

**NATURAL COLON CLEANSE**

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**ABSTRACT**

The present research based on the natural remedies which are acceptable in the belief that they suffer with fewer side effects than the synthetic ones. These juice having good property to cleanse the colon and helps to lose weight in 7days. This colon therapy remove non specific toxins from colon and intestinal tract by removing accumulation of faces.

**How it's useful?**

Colon cleansing believe that toxins from your gastrointestinal tract can cause a variety of health problems.

**Benefits**

Remove toxins.

Boosting your energy.

Weight loss.

Better digestion.

Makes digestive system more effective.

Prevent constipation.

Maintains regularity.

Decrease risk of cancer.

Maintain PH balance.

Regulate blood pressure.

What is the colon?

Digestive health is integral to feeling happy, healthy, and well.

One important organ in the digestive system is the colon, also called the large intestine.

Colon health is a significant part of digestive health.

Some people claim the colon should be cleansed for optimal digestive wellness. However, research proving the effectiveness of cleanses is scant and low in quality.

Still, certain aspects of colon cleansing may be beneficial. It may help issues such as constipation or irregular bowel movements, and there is some evidence that they can also reduce colon cancer risk. Other colon cleanse claims, such as removal of toxins and parasites, are questionable.

- **Introduction**

Ways to do a natural colon cleanse at home.

There are a few ways to colon cleanse. You can purchase a colon-cleansing product, or you can even get a colonic irrigation or enema.

Otherwise, you can do simple things to boost or “cleanse” colon health naturally at home.

The following natural colon cleanses can be done cheaply, and they’re also quite safe if done correctly.

### **Water flush**

Drinking plenty of water and staying hydrated is a great way to regulate digestion. People who support a water flush for colon cleansing recommend drinking six to eight glasses of lukewarm water per day.

Also try eating plenty of foods high in water content. This includes fruits and vegetables like watermelons, tomatoes, lettuce, and celery.

In fact, there are lots of foods that help cleanse the colon naturally through diet.

### **Saltwater flush**

You can also try a saltwater flush. This is especially recommended for people experiencing constipation and irregularity.

A 2010 study showed saltwater could possibly clear the colon when paired with certain yoga poses.

Before eating in the morning, mix 2 teaspoons salt with lukewarm water. Sea salt or Himalayan salt is recommended.

Drink water quickly on an empty stomach, and in a few minutes, you'll probably feel an urge to go to the bathroom.

Do this in the morning and in the evening, and make sure to stay home near the bathroom for a while after the cleanse. You may need to go to the bathroom multiple times.

### **High-fiber diet**

Fiber is an essential macronutrient often overlooked in the diet. It's found in whole, healthy plant foods like fruits, vegetables, grains, nuts, seeds, and more.

Plants contain cellulose and fibers that help "bulk" up excess matter in the colon. They also regulate constipation and overactive bowels, while boosting helpful bacteria as a prebiotic.

Make sure to eat plenty of high-fiber foods, which help a healthy colon. They can also be great for gut bacteria, too.

### **Juices and smoothies**

Juices are popular colon cleansers. These include fruit and vegetable juice fasts and cleanses, like master cleanses.

There isn't enough research on these for the colon, however. In fact, some research points out risks.

Even so, moderate intake of juices and juicing can be good for you. Juice blends contain some fiber and nutrients that benefit digestion. They also hold water to help hydrate and keep up regularity.

What's more, a study in 2015<sup>Trusted Source</sup> found that vitamin C may help cleanse the colon. Vitamin C is found in lots of fruits and vegetables added to juice blends.

Popular juices in juice fasts and cleanses include apple juice, lemon juice, and vegetable juices. However, some dietitians may recommend smoothies over juices for colon and overall health.

Since pulp and skins are removed when juicing, juices contain less fiber. Fiber is great for the colon, and smoothies hold a lot more fiber.

You don't need to fast and drink only juices and smoothies to get any benefit. Just try including more in your diet, such as with a daily juice or smoothie.

### **More resistant starches**

Resistant starches are similar to fiber. They're also found in plant foods like potatoes, rice, legumes, green bananas, and grains.

These promote a healthy colon by boosting gut microflora. A 2013 review on resistant starches also found they reduce colon cancer risk.

There is a downside, though. Resistant starches are found in carbohydrates. Still, low-carb dieters can choose options that cause fewer blood sugar spikes. These include rice and waxy potatoes.

Including these in the diet, like fiber, can be great for cleansing the colon.

### **Probiotics**

Adding probiotics to the diet is another way to cleanse the colon. This also boosts overall health in many other ways.

