot Sativa.



An example of Salvia inspired Visionary art

After effects

Short term

After the main intoxication normal awareness of self and the immediate surroundings returns but lingering effects may be felt. These short-term lingering effects have a completely different character than the experience of the main intoxication. About half of users report a pleasing 'afterglow', or pleasant state of mind following the main intoxication. Researchers (Baggott, et al) from the University of San Francisco conducted a survey of 500 Salvia users which identified that they 'sometimes or often' experience the following common (>20% occurrence) effects that linger following the main intoxication [21] :

- Increased insight - 47%
- Improved mood - 44.8%
- Calmness - 42.2%
- Increased connection with universe or nature - 39.8%
- Weird thoughts - 36.4%
- Things seem unreal - 32.4%
- Floating feeling - 32%
- Increased sweating - 28.2%
- Body felt warm or hot - 25.2%
- Mind racing - 23.2%
- Lightheaded - 22.2%
- Increased self-confidence - 21.6%

According to some notable sources (principally Daniel Siebert's sagewisdom (<http://www.sagewisdom.org/faq.html#Section%2011>) website) a few people report mild headache, insomnia, irritability or bronchial irritation after taking Salvia. These symptoms seem to be reported more often by smokers than by quid chewers.

Longer term

While 'improved mood' is one of the most commonly noted short-term effects following the primary intoxication, Baggot's Salvia user survey results also found that 25.8% of respondents reported antidepressant-like mood improvements lasting 24 hours or longer.^[20] These findings are in-line with known properties of K-Opioid agonists as well as anecdotal reports and findings of clinicians (<http://imageevent.com/sphere/antidepressanteffectsofsalviadivinor>).

Both scientific and anecdotal user evidence indicates that chemical constituents of Salvia may have potential as therapy for drug addictions (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11526958&dopt=abstract) to dangerous stimulants (e.g., amphetamines) and opiates. Research has shown that the plant contains neoclerodane diterpenes that have therapeutic potential (http://www.aapspharmsci.org/theme_issues/abstracts/view.asp?art=Front-04-00022&pdf=yes) for helping people who have drug abuse problems. The neoclerodane diterpenes in Salvia are k-Opioid agonists. k-Opioid agonists, according to Tidgewell et al, (AAPS Journal), "possess utility in the treatment of opioid dependence and have been shown to have anti-depressant activity as well as block stress-induced behavior responses."

Most users report no hangover or negative after-effects the next day. This is consistent with the apparent low toxicity of Salvia indicated by research (<http://sagewisdom.org/mowryetal.pdf>) conducted at the University of Nebraska.

Some media reports have raised concerns about the possibility of LSD-like flashbacks occurring after use of Salvia. Reports of flashbacks have not been established. At least one user reported experiencing ongoing negative psychological effects, having three flashback experiences in four months after taking a concentrated form of Salvia (10x extract). Though the linked account (<http://www.erowid.org/experiences/exp.php?ID=35575>) does mention other drug usage in a couple of cases: "*During one of them I had smoked absurd amounts of marijuana, and during another I was on shrooms*". Salvia flashbacks may be true enough but also ordinarily quite rare phenomena.

Salvia has not been found to be either physically or psychologically addictive. The results of the Baggot survey, which used the standard psychiatric drug dependence diagnostic framework, indicate that Salvia has little if any potential as a drug of dependence. While there are no proven health risks associated with the use of Salvia as a psychoactive drug, medical professionals generally caution against the ingestion of smoke from any substance into the lungs. Salvia's long-term effects on the human body are not well known at this time. Further study of its indigenous use in Mexico and its effect on the health of the Mazatec people who have been using it for centuries would be useful in this regard.

Scientific studies

Results from a study by William A. Carlezon et al ^[22] using 'Forced-Swim tests' (where rodents are forced to swim in a narrow cylinder from which they cannot escape) have been used to suggest that Salvia divinorum may have "Depressive-Like Effects". However, extrapolation from the observation of temporary physiological effects in rats to suggest more serious psychological consequences is questionable, particularly given that Salvia's short-term effects on motor-control have already been observed and well documented in human subjects.

A report on several Salvia species^[9] has looked at the efficacy of some 'folk' uses of the genus. *Salvia divinorum*, as one of the species included in the study, was found to work as a diuretic.

Controversy

The relatively recent emergence of *Salvia divinorum* in modern Western culture in comparison to its long traditions of indigenous use elsewhere contrasts widely differing attitudes on the subject.

The opinion that *Salvia divinorum* is a highly dangerous hallucinogenic drug appropriate for Schedule I or equivalent classification has been sufficiently prevalent amongst politicians to result in the enactment of various laws against its cultivation, sale or use in a number of countries and in some states in the US.

Opponents of such prohibitive measures argue that this is due to an inherent prejudice and a particular cultural bias rather than an actual balance of evidence, pointing out inconsistencies in attitudes toward other more toxic and/or addictive drugs such as alcohol and nicotine.

Those advocating consideration of *Salvia divinorum*'s potential for beneficial use in a modern context argue that more could be learned from Mazatec culture, where Salvia is not really associated with notions of drug taking at all and it is rather considered as a spiritual sacrament. In light of this it is argued that *Salvia divinorum* could be better understood more positively as an entheogen rather than pejoratively as a hallucinogen.

Other entheogenic plants with traditions of spiritual use include peyote (and other psychoactive cacti), iboga, virola, ayahuasca (an admixture of plants containing DMT + MAOI), and various types of psychoactive fungi.

In fact, US legislation specifically allows two of these to be used in a spiritual context. The Native American Church is allowed to use peyote and Uniao do Vegetal (or UDV) is permitted ayahuasca. Although not consistently granted (varying from state to state), the principal grounds for such concessions are constitutional.

Legal status

For more details on this topic, see Legal status of Salvia divinorum.

Press accounts of efforts to ban Salvia often quote law enforcement and government officials who exhibit an inaccurate knowledge of the plant's effects, and frequently characterize the drug as "chewable marijuana", or as "like LSD", two drugs with quite dissimilar effects to each other as well as to Salvia.

Unlike marijuana, Salvia has a nondescript appearance (being in the same genus as cooking sage), can be grown in a small space, has no odor and requires no elaborate lighting set-up. For these reasons, criminalization is likely to affect only the commercial sale of the plant, and not its private cultivation, which would be very difficult to police.

Before the late 1980s not many people knew about Salvia. The fact that the plant was not prohibited along with the rise of the Internet since the mid-1990s saw the growth of many businesses selling dried Salvia leaves, extracts and other preparations.

There are legislative controls of Salvia in one form or another in some countries including, Australia, Belgium, Denmark, Finland, Sweden, Italy, North Korea, and some states in the US such as Missouri, Louisiana, Tennessee, and Delaware. Currently, in the state of Utah, legislation is on the floor in the form of H.B. 190 [10] (<http://www.le.state.ut.us/~2007/bills/hbillint/hb0190.pdf>) sponsored by Paul Ray to give Salvia Divinorum Schedule I status.

See also

- Salvia
- Entheogen
- Shamanic
- Brett Chidester
- Psychonaut
- Psychedelic experience
- Psychedelic drugs
- Recreational drug use
- War on drugs

Citations

1. ^{a b c} Valdés 1983, p. 287.

2. ^ *a b* Medana 2006, p. 131.
3. ^ *a b* Valdés 1983, p. 288.
4. ^ Imanshahidi 2006, p. 427.
5. ^ *a b* Marushia 2002, p. 3.
6. ^ *a b* Marushia 2002, p. 6.
7. ^ Marushia 2002, p. 7.
8. ^ Prisinzano 2005, p. 527.
9. ^ *a b* Imanshahidi 2006, p. 430.
10. ^ Marushia 2002, p. 2.
11. ^ Valdés 1983, p. 290.
12. ^ *a b* Marushia 2002, p. 11.
13. ^ Reisfield 1993.
14. ^ *a b c* Prisinzano 2005, p. 528.
15. ^ Harding 2006, p. 107.
16. ^ *a b* Imanshahidi 2006, p. 431.
17. ^ Zhang 2005, p. abstract.
18. ^ *ibid.*
19. ^ Mowry 2003, p. 382.
20. ^ *a b* Baggott 2004, p. 14.
21. ^ Baggott 2004, p. 12.
22. ^ Carlezon 2005.

References

- Baggott, Matthew, Erowid, E. & Erowid, F. (2004), "A Survey of *Salvia divinorum* Users" (<http://www.erowid.org> 12-23].
- Carlezon, William A., Béguin, Cécile & DiNieri, Jennifer A. (2005), "Depressive-Like Effects of the κ -Opioid Rats" (<http://jpet.aspetjournals.org/cgi/content/abstract/316/1/440>), *Journal of Pharmacology And Experimental Therapeutics*, vol. 316, no. 1, pp. 107–112 [link accessed 2006-12-23].
- Harding, Wayne W., Schmidt, Matthew & Tidgewell, Kevin (2006), "Synthetic Studies of Neoclerodane Diterpenes of Salvinorin A" (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract>), *Journal of Natural Products*, vol. 69, no. 1, pp. 107–112 [link accessed 2006-12-23].
- Imanshahidi, Mohsen & Hosseinzadeh, Hossein (2006), "The Pharmacological Effects of *Salvia* species on the Central Nervous System: A Review" (<http://www.sciencedirect.com/science/article/pii/S0304384006000000>), *Phytotherapy Research*, vol. 20, pp. 427–437 [link accessed 2006-12-21].
- Marushia, Robin (2002), "*Salvia divinorum*: The Botany, Ethnobotany, Biochemistry and Future of a Mexican Plant" (http://www.2fethnobotany.com/2fimage%2FSalvia.pdf&ei=pHKMRbqgD73kafKZIfYH&usq=__BReJx2SVAik-kWqCSpY).
- Medana, Claudio, Massolino, Cristina & Pazzi, Marco, et al. (2006), "Determination of salvinorins and divinatorins by HPLC-ESI/MS" (<http://www.interscience.wiley.com/cgi-bin/abstract/112163281/ABSTRACT>), *Rapid Communications in Mass Spectrometry*, vol. 20, no. 12, pp. 1655–1662 [link accessed 2006-12-21].
- Mowry, Mark, Mosher, Michael & Briner, Wayne (2003), "Acute Physiologic and Chronic Histologic Changes Induced by *Salvia divinorum*" (<http://www.sagewisdom.org/mowryetal.pdf>), *Journal of Psychoactive Drugs*, vol. 35, pp. 379–382 [link accessed 2006-12-21].
- Prisinzano, Thomas E. (2005), "Psychopharmacology of the hallucinogenic sage *Salvia divinorum*" (<http://www.life-sciences.com/article.asp?doi=10.1016/j.lfs.2005.05.001>), *Life Sciences*, vol. 78, pp. 527–531 [link accessed 2006-12-21].
- Reisfield, Aaron S. (1993), "The botany of *Salvia divinorum* (Labiatae)" (<http://www.sagewisdom.org/reisfield>).
- Valdés III, Leander J., Díaz, José Luis & Paul, Ara G. (1983), "Ethnopharmacology of *Salvia divinorum* (Lamiaceae)" ([http://www.jethnopharmacology.com/article.asp?doi=10.1016/0378-5122\(83\)90001-1](http://www.jethnopharmacology.com/article.asp?doi=10.1016/0378-5122(83)90001-1)), *Ethnopharmacology*, vol. 7, no. 3, pp. 287–312 [link accessed 2006-12-20].
- Zhang, Yong, Butelman, Eduardo R. & Schlussman, Stefan D., et al. (2005), "Effects of the plant-derived hallucinogen salvinorin A on the mouse brain: agonist actions at kappa opioid receptors" (<http://www.springerlink.com/content/2e2e65wvctql>).

Media stories

- Lowell, Robert (mailto:rlowell@keepmecurrent.com). "Gorham legislator seeks Salvia ban" (<http://www.keepmecurrent.com/Community/story.cfm?storyID=29230>), *keepMEcurrent.com*, 7th December 2006.
- Quinones, Todd (http://cbs3.com/bios/local_bio_051194647). "Deadly Dangers Of A Street Legal High" (http://cbs3.com/specialreports/local_story_333213310.html), *CBS 3 Philadelphia*, 30th November 2006.
- Dujanovic, Debbie. "Dangerous Herb is Legal in Utah" (<http://www.ksl.com/?nid=148&sid=679822>), *KSL*, 27th November 2006.

- Follow-up story: "Lawmaker Responds to Investigative Report on Dangerous Herb" (<http://www.ksl.com/?sid=682728&nid=148>), 28th November 2006.

- Cardall, Duane. KSL Editorial (<http://www.ksl.com/?nid=238&sid=687501>), 1st December 2006.

- Edberg, Erika (http://www.abc4.com/story-by/?reporter_id=erikaedberg) (email) (mailto:erika@abc4.com). "Salvia Divinorum: A legal herb, powerful like LSD, and available in Utah" (http://www.abc4.com/local_news/featured_websites/story.aspx?content_id=3815A268-56DE-4356-85D5-C4A9F07A3FA5), *ABC 4*, 28th November 2006.
- Jensen, Anna. "D-E-A Issues Warning About Herb" (<http://www.krdotv.com/story.cfm?nav=news&storyID=1476>), *ABC News Channel 13*, 17th November 2006.
- Blake, Katherine (http://cbs4denver.com/bios/local_bio_183125238.html). "DEA Warns Over-The-Counter Drug Is Like Acid" (http://cbs4denver.com/investigates/local_story_317232334.html), *CBS 4 Denver*, 13th November 2006.
- Shortsleeve, Joe (http://cbs4boston.com/bios/local_bio_052115306). "Powerful Hallucinogenic Drug Legal Across Mass." (http://cbs4boston.com/specialreports/local_story_306204743.html), *CBS 4 Boston*, 2nd November 2006.
- Vince, Gaia. "Mind-altering drugs: does legal mean safe?" (<http://www.newscientist.com/channel/being-human/drugs-alcohol/mg19125711.000-legal-highs-on-the-rise.html>), *New Scientist*, 29th September 2006.

