



## Unwashed Poppy Seed

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### Introduction

Poppy seeds are a naturally derived product originating from a flowering plant known as papaver somniferum (poppy plant). Depending on the methods of harvesting and geographical origin of the plant, unwashed poppy seeds may have higher amounts of Schedule II opium alkaloids such as morphine, codeine, and thebaine on their seed coats when compared to *washed* poppy seeds. The poppy seeds themselves possess no opium content. Instead, the opium alkaloids (e.g., morphine, codeine, and thebaine) are found in the poppy latex, which is a milky white fluid that exudes from the pod when it is cut. Harvesters, who wish to increase opium alkaloids contents on the poppy seed coats, make cuts in the opium pods before they ripen which allows the latex to seep onto the seed coats. Individuals wishing to extract the opium alkaloid content from unwashed poppy seeds, use the seeds to create a tea, which contains sufficient amounts of alkaloids to produce psychoactive effects.

In the United States, at least 12 deaths have been reported in the scientific literature associated with use of *unwashed* poppy seed tea. Unwashed poppy seeds are widely available online and through private websites.

### Licit Uses

*Washed* and processed poppy seeds are used in foods to make pastries, cakes, porridge, and glaze. People also take poppy seeds by mouth for asthma, cough and diarrhea caused by infection. Poppy seed oil is used in manufacturing to make soap, paint and varnish.

### Chemistry and Pharmacology

The surface of *unwashed* seed is typically contaminated with the same opium alkaloids (e.g., morphine, codeine and thebaine), as found in the latex exudate from the poppy pods. The opium alkaloids such as morphine and codeine bind to and act as agonists at opioid receptors thereby producing psychoactive and other pharmacological effects such as analgesia, euphoria, respiratory depression, decreased gastrointestinal motility, and physical and psychological dependence. Pharmacological and toxic effects, abuse, and dependence liabilities of the aforementioned alkaloids are qualitatively similar to those of other Schedule II opioid analgesics (e.g., oxycodone, hydrocodone, oxymorphone etc.).

### User Population

*Unwashed* poppy seeds are abused for their opioid effects. Some users boil the seeds to produce a tea, which is consumed

for the purposes of perceived “natural” pain relief. Others produce the poppy seed tea from *unwashed* poppy seeds purely to obtain a “high”. *Unwashed* poppy seeds are a danger to the user and their abuse may result in unpredictable outcomes including death when used alone or in combination with other drugs as reported in the scientific literature.

### Control Status

Pursuant to 21 U.S.C. 812 of the Controlled Substances Act (CSA), opium poppy, poppy straw, opium and opiates (including their salts and derivatives) are Schedule II Controlled Substances. Some examples of such substances include morphine, codeine and thebaine.

However, the definitions of “opium poppy” and “poppy straw” under 21 U.S.C. 802(19) and (20) specifically exclude the “seed thereof.” As such, poppy seeds are excluded from control under the CSA but the definition does not exclude seeds with opium alkaloids.

Note: The opium alkaloids (inclusive of morphine, codeine and thebaine), if present as contaminants on poppy seed material, are not exempted from CSA control. Encounters of these materials are in violation of the Controlled Substances Act.

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section; Fax 571-362-4250, telephone 571-362-3249, and Email DPE@usdoj.gov.

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