You can get more probiotics by taking probiotic supplements. Also, eat lots of probiotic-rich foods, like yogurt, kimchi, pickles, and other fermented foods.

Probiotics introduce good bacteria to the gut with the help of fiber and resistant starches. These curb inflammation and promote regularity — two elements of digestive health related to the colon.

Apple cider vinegar is also considered probiotic and is included in colon cleanses. The enzymes and acids that apple cider vinegar contains supposedly suppress bad bacteria. Currently, there are no studies on this.

### **Herbal teas**

Trying some herbal teas may assist digestive health via the colon.

Laxative herbs like psyllium, aloe vera, marshmallow root, and slippery elm may help with constipation. Make sure to talk to your doctor and follow directions closely before using these herbs. Also use them sparingly; otherwise, they can be harmful.

Other herbs like ginger, garlic, and cayenne pepper contain antimicrobial phytochemicals. These are thought to suppress bad bacteria. For this reason, they're included in lots of cleanses, though studies are needed.

Try a cup of one of these herbal teas up to three times a day. Only drink tea once per day for laxative herbal teas.

What should you know before doing a natural colon cleanse?

### Jii

Interested in one of the above natural colon cleanses? Doing one in a gentle fashion at home is usually safe.

Combining these with fasting, or increasing the frequency of their use, can have risks. If you have high blood pressure and must keep your sodium intake low, avoid saltwater flushes.

- **Herbs used in the colon cleanse**



## THE BEST INGREDIENTS FOR A NATURAL COLON CLEANSE



*Ingredients you just can't miss.*

### SENNA LEAF

An herbal laxative that greatly increases the peristaltic (or push) action of your colon. Its sennosides aid in relieving constipation.



### CASCARA SAGRADA

A botanical laxative that helps in favorable changes in absorption, secretion, and motility in the colon; is known to soften the stool for gentle movements.



### DANDELION

With its naturally high phenolic content, Dandelion has botanical antioxidant activities that help with digestive problems.



### ARTICHOKE

This thistle has both antioxidant benefits and choleric and diuretic activities, which makes it a supreme herbal ingredient for detoxing.

### MILK THISTLE

Also known as silymarin, Milk Thistle is potent in its liver-targeting activities and its aid in immune and inflammatory responses.



### SARSAPARILLA

Sarsaparilla root is known to detoxify, clear heat, and relieve dampness; it also has high phenolic content, which makes it an excellent antioxidant.

### FENNEL

Fennel has been used as natural medicine for digestive, endocrine, reproductive, and respiratory systems, and has a notable antioxidant capacity.

### ALOE VERA

Aloe Vera has been considered a global panacea, but in modern use is a soothing agent helpful for a gentle aid in constipation.

Herbal Nitro

# COLON CLEANSING FOODS

Colon cleansing has become very popular among weight loss programs thanks to its quick way to help detoxify the body and restore regularity.

Chronic constipation and irregularity have become a major problem thanks to highly processed foods and the deficiency of fiber and nutrients in our diets.

Cleansing our colon now and then won't prevent the problem, the best way to keep it clean and healthy is to incorporate naturally colon cleansing and detoxifying foods into your daily diet.