External links

- The Salvia divinorum Research and Information Center (<http://www.sagewisdom.org/>) - Daniel Siebert's site
- Erowid Salvia divinorum Vault (<http://www.erowid.org/plants/salvia/salvia.shtml>) - Salvia section from Erowid's vast reference site
- Lycaeum page on Salvia divinorum (<http://leda.lycaeum.org/?ID=269>) - another large reference site for psychoactives
- Salvia divinorum Scotland (<http://www.salvia-divinorum-scotland.co.uk/salvia/index.htm>) - information and advice on cultivation etc
- The Salvia Center (<http://www.salviacenter.com/>) - a hub for Salvia information on the web
- Salvia.net (<http://www.salvia.net/>) - information about growing, history and some experience reports
- All about Salvia divinorum (<http://www.salvia-divinorum.nl/>)

Botany

- How to grow Salvia divinorum (http://coffeesh0p.com/Info/How_To_Grow_Salvia_Divinorum/)
- Grow your own Salvia divinorum seeds (<http://members.cox.net/sageseeds/>) - an illustrated step

by step guide to hand pollination and seeds

- Information about salvia in one guide (<http://www.salviaguide.com/>)

Law

- Erowid's Salvia Law vault (http://www.erowid.org/plants/salvia/salvia_law.shtml)
- The Salvia divinorum Research and Information Center (<http://www.sagewisdom.org/legalstatus.html>)

Forums

- International section of the 'Salvia Community' (<http://www.salvia-community.net/International-f16.html>) - discussions with Salvia experts from all over the world
- Drugs Forum Salvia Forum (<http://www.drugs-forum.co.uk/forum/forumdisplay.php?f=35>) - focussed on high quality info and mature discussion of Salvia
- The SalviaD (<http://groups.yahoo.com/group/SalviaD>) Yahoo group is active with over 20,000 posts since 1999.
- SalviaD Alliance Forum (http://groups.yahoo.com/group/SalviaD_Alliance)
- Psychonaut.net Salvia discussion forum (http://www.psychonaut.com/index.php?option=com_forum&Itemid=11&page=viewforum&f=8&lang=en)

Retrieved from "http://en.wikipedia.org/wiki/Salvia_divinorum"

Category: Salvia divinorum

-
- This page was last modified 20:02, 30 January 2007.
 - All text is available under the terms of the GNU Free Documentation License. (See **Copyrights** for details.) Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a US-registered 501(c)(3) tax-deductible nonprofit charity.

A# #2



BOARD OF PHARMACY
State of North Dakota

John Hoeven, Governor

OFFICE OF THE EXECUTIVE DIRECTOR

P O Box 1354
Bismarck ND 58502-1354
Telephone (701) 328-9535
Fax (701) 328-9536

www.nodakpharmacy.com
E-mail= ndboph@btinet.net
Howard C. Anderson, Jr, R.Ph.
Executive Director

Bonnie J. Thom, R.Ph.
Granville, President
Gary W. Dewhirst, R.Ph.
Hettinger, Senior Member
Dewey Schlittenhard, MBA, R.Ph.
Bismarck
Rick L. Detwiller, R.Ph.
Bismarck
Laurel Haroldson, R.Ph.
Jamestown
William J. Grosz, Sc.D., R.Ph.
Wahpeton, Treasurer

Senate Bill No 2317
Scheduling of Salvia divinorum
11:30 AM - Wednesday January 31, 2007 - Fort Lincoln Room

Chairman Nething and members of the Senate Judiciary Committee, for the record I am Howard C. Anderson, Jr, R.Ph, Executive Director of the North Dakota State Board of Pharmacy. Thank you for the opportunity to speak with you today.

Salvia divinorum

From Wikipedia, the free encyclopedia

Salvia divinorum, also known as **Diviner's Sage**^[2], **Magic Mint**^[2], **ska Maria Pastora**^[3], **Sally D**, or simply **Salvia** (although the genus name is shared among many plants), is a powerful psychoactive plant, a member of the sage genus and the Lamiaceae (mint) family^[4]. It has long been used as an entheogen by the indigenous Mazatec shamans for healing during spirit journeys^[1]. The plant is found in isolated, shaded and moist plots in Oaxaca, Mexico^[1]. It is thought to be a cultigen^[5].

The Latin name *Salvia divinorum* literally translates to "Sage of the seers".^[6] The genus name *Salvia* is derived from the Latin *salvare*, meaning "to heal" or "to save".^[7]

The primary psychoactive constituent is a diterpenoid known as *salvinorin A*.^{[8][9]}

Contents

- 1 History
- 2 Botany
- 3 Chemistry
- 4 Ingestion
 - 4.1 Traditional methods
 - 4.2 Modern methods
 - 4.3 Attainment of effect
 - 4.4 Duration of effect
- 5 Experience
 - 5.1 Expression
- 6 After effects
 - 6.1 Short term
 - 6.2 Longer term
- 7 Scientific studies
- 8 Controversy
- 9 Legal status
- 10 See also
- 11 Citations
- 12 References
 - 12.1 Media stories
- 13 External links
 - 13.1 Botany
 - 13.2 Law
 - 13.3 Forums

Diviner's sage

Three well established <i>Salvia divinorum</i> plants.
Scientific classification
Kingdom: Plantae
Division: Magnoliophyta
Class: Magnoliopsida
Order: Lamiales
Family: Lamiaceae
Genus: <i>Salvia</i>
Species: <i>S. divinorum</i>
Binomial name
<i>Salvia divinorum</i> Epling & Játiva ^[1]

History

Salvia divinorum was first recorded in print by Jean Basset Johnson in 1939 as he was studying Mazatec shamanism^[10]. R. Gordon Wasson later documented its usage and reported its effects through personal testimonials^[11]. It was not until the 1990s that the psychoactive mechanism was identified by a team led by Daniel Siebert^[12].

The history of the plant is not known, but there are three possibilities as to its origin. Since it is found in one, small area and only one indigenous group use it, it is either native to this area, is a cultigen of the Mazatecs or is a cultigen of another indigenous group.^[6] Wasson theorized that this plant was the mythological *pipilzintzintli*, the "Palatable Prince" of the Aztec codices.^[3] However, this theory is not without dispute. The Aztecs were extremely knowledgeable in plant identification, and their records report that *pipilzintzintli* has both male and female varieties. *Salvia divinorum*, however, is monoecious, meaning it produces flowers of both sexes on a single plant. Skeptics of this theory report that the Aztecs would have known the difference between male and female flowers. Wasson gains validity, however, as a number of Aztec historical accounts classify plants as male or female in a metaphorical, rather than botanically anatomical manner.

Botany

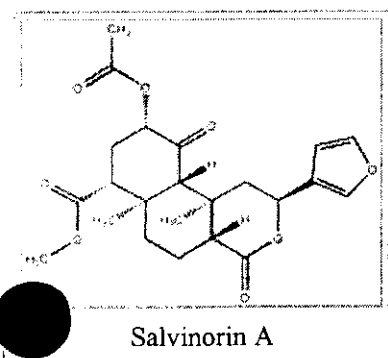
Unlike other species of *salvia*, *Salvia divinorum* produces few seeds, and those seldom germinate. For an unknown reason, pollen fertility is reduced. There is no active pollen tube inhibition within the style, but some event or process after the pollen tube reaches the ovary is aberrant.^[13] Partial sterility is often suggestive of a hybrid origin, although no species have been recognized as possible parent species. The ability to grow indistinguishable plants from seeds produced by self pollination also weakens the hybrid theory of origin, instead implying inbreeding depression, or an undiscovered incompatibility mechanism. The plant is mainly propagated by cuttings or layering. Although isolated strands of *S. divinorum* exist, these are thought to have been purposely created and tended by the Mazatec people. For this reason, it is considered a true cultigen, not occurring in a wild state.^[5]

Known specimens are clones from a small number of collected plants. Two strains are in major circulation: the Wasson/Hofmann strain, obtained upon request from a Mazatec shaman in Oaxaca in 1962, and the Blosser ('Palatable') strain, obtained around 1980. The 'Palatable' strain is said to have a more acceptable taste than the Wasson/Hofmann strain, although most reports suggest that there is little difference.

Additional 'commercial' strains are in circulation, but all seem to be similar in potency, effect, and growth. The numerous different names that can be found have more to do with marketing than with the formal identification of botanically distinct strains.

Chemistry

For more details on this topic, see *Salvinorin A*.



The active constituent is a *trans*-neoclerodane diterpenoid known as **Salvinorin A**, chemical formula $C_{23}H_{28}O_8$.^[14] Unlike other known opioid-receptor ligands, salvinorin A is not an alkaloid — it does not contain a basic nitrogen atom.^[15]

Salvinorin A is the most potent naturally-occurring psychoactive compound known.^[16] It is active at doses as low as 200 μg .^{[12][14][16]} Recent research has shown that salvinorin A is a potent and selective κ (kappa) opioid receptor agonist.^[14] It has been reported that the effects of salvinorin A in mice are blocked by kappa opioid receptor antagonists^[17]. This makes it unlikely that another mechanism contributes independently to the compound's effects. Salvinorin A is unique in that it is the only naturally occurring substance known to induce a visionary state via this mode of action. Salvinorin A has no actions at the 5-HT_{2A} serotonin receptor, the principal molecular target responsible for the actions of classical hallucinogens.^[18]



Flowering *Salvia divinorum*

Salvinorin's potency should not be confused with toxicity. Rodents chronically exposed to dosages many times greater than those to which humans are exposed did not show signs of organ damage.^[19]

Other terpenoids have been isolated from *S. divinorum*, including other salvinorins and related compounds named divinorins and salvinicins. None of these compounds has shown significant (sub-micromolar) affinity at the kappa opioid receptor, and there is no evidence that they contribute to the plant's psychoactivity.

Ingestion

Traditional methods

Mazatec shamans use two methods of ingestion. Often they simply eat the fresh leaves by chewing and swallowing them. Sometimes they crush the leaves to extract the leaf juices, which they then drink (usually mixed with water). Reportedly, dosages vary from as few as 6 leaves to as many as 120 when using these methods.

Modern methods

Dry leaves can be smoked in a pipe but most users prefer the use of a water pipe to cool the smoke. The temperature required to release salvinorin A from the plant material is quite high (about 240°C). A regular flame will work, but the direct application of something more intense, such as the flame produced from a butane torch lighter, is often preferred.

Many people find that smoking the unprocessed dried *Salvia* leaf produces only light or unnoticeable effects, perhaps due to the large volume of plant material that must be smoked to produce psychoactive effects. However, responses vary widely. A concentrated preparation of *Salvia* leaf called *Salvia* extract, with relative strength suggested by terms such as 5x, 10x, 15x, 20x, 40x, etc, may be smoked in place of natural strength leaves; this reduces the total amount of smoke inhaled for a given dosage of salvinorin overall, and facilitates more powerful experiences.

Sublingually ingested tinctures constitute another form of prepared *Salvia*. The effects ramp up over a period of 10-20 minutes, and die down after about 50-60 minutes, contrasted with the relatively short duration of smoked *Salvia*.

The traditional Mazatec method may also be employed. However, salvinorin A is generally considered to be inactive when simply ingested as the chemical is effectively deactivated by the gastrointestinal system [1] (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=7526076&dopt=Citation). Therefore, the 'quid' of leaves is held in the mouth as long as possible in order to facilitate absorption of the active constituents through the oral mucosa. Chewing consumes more of the plant than smoking, and also produces a longer-lasting experience.

Some choose to tincture or use a quid, and then smoke leaves or extract after the first sensations are felt, typically around the 15-20 minute mark. This produces an experience resembling the oft overwhelming quality of smoked extract, while also stretching the intense sudden nature of smoked *Salvia* to the duration of a tincture or quid, around 50-60 minutes. This is not recommended for inexperienced users of *Salvia*, as if the effects are unpleasant or frightening, they are not over shortly, as they would be for a smoked method of administration.

Attainment of effect

Some types of people seem to be particularly resistant to the effects even after repeated attempts. Others find their sensitivity quite variable from one experience to the next. Regardless of sensitivity which may be established in the longer term, many people fail to achieve significant effects with their initial attempts. Anecdotal reports suggest for some the possibility of increasingly stronger effects with repeated use of similar amounts of *Salvia*. This could be attributable to the practice and learning of more efficient ingestion techniques. Some suggest however that 'reverse tolerance' or increased sensitisation may otherwise be a phenomenon of the active principle.

Onset of the effects may be subtle and not immediately noticeable. There is often a few seconds of preceding latency. In any case, caution is advised if considering further ingestion before time has been allowed for prior amounts to clear system.

