

Red wine: “A Splash Full of Vibes”

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I. Introduction

Red wine is a beverage from the alcoholic fermentation of ripe and fresh grapes or fresh grapes juice. As biochemical definition would be drink from the alcoholic fermentation of grapes juice sugar by yeast.

Wine has always been linked in some way to history of man, either because of it is a beverage that has its own flavor and personality as it brings out benefits to health. In ancient civilization like Egyptian, Spain, Greek, Romans and Hindus beside these countries wine was used as medicine for both body and soul.

Historical research presented that the use of wine for medical purpose has been practiced over 2000 years by man. Wine is one of the oldest beverage that has always been related to history of man and presents benefits to human health.

Data presented by World Health Organization presents that mortality rate due to cardiovascular disease in

France are smaller when compared to other countries due to this French paradox has appeared .Although there are certain reports of wine consumption for more than 7000 year and their benefits were only highlighted in 1992 when French paradox was published .

In this report we can mention benefits of wine prevention of heart and circulatory diseases. If wine is consumed together with meal then it is most beneficial for all diabetic patient as it also fight against obesity and provide u us long life and high quality life and create barrier to development of demetria. Meal consumed by wine results in good digestion as it is anti – infective effect and has good impact on women’s health. Wine is excellent for skin and prevent blindness .It has anti – inflammatory properties and reduce lungs diseases although it is very pleasant for drinking.

If in this report it is possible to associate wine drinking with health benefit that is associated with fettle eating and high quality life but this could only possible when it is consumed in adequate amount Here the logical attention is related to eating habits that were adopted byFrench people .

Those people have high sedentary lifestyle, smoking, high consumption of saturated fats and high cholesterol level when differentiated with other industrial countries have lower incidence of diseases coronary diseases. A law is assigned to high consumption of wine. Red wine is drive from darker colored grapes varieties and colors can range from deep red to an intense violet or even a shade of dark brown all these variations are occur due to aging of wine it depends upon the time period in number of days kept or stored during fermentationprocess.

The colour of red wine comes from anthrocyanin pigment that are found in skin of grapes .Red wine production usually comprises color and flavor extracting from skin ofgrapes.

In this report the objective of this study is to carry out a bibliographical review on the reasearches and studies that were carried out with the theme “Red wine is sip of health” with prominence on beneficial effects of phenolic composition of red wine and thus contribute dissemination of benefits of regular drinking of red wine and benefits for humanhealth

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Report description

A form of wine is attained from black grapes varieties red wine can range in color from deep violet to brick red all the way to dark brown.

All these depends upon the time period and number of days kept for storage during fermentation. Although the purple grapes yields a greenish white juice, red wine gets its trademark from anthrocyanin pigment that are found in the skin of grapes.

Most red wine production process involved extraction flavor and colorfrom the skin of grapes. Increasing global consumption of red wine particularly amongst the younger generation is expected to greatly benefit the red wine market.

The popularity of wine in large gathering and social events coupled withchanging lifestyle and discerning taste are likely to attract people to takecloser look at red wine market .

I anticipate to prove that drinking one or two glasses a day of red wine can have positive impact on buyers health.

Recent research published in journal gastro -enterologist suggests that daily glass of red wine provides many health benefits for human gut microbiome. The microbiome describes a group of genomes of microorganism that resides in human gut

Background description

Wine is an alcoholic beverage that is popular for 1000 years as it is made from fermented grapes.

Wine is frequently quoted in bible from Noah and his grapes vines to Jesus and is used in Catholic Church. The earliest remnant of wine was discovered at the site of Hajji First Tape, in northern Zagros mountains of Iran.

Wine dated back to Neolithic period (8500- 4000 BC) carbon dating confirm wine between (5400 to 5000 BC).

Vineyard was discovered around 4100 BC in cave in Armenia (coffee 2011). The premature production of red wine was in 6000 BC in Georgia (region between Europe and Asia).