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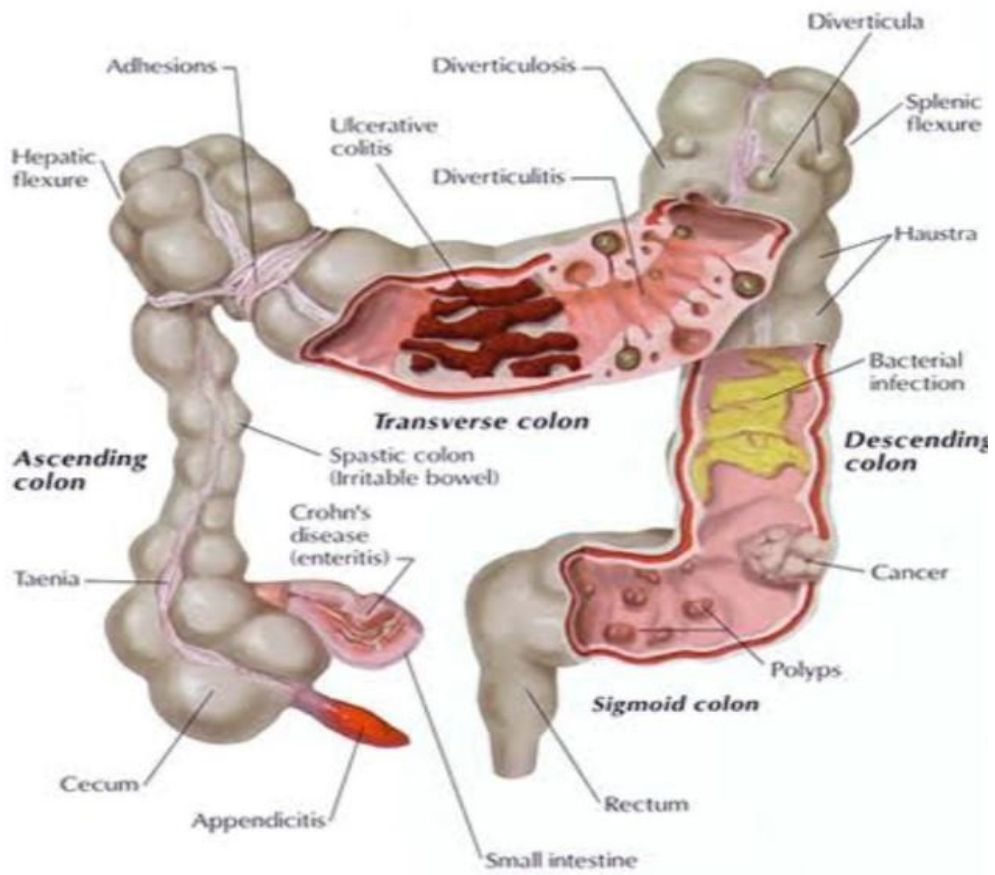
 <p><b>FLAX SEEDS</b> Protects intestinal flora Regulates bowel habits without side effects</p>	 <p><b>ALOE VERA</b> Heals and soothes intestinal lining</p>
 <p><b>ALFALFA</b> Helps to soothe the digestive tract during a cleanse</p>	 <p><b>PEPPERMINT</b> Alleviates the intestine</p>
 <p><b>SPIRULINA &amp; WHEATGRASS</b> Aids the body in obtaining more oxygen and eliminating unnecessary toxins</p>	 <p><b>MANGO</b> Relieves constipation due to its laxative properties</p>
 <p><b>CHICKWEED</b> Constipation relief and colon cleansing</p>	 <p><b>PROBIOTIC YOGURT</b> Excellent to restore regularity, try minimally processed</p>
 <p><b>CASCARA SAGRADA</b> Strengthens the muscle tone of the colon walls</p>	 <p><b>FERMENTED FOODS</b> Kefir and unpasteurized, cultured butter are a great probiotic source.</p>
 <p><b>FENNEL SEEDS</b> Relieves lower abdominal pain Enhances digestion Reduces gas</p>	 <p><b>ORGANIC FRUITS</b> Apples, grapes, pineapples, papaya and kiwi are rich in fiber, act as natural lubricants &amp; contain valuable enzymes that help maintain regularity.</p>

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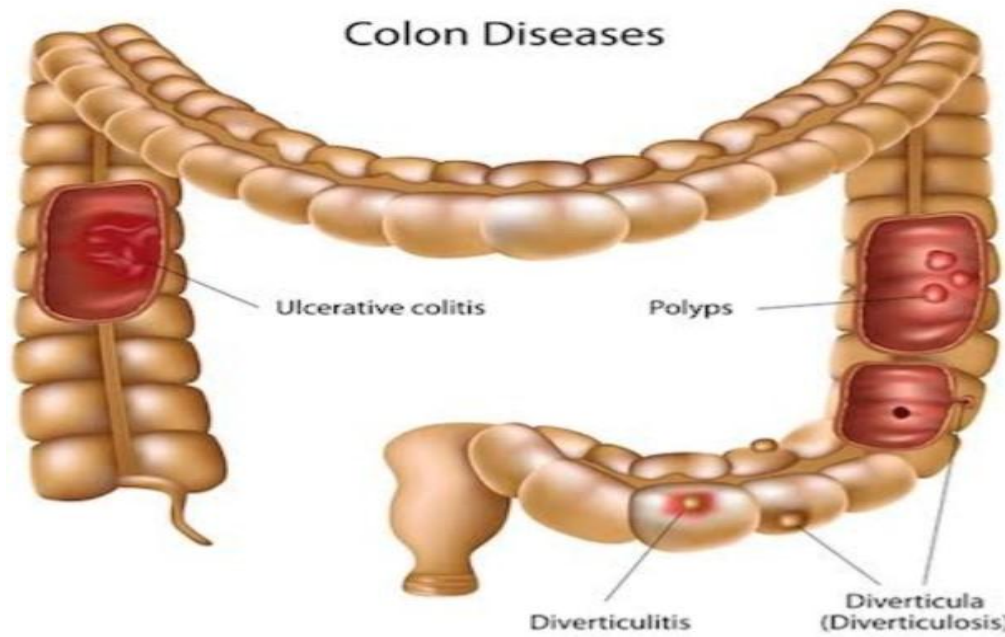
## COLON CLEANSING HERBS THAT KILL PARASITES

