



# Unbiased Essiac Tea Review: Benefits, Side Effects, Ingredients

Essiac is a herbal mixture that people take to boost immunity, get rid of toxins, and reduce inflammation. It's also a controversial add-on to cancer treatment and a supplement used by cancer survivors. This article sums up the research on Essiac, focusing on its individual herbs. Learn how to tease apart the true potential health benefits of Essiac from myth, marketing hype, bad science, and distorted historical data.

Disclaimer: This article is for informational purposes only. Please discuss your health concerns with your doctor. The FDA has not approved Essiac for treating cancer or any other medical condition. Essiac is sold as a herbal dietary supplement.

# What Is Essiac Tea?

### Overview

**Essiac is a botanical formulation of four herbs.** It was popularized in the 1920s by Canadian nurse Rene Caisse (Essiac is Caisse spelled backward) (<u>Cassileth, 2011</u>).

It is believed that Caisse obtained the formula from a patient who allegedly cured her breast cancer with the mixture, which she learned about from an Ojibwa healer. The Ojibwe (Anishinaabe) are an Indigenous people in Canada and the United States with a rich history of traditional medicine (<u>Cassileth, 2011</u>).

# Proponents claim that Essiac can help detoxify the body, strengthen the immune system, and reduce inflammation and oxidative stress.

Researchers have identified antioxidant, anti-inflammatory, and immune-balancing compounds in Essiac and its individual herbs. However, few clinical trials have been published (<u>Leonard et al., 2006</u>; <u>Kabeel et al., 2018</u>).

There is ongoing controversy around the use of Essiac as an alternative cancer therapy. Some proponents claim it may improve the quality of life, help relieve cancer pain, reduce chemotherapy side effects, and kill cancer cells. Skeptics point out that no controlled human studies are available to back up its use.

This article sums up the research on the potential benefits, side effects, and individual ingredients in Essiac tea. It's 100% unbiased and meant to help you understand the existing data.

### **Essiac Tea Ingredients**

**The original Essiac tea formula** likely contains the following four herbs and their ratios (<u>Seely</u> <u>et al., 2007</u>):

- Burdock root (*Artium lappa*): ~60%
- Sheep sorrel leaves (*Rumex acetosa L.*): ~30%
- Slippery elm inner bark (*Ulmus rubra*): ~8%
- Indian or Turkey rhubarb root (*Rheum officinale* Baillon/*Rheum palmatum* L.): ~2%

**Essiac should not be confused with Flor-Essence**. Flor-Essence is a more recent, modified Essiac product that also includes:

- Red clover blossom (*Trifolium pratense*)
- Blessed thistle herb (Carduus benedictus)
- Kelp (*Laminaria digitata*)
- Watercress herb (*Nasturtium officinale*)

Supposedly, Caisse agreed to modify the original Essiac recipe in the '60s and '70s while working with American physician Dr. Charles Armao Brusch. The pair purportedly named the new blend Flor-Essence. However, Caisse also continued to use the original Essiac formula independently (LeMoine, 1997).

Essiac Gold is a new formulation that contains the original four-herb formula and AHCC.

### Essiac Tea Purported Uses

According to supporters and some manufacturers, people use Essiac for:

- Detox/as an herbal cleanse
- Strengthening the immune system
- Reducing inflammation or pain
- Balancing blood sugar (in diabetes/prediabetes)
- General wellness, as a health tonic taken by healthy people and cancer survivors
- Easing the symptoms of gut, stomach, and liver disorders
- Improving appetite
- Complementary cancer treatment (to improve the quality of life and/or reduce chemotherapy side effects)
- Complementary HIV/AIDS treatment

The U.S. Food and Drug Administration (FDA) has not approved Essiac or Flor-Essence to treat cancer or any other medical condition. Essiac is classified and sold as a dietary supplement or health tonic. The FDA regulates dietary supplements as foods, not drugs. Manufacturers are responsible for ensuring that the product is safe and that the label claims are truthful and not misleading.

### **Historical Perspective**

According to historical records, Rene Caisse first heard about Essiac in 1922 while she was working in a hospital in Ontario. She began offering it to terminal cancer patients that were considered medically untreatable shortly after (<u>LeMoine, 1997</u>).