Red wine is classified into six main varieties of red grapes namely -

- ❖ Cabernet Sauvignon - Youngest of red wine as it is less than 600 years old. These grapes were mentioned in 18th century as they are known as Hardy wine in France and it is cultivated in Australia
- ❖ Chianti – It is known as Italian wine and it is dated back before 15th century.
- ❖ Merlot – It is known as oldest wine that dated back in 1st century in France and it is cultivated in Bordeaux region of France as it is difficult to grow because of large size and it's thin skin.
- ❖ Sangiovese- These grapes are used in Tuscany in 1722 in they are used in production of Chianti wines.
- ❖ Zinfandel- These are known as oldest variety of grapes that are pre owned and flourished in California.

Red wine has many benefits namely –

- ❖ It keeps heart healthy keeps memory sharp and keeps you slim
- ❖ Reduce the risk of cancer
- ❖ Helps to treat common cold
- 9 ❖ Regulate blood sugar
- ❖ Fight diabetes
- ❖ Anti-aging
- ❖ Prevent obesity
- ❖ Prevents sunburn
- ❖ Rich in diuretic properties
- ❖ Promotes long life
- ❖ Makes skin glowing
- ❖ Boost immune system
- ❖ Helps in migraine

Health Benefits Of Red Wine



Boost heart health

Fight diabetes

For anti ageing

Prevents obesity

Boost brain health and reduces stress

Raise Omega 3 fatty acid

Prevents breast cancer

Prevents sunburn

www.lybrate.com

lybrate

Health Benefits of Red Wine ✓



- Lower your cholesterol ✓
- Reduced risk of dementia ✓
- Reduced insulin resistance ✓
- Keep blood vessels flexible ✓
- Control blood sugar ✓
- Reduced risk of cancer ✓
- Lower the risk of heart disease ✓

HOWMANY PEDIA

Benefits of Red Wine

Consuming 4 to 8 ounces of RED WINE a day, offers multiple health benefits.

Nutritional value of each glass of red wine-

- 1% Vitamin K
- 1% Thiamin
- 2% Niacin
- 3% Riboflavin
- 4% Vitamin K

Red wine is also a source of Antioxidants, Flavonoids, Polyphenols and Resveratrol.

BENEFITS

-  Resveratrol can improve heart health in several ways
-  It appears to boost the levels of Omega-3 fatty acids
-  One glass of wine with dinner may decrease cardio metabolic risks in people with Type-II Diabetes
-  Keeps blood vessels healthy and maintains blood pressure
-  Resveratrol may protect the brain from stroke damage
-  Resveratrol may help prevent vision loss
-  Improves lung functioning and helps prevent lung cancer

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Interesting Benefits Of
RED WINE
For Skin, Hair And Health

- ### 1 Peaceful Sleep



Red wine can give you a peaceful sleep due to the presence of a substance called melatonin. Melatonin can stimulate your body clock and keeps you healthy.
- ### 2 Healthy, Glowing Skin



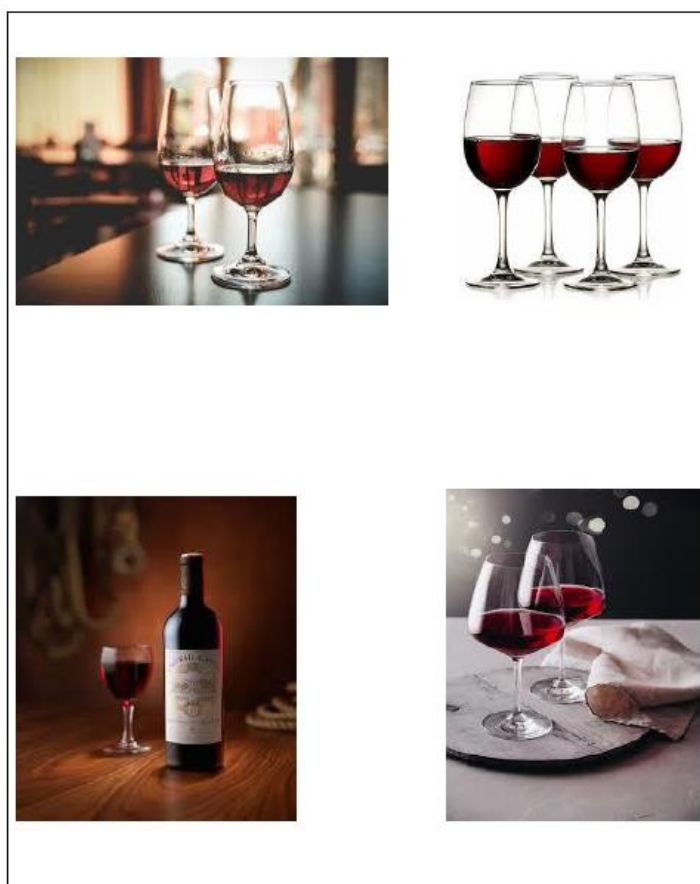
Everyone wishes to have a healthy glowing skin and the magic is one of the many benefits of drinking red wine. The red wine benefits for skin is because of the antioxidants that protect your skin and prevent it from ageing.
- ### 3 Stronger Teeth