 <p><b>PUMPKIN SEEDS</b></p>	 <p><b>TEA TREE OIL</b></p>	 <p><b>WORMWOOD</b></p>	 <p><b>CLOVES</b></p>
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Foods are used as a colon cleanse



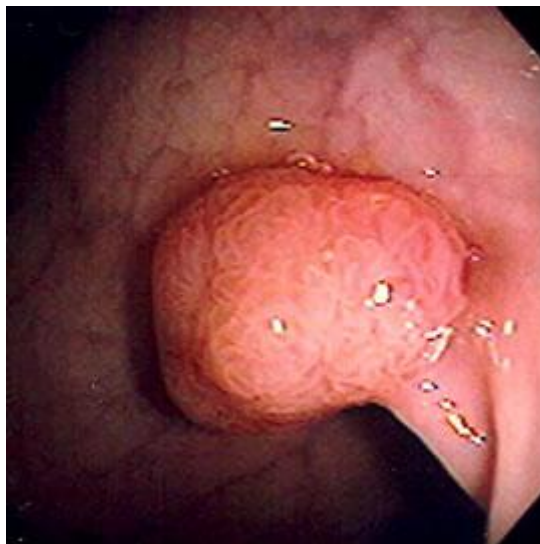
Colon disorder





**Colon cancer**

The colon is a hollow flexible structure approximately three feet long. Also known as the large intestine (or bowel), it is formed mostly from muscle with an inside lining (mucosa). The main functions of the colon are to absorb water and to retain waste products until they are evacuated.



An endoscopic image of a benign, or non-cancerous, polyp.

Colon cancer (also referred to as colorectal cancer) is a disease that starts in the colon, and usually in the mucosal lining. It may begin subsequent to the appearance of small polyps that grow on this lining. When these polyps initially form, they are benign—that is, they are not cancerous. Over time, these polyps can become cancerous. As these cells grow, they can invade tissue surrounding the colon, and travel through the blood stream to other areas of the body.

Colon cancer occurs frequently in developed countries and is the second most common cancer in American men and women. It is estimated that 140,000 new cases are diagnosed each year in the United States, and 60,000 colorectal cancer deaths occur each year. The disease affects both men and women equally.

Colon cancer is more common as a person grows older, with the odds of occurrence doubling each decade from the ages of 40–80. It is for this reason that it is important to have recurring colonoscopy screenings during this period in your life. Pre-cancerous polyps can be removed, and this greatly reduces the chances of developing colon cancer.

### Causes of colon cancer

Many researchers have tried to identify the cause(s) of colon cancer. But here is some of what is known:

- colon cancer is more common in those who eat lots of fat and meat, but little fiber;
- Colon cancer is very rare in some countries where the population eats a low-meat, high-fiber diet;
- having an inherited disease such as familial adenomatous polyposis (FAP) may be a factor in the development of colon cancer;
- having a close relative with colon cancer increases the risk of also developing it;
- patients with ulcerative colitis or Crohn's disease have a greater chance of developing colon cancer compared with the normal population.

### Colon inertia

Colonic inertia is referred to as a motility disorder; that is, it is an abnormal passage of waste through the digestive system. Motility disorders are very common, especially problems associated with constipation and diarrhea. Walk down any drug store aisle and you will eventually be presented with many over-the-counter medications to correct these problems.

However, motility disorders may indicate a more complex problem. The function of the digestive tract may be impaired.

### Symptoms

- constipation
- diarrhea nausea and or vomiting

Any dramatic change in bowel habits, or bleeding, should be immediately addressed. Consult a physician to determine the cause of this change.

### Causes

Colonic inertia may be caused by one or more of the following:

- nerve or muscle damage
- not enough water in a person's diet
- eating too much dairy products
- frequent use of antacids and laxatives
- strong pain killers and other medication

- thyroid conditions

Your doctor may request a complete dietary history to determine if your lifestyle.