Duration of effect

If Salvia is smoked the main effects are experienced quickly. The most intense 'peak' is reached within a minute or so and lasts for about 1-5 minutes, followed by a gradual tapering back. At 5-10 minutes, less intense yet still appreciable effects typically persist, but giving way to a returning sense of the more everyday and familiar until back to recognisable baseline after about 15-20 minutes. [2] (http://www.erowid.org/plants/salvia/salvia_effects.shtml)

Chewing the leaf makes the effects come on more slowly, over a period of 10-15 minutes, the experience then lasting for about 40-50 minutes but produce much milder and lighter effects than other methods of dosing. The bitter taste of the leaf is usually so objectionable most individuals will not chew the leaf long enough to obtain any kind of psychedelic effect.

Experience

Psychedelic experiences, in relating by definition to realms of mind, are necessarily somewhat subjective. Individual variations in reported effects are to be expected. However, from the many experience accounts posted to the Internet (Erowid has almost 700 entries (http://www.erowid.org/experiences/subs/exp_Salvia_divinorum.shtml)) some general trends can be vouched.

Most people find that the effects of salvinorin are not conducive to socializing, thus those with any experience with the drug emphasize that Salvia is not a 'party drug'. External stimuli can be distracting. The experience can be disorienting and dissociative. Motor-control is negatively affected. It is advisable to have a sober trip sitter present, particularly for first time experiences, prior to possible assessment of individual sensitivity.

The effects of Salvia are regarded by many to be highly spiritual. Many find Salvia useful for meditation. Consciousness is retained until the highest doses, but body control, awareness of the external environment, and individual personality may be affected with even modest amounts. Even those experienced with the use of other psychoactive substances may feel confused and out of control.

At lower doses spontaneous laughter, mild closed-eye visuals, stuttering or strobing visual effects, changes in depth perception, and a heightened sense of color and texture may be experienced.

Moderate doses appear trance-like. Time distortion and open-eye visuals become increasingly apparent. Fractal patterns and geometric shapes may be noticeable with eyes open, and can be confusing. Many people experience sensations of falling, similar to, but more pronounced than what is occasionally felt at the onset of sleep. The user may experience fully formed visions of other places, people, and events, especially with eyes closed.

At high doses the effects become more powerful and may additionally include reports of perceptions of dimensional distortion, vertigo, feelings of intense exhilaration and/or panic, sensations of wind or physical pressure, hearing voices, flanging of sound, significant open and closed-eye visuals, loss of speech, life changing experiences, dissociation and various hallucinations of experiencing alternate realities, out-of-body experiences, visiting parallel universes, dissolution of one's ego, as well as perceived contact with beings or entities. Many users report twisting or melting feelings. Ordinary objects appear to morph into powerful visually animated creatures. It is also not unusual while experiencing the effects, a person will not remember that they have taken Salvia, which can cause the user to panic. A strong feeling of déjà vu is commonly reported as an effect of large doses of Salvia.

The experience is quite different from that of most other psychoactives and may be overwhelming, even with a conducive, reassuring and comfortable set and setting. Most Salvia practitioners recommend darkness and silence as

the best environment; however, minimal, ambient or relaxing music can be helpful.

According to experience reports at Erowid (http://www.erowid.org/experiences/subs/exp_Salvia_divinorum.shtml) and elsewhere, Salvia seems to produce visions which have a somewhat higher level of consistency than other substances. Reports of contact with an entity supposedly associated with the plant, ("the Shepherdess/Salvia Goddess") again with fairly consistent characteristics, are also common.

Many Salvia users, during high-dose out-of-body experiences, may suddenly 'merge' with objects. With the significant time distortion typical of Salvia, participants may report the feeling of living a lifetime as another person, or as an inanimate object, such as a wall or a piece of furniture.

The experiences can be pleasant, or frightening and confusing [3] (<http://www.erowid.org/plants/salvia/salvia.shtml>).

Interestingly, the effects of Salvia divinorum are often mistakenly described as 'LSD-like' by people who have not tried it, most notably politicians (http://politics.nexcess.net/pressrelease/2006/04/assemblymen_jack_conners_and_h_1.html) and reporters (http://www.longislandpress.com/?cp=162&show=article&a_id=4377). Actual users on the other hand more often describe its effects as unique (38.4%), and more like meditation, yoga or a trance (23.2%). This compares to only 17.7% of users who liken it to any of the other serotonergic psychoactives (mescaline, psilocybin, LSD, etc.).^[20]

Expression

Salvia can shift perception into altered states of consciousness and sensation. Such powerful experiences may be interpreted as enlightening, frightening, or just plain strange. Many take time to integrate and try to make sense of their experience in the hours, days or weeks following. Some find it useful to be alone for an hour or so to mull over thoughts and absorb the experience. Others find it is useful to talk through, sharing the imagery and ideas with another person. For some the experience is so far removed from everyday reality they find it difficult to describe. Recall may be likened to that of an elusive dream, with memory quickly fading on waking.

Many feel compelled to communicate details of their experiences to a wider audience, as evidenced by the numerous reports posted on the Internet on various websites and forums. As well as such firsthand phenomenological accounts some may go on to write more extensive prose and/or poetry [4]

(<http://www.sagewisdom.org/greengnosis.html>). A remarkable example of such inspired writing is Dale Pendell's Salvia divinorum chapter from his book Pharmako/poeia (<http://www.sagewisdom.org/pharmakopoeia.html>) which won the 1996 Firecracker Alternative Book Award.[5] (http://www.literature-awards.com/firecracker_alternative_awards.htm)



An example of Salvia inspired Visionary art

Although Salvia experiences can be quite conceptual and abstract for some, many people describe their visions more pictorially. Rather than using words, for some temperaments the strong visual motifs are best rendered in the form of drawing or painting. Examples of such Salvia inspired artwork can readily be found on the Internet, [6] (<http://www.salvia-divinorum-scotland.co.uk/salvia/images/artwork.htm>) [7] (<http://www.sagewisdom.org/arts.html>) [8] (<http://www.mpm7.com/>). Others claim musical inspiration from the plant. Some examples of this include the songs "Salvia Divinorum" by 1200 Micrograms, "Rosetta Stoned" by Tool, "Salvia" by Deepwater Sunshine [9] (<http://www.redfizz.com/rf/song.aspx?&songid=342543>), and "8 Foot Sativa" by 8 Foot Sativa.

After effects

Short term

After the main intoxication normal awareness of self and the immediate surroundings returns but lingering effects may be felt. These short-term lingering effects have a completely different character than the experience of the main

intoxication. About half of users report a pleasing 'afterglow', or pleasant state of mind following the main intoxication. Researchers (Baggott, et al) from the University of San Francisco conducted a survey of 500 Salvia users which identified that they 'sometimes or often' experience the following common (>20% occurrence) effects that linger following the main intoxication^[21] :

- Increased insight - 47%
- Improved mood - 44.8%
- Calmness - 42.2%
- Increased connection with universe or nature - 39.8%
- Weird thoughts - 36.4%
- Things seem unreal - 32.4%
- Floating feeling - 32%
- Increased sweating - 28.2%
- Body felt warm or hot - 25.2%
- Mind racing - 23.2%
- Lightheaded - 22.2%
- Increased self-confidence - 21.6%

According to some notable sources (principally Daniel Siebert's sagewisdom (<http://www.sagewisdom.org/faq.html#Section%2011>) website) a few people report mild headache, insomnia, irritability or bronchial irritation after taking Salvia. These symptoms seem to be reported more often by smokers than by quid chewers.

Longer term

While 'improved mood' is one of the most commonly noted short-term effects following the primary intoxication, Baggott's Salvia user survey results also found that 25.8% of respondents reported antidepressant-like mood improvements lasting 24 hours or longer.^[20] These findings are in-line with known properties of K-Opioid agonists as well as anecdotal reports and findings of clinicians (<http://imageevent.com/sphere/antidepressanteffectsofsalviadivisor>).

Both scientific and anecdotal user evidence indicates that chemical constituents of Salvia may have potential as therapy for drug addictions (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11526958&dopt=abstract) to dangerous stimulants (e.g., amphetamines) and opiates. Research has shown that the plant contains neoclerodane diterpenes that have therapeutic potential (http://www.aapspharmsci.org/theme_issues/abstracts/view.asp?art=Front-04-00022&pdf=yes) for helping people who have drug abuse problems. The neoclerodane diterpenes in Salvia are k-Opioid agonists. k-Opioid agonists, according to Tidgewell et al, (AAPS Journal), "possess utility in the treatment of opioid dependence and have been shown to have anti-depressant activity as well as block stress-induced behavior responses."

Most users report no hangover or negative after-effects the next day. This is consistent with the apparent low toxicity of Salvia indicated by research (<http://sagewisdom.org/mowryetal.pdf>) conducted at the University of Nebraska.

Some media reports have raised concerns about the possibility of LSD-like flashbacks occurring after use of Salvia. Reports of flashbacks have not been established. At least one user reported experiencing ongoing negative psychological effects, having three flashback experiences in four months after taking a concentrated form of Salvia (10x extract). Though the linked account (<http://www.erowid.org/experiences/exp.php?ID=35575>) does mention other drug usage in a couple of cases: "*During one of them I had smoked absurd amounts of marijuana, and during another I smoked shrooms*". Salvia flashbacks may be true enough but also ordinarily quite rare phenomena.

Salvia has not been found to be either physically or psychologically addictive. The results of the Baggott survey, which used the standard psychiatric drug dependence diagnostic framework, indicate that Salvia has little if any potential as a drug of dependence. While there are no proven health risks associated with the use of Salvia as a psychoactive drug, medical professionals generally caution against the ingestion of smoke from any substance into the lungs. Salvia's long-

term effects on the human body are not well known at this time. Further study of its indigenous use in Mexico and its effect on the health of the Mazatec people who have been using it for centuries would be useful in this regard.

Scientific studies

Results from a study by William A. Carlezon et al [22] using 'Forced-Swim tests' (where rodents are forced to swim in a narrow cylinder from which they cannot escape) have been used to suggest that *Salvia divinorum* may have "Depressive-Like Effects". However, extrapolation from the observation of temporary physiological effects in rats to suggest more serious psychological consequences is questionable, particularly given that *Salvia*'s short-term effects on motor-control have already been observed and well documented in human subjects.

A report on several *Salvia* species^[9] has looked at the efficacy of some 'folk' uses of the genus. *Salvia divinorum*, as one of the species included in the study, was found to work as a diuretic.

Controversy

The relatively recent emergence of *Salvia divinorum* in modern Western culture in comparison to its long traditions of indigenous use elsewhere contrasts widely differing attitudes on the subject.

The opinion that *Salvia divinorum* is a highly dangerous hallucinogenic drug appropriate for Schedule I or equivalent classification has been sufficiently prevalent amongst politicians to result in the enactment of various laws against its cultivation, sale or use in a number of countries and in some states in the US.

Opponents of such prohibitive measures argue that this is due to an inherent prejudice and a particular cultural bias rather than an actual balance of evidence, pointing out inconsistencies in attitudes toward other more toxic and/or addictive drugs such as alcohol and nicotine.

Those advocating consideration of *Salvia divinorum*'s potential for beneficial use in a modern context argue that much could be learned from Mazatec culture, where *Salvia* is not really associated with notions of drug taking at all and it is rather considered as a spiritual sacrament. In light of this it is argued that *Salvia divinorum* could be better understood more positively as an entheogen rather than pejoratively as a hallucinogen.

Other entheogenic plants with traditions of spiritual use include peyote (and other psychoactive cacti), iboga, virola, ayahuasca (an admixture of plants containing DMT + MAOI), and various types of psychoactive fungi.

In fact, US legislation specifically allows two of these to be used in a spiritual context. The Native American Church is allowed to use peyote and Uniao do Vegetal (or UDV) is permitted ayahuasca. Although not consistently granted (varying from state to state), the principal grounds for such concessions are constitutional.

Legal status

For more details on this topic, see Legal status of Salvia divinorum.

Press accounts of efforts to ban *Salvia* often quote law enforcement and government officials who exhibit an inaccurate knowledge of the plant's effects, and frequently characterize the drug as "chewable marijuana", or as "like LSD", two drugs with quite dissimilar effects to each other as well as to *Salvia*.

Like marijuana, *Salvia* has a nondescript appearance (being in the same genus as cooking sage), can be grown in a small space, has no odor and requires no elaborate lighting set-up. For these reasons, criminalization is likely to affect only the commercial sale of the plant, and not its private cultivation, which would be very difficult to police.

Before the late 1980s not many people knew about *Salvia*. The fact that the plant was not prohibited along with the rise of the Internet since the mid-1990s saw the growth of many businesses selling dried *Salvia* leaves, extracts and other

preparations.

There are legislative controls of *Salvia* in one form or another in some countries including, Australia, Belgium, Denmark, Finland, Sweden, Italy, North Korea, and some states in the US such as Missouri, Louisiana, Tennessee, and New Jersey. Currently, in the state of Utah, legislation is on the floor in the form of H.B. 190 [10] (<http://www.le.state.ut.us/~2007/bills/hbillint/hb0190.pdf>) sponsored by Paul Ray to give *Salvia Divinorum* Schedule I status.