Red wine contains polyphenol that helps to strengthen the gums and prevent gum inflammation. Further, it can also prevent the teeth from decaying by hardening the enamel.
- ### 4 Red Wine Skin Benefits



Red wine is considered to be one of the healthiest drinks and was used for medicinal purposes in ancient times. French people drink red wine almost daily to stay fit and healthy.



II. Methodology

Ingredients

- Grapes
- Sugar
- Long pepper
- Cinnamon
- Cardamom
- Cloves
- Crushed Ginger
- Tulsi powder (Dried in sunlight)
- Lemon water (Apple and Orange juice)
- Beetroots
- Yeast
- Wheat crushed

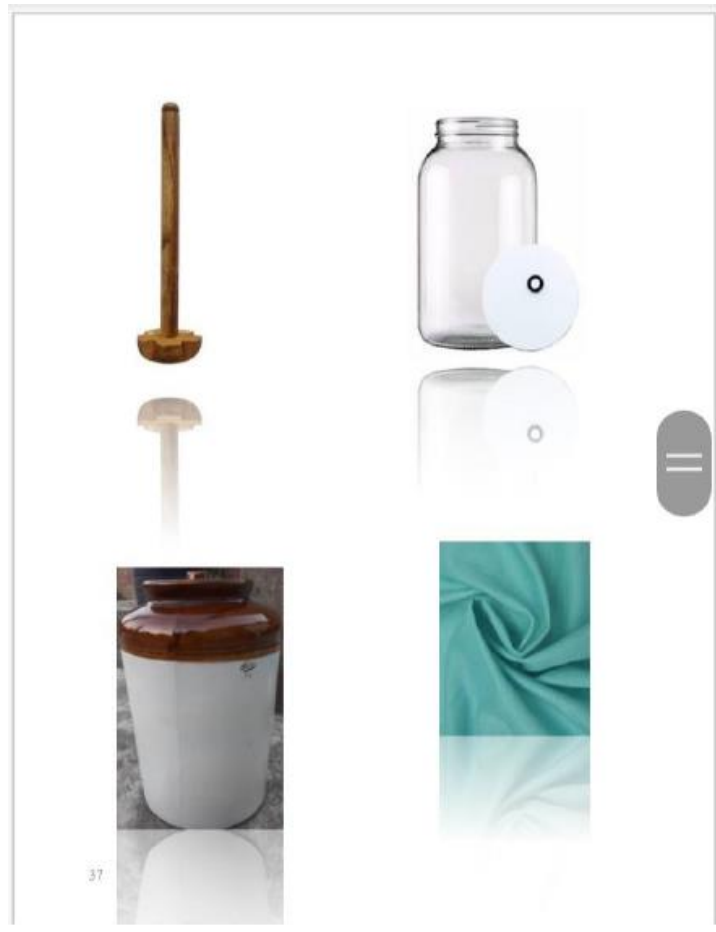


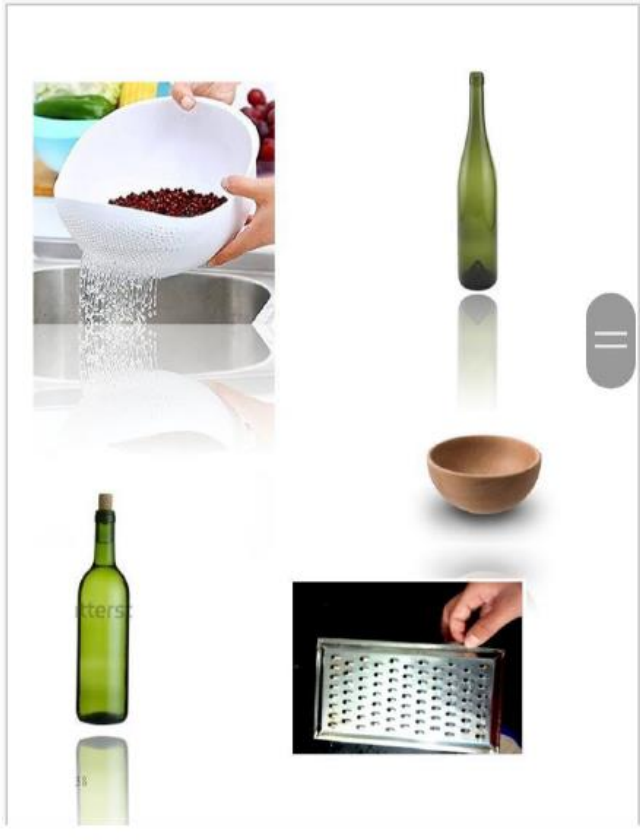


Equipment's

- Churning Rod Wooden
- Ceramic Jar

- Cotton Cloth
- Storing Jar (Glass)
- Vessel (For Washing grapes)
- Cork Bottles
- Sterilized Wine Bottles
- Stainless Steel Grater
- Siever
- Binding cloth
- Grinder (For Wheat)
- Mixer (Apple/ Orange juice)
- Bowel for activation of yeast





Processing of red wine (Part -1)