### **Diagnosis**

Diagnosing for colonic inertia may require a test called D transit measurement time to determine the speed at which the body moves food through the digestive system. This test may, in fact, point towards causes that are not even related to colonic inertia, such as low thyroid hormone levels. A thorough medical history is necessary to determine if certain medical events may have precipitated this problem.

If colonic inertia is indicated, and the person suffers from constipation with abdominal pain and bloating which make daily activities difficult, then surgery may be needed.

### **Treatment**

Fortunately, most problems with motility in the lower gut can be resolved with changes in diet and exercise. Such dietary changes could include:

- eating foods high in fiber
- drinking plenty of water
- avoiding dairy products
- avoiding fatty foods

However, surgical intervention is an option when these changes fail to produce the desired result.

### **Surgical treatment**

Surgically shortening the colon (large intestine) corrects a slow colon. Most of the colon is removed, and the small intestine is attached directly to the rectum. This procedure does not require a colostomy.

The surgery for slow colon is considered major surgery. It is not quite as dangerous as open heart surgery, chest or brain surgery, but it is major surgery. It is a bigger operation than a hysterectomy. It involves removing about eighty percent of the large intestine.





### **Symptoms**

- Abdominal Pain

- Bloating and Gas
- Constipation
- Diarrhea

### Diverticular disease

Most folks who think about the colon worry about the polyps and cancers that may develop from epithelial cells. But problems can also develop in other areas. Diverticula are sac-like pouches that protrude from the normally smooth muscular layer of the colon (see Figure 2). They tend to develop where the muscles are weakest, at the places where penetrating vessels cross through the muscles. And in Western societies, the great majority of diverticula develop where the colon is narrowest, in the sigmoid.

Ingredients	Biological source	Benefits	Synonym
Cucumber 	Derived from plant of cucumis sativus Family -cucurbitaceae	Remove toxins Regulate blood pressure. Promote health skin. Weight loss	Knobby cucumber
Pineapple 	proteolytic enzyme Isolated from juice of ananas cosmos. Family - bromeliaceae	Boost energy Reduce wrinkles Clear digestive upsets.	Bromelin
Peppermint 	Perennial leaves of mentha piperita Family -labiatae	Fresh to breath. Improve energy. Relieve menstrual cramps	Pudina
Lemon juice 	Derived from ripe fruit of Citrus limon Family -rutaceae	Improve liver function. Reduce weight	Cortex limonis

### Materials

### Procedure

Take The slices of cucumber n pineapple in the grinder.

- Grind it smooth, adding water it.
- Again grind. Make it juice.
- Then added the peppermint juice.
- Add some drop of lemon juice.

Add some raw salt, for taste.

- Take it freshly How it's take?

Drinks this beverage once a day, in the morning on an empty stomach.

After a week feel much better and helps to lose weight and Clean colon naturally by homemade.

Side effects of intense cleanses include:

nausea

vomiting

dizziness

dehydration

electrolyte imbalances

cramping

If any of these symptoms occur, stop your cleanse immediately and see your doctor. These symptoms have the risk of leading to heart failure and digestive damage if the cleanse is continued. An enema or colon cleanse used occasionally poses little risk for a healthy individual. But overuse can quickly lead to chronic constipation or even bowel injury.

Also talk to your doctor before making major changes to your diet for colon health. This includes eating significantly more fiber, resistant starches, juices, and smoothies.

Make sure to also be careful when using herbal teas for a colon cleanse. Some herbs can impede or affect certain medications. Laxative herbs can also be harmful if overdone. Overuse of laxatives reduces the body's ability to move stool and can result in chronic constipation.

If you have a chronic illness, talk to your doctor before doing a natural colon cleanse at home. Colon cleanses aren't right for everybody.

### **Dehydration**

While some of the weight loss associated with colon cleansing is due to the removal of waste, it also causes the removal of fluids. Dehydration can lead to kidney failure in extreme cases.

**Electrolyte imbalance**

Colon cleanses can upset the balance of electrolytes like potassium and sodium in your body. These chemicals carry electrical signals across cells, and an imbalance can lead to a loss of consciousness as well as kidney damage.

**Bacterial imbalance and infection**

Colon cleanses can potentially invite unhealthy bacteria into the lower digestive system with the instruments and fluids used. They also remove the healthy bacteria that can fight that infection.

**Bowel perforation**

Bowel perforation happens when a tear occurs in the wall of the lower intestine. It's considered a medical emergency. Though symptoms begin with fever, pain, chills, and nausea, it can progress and even be fatal.

