Janata Shikahan Sanstha's
Kisan Veer Mahavidyalaya, Wai
Student List B.Sc.- III Chemistry
2024-25

Sr. No	Roll No.	Student's Name	Praoject Name
1	1	WADKAR OMKAR ASHOK	Preparation of pegment and poster paints
2	2	DALVI SANKET MOHAN	
3	3	CHAVAN SNEHAL SURESH	
4	4	BANDAL ADINATH SURESH	
5	5	PAWAR SHANTANU SANJAY	
6	6	MANDHARE SHIVAM ANIL	
7	7	MORE SWARUP RAVINDRA	"Green Approach: Natural Indicators as an Eco-Friendly in Acid - Base Titration"
8	8	INGAWALE SANIKA SANJAY	
9	9	DAREKAR PARTH DEEPAK	
10	10	MANDHARE PRATHAMESH SATISH	
11	11	ANABHULE ABHINAV SUNIL	
12	12	MAHADIK SAHIL PRAMOD	
13	14	RUTUJA ANIL YADAV	"Determation of Lactic Acid in Sample of Milk"
14	16	VEDPATHAK ATHARV SUNIL	
15	17	PAWAR SWAMINI KRISHNRAJ	
16	18	CHIKANE SANIKA SURESH	
17	19	MANDALE SIDDHI DINKAR	
18	20	THOPATE DIVYA DASHRATH	
19	21	BHILARE SANIKA DATTATRAY	"Claisen - Schmidt Condensation"
20	22	KARADE SANIKA BALU	
21	23	NIKITA KIRAN WAGHMARE	
22	24	DAGADE PRASHANT TATYABA	
23	25	SHELAR ROHIT SHRAVAN	
24	26	TARATE SHRUTI KRISHNDEV	
25	27	BHOSALE ABHIJIT SANTOSH	"Acidity in Tea Powder"
26	28	BARGE MAYUR KESHAV	
27	29	NEHA KIRAN WAGHMARE	
28	30	SHIRKE TEJASVI MANOHAR	
29	33	JADHAV SOURAV SANTOSH	
30	34	PAWAR ARYAN DILIP	
31	35	NIGADE OM VIKAS	"Preparation of Soap"
32	36	PAWAR KIRAN SARJERAV	
33	37	KHUTEKAR VAISHNAVI BHAGWAN	
34	38	SHUBHANGI TUKARAM DHOLE	
35	39	ITHAPE PRAJJWAL BHASKAR	
36	40	CHAVAN ANIKET MAHADEV	
37	41	KAMBLE TUSHAR MAHADEV	
38	47	SHAIKH SOHEL SHARIF	"Analysis of Honey"
39	48	KAMBLE ADITYA RAJESH	
40	49	ITHAPE VIRAJ RAVINDRA	
41	58	AKHADE KOMAL KONDIRAM	
42	59	SANAS VISHAKHA PANDURANG	
43	63	KADAM OMKAR VIJAY.	Sugarcane Juice
44	64	LOKHANDE ROHIT SUHAS	
45	65	PRAJWAL RAJENDRA KADAM	
46	71	KADAM ADITYA SANJAY	
47	78	SURYAWANSHI SHIVAM DINESH	

WAI Dist. Satara
KISAN VEER MAHAVIDYALAYA

Head
Department of Chemistry
Kisan Veer Mahavidyalaya, Wai

DEPARTMENT OF CHEMISTRY

Certificate

This is Certify to that, following candidates, ***Mr. Swarup Ravindra More, Ms. Sanika Sanjay Ingavale, Mr. Parth Dipak Darekar, Mr. Prathmesh Satish Mandhare, Mr. Abhinav Sunil Anbhule, Mr. Sahil Pramod Mahadik*** of B.Sc.-III have successfully completed the project work entitled ***"Green Approach: Natural Indicators as an Eco-Friendly in Acid-Base Titration"*** in practical fulfillment of the award of Bachelor of Chemistry as laid down by the Shivaji University, Kolhapur during the academic year 2024-2025.