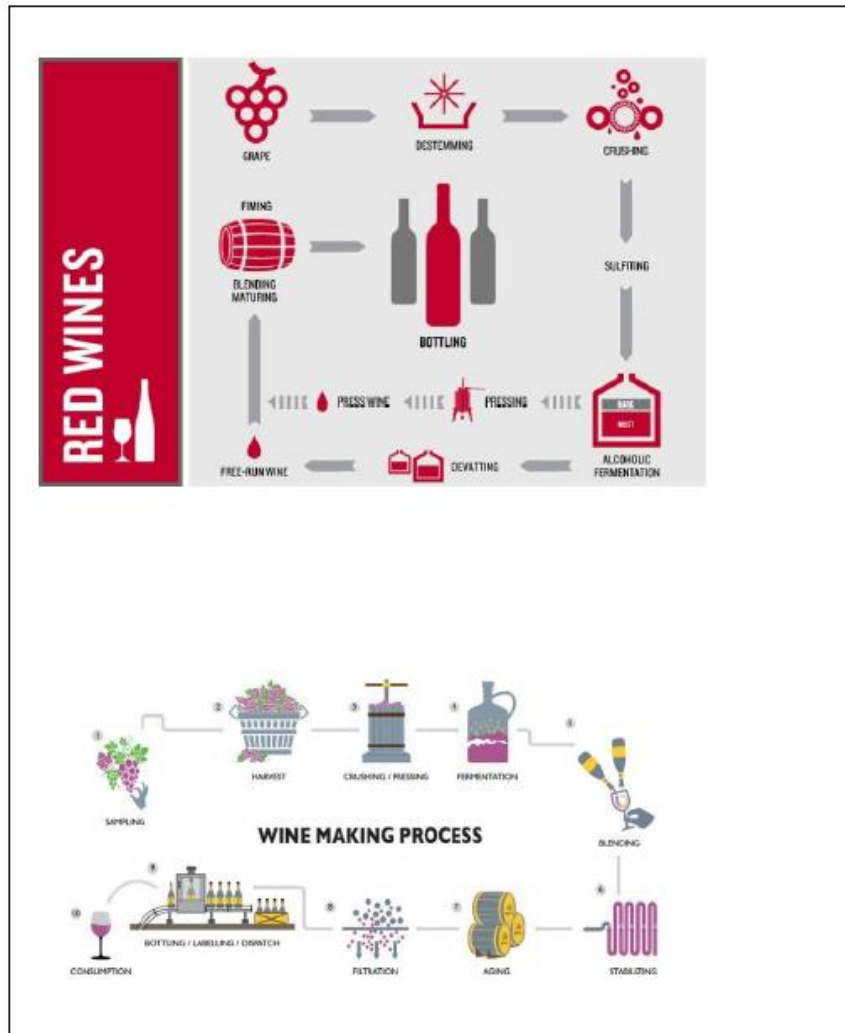
Steps

- Use boiled and cooling water only
- Take three kg of grapes
- Wash the grapes in boiled and cooled water
- Remove all the stems
- Pat it dry
- After drying fill it in ceramic jar
- Use a wooden churning rod for mashing grapes
- Take 1.5 kg sugar
- Mash the batter until the sugar starts to melt
- Take long pepper – 4 piece and add in it
- Add cinnamon sticks- 4 piece
- Add cardamom - 4 piece
- Add cloves – 4 piece
- Crush the ginger- small piece

- Add Tulsi powder
- Add lemon water (Apple /Orange juice half apple and half orange four tablespoon lemon)
- For color (Red) Add beetroot 200 grams
- Boil beetroot for two to three minutes
- Drain and store water
- Add beetroot juice in Ceramic jar
- Wheat slightly crushed – 200 grms
- Mix well
- In lukewarm water add one tablespoon yeast and sugar one tablespoon keep it for few minutes for activation of yeast
- Add yeast mixture in ceramic jar
- Don't close lid tightly
- Cover and tie it with a cloth
- Stir after 24 hours with a wooden spoon for 21 days

Processing of wine (Part -2)

- On 21th day open the jar and mix the batter well
- Use sterilized vessel and bottles
- Strain the liquid and keep it in jar or bottle
- Run the wine into bottles
- Leave half inch of space for the cork



Observation of red wine

- Shelf life of red wine is usually five years
- My red wine will expire after four years 10 months and 22 days 97% production date 2/ 27/21 best before-: 2/27/26.