See also

- *Salvia*
- Entheogen
- Shamanic
- Brett Chidester
- Psychonaut
- Psychedelic experience
- Psychedelic drugs
- Recreational drug use
- War on drugs

Citations

1. ^ *a b c* Valdés 1983, p. 287.
2. ^ *a b* Medana 2006, p. 131.
3. ^ *a b* Valdés 1983, p. 288.
4. ^ Imanshahidi 2006, p. 427.
5. ^ *a b* Marushia 2002, p. 3.
6. ^ *a b* Marushia 2002, p. 6.
7. ^ Marushia 2002, p. 7.
8. ^ Prisinzano 2005, p. 527.
9. ^ *a b* Imanshahidi 2006, p. 430.
10. ^ Marushia 2002, p. 2.
11. ^ Valdés 1983, p. 290.
12. ^ *a b* Marushia 2002, p. 11.
13. ^ Reisfield 1993.
14. ^ *a b c* Prisinzano 2005, p. 528.
15. ^ Harding 2006, p. 107.
16. ^ *a b* Imanshahidi 2006, p. 431.
17. ^ Zhang 2005, p. abstract.
18. ^ *ibid.*
19. ^ Mowry 2003, p. 382.
20. ^ *a b* Baggott 2004, p. 14.
21. ^ Baggott 2004, p. 12.
22. ^ Carlezon 2005.

References

- Baggott, Matthew, Erowid, E. & Erowid, F. (2004), "A Survey of *Salvia divinorum* Users" (<http://www.erowid.org/general/news/12-23>].
- Carlezon, William A., Béguin, Cécile & DiNieri, Jennifer A. (2005), "Depressive-Like Effects of the κ -Opioid Receptor Agonist in Rats" (<http://jpet.aspetjournals.org/cgi/content/abstract/316/1/440>), *Journal of Pharmacology And Experimental Therapeutics*
- Harding, Wayne W., Schmidt, Matthew & Tidgewell, Kevin (2006), "Synthetic Studies of Neoclerodane Diterpenes from *Salvia divinorum*" (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=1681112), pp. 107–112 [link accessed 2006-12-23].
- Imanshahidi, Mohsen & Hosseinzadeh, Hossein (2006), "The Pharmacological Effects of *Salvia* species on the Central Nervous System"

Phytotherapy Research, vol. 20, pp. 427–437 [link accessed 2006-12-21].

- Marushia, Robin (2002), "Salvia divinorum: The Botany, Ethnobotany, Biochemistry and Future of a Mexican Mint" (http://www2ethnobotany.com/2Fimage%2FSalvia.pdf&ei=PHKMRbqgD73kafKZlfYH&usg=__BReJx2SVAik-kWqCSpYJcIoZHHI=&sig)
- Medana, Claudio, Massolino, Cristina & Pazzi, Marco, et al. (2006), "Determination of salvinorins and divinorins in Salvia by HPLC-ESI-MS/MS spectrometry" (<http://www3.interscience.wiley.com/cgi-bin/abstract/112163281/ABSTRACT>), *Rapid Communications in Mass Spectrometry*, vol. 20, pp. 123–127 [link accessed 2006-12-21].
- Mowry, Mark, Mosher, Michael & Briner, Wayne (2003), "Acute Physiologic and Chronic Histologic Changes in Rats after Chronic Administration of Salvia divinorum" (<http://www.sagewisdom.org/mowryetal.pdf>), *Journal of Psychoactive Drugs*, vol. 35, pp. 379–382 [link accessed 2006-12-21].
- Prisinzano, Thomas E. (2005), "Psychopharmacology of the hallucinogenic sage Salvia divinorum" (<http://www.sciencedirect.com/science/article/pii/S0950268805000000>), *Life Sciences*, vol. 78, pp. 527–531 [link accessed 2006-12-21].
- Reisfield, Aaron S. (1993), "The botany of Salvia divinorum (Labiatae)" (<http://www.sagewisdom.org/reisfield.html>), *Sida, Contributions to Botany*, vol. 19, pp. 1–10 [link accessed 2006-12-21].
- Valdés III, Leander J., Díaz, José Luis & Paul, Ara G. (1983), "Ethnopharmacology of Salvia divinorum (Salvia divinorum, L.)" (<http://www.sagewisdom.org/valdes.html>), *Ethnopharmacology*, vol. 7, no. 3, pp. 287–312 [link accessed 2006-12-20].
- Zhang, Yong, Butelman, Eduardo R. & Schlussman, Stefan D., et al. (2005), "Effects of the plant-derived hallucinogen salvinorin A on mouse brain slices: agonist actions at kappa opioid receptors" (<http://www.springerlink.com/content/2e2e65wvctqbenvl/>), *Psychopharmacology*, vol. 181, pp. 1–12 [link accessed 2006-12-21].

Media stories

- Lowell, Robert (<mailto:rlowell@keepmecurrent.com>). "Gorham legislator seeks Salvia ban" (<http://www.keepmecurrent.com/Community/story.cfm?storyID=29230>), *keepMEcurrent.com*, 7th December 2006.
- Quinones, Todd (http://cbs3.com/bios/local_bio_051194647). "Deadly Dangers Of A Street Legal High" (http://cbs3.com/specialreports/local_story_333213310.html), *CBS 3 Philadelphia*, 30th November 2006.
- Dujanovic, Debbie. "Dangerous Herb is Legal in Utah" (<http://www.ksl.com/?nid=148&sid=679822>), *KSL*, 27th November 2006.
- Follow-up story: "Lawmaker Responds to Investigative Report on Dangerous Herb" (<http://www.ksl.com/?nid=148&sid=682728>), 28th November 2006.
- Cardall, Duane. KSL Editorial (<http://www.ksl.com/?nid=238&sid=687501>), 1st December 2006.
- Edberg, Erika (http://www.abc4.com/story-by/?reporter_id=erikaedberg) (email) (<mailto:erika@abc4.com>). "Salvia Divinorum: A legal herb, powerful like LSD, and available in Utah" (http://www.abc4.com/local_news/featured_websites/story.aspx?content_id=3815A268-56DE-4356-85D5-C4A9F07A3FA5), *ABC 4*, 28th November 2006.
- Jensen, Anna. "D-E-A Issues Warning About Herb" (<http://www.krdotv.com/story.cfm?nav=news&storyID=1476>), *ABC News Channel 13*, 17th November 2006.
- Blake, Katherine (http://cbs4denver.com/bios/local_bio_183125238.html). "DEA Warns Over-The-Counter Drug Is Like Acid" (http://cbs4denver.com/investigates/local_story_317232334.html), *CBS 4 Denver*, 13th November 2006.
- Shortsleeve, Joe (http://cbs4boston.com/bios/local_bio_052115306). "Powerful Hallucinogenic Drug Legal Across Mass." (http://cbs4boston.com/specialreports/local_story_306204743.html), *CBS 4 Boston*, 2nd November 2006.
- Vince, Gaia. "Mind-altering drugs: does legal mean safe?" (<http://www.newscientist.com/channel/being-human/drugs-alcohol/mg19125711.000-legal-highs-on-the-rise.html>), *New Scientist*, 29th September 2006.

External links

- The Salvia divinorum Research and Information Center (<http://www.sagewisdom.org/>) - Daniel Siebert's site
- Erowid Salvia divinorum Vault (<http://www.erowid.org/plants/salvia/salvia.shtml>) - Salvia section from Erowid's vast reference site
- Lycaeum page on Salvia divinorum (<http://leda.lycaeum.org/?ID=269>) - another large reference site for psychoactives
- Salvia divinorum Scotland (<http://www.salvia-divinorum-scotland.co.uk/salvia/index.htm>) - information and advice on cultivation etc

- The Salvia Center (<http://www.salviacenter.com/>) - a hub for Salvia information on the web
- Salvia.net (<http://www.salvia.net/>) - information about growing, history and some experience reports
- All about Salvia divinorum (<http://www.salvia-divinorum.nl/>)

any

- How to grow Salvia divinorum (http://coffeesh0p.com/Info/How_To_Grow_Salvia_Divinorum/)
- Grow your own Salvia divinorum seeds (<http://members.cox.net/sageseeds/>) - an illustrated step by step guide to hand pollination and seeds
- Information about salvia in one guide (<http://www.salviaguide.com/>)

Law

- Erowid's Salvia Law vault (http://www.erowid.org/plants/salvia/salvia_law.shtml)
- The Salvia divinorum Research and Information Center (<http://www.sagewisdom.org/legalstatus.html>)

Forums

- International section of the 'Salvia Community' (<http://www.salvia-community.net/International-f16.html>) - discussions with Salvia experts from all over the world
- Drugs Forum Salvia Forum (<http://www.drugs-forum.co.uk/forum/forumdisplay.php?f=35>) - focussed on high quality info and mature discussion of Salvia
- The SalviaD (<http://groups.yahoo.com/group/SalviaD>) Yahoo group is active with over 20,000 posts since 1999.
- SalviaD Alliance Forum (http://groups.yahoo.com/group/SalviaD_Alliance)
- Psychonaut.net Salvia discussion forum (http://www.psychonaut.com/index.php?option=com_forum&Itemid=11&page=viewforum&f=8&lang=en)

rieved from "http://en.wikipedia.org/wiki/Salvia_divinorum"

Category: Salvia divinorum

- This page was last modified 20:55, 29 January 2007.
 - All text is available under the terms of the GNU Free Documentation License. (See **Copyrights** for details.)
- Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a US-registered 501(c)(3) tax-deductible nonprofit charity.

5. Hallucinogenic substances. Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation containing any quantity of the following hallucinogenic substances, including their salts, isomers, and salts of isomers whenever the existence of those salts, isomers, and salts of isomers is possible within the specific chemical designation (for purposes of this subsection only, the term "isomer" includes the optical, position, and geometric isomers):

- 2C-T-1
- a. Alpha-ethyltryptamine, its optical isomers, salts, and salts of isomers (also known as etryptamine; a-ethyl-1H-indole-3-ethanamine; 3-(2-aminobutyl) indole).
 - b. 4-bromo-2, 5-dimethoxy-amphetamine (also known as 4-bromo-2, 5-dimethoxy-a-methylphenethylamine; 4-bromo-2, 5-DMA).
 - ✓ c. 4-bromo-2, 5-dimethoxyphenethylamine (also known as 4-bromo-2, 5-DMPEA).
 - d. 2,5-dimethoxy-amphetamine (also known as 2, 5-dimethoxy-a-methylphenethylamine; 2, 5-DMA).
 - e. 2,5-dimethoxy-4-ethylamphetamine (also known as DOET).
 - f. 4-methoxyamphetamine (also known as 4-methoxy-a-methylphenethylamine; paramethoxyamphetamine; PMA).
 - g. 5-methoxy-3,4-methylenedioxy-amphetamine.
 - ✱ h. 4-methyl-2,5-dimethoxy-amphetamine (also known as 4-methyl-2,5-dimethoxy-a-methylphenethylamine; "DOM" and "STP").
 - i. 3,4-methylenedioxy amphetamine.
 - j. 3,4-methylenedioxymethamphetamine (also known as MDMA).
 - k. 3,4-methylenedioxy-N-ethylamphetamine (also known as N-ethyl-alpha-methyl-3,4(methylenedioxy)phenethylamine, N-ethyl, MDA, MDE, MDEA).
 - l. N-hydroxy-3,4-methylenedioxyamphetamine (also known as N-hydroxy-alpha-methyl-3,4(methylenedioxy)phenylamine, and N-hydroxy MDA).
 - m. 3,4,5-trimethoxy amphetamine.
 - n. Bufotenine (also known as 3-(Beta-Dimethyl-aminoethyl)-5-hydroxyindole; 3-(2-dimethylaminoethyl)-5-indolol; N, N-dimethylserotonin; 5-hydroxy-N,N-dimethyltryptamine; mappine).
 - o. Diethyltryptamine (also known as N, N-Diethyltryptamine; DET).
 - p. Dimethyltryptamine (also known as DMT).
 - q. Hashish.
 - r. Ibogaine (also known as 7-Ethyl-6, 6B, 7, 8, 9, 10, 12, 13-octahydro-2-methoxy-6, 9-methano-5-H-pyrido [1', 2':1,2] azepino (5,4-b) indole; Tabernanthe iboga).
 - s. Lysergic acid diethylamide.
 - t. Marijuana.
 - u. Mescaline.
 - v. Parahexyl (also known as 3-Hexyl-1-hydroxy-7,8,9,10-tetrahydro-6,6,9-trimethyl-6H-dibenzol[b,d]pyran; Synhexyl).
 - w. Peyote (all parts of the plant presently classified botanically as *Lophophora williamsii* Lemaire, whether growing or not, the seeds thereof, any extract from any part of such plant, and every compound, manufacture, salts, derivative, mixture, or preparation of such plant, its seeds, or its extracts).
 - x. N-ethyl-3-piperidyl benzilate.
 - y. N-methyl-3-piperidyl benzilate.
 - z. Psilocybin.
 - aa. Psilocyn.
 - bb. Tetrahydrocannabinols (synthetic) equivalents of the substances contained in the plant, or in the resinous extractives of *Cannabis*, sp. or synthetic substances, derivatives, and their isomers with similar chemical structure and pharmacological activity such as the following:
 - (1) Delta-1 cis or trans tetrahydrocannabinol, and their optical isomers.
 - (2) Delta-6 cis or trans tetrahydrocannabinol, and their optical isomers.
 - (3) Delta-3,4 cis or trans tetrahydrocannabinol, and its optical isomers. (Since nomenclature of these substances is not internationally standardized, compounds of these structures, regardless of numerical designation of atomic positions covered.)
 - cc. Ethylamine analog of phencyclidine (also known as N-ethyl-1-phenylcyclohexylamine, (1-phenylcyclohexyl) ethylamine, N-(1-phenylcyclohexyl) ethylamine, cyclohexamine, PCE).
 - dd. Pyrrolidine analog of phencyclidine (also known as 1-(1-phenylcyclohexyl)-pyrrolidine, PCPy, PHP).
 - ee. Thiophene analog of phencyclidine (also known as (1-[1-(2-thienyl) cyclohexyl] piperidine; 2-Thienyl analog of phencyclidine; TPCP, TCP).
 - ff. 1-[1-(2-thienyl)cyclohexyl]pyrrolidine (also known as TCPy).

