

Title: A Comparative study between Salicin and Salicylic Acid derivatives and it's utility.

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Reference:

- 1) <https://doi.org/10.1016/j.btre.2014.08.005>
- 2) Laboratory synthesis of Salicin & Salicylic Acid.
- 3) Other Lab Tests.

<https://doi.org/10.5281/zenodo.12739871>

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Description:

In this comparison Salicin has been compared with Salicylic Acid derivatives. And also quantity of Salicin found in fruits, vegetables, herbal medicine.

Plants Name/ Chemical/Drugs	Remarks/ Metabolite
Salicin	
Salicylic Acid	
Acetylsalicylic Acid (Asprin)	
Sodium Salicylate	Still now used in homeopathy.
Sodium Amino Salicylate	Second line treatment for TB.
4-Aminosalicylic Acid (Para-aminosalicylic Acid)	
5-Aminosalicylic Acid (Mesalazine)	
Sulfasalazine	<u>Metabolite</u> : 5-Aminosalicylic Acid
Mesalazine	
Olsalazine	<u>Metablite</u> : 5-Aminosalicylic_Acid.
Biosynthesis of Salicin	https://doi.org/10.1016/j.btre.2014.08.005

Conclusion:

Nowadays the use of Asprin completely restricted. Doctors prescribing Aprin only for Cardiovascular diseases. People taking Asprin should not consume products containing high Salicin content. Even though Sulfasalazine is not a Salicylic Acid derivative but it's metabolite is a Salicylic Acid derivative.

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Salicylic

1 message

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What plant has salicylic acid?

White willow (*Salix alba*) is a natural source of salicylic acid. Willow has long been used for medicinal purposes.

What plants are high in salicylic acid?

Broccoli, cauliflower, cucumber, mushrooms, radishes, spinach, and zucchini all contain high amounts of salicylates. Vegetables from the nightshade family, like eggplant and peppers, also contain salicylates. Tomatoes are very high in salicylates.

Abstract. Salicylic acid and related compounds are produced by plants as part of their defence systems against pathogen attack and environmental stress. Which fruit has high salicylic acid?

Based on weight, herbs and spices have the highest concentrations of salicylic acid. Curry powder, for example, has been reported to have 218 mg per 100 grams of powder (3). For comparison, raspberries are reported to have 4.4 mg per 100 grams and they are considered a high salicylate food. What foods are high in salicylic?

Natural salicylates are found in a wide array of foods, including fruits, vegetables, coffee, teas, nuts, spices, Does turmeric have salicylates?

The highest concentrations of salicylic acid [measured in milligrams (mg) per gram] have been found in some herbs and spices, such as cumin, curry powder, dill powder, garam masala, oregano, paprika, rosemary, thyme and turmeric. What is salicin used for?

In fact, in the 1800s, salicin was used to develop aspirin. White willow appears to bring pain relief more slowly than aspirin, but its effects may last longer.

Salicin hydrolyses into β -D-glucose and salicyl alcohol (saligenin).

Salicyl alcohol can be oxidized into salicylaldehyde and salicylate, both biologically and industrially.

How is salicylic acid prepared industrially?

Salicylic acid is produced commercially via the Kolbe-Schmitt process. Here phenol and sodium hydroxide are reacted to make sodium phenoxide. The phenoxide is contacted with CO₂ to form sodium salicylate. The salicylate is acidified to give salicylic acid.

Salicylic acid is used in the production of other pharmaceuticals, including 4-aminosalicylic acid, sandalpiride, and landetimide (via saletamide).

Aminosalicylate sodium belongs to the family of medicines called anti-infectives. It is used with other medicines, to help the body overcome tuberculosis (TB). It will not work for colds, flu, or other virus infections.

Uses. It is used in medicine as an analgesic and antipyretic. Sodium salicylate also acts as non-steroidal anti-inflammatory drug (NSAID), and induces

apoptosis in cancer cells and also necrosis. It is also a potential replacement for aspirin for people sensitive to it.

Aminosalicylates can be used in Crohn's disease or ulcerative colitis, however they are often more effective in ulcerative colitis. Aminosalicylates have been shown to independently induce and maintain remission in mild to moderate ulcerative colitis.

4-Aminosalicylic acid (4-ASA) has been suggested as an effective treatment for both active and quiescent ulcerative colitis. 5-Aminosalicylic acid (5-ASA) is well accepted for the maintenance treatment of inactive ulcerative colitis.

Sulfasalazine and 5-Aminosalicylates (5-ASA)

What are sulfasalazine and 5-ASAs?

Sulfasalazine is a drug that is made up of two components: sulfapyridine and 5-aminosalicylic acid (5-ASA). This medication has been used since the 1930s to treat inflammation in arthritis and it was later found to do the same in ulcerative colitis.

At first, scientists did not know why sulfasalazine was effective in treating colitis but studies have then showed that it was due to the 5-ASA component of the drug. Later, medications for colitis started to exclude the sulfapyridine component of the drug because it

was found to be responsible for the side effects. These newly-designed drugs with fewer side effects would go on to be called 5-ASAs.

Examples of these medications include mesalamine, sulfasalazine, and olsalazine. You might recognize

Olsalazine is used to treat ulcerative colitis (a condition which causes swelling and sores in the lining of the colon [large intestine] and rectum) in adults when another medication (sulfasalazine) could not be tolerated. Olsalazine is in a class of medications called anti-inflammatory agent.

What is sulfasalazine?

Sulfasalazine is a type of drug known as a disease-modifying anti-rheumatic drug (DMARD). Sulfasalazine reduces inflammation, pain and swelling in your joints and may reduce the progression of your condition.

Mesalazine, also known as **mesalamine** or **5-aminosalicylic acid (5-ASA)**, is a medication used to treat **inflammatory bowel disease**, including **ulcerative colitis** and **Crohn's disease**.^[1] It is generally used for mildly to moderately severe disease.^[1] It is taken by mouth or **rectally**.^[1] The formulations which are taken by mouth appear to be similarly-effective.^[12]