- Normal alcoholic content present in red wine 12 to 15%
- Sugar content 0.9 per (175 ml) 0.6 gram 100 gram
- Home made red wine 3 pounds of sugar in one gallons of water produced 14% of alcohol in finished wine if sugar is added

- Home made red wine alcoholic content 10 to 15%

- Added 40 capsules of yeast in homemade red wine for fermentation as most common yeast associated with winemaking is *Sacchromyces Cerevisiae* as it thrives in between 2.8 to 4 of PH as there is also primary yeast species in alcohol production called *Sacchromyces Cerevisiae* and another species called as *S . Carlsburggiensis* are used for fermentation
- Normal temperature of red wine 20 to 30*C and storage wine 62 to 68%
- Normally humidity of red wine relative humidity is 50 to 70% is recommended as if humidity is more than 70% then it will cause molds inwine.
- Wine storage ideal temperature 55 *F to 57 *C
- Wine falls between three to four on pH scale ranges(0 to 14)as it is less acidic then white wine .Red wine acidity 3.3 and 3.6 average table winewill have 0.6 to 0.7 % of acidity
- There are many factors that are responsible in changes of red winenamely :

- PH
- Temperature
- Humidity
- Temperature fluctuation
- Vibration
- Lie it in dark place
- Preservative nitrogen plus fridge
- Refrigeration
- No addition of ice
- Storage cold place
- Remove all of oxygen from wine.