**Antioxidants activity****Pineapple**

The radical scavenging activity of pineapple (*A. ananas*) was determined by DPPH assay. The dry pineapple fruit was extracted by maceration in Hexane, Dichloromethane and Methanol for 3 days per each and then filtered. The filtrate was evaporated to dryness. The crude extract was mixed with 2,2-diphenyl-1-picrylhydrazyl (DPPH), absorbance at 515 nm. Gallic acid was used as reference standard. The methanol extract showed the most DPPH assay with the percentage of inhibition at 96.91. Pineapple could be used in the food and pharmaceutical industries.

**KEYWORDS:** *A. comosus*, pineapple, antioxidant.

**1. INTRODUCTION**

Free radicals are highly reactive molecules with one or more unpaired electrons. Free radicals are generated during cellular metabolism, can be ingested or inhaled as environmental pollutants, or can be generated during the metabolism of certain drugs. Free radicals are responsible for the cell damage in the body and contribute to various kinds of health problems, such as heart disease, diabetes, macular degeneration, and cancer.<sup>[1-3]</sup> Active antioxidants are found in fruits, vegetables, teas, coffee, cereal products, herbs, spices.<sup>[4-12]</sup>

Ananas comosus (L.) (pineapple) is belonging to the family Bromeliaceae is used in folk remedies for digestive disorder and diuretic property. Juice of the leaves consumed for hiccoughs and vermifuge. Juice of ripe fruit regarded also as antiscorbutic, cholagogic, diaphoretic, refrigerant, and useful in jaundice. Young vegetative buds are used for respiratory ailments among Choco children. The enzyme complex of A. comosus called bromelain is known for its clinical applications particularly modulation of tumor growth, blood coagulation and anti-inflammatory effect.<sup>[13-14]</sup> Pineapple, Ananas comosus L. is an important tropical fruit, that is consumed in many parts of the world as fresh fruit, juice, jam, jelly and dried product. It has a high nutritive value and is a rich source of vitamins A, B and C besides several minerals such as calcium, phosphorus and iron. Though there are some reports on the antioxidant activities pineapple in relation to other fruits.<sup>[15]</sup>

## 2. OBJECTIVES

1. To extract of pineapple by organic solvents.
2. To study antioxidant activity of pineapple extract.

## 3. MATERIALS AND METHODS

### Chemicals

2,2-diphenyl-1-(2,4,6-trinitrophenyl) hydrazyl (DPPH), gallic acid (Fluka) Hexane, dichloromethane, methanol and absolute ethanol were purchased from Singma Aldrich.

### Preparation of pineapple extracts

The Pineapple fruit (Fig. 1) were purchased from Thewet market Bangkok Thailand. Ripe pineapples were cut into pieces and washed with deionised water. The small pieces were heated at 65 °C for 6 hr. The dried fruit (350 g) of pineapple were sequentially extracted at room temperature with hexanes (3 X 700 mL), Dichloromethane (3 X 700 mL), and MeOH (3 X 700 mL) respectively. [11]. The extracts were evaporated to obtain three dry extracts, crude hexanes (1.50 g) crude CH<sub>2</sub>Cl<sub>2</sub> (21.34 g) crude MeOH (100.15g) respectively. The crude extract was used to explore their antioxidant activity.

### DPPH radical scavenging activity

The DPPH radical scavenging activities of extracts were measured according to the slightly modified method.<sup>[11]</sup> Each compound (80 µL), was added to 0.3 nM DPPH (400 µL) solution in test tube. All of the compound were tested in final concentrations of 0.1 mg/mL. The reaction mixture (800 µL), was mixed for 1 min and incubated at temperature (37 °C) for 30

min. then the absorbance was measured at 517 nm with a blank containing DPPH and ethanol. Gallic acid was used as a positive control. The DPPH radical scavenging activity was calculated according to the equation

$$(\%) = (A_{\text{blank}} - A_{\text{sample}}) / A_{\text{blank}} \times 100.$$

#### 4. RESULTS

In the present work, the yields of hexane, dichloromethane and methanol extracts of pineapples were 0.4%, 5.8% and 28.6%, respectively. The results antioxidant activity of DPPH assay for pineapple extract were

Fruit of pineapple	350g
Hexane extract	1.50g
CH <sub>2</sub>	
Cl <sub>2</sub>	
Extract	21.24g
MeOH extract	100.15g

I Antioxidant activity of pineapple extract.

Extrat	%inhibitions
Hexane extract	3.07
Dichloromethane extract	18.14
Metabolic extract	96.91
Gallic acid	97.93

The effects of extracts on DPPH radical scavenging activities were determined based on their hydrogen donating ability. As shown in the Table I, the extract methanol (%inhibition, 96.91) showed strong DPPH radical scavenging activity, which are comparable to that of Gallic acid (%inhibition, 97.93). On the other hand, dichloromethane (%inhibition, 18.14) hexane (%inhibition, 3.07) extract exhibited lower strong DPPH radical scavenging activity.