Caisse attracted the attention of medical doctors and health authorities over the next couple of decades. However, it wasn't until the mid-70s that the first research studies on Essiac took place (LeMoine, 1997).

Some sources claim that Essiac was given either by mouth or injection on a case-bycase basis. Others state that one herb was given by injection while the other ones were given orally. Caisse may have tested sheep sorrel herb alone by injection in some patients. Commercial websites may twist this data in an attempt to bring credibility to their modified Essiac formulations and herb ratios (LeMoine, 1997; I Was "Canada's Cancer Nurse").

The exact ratios and plant parts that Rene Caisse used are still a subject of debate. We go over this controversy in the next part, so let's dive in...

# **Essiac Tea Herbs & their Benefits**

### 1) Burdock Root

**Burdock root is the main ingredient in Essiac**. It's present in the largest amounts in the original and most other commercially available Essiac products. Burdock root likely carries the main health benefits of the formulation as a whole. Its traditional uses support this, while the studies carried out so far hint at it as well (<u>Kabeel et al., 2018</u>).

Traditionally, burdock root is used to cleanse toxins from the body, help fight infection, and relieve coughs and skin issues (<u>Chan et al., 2011</u>; <u>Don & Yap, 2019</u>).

Studies have confirmed that burdock root is rich in antioxidants, nutrients, and unique health-promoting active compounds. It contains the following compounds that act in synergy (Moro & Clerici, 2021; Ferracane et al., 2010; Yari et al, 2018; Gao et al., 2018; Lou et al., 2016; Pirvu et al., 2017; Rao et al., 2019; Duke, 2002):

- **Arctigenin and arctiin**, which are being investigated for their anti-inflammatory, immunomodulating, and anticancer properties
- **Total antioxidants** more powerful than vitamin C, including quercetin and others that promote detox, help reduce inflammation, and support normal blood sugar
- **Polysaccharides** that help strengthen the immune response and reduce inflammatory chemicals (cytokines) in the body
- **Inulin**, prebiotic fiber that balances the gut microbiome, improves digestion, supports healthy blood sugar levels, and helps fight insulin resistance
- Mucilage, which may protect and soothe the gut lining
- Bitter compounds that may support digestion and help kill bacteria and their biofilms

Limited clinical trials also back up the use of burdock root for knee osteoarthritis and colon inflammation. According to trials, burdock root may **increase antioxidant enzymes and total antioxidant status while reducing markers of inflammation and oxidative stress** (Maghsoumi-Norouzabad et al., 2014; Mizuki et al., 2019).

Small studies also suggest that burdock might be helpful for **healing ulcers and reducing the inflammatory response in** *H. pylori* **infection**. Plus, burdock root improved lipid status in another clinical study, pointing to its heart-protective potential (<u>Yen et al., 2018</u>; <u>Ha et al., 2018</u>).

High doses of GBS-01, a specific burdock fruit extract, seemed to improve outcomes in **a pilot trial of 15 patients with advanced pancreatic cancer** who didn't respond to standard chemotherapy (<u>lkeda et al., 2016</u>).

Burdock extract and arctigenin reduced tumor growth and enhanced survival in mice with skin and prostate cancer. The extract showed **anti-cancer potential** in blood, breast, and other cancer cells in the lab. It was the most active out of 364 herbal extracts screened using cancer and healthy cells in one Japanese experiment (<u>Nascimento et al., 2019</u>; <u>Wang et al., 2018</u>; <u>Don & Yap, 2019</u>; <u>Susanti et al., 2013</u>).

Have in mind that cellular and animal findings can't be applied to humans. More clinical studies are needed to better understand these findings and burdock's health benefits.

### 2) Sheep Sorrel

**Sheep sorrel is the second most dominant herb in Essiac**. This undervalued medicinal and culinary plant has a long history of traditional use among Canadian indigenous people (Korpelainen & Pietiläinen, 2020; Bello et al., 2019).