Fermentation of red wine

Observation table (within 21 days)

Date	Temperature	Humidity	Temperature fluctuation
	Normal temperature- (20°C- 30°C)	Relative humidity (50 to 70%)	Normal -(20°C - 30°C)
27 Feb	25° C	31 %	Constant
28 Feb	28°C	32 %	No change
1 March	22°C	32 %	25 °C
2 March	28°C	35 %	Constant
3 March	28°C	31 %	Constant
4 March	26°C	30 %	Constant
5 March	30°C	32 %	Constant
6 March	20° C	67 %	No change
7 March	30°C	35 %	No change
8 March	26°C	32 %	No change
9 March	29°C	43 %	30°C
10 March	29°C	43 %	No change
11 March	30°C	29 %	28°C
12 March	21°C	32 %	25°C
13 March	30°C	42 %	No change
14 March	30°C	47 %	26 °C
15 March	22° C	42 %	No change
16 March	26°C	57 %	20 - 30 °C
17 March	25° C	60 %	No change
18 March	30°C	57 %	28° C
19 March	25°C	73 %	No change

Observation SCALE

Hedonic scale	Ranking test	Sensitivity Test	Numerical scoring	Composite score test
Like extremely- 9	1 st Rank	Weak-1	Excellent- 90 %	Quality - 20
Like very much- 8	2 nd Rank	Medium-2	Good – 80 %	Color - 20
Like moderately- 7	3 rd Rank	Strong -3	Fair – 70 %	Consistency - 20
Like slightly- 6	4 th Rank	Very strong- 4	Poor – 60 %	Flavor - 40
Neither like or dislike -5		Extremely strong -5		Absence of defect - 20
Dislike slightly- 4				
Dislike moderately- 3				
Dislike very much- 2				
Dislike extremely- 1				

In following observation and data representation –

- Statistical representation
- Total no of consumer kept under observation = 20 People
- Formula = Total no of consumer satisfied / 20
- Pie Charts

Hedonic Scale



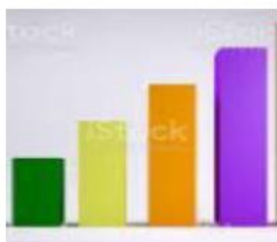
- **Green** - Neither like nor dislike
(1/20 = 0.05)
- **Yellow** - Slightly
(3/20 = 0.15)
- **Orange** - Like very much
(4/20 = 5)
- **Purple** - Moderate
(4/20 = 5)
- **Red** - Like extremely
(10/20 = 2)

Pie Chart of Hedonic Scale



- **Blue** - Neither like nor dislike (0.05)
- **Red** - Slightly (0.15)
- **Green** - Like very much (5)
- **Purple** - Moderate (5)
- **Sky blue** - Like extremely (2)

Ranking Test



- Green - Slightly like (4th Rank)
- Yellow – Moderate (3rd Rank)
- Orange – Good (2nd Rank)
- Purple – Excellent (1st Rank)

Pie Chart of Ranking Test



- Green - 1st Rank
- Blue - 2nd Rank
- Yellow - 3rd Rank
- Red - 4th Rank

Given Ranks -

- ◇ 1st Rank - 10 /20
- ◇ 2nd Rank - 6/20
- ◇ 3rd Rank - 6/20
- ◇ 4th Rank - 0 /20

Sensitivity Test



❖ **Extremely Strong** – 10/20 (Red)

❖ **Very Strong** – 4/20 (Purple)

❖ **Strong** - 3/20 (Orange)

❖ **Medium** – 2/20 (Yellow)

Pie Chart of Sensitivity



> **Pink** – Extremely Strong
(10/20 = 2 %)

> **Violet** – Very Strong
(4/20 = 5%)

> **Sky Blue** – Strong
(3/20 = 0.15%)

> **Yellow** – Medium
(2/20 = 0.1 %)

Numerical Scoring Pie Chart



- Blue color - 90 %
(10/20 = 2)
- Orange - 80 %
(4/20 = 5)
- Green - 70 %
(5/20 = 4)
- Yellow - 60 %
(0/20 = 0)

Composite Score

Flavor



- Orange - Extremely Strong
(20/40 = 2)
- Yellow - Moderate
(20/40 = 2)
- Green - Strong
(20/40 = 2)