#### 5. Conclusion of pineapple activity

The crude MeOH extract showed highest antioxidant activity. The crude MeOH extract of pineapple fruit showed antioxidant activity with the percentage of inhibition at 96.91. Pineapple could be used in the food Cucumber.

#### 1. Introduction

Reactive oxygen species (ROS) generated by NADPH oxidase during oxidative phosphorylation, are normal components of healthy cell. ROS are also mediators of the first defensive actions of cells and involved in phagocytosis, apoptosis and detoxification.<sup>[1,2]</sup>



Recently, increasing evidence highlights that overproduction of ROS and oxygen-derived free radicals may contribute to a variety of pathological effects and induce many diseases like cancer, atherosclerosis, diabetes and rheumatoid arthritis.<sup>[3,4]</sup> In order to reduce ROS-induced damage, both synthetic and natural antioxidants are used. However, synthetic antioxidants such as butylated hydroxyanisole and butylated hydroxytoluene are considered for liver damage and carcinogenesis.<sup>[5]</sup> Therefore it is essential to develop natural non-toxic antioxidant to protect human body from free radicals and retard the progress of many chronic diseases.

A large number of medicinal plants and their purified constituents have shown beneficial therapeutic potentials.

A large number of herbs have been reported to exhibit antioxidant activity. The majority of antioxidant activity in plants is due to the presence of phenolic compounds.<sup>[6]</sup>

Phenolic compounds are a group of compounds naturally present in plants.<sup>[7]</sup> Plant-derived polyphenols receive considerable interest because of their antioxidant and antimicrobial properties. Polyphenolic compounds mainly include simple phenols, phenolic acids, coumarins, tannins and flavanoids. The beneficial effects derived from phenolic compounds have been attributed to their antioxidant activity.<sup>[8]</sup> Antioxidant-based drug formulations are used for prevention and treatment of complex diseases like atherosclerosis, stroke, diabetes, Alzheimer's disease and cancer. Radical scavenging activity is considered to be involved in aging process, anti-inflammatory, anticancer and wound healing activity. The development of antioxidants that scavenge reactive oxygen species (ROS) would support biological resistance to free radicals, retard the process of aging, and decrease the risk of age-associated degenerative disease.<sup>[9]</sup> *Cucumis sativus* commonly known as Cucumber is a well-known plant belonging to the family Cucurbitaceae. The plant is widely cultivated in India and throughout the world. The fruit obtained from the plant is widely consumed throughout the world. The plant is attributed to various uses in Ayurveda. Seeds are highly nourishing. Leaves boiled in water and mixed with cumin seeds are used for throat infection. Seeds are used by Unani physicians in fevers. Seed oil is used for burning, insomnia and frontal headache. The plant is also used for jaundice, bleeding disorders and anuria. The seeds are used as diuretic, tonic, anthelmintic and also as taeniocide. The leaf juice is emetic and is used to treat dyspepsia in children.<sup>[10,11]</sup> Free radical scavenging activity of leaves of *Cucumis sativus* was evaluated *in vitro* using 1, 1-diphenyl-2-picrylhydrazyl (DPPH) free radical.

## 2. MATERIALS AND METHODS

### 2.1 Chemicals

1, 1-diphenyl-2-picryl-hydrazyl (DPPH) was obtained for Sigma Aldrich Co USA. All other chemicals used were of analytical grade.

### 2.2 Preparation of crude extract

500 grams of leaves of plant *Cucumis sativus* were collected from local market. The leaves were authenticated by H.M. Pandit (Department of Botany) Khalsa College, Mumbai, with voucher number BV/COP/NM/350/2012-2013.

The leaves were washed properly and dried at room temperature and thereafter they were powdered in grinder. 80gms of powder leaf were extracted in Soxhlet apparatus using methanol as solvent. Yield of the leaves was 21.3%. The leaves extract was then concentrated using Rotary evaporator under reduced pressure. The stock solution of crude extract (1mg/ml) was prepared by dissolving a known amount of dry extract in methanol. The working solutions (100, 200, 400, 600, 800 and 1000 µg/ml) of the extract were prepared from stock solution using suitable dilution.

### 2.3 Preliminary phytochemical screening<sup>[12]</sup>

The methanolic extract of *Cucumis sativus* was tested for preliminary phytochemical screening for the presence of alkaloids, glycosides, fixed oils, flavanoids, steroids and terpenoids, and tannins.