The whole plant and its leaves and stems contain:

- Quercetin, a potent antioxidant and antihistamine. Sheep sorrel is among plants with the highest amount of quercetin, according to the USDA database (<u>Mostafa et al., 2011;</u> <u>Bhagwat et al., USDA</u>)
- **Emodin**, which is being researched for its anti-cancer, circulation-promoting, bowel cleansing, and virus- and parasite-fighting properties (<u>Mostafa et al., 2011</u>; <u>El-Bakry et al., 2012</u>; <u>Gupta & Rai, 2018</u>)
- Natural vitamin C in exceptional amounts (up to 1200 mg/100 g, which is >800% RDA). Sheep sorrel was historically used for preventing scurvy and conditions caused by vitamin C deficiency (<u>Atanassova et al., 2018</u>)
- **Tannins**, antioxidant and anti-inflammatory "shrinking" plant actives that help stop bleeding and diarrhea (<u>Derksen et al., 2014</u>)

Sorrel leaves also contain oxalic acid. Oxalic acid can build up and damage the kidneys in excess. Cooking or boiling the leaves destroys most of the oxalic acid (<u>Tuazon-Nartea & Savage, 2013</u>).

Animal and cell-based studies reveal that sheep sorrel holds promise for **stomach ulcers and inflammation**, **nausea and gut disorders like constipation and diarrhea**, **wounds and skin irritation**, **exposure to toxins**, **and weak immune response**. Clinical studies have yet to be carried out (<u>Bae et al., 2012</u>; <u>Hussain et al., 2015</u>; <u>Bicker et al., 2009</u>; <u>Alkushi, 2017</u>; <u>Li et al.</u> <u>2016</u>).

Scientists tested the anticancer potential of sheep sorrel extract in leukemia and bone cancer cells. One analysis points out that the leaves are a source of nutrients that aid healthy weight gain, which is important for people battling serious illness (<u>Wegiera et al., 2012</u>; <u>Wong, 2011</u>; <u>Ito, 1986</u>; <u>Ladeji & Okoye, 1993</u>).

Still, studies haven't yet investigated sheep sorrel for cancer prevention or treatment in humans.

#### Roots or leaves?

Manufacturers can't seem to agree on what part of the sheep sorrel plant went into the original Essiac formula. A minority claim that their recipe is "authentic" because they use sheep sorrel roots, which are harder to harvest.

However, the existing historical and scientific data suggest otherwise: **it was likely the undervalued and "cheap" leaves, not the roots, that Rene Caisse used in the original formula**. Most proponents, including Caisse's assistant Mary McPherson, agree with this view.

In her archived conversations with a doctor testing Essiac at the Sloan Kettering Institute, Caisse was likely referring to burdock root, *not* to sheep sorrel, when she wrote "Roots are the most important part." We can't know for sure, though.

The main brands of Canadian Essiac products that can be traced to the original formula sold by Caisse use sheep sorrel leaves or the whole herb (leaves with some stem).

Further supporting this point, **all published animal and cellular studies used Essiac mixtures with sheep sorrel herb**. One such recent animal study demonstrated anti-leukemic activity in rats (<u>Kabeel et al., 2018</u>; <u>Tai et al., 2004</u>).

### 3) Slippery elm

Slippery elm is the third most predominant ingredient in Essiac. The inner bark is a Native American remedy **traditionally used to reduce mucous inflammation and damage**. People took it to relieve a sore throat, soothe an irritated gut, help heal wounds, and as a laxative (<u>Watts, 2012</u>).

Slippery elm is high in:

• **Mucilage**—the main active ingredient—a polysaccharide-rich mixture that can coat and protect open wounds and mucous membranes of the respiratory and digestive tract; it also acts as dietary fiber and aids digestion (<u>Braun, 2006</u>)

- Antioxidants that may help with irritable bowel syndrome (IBS) (<u>Joo, 2014</u>, <u>Watts,</u> <u>2012</u>)
- Tannins, like sheep sorrel (see above) (<u>Newall et al., 1996; Tamayo et al., 2000</u>)
- **Organic acids** with anti-inflammatory, antiviral, and potential anticancer properties <u>Wijesundara & Rupasinghe, 2019</u>)

Controlled clinical studies on slippery elm are lacking. Pilot trials and case studies suggest possible benefits for constipation-predominant IBS, gut dysbiosis, throat pain and inflammation, and gastroesophageal reflux disease (GERD) (<u>Hawrelak & Myers, 2010</u>; <u>Peterson et al., 2018</u>; <u>Watts, 2012</u>; <u>BMJ, 2003</u>; <u>Kines & Krupczak, 2016</u>; <u>Elliot, 2016</u>; <u>Martin & Seaman, 2015</u>).