Composite Score Test

Colour /Quality/ Consistency



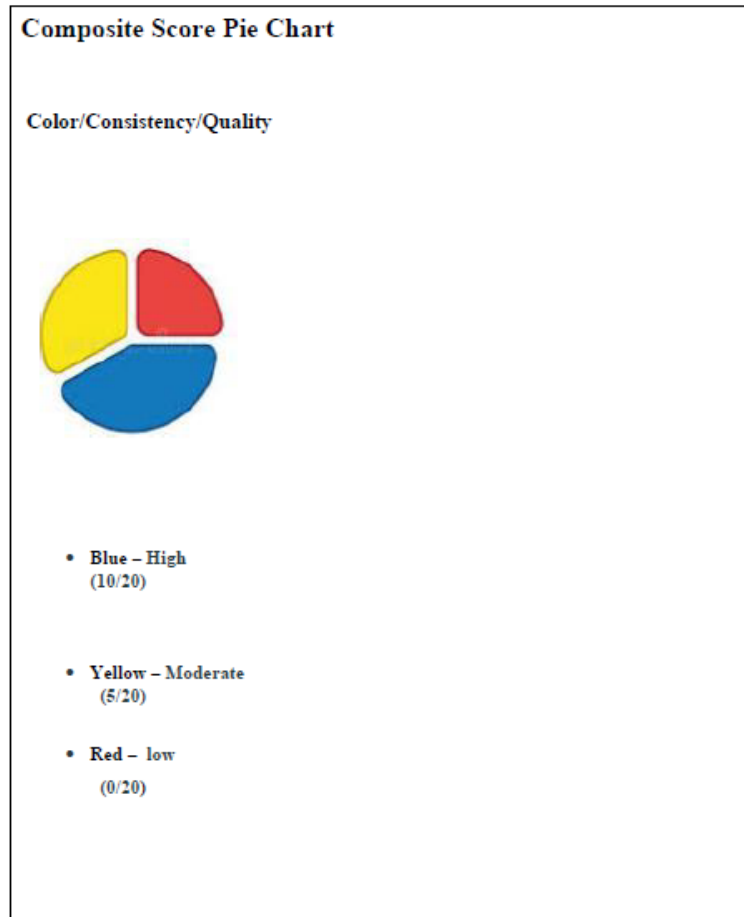
- Red – (10/20) Strong
- Purple – (5/20) Moderate
- Orange – (0 /20) Weak

Composite Score Pie Chart

Flavor



- Light Orange – Weak
- Orange - Moderate
- Pink - Strong
- Violet – Extremely Strong



Defects in New Product

There is no defect in color , flavor, taste , consistency and quality of processed wine as shown in the above data representation and number of observation presented in this report .

These observation convey that my red wine is processed in organized manner as its taste , flavor, color and quality took attention of people who enjoyed it .

- Colour – 20/20 (No color defect)
- Flavor – 40/40. (Extremely Strong)
- Consistency – 20/20
- Texture – 40/40
- Odour – 20/20 (Strong)
- Taste – 20/20 (Strong)

III. Result

My researches, summary, conclusion, body of report and background information on red wine convey that red wine is goodfor health as it provides fettle boons to those people who drink a glass of wine in moderate amount and convince people to drink more of wine

My observation table, data analysis, statistical calculation and methodology rely that there is no defects present in my fermented wine

I allotted the survey to about 20 people and put up many questionnaire regarding the product flavor, taste, color, odour,and aroma etc and took observation.

After analyzing observation I spotted that many of people timehonored me for marketing of red wine and approved me about strong flavor of red wine and convinced me about its health benefits of red wine and put

up many questionnaire on its processing and gave their observation accordingly

IV. Conclusion

Is series of studies prove that benefits of regular and moderate consumption of red wine two human health mainly related to its phenolic composition.

Since ancient time wine has been closely linked to evolution of medicine and the consumption of red wine is now recognized as beneficial to health by medicine .

The component of red wine are known as potent antioxidant and have been identified as having anticarcinogenic, anti-inflammatory and antimicrobial properties .

The component present in wine show that wine can be considered as functional food.

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude to my project guide

<<Dr Komal Singh >>

who gave me the golden opportunity to do this wonderful project on the topic -

<< **Red Wine A Sip Of Health** >> which also helped me in doing a lot of research and I came to know about so many new things I am really thankful to them.

Secondly I would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame.