Path : plants > salvia

Help support Erowid with a \$10 Paypal donation.

Salvia Legal Status by Erowid

U.S. FEDERAL LAW *

Caution : All legal information should be verified through other sources. [\[see below\]](#)

U.S. FEDERAL LEGAL SUMMARY Salvia divinorum	
REGULATED	No
STATUS	Not Approved For Human Consumption
SCHEDULE	Un-Scheduled

Salvia divinorum is uncontrolled in the United States by federal law, but is controlled in some states (see state law). This means all parts of the plant and its extracts are legal to cultivate, buy, possess, and distribute (sell, trade or give) without a license or prescription. If sold as a supplement, sales must conform to U.S. supplement laws. If sold for consumption as a food or drug, sales are regulated by the FDA.

The federal analog act generally requires that, in order to qualify as an analog, a substance must be chemically similar to a substance which is federally scheduled. Salvia Divinorum is chemically quite different from other scheduled substances and as a plant is quite unlikely to be targeted by this act.

Selling Salvia divinorum for human consumption as a "drug" is probably illegal in the US under the Food, Drug & Cosmetics Act and its sale as a drug would be regulated by the FDA. Selling an unapproved drug in the US can be prosecuted under the FD&C's "misbranding" clause. (FD&C Section 502) The more it is packaged and marketed as a drug (for example a 10x extract hyped as 'the new ecstasy') the more likely it is to be treated as an "illegal drug" by law enforcement agents.

The US Air Force is considering whether to include Salvia divinorum in the list of banned drugs. See [Plant could get airmen in legal hot water](#), Jan 2004.

California Analog Act

Under the strict [California Analog Act](#), salvia could potentially be prosecuted if it is sold for human consumption as a psychoactive drug.

US Federal Analogue Act

Under the Federal Analogue Act, salvia fails to meet the "chemically similar" criteria and thus is not subject to the analogue act provisions. However, the DEA has recently changed their view on this and now states:

"Salvia Divinorum, Salvinorin A, and Divinorin A are not listed in the Controlled Substances Act. If sold for human consumption, Salvia may be subject to control under the Analogue statutes because of its functional pharmacological similarities to other CI hallucinogens like THC."
-- from DEA Diversion Salvia Page Feb 2002

However the DEA's analysis is completely flawed. The Federal Analogue Act, [as currently understood](#) requires that a substance be "chemically similar" to a controlled substance not "pharmacologically similar" as the DEA suggests in their quote. Very little is known about the pharmacology of Salvia and there is still much unknown about the

in their quote. Very little is known about the pharmacology of Salvia and there is still much unknown about the pharmacology of THC. Saying the two are 'pharmacologically similar' might satisfy the paragraph II of the Analogue Act test, but its also just wrong. Perhaps the DEA has performed human pharamcology studies on salvinorin that they are keeping secret, but most likely the authors of this article are just trying to use their position to further extend the reach of their power well beyond the scope of the law.

Salvinorin is not a chemical analog of any scheduled substance.

Federal Analogue Act of 1986

California Analog Act of 1988

US Military *

US Navy: K writes: Salvia Divinorum is now on the list of banned substances for the US Navy. It is not tested for, however, if you are found in possession or using it you will be charged under UCMJ Article 92 "Failure to Obey Order or Regulation". Unconfirmed. The Navy Awareness Training on Salvia Divinorum, Feb 2004 (orig) states that sailors may be disciplined under SECNAVINST 5300.28C and OPNAVINST 5350.4C as general prohibitions against the "illicit" use of intoxicants. These reportedly do not apply to religious / spiritual use, although we do not know the details of these exemptions. (Thanks DN)

US Marines: According to Marine Corps News, the use of Salvia divinorum for "intoxication, excitement, or stupefaction" is prohibited under the same rules as those for the Navy.

U.S. STATE LAW *

Delaware *

Bill outlawing Salvia divinorum signed on May 02 2006 adds it to schedule I of the Delaware state controlled substances law. Bill Banning Salvia divinorum, now passed (May 8 2006). (Thanks to Logan)

Louisiana *

Effective Aug 8, 2005 (signed into law Jun 28, 2005) Louisiana Act No 159 makes 40 plants illegal, including S. divinorum, when intended for human consumption. The law specifically excludes the "possession, planting, cultivation, growing, or harvesting" of these plants if used "strictly for aesthetic, landscaping, or decorative purposes." (Text of HLS_05RS-52 and Update June 2005)

Missouri *

On Aug 28, 2005 House Bill 633 was incorporated into 195.017 of Missouri's drug regulation statutes. Thus, Salvia and salvinorin A became Schedule I substances in that state. As far as Erowid knows, Missouri is the first state in the U.S. to actually schedule s. divinorum or its active chemical. <http://www.moga.state.mo.us/statutes/chapters/chap195.htm>. (Thanks Q)
St. Peters city passed an ordinance banning sales of Salvia divinorum to minors aged 17 or younger. Jan 2003. (St Peters Journal - Jan 26, 2003)
HB165 introduced in state legislature, proposing addition of S.divinorum to list of scheduled substances. No hearing scheduled as of Jan 2005. (MO House of Representatives)

New Jersey *

New Jersey lawmakers are reportedly considering a ban of Salvia divinorum: courier post online, may 18 2006. No law concerning Salvia d. known, but a mention in news about Northern Monmouth includes the following curious text: app.com GRAND TOUR: Two 15-year-old borough males were charged on Sept. 10 with illegal possession of salvia divinorum with intent to distribute by Sgt. Kevin Roake. (Thanks embroglio)

New York *

New York is moving to control Salvia divinorum. State Targets Tripped Out Herb - Long Island Press, June 16 2005. Also see the text of the proposed law taken from the very, very awful web site at: <http://public.leginfo.state.ny.us/>. (Thanks Embroglio)

Oklahoma *

Any substance/products containing Salvia divinorum that "has been enhanced, concentrated, or chemically or physically altered" is controlled under the Oklahoma Uniform Controlled Substances Act on Nov 1, 2006, after state bill 2485 was signed into law on May 26, 2006. Text of bill available HB2485 CCS RTE. We assume this means that plain leaf, unprepared would not be controlled under this law. (Thanks B, DK, and mr. JR)

Tennessee *

Tennessee has made it a class A misdemeanor to "knowingly produce, manufacture, distribute, possess or possess with intent to produce, manufacture, or distribute the active chemical ingredient in the hallucinogenic plant Salvia divinorum A." Along with the strangely-worded caveat that this prohibition does not apply to "the possession, planting, cultivation, growing, or harvesting of such hallucinogenic plant strictly for aesthetic, landscaping, or decorative purposes." See <http://www.legislature.state.tn.us/bills/currentga/BillCompanionInfo.aspx?billnumber=SB3247>. The law takes effect on July 1, 2006. See also: Ban on hallucinogenic passed by House (May 2006). See also: Tennessee House and Tennessee Senate. (Thanks Embroglio and MG)

If you have information about the legal status of this substance in any other U.S. state, please let us know.

INTERNATIONAL LAW *

Australia *

The Australian National Drugs & Poisons Scheduling Committee recommended in November 2001 to have *Salvia divinorum* and salvinorin A added to Australia's strictest schedule, Schedule 9. The recommendations took effect on June 1, 2002, making dried or prepared *S. divinorum* illegal to buy, sell, or possess.

While drug laws fall under state jurisdiction in Australia, most states automatically incorporate changes and additions to federal law into the law of the state. This means that for all practical purposes, *S. divinorum* should be assumed to be controlled in all of Australia.

It is unclear whether live *S. divinorum* plants are now illegal as well. According to Shaman Australis, prior to this ruling, there were only three plants that were illegal in Australia: *Erythroxylum* species that contain cocaine, the opium poppy, and *Cannabis*. Other plants that contain scheduled substances are not generally considered illegal as long as the active chemicals are not extracted from them and they are not prepared for use (much as in the United States). This is likely now the case with *S. divinorum* as well.

Australia is the first country to have pass laws against the possession of *Salvia divinorum*.

- o [Shaman Australis Salvia Law Page](#)
- o [More Australian Drug Law](#)
- o [National Drugs and Poisons Schedule Committee - November 2001 Gazette](#)
- o [Salvia Crusaders of Australia](#)

Belgium *

Salvia divinorum became controlled in Belgium on Oct 22, 2006 [EMCDDA reference]. *Salvia divinorum* and Khat were added to a list of "illegal products" in May 2006 as a correction to the previous law. See [Modification de la réglementation sur les substances psychotropes](#). Previously, "Salvorin A" [sic] had been added to the list of controlled psychotropic substances on Oct 18, 2004. [Moniteur Belge/Belgisch Staatsblad]. However the name "*Salvia divinorum*" was not mentioned and the misspelling of the active compound provided legal confusion. [Thanks TE and Cholo]

Brazil *

Salvia divinorum is not controlled in Brazil, according to an Erowid visitor. Leaf and extracts are sold in shops and from domestic Brazilian websites. (Unconfirmed, thanks TN)

Canada *

Salvia divinorum is not controlled in Canada. *S. divinorum* leaf and extracts are sold in shops and live clones are available via mail order. (Thanks Mike)

Denmark *

Salvia divinorum (and salvinorin) were added to category B of the controlled substances list on August 23, 2003. ([text of law](#))

Estonia *

We have been told that "In Estonia one requires a doctor's prescription to use any substances/products containing salvinorin. This means that *Salvia divinorum* is banned in Estonia (import, cultivation..)." (Unconfirmed, thanks nfo).

Finland *

In August 2002, Finland passed laws against the importation of *Salvia divinorum*.

France *

We have been told that "*Salvia* is legal to possess, and consumption is not illegal in France." (unconfirmed, thanks JF).

Germany *

Salvia divinorum is not controlled in Germany. (Unconfirmed, thanks Ujo). Erowid received the following comment in Dec 2005:

Two months ago I was travelling by train from Amsterdam through Germany and I was searched by German police. They confiscated 1/2 gram of *Salvia divinorum* from me and I just received a fine for 100 euros in the mail. Either it is controlled or I'm the victim of an overzealous German district attorney. - JM

Hungary *

INK writes: "In Hungary it is legal to buy or sell *Salvia divinorum*. The plant can be bought in usual plant shops, ones that sell HBW seeds, cacti containing mescaline, and Kratom. However none of them are sold for human consumption, but for botanical purposes." (Unconfirmed, thanks INK).

Israel *

"*S. divinorum* has been sold by small vendors in Israel but low demand caused at least one vendor to stop selling it. The chief pharmacist at the Ministry of Health told one inquirer that it was not illegal to possess but might not be legal to sell because it's not an approved drug. Individuals have reported that they have imported *S. divinorum* into Israel through customs without incident, although additional border taxes may be applied." - Aly.

Italy *

S. divinorum and salvinorin A were added to the "Tabella 1" (list of prohibited plants and substances) in a Jan 11, 2005 Ministry of

Health statement. Salvia is illegal to grow, possess, distribute, etc. This follows a Jun 2004 ordinance making it illegal to sell Salvia divinorum and salvinorin A. (Text of Jan 11 2005 decree: Gazzetta Ufficiale N. 54 del 07 Marzo 2005; text of Jun 2004 ordinance) (Thanks xochi, alberto, ^DiO-LeCclo^*) First Arrest in Italy Related to S. divinorum, May 19 2005

Japan *

Salvia divinorum is sold in head shops in Japan.

Netherlands *

Salvia divinorum is legal to buy, sell and possess in the Netherlands.

Norway *

Salvia divinorum is not specifically controlled in Norway, but the national health council has said it considers it a prescription drug based on its use as a psychoactive drug. <http://www.lovdata.no/for/sf/hd/td-19991227-1565-0.html#1> (Thanks dodecha).

Poland *

Salvia divinorum is not currently controlled, but some people say police confiscate it saying it is a 'drug'. (Unconfirmed, thanks K)

Portugal *

Salvia divinorum is not listed in any Portuguese law or regulation that we know of. (Thanks J)

Romania *

Salvia divinorum is not listed as controlled in Romania. (Unconfirmed, thanks rh)

Russia *

Salvia divinorum is not controlled or illegal in the Russian Federation. See List of Controlled Drugs in Russia (Russian) (thanks joster)

Singapore *

Salvia divinorum and Salvinorin are not controlled in Singapore. (Unconfirmed, thanks t)

South Africa *

Salvia divinorum is not controlled in South Africa and legal to possess, sell, and import. South Africa has, however, a law which prohibits the "abuse" of any substance, but the legislation has not been used to control Salvia divinorum. See Higly Legal - Mr Spencer (Thanks DL, Willystyle)

South Korea *

As of January 2005, both Salvia divinorum and Salvinorin A are controlled in S. Korea. (media) (Thanks M)

Sweden *

As of Apr 1, 2006, Salvia divinorum and any product containing salvinorin are illegal to sell or possess. (Thanks Perdador, SA) Salvia is considered a "Häsofarlig Vara" (Hazardous Compound). See fhi.se. (Thanks mbobbo)

Perdador writes: "Up until that very day, online shops sold extracts and leaves for reasonable prices. The online shops seem to follow the new laws, and it is now hard to find any extracts or leaves of the plant from within Sweden. However ordering from other EU countries is still possible and the risk of getting caught is probably very low since the customs don't actively search for salvia divinorum, and probably will not even in the future because of how rare the drug is. During the last weeks before March 1 2006 prices were dumped very low on the swedish online shops that wanted to get rid of all their salvia divinorum in time, and the interest in the drug has probably never been greater because of the change in law." (Mar 3, 2006)

U.K. *

Salvia divinorum is unscheduled in the U.K., making it legal to buy, sell or possess. DW Writes:

Khat (Catha edulis), Salvia divinorum, Ma Huang, and Yohimbe are widely accepted as "legal highs" here in the UK. In fact it is not just 'head shops' where you can buy these plants (live or prepared). Some plant nurseries sell them, including some with awards from the Royal Horticulture Society.