### 2.4 Antioxidant activity (DPPH free radical scavenging activity) of methanolic extract of *Cucumis sativus* leaves.<sup>[13]</sup>

The antioxidant activity of the plant extract, silymarin and the standard was assessed on basis of the radical scavenging effect of the stable 1, 1-diphenyl-2-picryl-hydrazyl (DPPH) free radical activity. The DPPH radical scavenging activity was assayed according to method of Shimada *et al.* with some modifications. The diluted working solutions of the test extracts were prepared in methanol. Gallic acid was used as standard in 100-1000 µg/ml. Silymarin was also used as standard as plant was further investigated for hepatoprotective action. Silymarin was used in concentrations of 100-1000 µg/ml. Antioxidant activity of *Cucumis sativus* were compared with gallic acid and silymarin. 2ml of DPPH solution (0.2mM DPPH in methanol) was mixed with 2ml of sample, gallic acid and silymarin separately (100-

1000 $\mu$ g/ml). The mixtures were shaken vigorously and were kept in dark for 30mins and optical density was measured at 517nm. Methanol 2ml with 2ml DPPH solution (0.2mM) was used as blank. The optical density was recorded and DPPH radical scavenging activity was calculated using following formula:

$$\text{Scavenging activity (\%)} = [1 - (A1 - A2) / A0] \times 100$$

Where A0 is the absorbance of the control, A1 absorbance of the sample with DPPH and A2 is absorbance of the sample only.

### 3. RESULTS AND DISCUSSIONS

Preliminary phytochemical screening of the methanolic extract of *Cucumis sativus* of leaves is given in the table below,

**Table 1: Preliminary phytochemical screening of methanolic extract of *Cucumis sativus* leaves extract.**

Phytoconstituents	Present /absent
Alkaloids	Present
Glycosides	Present
Flavonoids	Present
Steroids and Terpenoid	Present
Tannins	Present
Fixed oil	Absent

antioxidants.<sup>[14]</sup> In the DPPH assay, the antioxidants are able to reduce the stable DPPH radical (purple) to non-radical form DPPH-H (yellow). The DPPH scavenging activities of antioxidants are attributed to their hydrogen donating abilities.

Natural antioxidants that are present in herbs are responsible for inhibiting or preventing the deleterious consequences of oxidative stress. Herbs contain free radical scavengers like polyphenols, flavonoids and phenolic compounds.<sup>[15]</sup> Many researchers are focused on the powerful but non toxic antioxidants from natural sources, such as natural antioxidants which could prevent formation of ROS. Also prevent the use of synthetic antioxidants that are suspected of causing or promoting negative health effects.<sup>[14]</sup> The phytochemical screening revealed presence of various constituents like alkaloids, glycosides, phenolic acids, flavanoids, steroids and tannins. These chemical constituents may be responsible for antioxidant activity as several such compounds are known to possess potent antioxidant activity.<sup>[16]</sup> Various chemical constituents have been isolated from plant, and the observed

antioxidant activity may be due to presence of any of these constituents. The plant exhibits various pharmacological activities like anticancer<sup>[17]</sup>, antidiabetic<sup>[18,19]</sup>, antihyperlipidemic<sup>[20]</sup>, wound healing<sup>[21]</sup> and other several activities. These properties may be due to its antioxidant activity.

Gallic acid is standard antioxidant; hence it was used as reference standard. Silymarin was used as reference standard in the *in vivo* studies; to compare antioxidant activity of MECS with silymarin it was used. The result showed that MECS (leaves extract) exhibited maximum DPPH scavenging activity of 86.17% at 1000 µg/ml, whereas for silymarin it was 94.22% and for gallic acid it was 98.03% at 1000 µg/ml.

The IC<sub>50</sub> values of MECS 380 µg/ml, silymarin 305 µg/ml and gallic acid 280 µg/ml are respectively.

#### 4. Conclusion of cucumber activity

Searching for the new natural antioxidants has become an urgent demand due to the health hazards accompanying the use of synthetic ones and the strict need of such antioxidants to decline many health disasters caused by liberated free radicals.

The outcome results clearly prove that the methanolic extract of leaves of *Cucumis sativus* has significant antioxidant action *in vitro* and the antioxidant activity could be utilized as a new natural antioxidant in food.

#### CONCLUSION

This is freshly prepared juice. Not harmful effects on body. This colon therapy remove non specific toxins from colon and intestinal tract by removing accumulation of feces.

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