Date:

Place: Wai

Dr. S. B. Wategaonkar
Research Guide

J.S. SANSTHA'S WAI Dist Satara KISANVEER MAHAVIDYALAYA

Prof. (Dr.) D. N. Zambare
HoD

Examiner

Kisan Veer Mahavidyalaya, Wai

Dist. - Satara

2024-2025

DEPARTMENT OF CHEMISTRY

Certificate

This is Certify to that, following candidates, ***Miss. Rutuja Anil Yadav Mr. Atharv Sunil Vedpaphak Miss. Swamini Krishnraj Pawar Miss. Sanika Suresh Chikane Miss. Saddhi Dinkar Mandale Miss. Divya Dashrath Thopate,*** of B.Sc.-III have successfully completed the project work entitled ***"Determination of lactic Acid in Sample of Milk"*** in practical fulfillment of the award of Bachelor of Chemistry as laid down by the Shivaji University, Kolhapur during the academic year 2024-2025

Date:12/03/2025

Place: Wai

24/3/25

Guide

Miss. N. S. Surve

Examiner

Head

Department of Chemistry

Prof. (Dr) D. N. Zambare

Professor and Head

Department of Chemistry

Kisan Veer Mahavidyalaya, Wai

JANATA SHIKSHAN SANSTHA'S

KISAN VEER MAHAVIDYALAYA, WAL

(DIST-SATARA)

CERTIFICATE

This is certify that **Bhilare Sanika Dattatray, Karade Sanika Balu, Tarate Shruti Krishndev, Shelar Rohit Shravan** has successfully completed the project work on **"CLAISEN-SCHMIDT CONDENSATION "** which is being submitted here with as partial fulfillment for the of Degree of Bachelor of Science in Chemistry Shivaji University Kolhapur.

This project is the result of data information collected from the respective information media and we have successfully verified the result obtained. All the resulting aspects are found to be correct and appropriate in the view of this project and the best of our knowledge.

Mrs. D.S.Patil
Under Guidance

J. S. SANSTHA'S WAI Dist. Satara KISAN VEER MAHAVIDYALAYA

Prof.Dr. D.N.Zambare
Head of Department

External Examiner
Shivaji University, Kolhapur

CERTIFICATE

This certify that **Shubhangi Tukaram Dhole,Vaishnavi Bhagwan Khutekar, Om Vikas Nigade, Kiran Sarjerav Pawar, Prajwal Bhaskar Ithape, Aniket Mahadev Chavan, Tushar Mahadev Kamble** has successfully completed the project work on "Preparation of Soap" which is being submitted here with a partial fulfillment for the award of Degree Bachelor of Science. This project is the result of original work completed under my guidance and to the best of my knowledge.

Prof. S.P.Sanap

(Department of Chemistry)

J.S.SANSTHA'S KISANVEER MAHAVIDYALAYA WAI Dist.Satara

Prof.Dr. D.N. Zambare

(Head of Department)

Professor and Head
Department of Chemistry
Kisan Veer Mahavidyalaya, Wai

External Examiner

Shivaji University Kolhapur

DEPARTMENT OF CHEMISTRY

Certificate

This is to Certify that, following candidates ***Kamble Aditya Rajesh, Ithape Viraj Ravindra, Shaikh Sohel Sharif, Akhade Komal Kondiram, Sanas Vishakha Pandurang*** of B.Sc.-III has successfully completed the project work entitled ***"Analysis of Honey"*** in practical fulfillment of the award of Master of Chemistry as laid down by the **Shivaji University, Kolhapur** during the academic year 2024 -2025.

Guide

(Miss. P. D. Jadhav)

Head

Department of Chemistry

Professor and Head
Department of Chemistry
Kisan Veer Mahavidyalaya, Wai

Examiner

Shivaji University Kolhapur

JANATA SHIKSHAN SANSTHA'S

KISAN VEER MAHAVIDYALAYA, WAL

(DIST-SATARA)

CERTIFICATE

This is certify that **Wadkar Omkar Ashok, Dalvi Sanket Mohan, Chavan Snehal Suresh , Bandal Adinath Suresh , Pawar Shantanu Sanjay, Mandhare Shivam Anil** has successfully completed the project work on **"Preparation of Pigments and Poster Paints"** which is being submitted here with as partial fulfillment for the of Degree of Bachelor of Science in Chemistry Shivaji University Kolhapur.

This project is the result of data information collected from the respective information media and we have successfully verified the result obtained. All the resulting aspects are found to be correct and appropriate in the view of this project and the best of our knowledge.