Some Conservative Members of Parliament bring up the legal issues around these plants, but nothing has changed in the law. In the teen drug treatment world, these drugs are rarely seen or mentioned as they are generally unknown among British teens. I have heard rumors that people have been charged with intoxicated driving for driving while on these drugs, but have seen no confirmation. -- DW

Bassetlaw MP John Mann has raised an 'Early Day Motion' in Oct 2005 (a notice for Commons debate) following on from a local newspaper report in the Workshop Guardian. Although there are lots of early-day motions and most do not become a law, they can indicate the direction of Parliament. (Thanks to Chris).

If you have information about the legal status of this substance in any other country, please let us know.

CAUTION & DISCLAIMER *

Erowid legal information is a summary of data gathered from site visitors, government documents, websites, and

other resources. We are not lawyers and can not guarantee the accuracy of the information provided here. We do our best to keep this information correct and up-to-date, but laws are complex and constantly changing. Laws may also vary from one jurisdiction to another (county, state, country, etc)...this list is not comprehensive.

RELATED RESOURCES •

RELATED LINKS •

[Sage Wisdom : Legal Status](#)

[Center for Cognitive Liberty's Salvia Divinorum Action Center](#)

[Salvia Legal Status & Related Media - J Tinnin](#)

[Shaman Australis Salvia Law Page](#)

[\[back to plants \]](#) [\[back to salvia \]](#) [\[back to law \]](#)

Created by Erowid - Jul 31, 1997

Last Mod - Jan 11, 2007

Content & design © 1995-2006 Erowid.org. Please ask before publicly reproducing.

The *Salvia divinorum* User's Guide

Version date: July 23, 2006

(The most recent version can always be found at:
<http://sagewisdom.org/usersguide.html>)

Created by "Sage Student", with contributions, editing,
and HTML rendering by Daniel Siebert

WHY YOU WERE GIVEN THIS GUIDE

Perhaps a friend gave you a *Salvia divinorum* cutting, or maybe you bought dried leaves, an extract, or a living plant. If so, you need to read this guide. It was written to teach you how to work with this herb in a way that is personally rewarding, and how to do so as safely as possible. It will also teach you how to grow and care for your own *Salvia divinorum* plants.

Salvia divinorum is an extraordinary visionary herb. It is not a recreational drug. It produces a profoundly introspective state of awareness that is useful for meditation, contemplation, and self-reflection. Its effects are unique and cannot be compared with the effects of other drugs. The effects of Salvia do not appeal to many people (young or old). The people who are most drawn to it are both mature and philosophically minded. Beware of inaccurate information. There are many unethical vendors who try to lure naive customers by portraying the effects of Salvia as more appealing than they are. The news media often sensationalizes stories about Salvia, exaggerating its effects, risks, and popularity. Much of what has appeared in the popular press is inaccurate and misleading. Salvia is not "legal pot." It is not "legal acid." It is not a substitute for any other drug. Before trying Salvia, it is important that you know about its effects, appropriate uses, and the

potential risks associated with irresponsible use.

Do **NOT** use Salvia until you have read through this guide. Salvia is unique. You cannot make assumptions about its effects based on experiences you may have had with other herbs or drugs. Salvia has much to offer: fascinating psychoactive effects, sensual enhancement, magical journeys, enchantment, apparent time travel, philosophical insights, spiritual experiences, and perhaps even healing and divination. It should not be used casually. It should always be used in a thoughtful, intelligent manner, and only by responsible adults that are of sound mind and clear intent.

IT'S FREE

No one should have charged you for this guide. It should be given to people free of charge whenever plants, leaves, or extracts are given away, or sold. No one should make a profit from it. It was written as a public service. The authors will not receive any royalties.

PRINT OUT COPIES FREELY, BUT COMPLETELY

This guide should be given free of charge to anyone who is interested in Salvia. Please print this guide in its entirety. Give it free of charge to everyone with whom you share leaves or plants. If you copy it, copy **ALL** of it. Do not change it. Supply it as is. As more is learned about Salvia, this guide will be updated. For this reason, it is important that the version date (above) be included in the copy you give out. That way, the person getting it will be able to know if their copy is up to date.

DO NOT COPY TO OTHER WEB SITES

This guide is updated frequently. The most recent version can always be found at:
<http://sagewisdom.org/usersguide.html>. We do not want to see obsolete versions floating around on the Internet. So please do not copy it to other web sites. If you want to make the guide accessible from another web site, simply include a link to the above URL.

JUST A BEGINNING

This guide is just a beginning. After reading it, you may wish to learn more. An excellent resource for additional

information is *The Salvia divinorum Research and Information Center* web site at: <http://sagewisdom.org>. This website, created by Daniel Siebert, provides a wealth of information, including:

- The most up-to-date version of *The Salvia divinorum User's Guide*.
- The *Salvia divinorum* FAQ.
- Images of *Salvia divinorum* plants and the chemical structure of salvinorin A.
- Experiential reports.
- Scientific papers and articles about *Salvia divinorum*.
- Links to many other *Salvia* sites.
- Information on joining various on-line *Salvia divinorum* discussion forums.
- *Salvia divinorum* inspired artwork.
- A calendar of *Salvia*-related conferences, seminars, and lectures.

***SALVIA DIVINORUM* BASICS**

Salvia divinorum is a species of sage (the genus *Salvia*). There are approximately 1000 species of *Salvia* worldwide, but *Salvia divinorum* is the only vision-inducing species known. *Salvia* is a member of a very large family of plants known as the Labiatae. Because mint is a well-known member of this family, it is sometimes referred to as the mint family. *Salvia divinorum* makes a beautiful house plant, and it can be grown just for that reason, but most people who grow this plant are interested in its fascinating psychoactive effects.

The botanical name *Salvia divinorum* means "Sage of the Diviners." Under the right conditions, taken in the right way, *Salvia* produces a unique state of "divine inebriation." For hundreds of years, it has been used in religious and healing ceremonies by the Mazatec Indians, who live in the province of Oaxaca, in Mexico.

The effects of *Salvia* are very different from those of alcohol; but like alcohol, it impairs coordination. **Never, ever, attempt to drive under the influence of salvia--doing so could prove fatal!**

Salvia contains a chemical substance called salvinorin A. Salvinorin A is responsible for Salvia's mind-altering effects. It is not chemically related to any other psychoactive drug. Unlike most visionary compounds, it is not an alkaloid. Pure salvinorin A is extremely potent. Doses of only several hundred micrograms (millionths of a gram) will have an effect, and doses above 1 milligram (1/1000 of a gram) are too much for most people to handle comfortably. Because of its extreme potency, pure salvinorin A should never be used unless the dosage has been precisely measured with an extremely accurate chemist's scale. Fortunately, Salvia leaf is hundreds of times weaker than pure salvinorin A; therefore, Salvia leaf can be used much more safely.

Salvia leaf is physically quite safe. It is very gentle on the body. Toxicological studies have shown that salvinorin A is extraordinarily non-toxic. No one has ever died from a Salvia overdose. Salvia is not habit-forming or addictive. People who choose to use Salvia, tend to do so quite infrequently. Salvia is not a stimulant, it is not a sedative, it is not a narcotic, it is not a tranquilizer. Like many entheogens, at sufficiently high doses it can induce visions, yet it is quite different from other entheogens. Dale Pendell, in his book *Pharmako/poeia*, assigns *Salvia divinorum* to a unique pharmacological class, which he calls "existential." This term alludes to the philosophical illumination Salvia seems to shine on the nature of existence itself.

SALVIA IS NOT A PARTY DRUG ←

This is important to understand. Salvia is not "fun" in the way that alcohol or *Cannabis* can be. If you try to party with Salvia you probably will not have a good experience.

Salvia is a consciousness-changing herb that can be used in a vision quest, or in a healing ritual. In the right setting, Salvia makes it possible to see visions. It is an herb with a long tradition of sacred use. It is useful for deep meditation. It is best taken in a quiet, nearly darkroom; either alone (if a sitter will not be used, see below for discussion of sitters), or with one or two good friends present. It should be taken either in silence or (sometimes) with soft pleasant music playing.

CURRENT LEGAL STATUS

Salvia divinorum is a legal plant in most countries. Missouri, Louisiana, Tennessee, and Delaware are the only states in the USA that prohibit its use. *Salvia divinorum* is entirely legal in all other US states. Australia, Denmark, Belgium, Italy, and South Korea are the only countries that have enacted legislation making possession of *Salvia divinorum* and/or salvinorin A illegal. Spain prohibits the sale of *Salvia divinorum*, but not possession or use. In Finland, Norway, Iceland, and Estonia, it is illegal to import *Salvia divinorum* without a relevant prescription from a doctor. Additional information about Salvia's legal status, and pending legislation that might affect it, is available at: <http://sagewisdom.org/legalstatus.html>.

→ SALVIA EXPERIENCES: WHAT TO EXPECT

Salvia experiences range in intensity from subtle to extremely powerful. This holds true for chewed leaves, smoked leaves, and for oral tinctures, such as "Sage Goddess Emerald Essence®." The strength of the effects will depend on how much you take, the way you take it, and your individual body chemistry.

Salvia experiences differ from those produced by other visionary drugs or herbs, and Salvia has many advantages:

- You cannot take a fatal overdose of Salvia leaves.
- Salvia is not habit forming.
- Salvia is legal in most countries.
- Its effects are brief in duration, so you quickly return to normal.
- Salvia seldom produces adverse side-effects or hangover.

Noise and distraction will interfere with the experience. When on Salvia, watching TV is nothing but annoying; sitting around a campfire in the woods at night, is wonderful.

→ Because *Salvia divinorum* can alter perception and behavior, it must never be used in a public environment-doing so could draw unwelcome attention. When the effects are intense, people often become immersed in a

dream-like inner visionary state of awareness.

Sometimes people in this state will move around as if sleepwalking. For this reason, you should always have a sober sitter present when using strong doses. The sitter is there to make sure that you don't do anything dangerous, like knocking over lit candles, or falling over furniture.

When Salvia is smoked the effects come on very quickly, in less than a minute. The effects are only strong for 5-6 minutes, and then they quickly taper off over another 20-30 minutes.

When the leaves are chewed, the first effects come on at about 15 minutes and gradually develop to peak about 30 minutes after ingestion. The peak level of effects lasts 30 minutes to an hour, and then gradually diminish over an additional 30 minutes to an hour.

When taken as a tincture held in the mouth, the effects begin in 10-15 minutes, and quickly develop to a peak level that lasts 20-40 minutes. The effects then gradually diminish over an additional 30 minutes to an hour. To be on the safe side, it is important not to drive or use machinery for at least an hour after the experience appears to be ended.

Usually people feel clearheaded and mentally refreshed after a Salvia experience. Occasionally some people experience mild headaches after smoking Salvia. It appears that such headaches are the result of smoke-induced sinus irritation. Like tobacco smoke, Salvia smoke is probably somewhat irritating to the lungs.

Salvia experiences can be divided into various levels of intensity. The SALVIA Experiential Rating Scale has been constructed to rate the various levels of effects produced by salvia. Each letter of the word *SALVIA* stands for another level of effects. The scale describes six different levels of intoxication, each one more intense than the previous. The overall intensity of effects is scored according to the highest scale level attained during the course of the experience.

The SALVIA Experiential Rating Scale 

Level - 1 "S" stands for SUBTLE effects. A feeling that "something" is happening, although it is difficult to say just what. Relaxation and increased sensual appreciation may be noted. This mild level is useful for meditation and may facilitate sexual pleasure.

Level - 2 "A" stands for ALTERED perception. Colors and textures are more pronounced. Appreciation of music may be enhanced. Space may appear of greater or lesser depth than is usual. But visions do not occur at this level. Thinking becomes less logical, and more playful; short-term memory difficulties may be noted.

Level - 3 "L" stands for LIGHT visionary state. Closed-eye visuals (clear imagery with eyes closed: fractal patterns, vine-like and geometric patterns, visions of objects and designs). The imagery is often two dimensional. If open-eyed visual effects occur, these are usually vague and fleeting. At this level, phenomena similar to the hypnagogic phenomena that some people experience at sleep onset occur. At this level, visions are experienced as "eye candy" but are not confused with reality.

Level - 4 "V" stands for VIVID visionary state. Complex three-dimensional realistic appearing scenes occur. Sometimes voices may be heard. With eyes open, contact with consensual reality will not be entirely lost, but when you close your eyes you may forget about consensus reality and enter completely into a dreamlike scene. Shamanistic journeying to other lands--foreign or imaginary; encounters with beings (entities, spirits) or travels to other ages may occur. You may even live the life of another person. At this level you have entered the shaman's world. Or if you prefer: you are in "dream time." With eyes closed, you experience fantasies (dream like happenings with a story line to them). So long as your eyes are closed you may believe they are really occurring. This differs from the "eye candy" closed-eye imagery, of level 3.