Cellular studies give us some clues about slippery elm's antitumor potential. Slippery elm seems to neutralize and prevent reactive species from damaging cells and causing cancerous mutations in test tubes. More research is needed (<u>Choi et al., 2002</u>; <u>Langmead, 2002</u>).

### 4) Rhubarb Root

Rhubarb root is a famous Traditional Chinese Medicine (TCM) herb. It's described as purging and cleansing and traditionally used to help the body flush accumulated toxins <u>China</u> <u>Pharmacopoeia Committee</u>, 2010; <u>Wen et al., 2018</u>).

Studies have confirmed that it contains **purgative**, **anti-inflammatory**, **antioxidant**, **antimicrobial**, **and liver-protective active compounds** (<u>Yang et al., 2012</u>; <u>Gao et al., 2013</u>).

Rhubarb root also contains (Tang et al., 2007):

- **Emodin** (also found in sheep sorrel—see above)
- Tannins (present in both sheep sorrel and slippery elm), and
- **Bitter compounds** that stimulate digestion

Clinical studies reveal that rhubarb root may be helpful for pancreas inflammation, stomach and duodenal bleeding, kidney failure, pesticide poisoning, and poor food tolerance in patients with gastrointestinal injury (<u>Hu et al., 2018; Wan et al., 2014; Liu et al., 2020; Zhang & Zhang, Zhang et al., 2018; Wang & Pan, 2015; Wang et al., 2015; Yu et al., 2012</u>).

#### Indian or Turkey rhubarb?

There are two main types of medicinal rhubarb: Indian rhubarb (*Rheum officinale* Baillon) and Turkey rhubarb (*Rheum palmatum* L.). Both are referred to as Chinese rhubarb, and both are used in TCM. They seem to have similar (if not identical) health properties. Indian rhubarb is usually more bitter than Turkey rhubarb (<u>Barceloux, 2009</u>; <u>Zhang et al., 2019</u>).

Most Essiac products contain Indian rhubarb, though some use Turkey rhubarb. Evidence is lacking to claim that one variety is superior to the other. Despite this, some sources claim that Indian rhubarb is more authentic compared to Turkey rhubarb.

All in all, rhubarb root is a minor component in Essiac (reportedly makes up  $\sim$ 2% of the original formula). As long as high-quality plant matter is used, the variety of rhubarb is unlikely to make a difference in the tea's overall health effects.

# Potential Benefits of Essiac Tea: Published Research

Read more about the unpublished studies in this article about Essiac and cancer.

Small Human Studies & Case Reports

### 1) Cancer

#### Breast & Ovarian Cancer

A survey study of 510 women with breast cancer did not find a link between the use of Essiac and improvements in quality of life or mood. Essiac users reported beneficial effects, and only two women reported minor adverse events (Zick et al., 2006).

#### Other

Case reports mention favorable outcomes using Essiac tea in patients with:

- Pancreatic cancer (Smiley et al., 2016)
- Prostate cancer (<u>Al-Sukhni, 2005</u>)
- Lung cancer (Gladwish et al., 2010; Yoon et al., 2009)

### Preclinical Studies (Animals & Cells)

Clinical evidence is lacking to support the use of Essiac for any of the conditions listed below. The existing animal and cell-based research is outlined to direct future research but cannot be interpreted as supportive of any health benefit.

### 1) Antitumor Potential

Cell-based studies reveal that Essiac has antioxidant properties, as well as that it can be toxic to cancer cells. However, **studies on breast and prostate cancer cells yielded conflicting results**. Essiac also had anti-leukemic activity in rats and roundworms (<u>Ulbricht et al., 2009;</u> <u>Kulp et al., 2006;</u> <u>Ottenweller et al., 2004;</u> <u>Eberding et al., 2007;</u> <u>Tai et al., 2004;</u> <u>Kabeel et al., 2018;</u> <u>Ruiz et al., 2021</u>).

Read more about the research on Essiac and cancer here.