Future Scope For Red Wine

- There is Steady growth in red wine consumption in emerging economies such as India and Brazil apart from China. Most of red wine brands are likely to include China in their strategic global planning to tap into the countries wine market.
- The average red wine growth in China is 4.4% . Our analysis believe that red wine consumption in China will continue to increase with average growth rate of 4.6% in next 5 years .Hence China will remain go to market for red wine producer for increasing its business
- Indian wine industry has grown due to changing lifestyle of urban people. In westernization of urban people has made wine drinking a style statement for them . Indian wine industry has also benefitted from the provision of WTO agreement applicable to it and due to Indian government tourist initiative - Incredible India.
- Today wine industry is delivering premium, high quality and luxurious quality of product and ensuring that these product must stand out on the shelf to face the cutthroat competition successfully.
- Today companies are also investing in wine tasting events, consumer feedback for taste and quality of product to tailor their product as per consumers taste
- Global wine market grew by 1.8 % in 2006 to reach the volume of 19.4 billion liters. Wine account for 73.5% of global wine market value.

Project summary

Red wine consumption increases level of antioxidant in blood . Moderate consumption of alcohol cause satisfactory impact on both physiologically and psychologically on human health. If a person drink alcohol sensibly then that person will take good advantage of red wine due to its beneficial compound present in it

Red wine contain polyphenol called resveratrol that consists various cardiovascular benefits and provide other helpful attributes. Red wine is made by using skin of grapes which increase vital antioxidant and vitamins in human system

Doctors recommend that excessive consumption of alcohol can cause serious impact on health of person. Wine is used since drawn of human civilization as it is popular all over the world for many centuries.

Red wine quality and vogue is influenced by qualitative and quantitative configuration of aromatic compounds that have certain chemical structure and properties. Red wine consists large amount of phenols and polyphenolic compounds that increase high antioxidant capacity .Red wine antioxidant capacities associated with profitable effects when it is consumed in adequate amount .

Aromatic compound present in wine are varietal thiols, other volatile sulfur comp, methoxy pyrazines , C-13 – norisoprenoid and other aromatic compound that are responsible for aromas in red wine

Daily drinking of wine may prevent various chronic diseases as red wine contains certain antioxidant that are good for human health.

Resvetrol is active in prevention of cardiovascular diseases by neutralizing free oxygen radicals and reactive nitrogenous radicals as it penetrate in blood brain barrier and protect the brain nerve cell

Red wine is healthiest alcohol due to its fermentation and production process as it contain many antioxidant vitamins and polyphenols. Tradition of winemaking and wine consumption is known for many centuries .

Ancient Roman knew the fettle benefits of wine and they made it popular all over the world. Red wine contain resvetrol which is very important polyphenol in red wine as they contain anthrocyanin , catechins and tannis (pro anthrocyanidin and ellagitannis and it aids, bodily system)

Resvetrol improve cardiovascular system that cause impact on decreasing risk of obesity and two types of diabetes. White wine contain less polyphenols than red wine.

Total polyphenol content in white wine in terms of 100 mg GAEL ¹ (Gallic acid equivalent) whereas the red wine contain thousands of mg GAEL ¹ of total polyphenols

Wine is an alcoholic beverage that is popular for 1000 years as it is made from fermented grapes when is frequently created in Bible from Noah and his grapes vines to Jesus and is used in Catholic Church the earliest

Earliest remnant of wine was discovered at the site of Haji Firuz Tepe, innorthern zagros mountain of Iran.

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Meriot -It is known as oldest wine that dated back in 1st century in France and it is cultivated in bordeaux region of France as it is difficult to grow because of large size and it's thin skin

Sangiovese – These grapes are used in the Tuscany in 1722 and they are used in production of chianti wines

Zinfandel - These are known as oldest variety of grapes that are preowned an flourished in California

Red wine prevent heart disease, lower bad cholestrol, reduce risk of cancer, control blood sugar level and keeps your body slim . Red wine cause positive effect on digestive system and keeps memory sharp as red wine is not only the best wine for consumer but is best alcohol.



Glossary

Key words	Description
Fettle boon	Health benefits
Aromatic compounds	Polycyclic aromatic compound
WTO	World trade organization
Vogue	Upcoming Fashion; popular
Remnant	A small minority of people who will remain faithful to god