Level - 5 "I" stands for IMMATERIAL existence. At this level one may no longer be aware of having a body. Consciousness remains and some thought processes are still lucid, but one becomes completely involved in inner

experience and loses all contact with consensual reality. Individuality may be lost; one experiences merging with God/dess, mind, universal consciousness, or bizarre fusions with other objects--real or imagined (e.g. experiences such as merging with a wall or piece of furniture). At this level it is impossible to function in consensual reality, but unfortunately some people do not remain still but move around in this befuddled state. For this reason a sitter is essential to ensure the safety of someone voyaging to these deep levels. To the person experiencing this the phenomenon may be terrifying or exceedingly pleasant; but to an outside observer the individual may appear confused or disoriented.

Level 6 - "A" stands for AMNESIC effects. At this stage, either consciousness is lost, or at least one is unable to later recall what one had experienced. The individual may fall, or remain immobile or thrash around; somnambulistic behavior may occur. Injuries can be sustained without pain being felt; on awakening, the individual will have no recollection of what he/she did, experienced, or said in level 6. People cannot recall what they experience in this very deep trance state. This is not a desirable level, because nothing can later be recalled of the experience.

METHODS OF USE

Salvia is never taken by injection. There are many different methods of use. Several will be discussed here.

TRADITIONAL MAZATEC METHODS

The two traditional Mazatec methods are quite inefficient in that they require many more leaves than do the other methods. But they are very safe. Traditionally the leaves are taken in a semi-darkened room as part of a healing or religious ceremony. At least one sober person is present to watch over the people who have taken Salvia. A water-based drink made from ground-up fresh leaves is one of the traditional Mazatec ways of using this herb. It requires a lot of leaves and tastes somewhat unpleasant, so this method is seldom used by non-Mazatecs. Salvinorin is very poorly absorbed from the stomach so it requires enormous amounts of leaves to make the drink effective. But it does work, and the effects last longer than from any other method. Chewing

and swallowing a large number of fresh leaves is the other Mazatec method. When this is done the leaves are nibbled slowly for about 1/2 hour. Although the chewed-up leaves are swallowed, most of the effect is due to salvinatorin that is absorbed through the tissues of the mouth during the chewing. This is a less efficient way of chewing Salvia than the quid method (see below). Most people find chewing and swallowing fresh leaves to be unpleasantly bitter, and for some, it causes gagging.

MODERN METHODS

THE QUID METHOD:

A ball or cylinder of rolled-up leaves is made. This is called a quid. It is to be chewed. The leaves are chewed slowly--about one chew every 10 seconds. They are kept under your tongue between chews. For half an hour keep the quid that is being chewed, and the juice that forms, in your mouth. If you can, hold it in your mouth without spitting or swallowing. Then, after the half-hour chewing time is over, spit it all out. Have a bowl to spit into, and a towel handy. Salvia juice stains carpets and other fabrics, so be sure the bowl won't tip over.

Quids can be made from either fresh leaves or dried leaves. Those made from dry leaves are less bitter. To make a quid from dried leaves, weigh out 2-8 grams of dried leaves. A gram scale accurate enough for this can be purchased for under \$50. If you have no scale, count out 8 to 28 large whole dried leaves. Place the leaves in a small bowl of cool water for 10 minutes. Once the leaves are wet and have been soaking for about 10 minutes, remove the leaves from the water, squeeze the excess water out of them, and ball them up into a quid. Some people skip this soaking step when they are in a hurry, but chewing on brittle dry leaves may be unpleasant. If you wish, you can sweeten the quid with sugar, honey, Stevia extract or an artificial sweetener like Equal®. This will make it less bitter and more pleasant to chew.

If fresh leaves are used instead of dry ones, you will need from 8 to 28 large fresh leaves.

The effect of Salvia quids can probably be increased by

first treating your mouth in a special way to increase its ability to absorb salvinorin A. To do this you will need a toothbrush and an alcohol/menthol containing mouthwash such as Cool Mint Listerine®, (or any other brand that contains alcohol and menthol). Gently brush the lining of your mouth, including the tissue under your tongue, and the top surface of your tongue. This removes layers of dead cells normally present. Do not brush hard enough to cause bleeding. Then rinse with the mouthwash for at least 30 seconds. Be sure to get mouthwash everywhere in your mouth, including under your tongue. Then spit out the mouthwash and rinse once with water.

You will experience very little in the first 12 to 15 minutes of chewing. Don't be misled by this. Full effects are usually felt by 30 minutes (the time you spit out the quid). They remain on this level for about 30-60 minutes more, then start to decrease. The whole experience seldom lasts longer than an hour and a half, but this varies.

SMOKING:

Dried leaves can be smoked in a pipe. They need to be smoked hot and the smoke must be inhaled deeply and quickly to have an effect. Because salvinorin requires high temperatures to vaporize, it is best to hold a flame immediately above the leaves, drawing it down into the leaves the whole time you inhale. The leaves can be smoked in a short-stemmed tobacco pipe, in a bong, or in a "steamroller" pipe. Fill up a medium size bowl with leaves. Use a hand-held butane lighter that will go out when you are no longer pressing it, not a match. Have a large ashtray or tip-proof bowl to set the pipe in when you feel you've had enough. Remember that when you are immersed in the experience you may forget you are holding a lit pipe. You could drop it, causing a burn or a fire; therefore, it is best to have a sitter present when smoking. First effects will be noticed within a minute of inhaling. After 5-6 minutes the effects will gradually begin to subside. The total duration of the experience may be less than 30 minutes or as long as an hour.

→ Extract-enhanced leaves can also be smoked. Extract-enhanced leaves can be very strong and should only be

smoked when a sitter is present. It is possible to vaporize leaves or extract in a special vaporizer that heats up material without burning it. Vaporization can be deceiving. Because very little smoke is produced, it is possible to inhale a very large dose without realizing it. Anyone trying vaporization absolutely **MUST** have a sitter present. Many commercial vaporizers made for *Cannabis* will not work for Salvia. Special Salvia vaporizers can be built easily, but vaporization is not for those new to Salvia.

Vaporization of pure Salvinorin A is also possible, but it is not recommended! Unless the dose has been measured very precisely, this is extremely dangerous, as it's very easy to vaporize too large a dose. To be done safely, vaporization of salvinorin A requires weighing the dose on a very precise chemical balance capable of weighing in micrograms (millionths of a gram). These analytical balances cost well over \$1000. There are now available standardized doses of Salvinorin A on leaves, using such preparations enables one to inhale a known precisely-measured dose of salvinorin A. This makes it possible to experiment with salvinorin A without having to buy an analytical balance, and it greatly reduces the risk of overdose.

There is now a commercially available Salvia tincture. It is marketed by Daniel Siebert as "Sage Goddess Emerald Essence®." This fluid extract of *Salvia divinorum* is intended to be kept in one's mouth until its salvinorin content has been absorbed. While it can be taken undiluted, it is quite irritating to the mouth if taken in this way. The irritation is due to its high alcohol content. It is better to take it diluted with hot water. The amount of alcohol taken even in a large dose of the extract is not sufficient to produce alcohol intoxication. The effect of the tincture is that of Salvia, not that of whiskey. The alcohol is in the tincture solely as a solvent. The tincture comes with two droppers, one for the tincture, and a different one for the hot water. And comes with detailed instructions regarding its use and appropriate dosage. A simple method of using the extract is to dispense the measured dose into a small glass such as a shot glass and then add an approximately equal volume of water that has been heated to the

temperature at which one drinks coffee. Immediately after mixing the two, sip the contents of the shot glass, and hold it in your mouth without swallowing. Keep your tongue elevated above the floor of your mouth to allow the sublingual tissues (those under the tongue) to absorb the salvinorin. This means keeping the liquid in your mouth until either the desired effect has been reached or 1/2 hour has passed. Then swallow it or spit it out, whichever you wish.

WHICH METHOD IS BEST?

There are pros and cons to each method. Some people report that the quid method produces a deeper, more visionary experience than smoking. Others report that chewing doesn't work for them at all, but smoking does. For those who get little effect from either method, the two methods can be combined. First chew a quid, and then, after spitting it out, light up. If you already smoke tobacco or *Cannabis* you will probably be comfortable with smoking Salvia. If you are a non-smoker you will probably prefer the quid method. Bear in mind that smoking anything, even Salvia, can't be good for your lungs. Unlike smoke, orally consumed Salvia does not irritate your lungs.

It requires quite a bit more dried leaf when taking the leaves as a quid than when smoking. Smoking is the most economical way to use the leaves.

The quid method produces effects that come on more gradually and last longer. They are better for exploring Salvia's world. They are better for deep meditation.

Salvia tincture (e.g. "Sage Goddess Emerald Essence®") has the same effects as a quid method, however the dosage can be adjusted more precisely, the effects come on somewhat faster, and holding the not-unpleasant tasting tincture in one's mouth is much nicer than holding chewed up leaves in your mouth. The only side-effects reported that are unique to the tincture have been "burning" of the lining of one's mouth. This occurs if the alcohol in the tincture has not been sufficiently diluted. It may leave one's mouth mildly sore the next day, in much the way that it would be if you drank soup that was scalding hot. This problem can be prevented by

diluting the tincture with enough water.

Generally speaking, it is best to avoid overly-concentrated extracts, vaporizers, and pure salvinorin A. Chewing quid, using tincture, smoking leaves, or smoking mild to medium-strength extracts will produce sufficiently strong effects for most people. There is no need to experiment with stronger and more dangerous ways of taking Salvia.

There are some people--albeit a minority--who, even after many experiments, find they remain "Salvia-hardheads." They never experience more than a slight Salvia effect from smoking, or from a quid. Some of these hardheads will get satisfactory results if they chew a quid, and then immediately smoke after spitting out the quid. Others will find even this ineffective. For them, extract-enhanced leaves are necessary to produce effects. See how sensitive you are before experimenting with stronger forms of Salvia. With a little practice, quid chewing, or smoking, or combining the two ("boosting"), works quite well for most people. Many people find it takes several meetings with Salvia before a "breakthrough" experience occurs. So don't label yourself a "Salvia-hardhead" too soon.

SITTERS and SAFETY **WHEN YOU NEED A SITTER**

A sitter is absolutely essential if you are taking doses on which you may freak out, become confused, injure yourself, fall, or do anything that might harm others. Have a sitter present if you are new to Salvia, are experimenting with a stronger form than you have used before, or are using a more effective method of ingestion.

An experienced Salvia user who is chewing a quid, may often choose to do it alone, and may be quite safe in doing so. But having a pleasant, sensible, sober sitter is an absolute must if you are trying vaporization, smoking high doses of extract-enhanced leaves, or using pure salvinorin. Smoking leaves usually falls in between in terms of risk. Many people do so without a sitter, but a sitter is never a bad idea. Use sound judgment.

WHAT A SITTER SHOULD KNOW AND DO

The sitter must remember that no matter how strangely the person acts, the effects of salvia are short lived. don't take the person to the emergency room (unless, of course, there is a true medical emergency). Keep the person safe and wait it out. If you can't keep the person safe, get help. Otherwise keep the matter private. Within an hour or so (usually much less) the person will be back to normal. It is very reassuring to hold onto this knowledge if things get messy. It helps to have experienced Salvia yourself before sitting for another person. Experience with other visionary materials may be only partially helpful. The sitter should know that Salvia is different from these. Touching to "ground" the person works for some people on some entheogens, but may be frightening for someone on Salvia. If you plan on touching, clear it with the person BEFORE they begin their experience.

THE ROLES OF THE SITTER

The sitter has three essential jobs. The most important of these is to keep the person, and others who may be present, safe. This comes before all else. The main danger is accidental injury. Your job is to be a gentle guardian. Be as unobtrusive as possible, but remain alert in case the person should suddenly start moving about recklessly. Do not use physical force unless nothing else will do. Use of physical force may result in injury. It could be misinterpreted as an assault. NEVER LET SALVIA BE USED WHERE FIREARMS, KNIVES, OR OTHER DANGEROUS OBJECTS ARE PRESENT. Take the person's car keys for safe keeping before the experience begins. Keep the person safe from falls, head banging, sharp objects, walking into walls, walking into furniture, walking through windows, wandering out into the street or other public areas, open flames, hot surfaces, and breakable objects. But let the person move about in a safe area. Do not grab or try to physically restrain him/her, unless absolutely necessary. Redirect. Speak softly. Gently take dangerous objects away. Use the minimum touching necessary (in their altered state, the person may think your touching is an assault and react to the imagined danger). You may have to handle unexpected intrusions of strangers and other awkward social situations.

The second job of the sitter is to reassure. Often, simple repeated explanations may help if they appear frightened, e.g. "You're safe, I won't let anything harm you." "You're just having a Salvia experience, you'll feel better in a few minutes." "Your name is....." "I'm your friend" If speech is not called for, be silent. Silence is often less threatening to the person than trying to decipher what a sitter is saying.

The third job of the sitter is to help the person to later recall the details of their experience. There are several ways. Use a notebook and record the person's actions. Later you can ask about these. This may help jog the person's memory about what was experienced. Another technique, if the person is not too far gone to talk during the experience, is to ask repeatedly "what are you experiencing now?" A notebook, or a tape recorder, can be used to record responses. Since some people will prefer that you remain silent and don't record, clear it with them in advance.