### 2) Antioxidant & Anti-inflammatory Activity

Essiac undoubtedly has antioxidant activity, but exactly how this can affect our health is uncertain.

Essiac showed strong antioxidant activity in roundworms, increasing their lifespan and ability to withstand oxidative stress (<u>Ruiz et al., 2021</u>).

One cellular study revealed that, at high concentrations, **antioxidants in Essiac help protect against DNA damage** in test tubes (<u>Leonard et al., 2006</u>).

Another study demonstrated the antioxidant and anti-inflammatory potential of both Essiac and Flor-Essence in mouse cells. Essiac seemed to have a stronger and more widespread effect than Flor-Essence in this study (<u>Cheung et al., 2005</u>)

One team of researchers reported **significant antioxidant**, **immune-balancing**, **and anti-inflammatory activity in cells**. Essiac was a more potent antioxidant than red wine, green tea, and cocoa (<u>Seely et al., 2007</u>).

In the same study, Essiac also blocked CYP450 liver enzymes. CYP450 enzymes are involved both in the metabolism of drugs and in cancer formation (<u>Seely et al., 2007</u>; <u>Rodriguez-Antona</u> <u>& Ingelman-Sundberg, 2006</u>).

### 3) Immune-balancing Effects

**Essiac had immune-balancing (***immunomodulatory***) effects in cellular experiments**. It stimulated immune cells called granulocytes to engulf pathogens, which strengthens the immune response. Essiac also increased the activity of CD8+ cells, which are key for tumor surveillance in the body and immune defense against bacteria and viruses (<u>Seely et al., 2007</u>).

In a study on mice, **Flor-Essence had beneficial effects on the immune system**. It increased the number of spleen cells, which support the immune response; it boosted the activity of macrophages, which specialize in removing dead and dying cells from the body. Plus, the mixture made NK immune cells more efficient at killing leukemia cells (<u>Wu et al., 2020</u>).

In the same mouse study, Flor-Essence increased the survival of immune cells in mice with weakened immune systems from treatment with the cancer drug cyclophosphamide. The authors say that further research should test if Flor-Essence can prevent immune damage caused by cyclophosphamide chemotherapy in humans (<u>Wu et al., 2020</u>).

### 4) Stomach Protection

Essiac helped protect the stomachs of rats from alcohol damage in one study. However, the researchers didn't find any positive effects on the liver, blood sugar regulation, or immunity in this experiment (<u>Leonard et al., 2006</u>).

### Lacking Evidence:

Despite anecdotal claims, evidence is lacking to back up the use of Essiac for the following conditions:

• Underactive thyroid

- Arthritis
- Fibromyalgia
- Chronic Fatigue Syndrome (CFS)
- HIV/AIDS

Individual herbs in Essiac have anti-inflammatory potential, though. This might *theoretically* explain its use for arthritis, fibromyalgia, and CFS. Read more about some experimental uses of Essiac in this article.

# **Essiac Tea Side Effects & Drug Interactions**

### Side Effects

A review of patients taking Essiac mentions no obvious toxicity (TreatmentUpdate, 1998).

One case report described a 59-year-old woman with symptoms of anorexia, nausea, myalgia, fatigue, and generalized abdominal pain following Essiac tea intake over a 6-month period. Her symptoms resolved after discontinuing the tea (<u>Cassileth, 2011</u>).

The manufacturer of Flor Essence states that users may experience:

- Increased bowel movements
- Frequent urination
- Swollen glands
- Skin blemishes
- Flu-like symptoms
- Slight headaches

In one survey-based study on cancer patients, 6.6% of Flor-Essence users reported adverse effects, including the following (<u>Richardson et al., 2000</u>):

- Diarrhea (1.9%)
- Constipation (1.2%)
- Nausea (1.1%)
- Fatigue (0.9%)

Vomiting has also been reported.

These side effects may not be applicable to the original four-herb Essiac tea. Clinical data are lacking to determine this.