Miss.P.S.Jaigude
Under Guidance

J.S.SANSTHA'S WAI Dist.Satara KISANVEER MAHAVIDYALAYA

Prof.Dr. D.N.Zambare
Head
Department of Chemistry
Kisan Veer Mahavidyalaya, Wai

External Examiner
Shivaji University, Kolhapur

1)
2)
3)

JANTA SHIKSHAN SANSTHA"S

KISAN VEER MAHAVIDYALAYA, WAI

DEPARTMENT OF CHEMISTRY

Project Name

"ACIDITY IN TEA POWDER"

Submitted By :- Student of B. Sc - III

SUBMITTED BY :

Sr.No.	Name of student	Roll No.	Seat No.
1	*Barge Mayur Keshav*	28	
2	*Shirke Tejasvi Manohar*	30	
3	*Jadhav Sourav Santosh*	33	
4	*Pawar Aryan Dilip*	34	
5	*Bhosale Abhijit Santosh*	27	

GUIDE BY:

Assist. Prof. A. A. Pandhare

Project Year – 2024-2025

B.Sc. III

Sample Copy of Project

Janta Shikshan Sanstha's

Kisan Veer Mahavidyalaya, Wai

CERTIFICATE

This is to certify that, following candidate of, ***Barge Mayur Keshav, Shirke Tejasvi Manohar, Jadhav Sourav Santosh, Pawar Aryan Dilip, Bhosale Abhijit Santosh*** of **B.Sc.III** class has successfully completed the project work entitled "***ACIDITY IN TEA POWDER***" in practical fulfillment of the award of Bachelor of Science in Chemistry as laid down by the Shivaji University Kolhapur during the academic year 2024-2025

Pandhare...
Guide

(Asst. Prof A. A. Pandhare)

Head

Department of Chemistry

External Examiner

Shivaji University, Kolhapur

ACKNOWLEDGEMENT

Foremost, it gives me immense pleasure to express my sincere thankful to my research guide Assist. Prof. A. A. Pandhare Department of Chemistry, for his guidance and constant support from the initial to final level which enabled me to develop an understanding of the problem. His enthusiasm and optimism of science is an invaluable source of inspiration for me. It was great pleasure and privilege to study under his mentorship.

I would like to thanks Dr. Gurunath Fagare sir Principal of Kisan Veer College, for providing facilities to carry out me search work in college laboratory.

I would like to thanks to Prof. (Dr.) D. N. Zambare, Head of department of Chemistry, Miss. P.S. Jaigude, Mrs. D. S. Patil for constant support and thanks to non-teaching staff, Kisan Veer Mahavidyalaya, Wai.

Place: Wai

Date :- / /202

Sr.No.	Name of student	Roll No.	Sign
1	*Barge Mayur Keshav*	28	
2	*Shirke Tejasvi Manohar*	30	
3	*Jadhav Sourav Santosh*	33	
4	*Pawar Aryan Dilip*	34	
5	*Bhosale Abhijit Santosh*	27	A.S.Bhosale.

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TOPIC

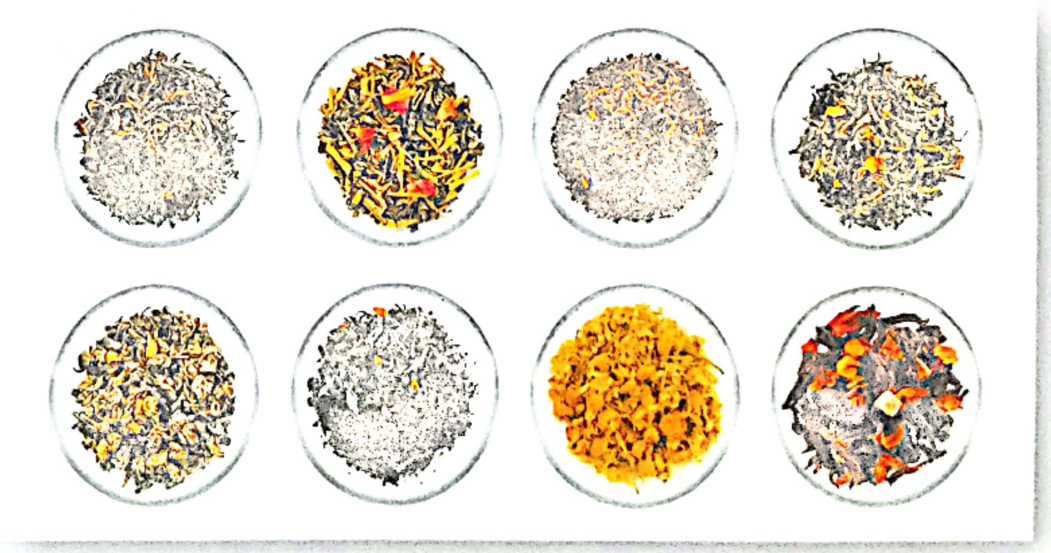
ACIDITY IN TEA POWDER

INTRODUCTION

Tea is a popular beverage made by infusing dried tea powder or herbs in hot water. The powder used to make tea come from the Camellia sinensis plant, and the processing methods applied to these powder determine the type of tea produced. There are several main types of tea, including green tea, black tea, white tea, and oolong tea, each with its own distinct flavour, aroma, and colour.