INTERACTIONS BETWEEN SALVIA AND OTHER DRUGS

One should be particularly cautious about combining salvia with other drugs. As is the case with most drugs, some combinations may interact in unexpected and possibly negative ways.

Many people who are taking regular medications do use salvia with no adverse effects. Although salvia appears to be relatively safe when combined with many medications, there probably are some drugs that it should not be combined with. It is important to remember that each individual is unique. The fact that some people do not experience problems with a particular combination does not guarantee that that combination is safe for everyone.

If you must combine salvia with another drug, you should always do so cautiously. Start with an extremely conservative dose so as to reduce the risk, should a negative reaction occur. If no negative reaction occurs, you can try increasing the dosage slightly on subsequent attempts. Provided that no adverse effects are experienced, you can increase the dose until you obtain

the desired level of effects. One should always have an alert, responsible sitter present when experimenting with new combinations. It is important to have someone on hand who can help you, should the need arise.

We are aware of one individual who reported that his breathing became somewhat constricted and labored for several minutes when he smoked salvia following a high dose of GABA. While it is not certain that this reaction was due to an interaction of the two drugs, it would be prudent to avoid this combination.

THE NEUROLOGICAL MECHANISM OF ACTION FOR SALVINORIN A

Salvinorin A has been identified as a potent, highly selective kappa-opioid receptor agonist. Experimental evidence indicates that the psychoactive effects of salvinorin A result from its activity at these receptors.

GUIDELINES FOR USING SALVIA INTELLIGENTLY AND SAFELY

Salvia divinorum is a remarkably safe herb, provided that it is used in a safe manner. It can produce fascinating experiences that are deeply enriching, provided that it is used intelligently. Please pay careful attention to the following basic safety guidelines:

- NEVER USE SALVIA IF GUNS, KNIVES, OR OTHER DANGEROUS OBJECTS ARE WITHIN EASY REACH.
- NEVER DRIVE WHEN TAKING SALVIA.
- Choose the time and place of your salvia experience carefully. Privacy and safety are essential. Be very careful about heights, and open flames such as candles. Do not take Salvia when you may be interrupted by phone calls, visits, pets, children, etc. Turn off your telephone and set your answering machine to silently record incoming calls. You can return the calls in a couple of hours once you are sober.
- Give careful thought to how much you will take, and how you take it.
- After all smoking material is safely out, lie down in bed, on a couch, or on a carpet. You are much safer lying down than you would be stumbling

around. Stay put for the rest of the experience. The visionary effects are best perceived with eyes closed.

- Have a sitter (this is especially important if you are new to Salvia, taking a high dose, smoking a strong extract, or using a very strong delivery system (such as vaporization)).
- Volunteer to be a sitter for others.
- If you have mental health problems, don't take Salvia without first discussing it with your therapist, or doctor.
- Practice and encourage responsible use, don't give Salvia to minors, or to violent or unstable people. Don't share it with strangers. Know who you are giving it to and know why they want to use it.
- Never take Salvia while at work or in public. Keep it private. It's not for concerts. It is not for raves. It's not for large noisy parties. Better to use it in a quiet safe private place in the company of a close friend.
- Mixing Salvia with other drugs or large amounts of alcohol may cause out-of-control behavior, or terrifying experiences. While experienced Salvia users have experimented with combinations, these are not for Salvia beginners, and are certainly riskier than just using Salvia by itself. While there are no known toxic drug-drug interactions between Salvia and anything else, this has not been studied scientifically (see above for a discussion of a possible toxic drug-drug interaction of salvia with GABA).
- Be extra careful of flames (candles, lighters, fire, etc.) when using Salvia.
- Be very careful about using vaporized extracts, vaporized leaves, or smoking high-potency extract-enhanced leaves. These require a sitter to be present. Chewing quid or smoking leaves is much less likely to produce out-of-control behavior than these are.
- Never use pure salvinorin A unless the dose you are taking has been weighed with an ultra-accurate balance that can weigh out doses in micrograms, and you know exactly how much you can safely take. Even if you do meet these requirements, you still should have a sitter

present.

THE PLANT AND ITS CARE

If you will be growing your own *Salvia*, you should read this. If you will not be growing your own, you may wish to skip this section.

Salvia divinorum is a semi-tropical perennial. That means that it can grow year after year, but only if it is not exposed to freezing temperatures. It is a green plant with large leaves and a distinctive thick, hollow, square green stem. It can grow several meters (yards) high if conditions are favorable. When it grows high enough, the branches will bend, or break, and may root if they come in contact with moist earth. Although *Salvia divinorum* can flower under natural lighting conditions, it almost never sets seed that will sprout. So the plant is almost always propagated by cuttings. The leaves are oval, weakly notched (serrated) and can be quite large (up to 9 inches in length). They are usually emerald green, but under some conditions, may be yellow-green or even yellow. They are covered with a fine coating of extremely short hairs (trichomes), giving the leaves a satin like velvety appearance in certain lights. The plants grow best in partial shade, in well-watered, but well-drained, soil. The roots must not be kept constantly soaked, or root-rot will set in and kill the plant.

Salvia divinorum can be grown indoors in any climate. It makes a beautiful house plant.

You can grow *Salvia divinorum* outdoors all year round if you live in a humid semi-tropical climate, with well-watered, but well-drained soil, with a high humus content. If you live in a colder or drier climate, you can still grow *Salvia* outdoors, weather permitting. But you may have to do it with some care, making sure it is protected from frost, watered frequently, and misted when humidity is low. *Salvia* will not live through freezing or drought. It can be grown outdoors in pots which can be brought indoors when it is cold (below 40 degrees Fahrenheit). That way it can be grown outdoors in summer and indoors in winter.

Salvia will tell you when it is getting too dry: its leaves will droop. Be sure to water it at the first sign of mild drooping--do not let the plant become limp. The soil should drain well but should be kept moist. If planting Salvia in pots, make sure the pot is large enough to allow the plant to grow well. Although your available space will limit possible pot size, use the biggest pot that is practical. It must have drainage holes. Placing gravel (or broken up pieces of crockery) in the bottom of the pot will help promote drainage and thus discourage root-rot. Most commercial potting soil will work well. Adding Vermiculite® or Perlite® to the potting soil is helpful but not essential.

Salvia will need fertilizer. Any good general-purpose fertilizer will work. Fish emulsion is a good organic fertilizer choice, but because it has a very unpleasant odor, it is suitable only for outdoor use. Satisfactory results can be achieved with chemical fertilizer products. Some of them are:

Scott's® All-Purpose Plant Food (18-13-13) lightly sprinkled on the soil about once every six weeks.
Miracle-Grow® (15-30-15) or MirAcid® (30-10-10) added to the water once a week (1/4 tsp. per gallon).
Peter's® Professional Soluble Plant Food (15-30-15) 1/4 tsp. to gallon of water once per week.

If growing indoors, take the plants outdoors when it is warm enough, and let rain fall on them. This will prevent mineral salts from building up in the soil and killing your plant

Salvia divinorum can do well in a variety of different lighting conditions. It does best with a few hours of partial sunlight a day. It can do well when grown indoors near a window. It can handle more sun if kept well watered and misted frequently. It can also handle moderately deep shade. When changing the lighting conditions or the humidity conditions your plants are exposed to, do so gradually. Given enough time, Salvia is very adaptable, but it may take weeks to get used to a new environment.

Many pests can attack Salvia. Whitefly is a big problem

page 20 missing

since nodes are the places from which new roots are most likely to develop. While it is not necessary to make the cut here, doing so has the advantage that there will be no stem material dangling in the water below the node. This is important as the cut stem end is more likely to start to rot than is a node.

Make sure the cutting is made with clean shears, or a knife, so the cut stem does not get attacked by germs and fungi that could cause stem rot. Place it where it will get some filtered sunlight. Change the water daily. It may be a good idea to use cooled boiled water. If your water is chlorinated, boiling will drive off chlorine. Non-chlorinated water may be contaminated with plant disease germs, but boiling should kill these. Rooting in water is successful about 75% of the time (the rest of the time stem rot occurs and kills the cutting).

In two weeks roots will start to develop. When they are about 1/2-1 inch long, transplant to potting soil in a well-drained pot. Cover with a clear glass jar or clear plastic bag to serve as a humidity tent until the plant establishes its roots in the soil and appears vigorous (usually 1-2 weeks). Then gradually wean the plant from dependence on the humidity tent.

Some growers report that *Salvia* branches that break off spontaneously in summer are more likely to root successfully than those deliberately cut. Rooting in water outdoors may decrease the chance of stem rot occurring, apparently the UV light in unfiltered sunlight acts to kill germs or fungi in the water.

ROOTING IN SOIL:

Salvia can be rooted directly in soil. Materials needed:

- Potting soil.
- Two disposable plastic cups.
- Some Rootone® powder (this is a rooting hormone mixture that also contains a fungicide) it is available at most nurseries in the United States.
- A 1-gallon thin, transparent, polyethylene food storage bag.
- A rubber band.
- Water.

METHOD:

Punch some small holes in one of the cups for drainage. Fill the cup 2/3 the way up with potting soil. Using a pencil or a finger make a hole in the soil about 2 inches deep. The soil is now ready for your cutting. You must now prepare the cutting. With clean shears, cut off a length of stem from a healthy plant. Leave a few leaves (small ones) on top. Harvest the larger leaves from the cut-off stem. Immediately after cutting the stem, place it in clean water. Cut it back to just below a node, as roots will develop from the node. Keep the cut surface wet. Place the cut surface, and the stem for about 1 inch above the cut, into the rooting powder. Shake off the excess. Rooting powder is somewhat toxic, so wash your hands after handling it. Place the powder coated cutting in the hole in the soil. Gently push the soil around the cutting, holding it in place while filling in the hole. Water the planted cutting until some water runs out the drainage holes. Place the cup with the plant in it into the second plastic cup (which is there to catch any runoff water). You may want to put a small piece of wood or plastic in the bottom of the outer cup to act as a spacer. This allows enough space for excess water to drain. Place a 1-gallon clear plastic bag over the rooted cutting, using a rubber band to hold it in place. The rubber band should be outside the bag and the bag outside both cups. The Rubber band holds the bag against the cups. As the plastic bag acts to conserve moisture, frequent watering is not required. After several weeks you can transplant the now rooted plant to a larger pot.

PROCESSING PLANT MATERIAL

Dried *Salvia divinorum* leaves should be stored in sealed containers away from light. Stored this way, the leaves will retain their potency for many, many years, perhaps indefinitely (nobody knows just how long). If you are growing your own, you will probably want to dry leaves for future use. There are several ways to do this.

- **Method 1.) Nature's Bounty**

Wait until the leaves die or are shed. Gather them. Place them on a plate in a room with low humidity. Turn often. Wait until they are dry, then store. It is not known if naturally shed leaves are

stronger or weaker than picked leaves.

Advantage: you won't be depriving your plants of leaves it needs.

Disadvantage: you will have to wait until the plant is ready to make a donation to your cause. Leaves may not be in prime condition.

- **Method 2.) Salvia "Tobacco"**

Take big, freshly picked leaves and place one atop another (like stacking sheets of paper). Then cut through the pile, making 1/2 cm. (1/4 inch) strips. Pile these on a plate into a heap. Turn them twice daily until they are dry but not crispy.

Advantage: The resulting "tobacco" is said to give a smoother smoke than thoroughly dried leaves.

Disadvantage: It is possible that this slow partial drying results in weaker leaves that may not keep as long as thoroughly dried (crispy) leaves.

- **Method 3.) Food Dehydrator**

Dry in a food dehydrator. These are available where small kitchen appliances are sold. Drying is very fast and thorough. Dry until the leaves, including the leaf stems, are crispy. Touch the leaves with your fingers to see if they are thoroughly dried. If they are, the leaf stems should snap if pressure is applied to it.

Advantages: speed, thorough drying, and convenience.

Disadvantage: Cost of buying a dehydrator.

- **Method 4.) Conventional Oven Dried Salvia**

Place on an oven-proof dish. Oven dry in an oven set at no more than 175 degrees F.

Advantage: speed, thorough drying, and convenience.

Disadvantages: Somewhat less convenient than using a food dehydrator. It may be hard to keep oven temperature at an optimal range.

- **Method 5.) Microwave Oven Dried Salvia**

Lay the leaves in a single layer between two paper towels and microwave them on high for 10 seconds at a time, checking after each period, until they are dry enough to store.

- **Method 6.) Calcium Chloride (CaCl₂) Drying**

Calcium chloride is available from chemical supply houses, or as "Damp-Rid" refills, from most hardware stores. Place a sufficient amount of calcium chloride in the bottom of a polyethylene container. Place a piece of aluminum foil over but not touching the CaCl₂, and place the leaves to be dried on top of foil. Curling up the edges of the foil, should prevent the leaves from touching the CaCl₂. Then seal the container. The leaves should be dry in about two days.

Advantage: very thorough drying.

Disadvantages: less convenient than other methods. Slow.

However you dry the leaves, store them in a sealed jar away from light. A clean glass canning jar works very well (Mason jar). Storing the jar inside a kitchen cabinet or medicine chest will keep it away from light. Stored this way, leaves will retain their potency for many, many years.

IN CLOSING

Having read this far, you now know enough to start on Salvia's green path. Whether you choose to is up to you. If you do, may you always find it a path with a heart. May this most remarkable teacher-plant guide you toward greater self-knowledge, harmony, wonder and joy. As you get to know this miraculous plant, please keep in mind that Salvia's fate is in your hands. For Salvia to remain legal, you and others must use it safely, responsibly, and privately.