#### Contraindications

The label on the original four-ingredient Essiac formula sold in Canada states that people with the following conditions should not take the supplement:

- Kidney stones (due to the oxalate content in sheep sorrel leaves)
- Arthritis (possibly also due to oxalates in sheep sorrel)
- Gastrointestinal disorders including intestinal obstruction, appendicitis, abdominal pain, IBS, and Crohn's (possibly a general precaution and due to Essiac's potential laxative effects)
- Allergies to plants of the daisy (*Asteraceae*) family

Pregnant and breastfeeding women and children should also avoid Essiac due to a lack of safety data.

The oxalate content in Essiac tea should be low since high temperatures neutralize oxalic acid from sheep sorrel leaves. It's usually only the fresh leaves that are problematic, but caution is recommended in sensitive groups.

### **Drug Interactions**

Not much is known about the possible drug interactions of Essiac and its individual herbs.

Theoretically, interactions with the following medications are possible:

- Blood-thinning drugs
- Diuretic drugs
- Diabetic drugs
- Birth control pills
- Hormone replacement drugs
- Drugs that affect the kidneys and liver
- DX-8951f (experimental chemotherapy drug)

One case mentions reduced clearance of an experimental chemotherapy drug in a patient taking Essiac. This might be because Essiac seems to block cytochrome P450 enzymes, which break down and clear drugs from the body (<u>Cassileth, 2011</u>).

Slippery elm, a component of Essiac, may also reduce the absorption of drugs due to its mucilage content.

Please consult your doctor before using Essiac to avoid potentially dangerous drug and disease interactions.

## **Essiac Tea Dosage & Available Formulations**

#### Available Essiac Tea Supplements

Essiac is available as:

- **Powder** that you make into a tea
- Liquid extract (with alcohol) that you can mix with water

- **Drops (with glycerin)** based on the alcohol extract in which alcohol has been replaced with glycerin
- **Capsules** containing the dried extract

In its original plant parts and ratios, the herbal formulation known as Essiac is trademarked and sold by a Canadian company.

Read more about the science behind these different formulations in this article to choose the best product for your needs.

### Recommended Dosage

# Since clinical data is lacking, all dosage recommendations are either anecdotal or endorsed by supplement manufacturers.

The following has been recommended by Essiac capsule manufacturers:

- 2 capsules twice daily for daily use
- 3 capsules three times daily for other health situations

If taking the **powder**, manufacturers recommend mixing the contents of the whole bottle with 88 fl oz (fluid ounces) of water, and then taking:

- 2 fl oz twice daily for daily use
- 3 fl oz three times daily for other health situations

They also give the following dosing for the liquid extract:

• 3 tsp twice daily

On the other hand, the maker of Flor-Essence states that adults may take 1 to 12 fl oz tea per day depending on individual needs.

Manufacturers typically advise not eating for one hour before or after taking Essiac.

### Choosing the right product

Many web articles state that the original formula of Essiac tea has been kept a secret since the sale of the recipe to a private company. This doesn't appear to be true. The amount and plant parts of each herb that goes into the final product are specified on most Essiac formulas sold in Canada.

Yet, many companies are now claiming that only their formula is the original one. Today, **several companies manufacture over 40 different Essiac formulas and sell them worldwide**. Some don't specify herbal ratios, hiding the exact ingredients behind a veil of mist that they label as a *proprietary blend*.

Good manufacturing practices (GMP) recommend specifying the amount of each ingredient that goes into the supplement on the label. Declaring the exact quantities of each ingredient present in the product is a must in the European Union, but it's not a requirement in the U.S. and Canada (European GMP guide).

Quality products should also specify how the herbs are grown and sourced, state the country of manufacture, and provide certificates of third-party testing.

It's challenging for consumers to decide whether a product is of good quality or not when the exact ingredients and their ratios aren't listed. In such cases, consumers need to put their trust in the brand without knowing exactly what they're getting.

Do your research before purchasing any Essiac product and look to buy from trusted, highquality brands.

# In Summary

Despite its controversial past, scientific research supports the use of Essiac as a general health tonic. Studies confirm it contains antioxidants, nutrients, and other active compounds that support a healthy immune response and good digestion.

Clinical studies on Essiac have yet to be carried out. Case reports and animal studies suggest that the use of Essiac for cancer should be further researched, but we have no solid data yet to speak about its effectiveness.

Taken at the recommended doses, Essiac is likely safe and causes few side effects. Consult your doctor before use to avoid disease and drug interactions.



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