The preparation of tea involves steeping the tea powder or tea bags in hot water, allowing the flavours and compounds from the powder to be released into the liquid. The brewing time, water temperature, and other factors can influence the taste of the tea. Beyond the traditional teas, there are also herbal teas made from infusing various plants, flowers, or herbs in hot water.

Tea has been enjoyed for centuries and holds cultural significance in many societies. It is not only valued for its diverse flavors but also for the potential health benefits associated with its antioxidant content. Whether sipped for relaxation, socializing, or health reasons, tea remains a globally beloved and versatile beverage.



REASON FOR ACIDITY OF TEA POWDER

The acidity in tea powder is primarily attributed to the presence of natural organic acids. One of the key acids found in tea powder is citric acid, although other acids such as oxalic acid and malic acid may also contribute to the overall acidity. These acids play a crucial role in shaping the flavour profile of the tea. The levels of acidity can vary depending on factors such as the tea plant variety, growing conditions, and processing methods. Additionally, the terroir of the tea-growing region, including factors like soil composition and climate, can influence the acidity of the tea powder. During the growth and development of the tea plant, environmental factors and the plant's metabolic processes contribute to the accumulation of these organic acids. The acidity in tea powder contributes to the refreshing and lively taste that is characteristic of many types of tea, and it is a key element in the complex interplay of flavours that tea enthusiasts appreciate.

AIM

To compare the oxalic acid content in the various samples of Tea powder.

Requirements

- 10 gm of three different brands of tea powder
- Calcium Carbonate ($CaCO_3$)
- Filter Paper
- Funnel
- Beaker
- Chemical Balance
- Wire Gauge
- Tripod Stand
- Bunsen Burner

PROCEDURE

1. Weigh exactly 10gm of 1st sample of tea powder.

2. Take 200ml of distilled water in a beaker.

3. Put tea powder in above beaker boil it for 10 minutes.

4. Filter above boiled solution using funnel and filter paper in another beaker.

5. In filtrate add 4gms of $CaCO_3$ and boil it.

6. Filter above boiled solution using funnel and filter paper in another beaker. There will be a precipitation of Calcium oxalate on the filter paper.

7. Keep filter paper aside and let it dry.

8. Weigh the ppt. of oxalic acid.

9. Repeat the above steps for the other two samples

OBSERVATION

Sr. No.	Brand of Tea	Weight of Tea Powder	Weight of Acid Obtained	Percentage of Oxalic Acid
1	Red Label	10gm	0.91	9.1%
2	Parivar	10gm	0.87	8.7%
3	Society	10gm	0.80	8%

RESULT

The results indicate variations in the oxalic acid content among the different tea brands. ***Red Label exhibited the highest percentage of oxalic acid at 9.1%, followed closely by Parivar at 8.7%. Society on the other hand, showed a slightly lower percentage at 8%.***

These differences may arise from various factors such as tea plant varieties, growing conditions, and processing methods unique to each brand.

BENEFITS OF CONSUMING TEA

Consuming tea can offer various health benefits, and these advantages may vary depending on the type of tea. Here are some general benefits associated with tea consumption:

☆ **Antioxidant Properties:** Tea, especially green tea, is rich in antioxidants such as catechins and polyphenols. These compounds help neutralize free radicals in the body, which can contribute to overall health and may play a role in reducing the risk of chronic diseases.

☆ **Heart Health:** Regular tea consumption has been linked to cardiovascular health. Antioxidants in tea may help lower bad cholesterol (LDL cholesterol) levels and improve blood vessel function, reducing the risk of heart diseases.

☆ **Weight Management:** Green tea, in particular, is often associated with weight management benefits. It may help boost metabolism and fat burning, making it a popular choice for those seeking to maintain a healthy weight.

☆ **Improved Mental Alertness:** Tea contains caffeine, which can enhance alertness and improve cognitive function. However, the caffeine content in tea is generally lower than that in coffee, providing a milder energy boost without the jitters.

☆ **Reduced Cancer Risk:** Some studies suggest that the antioxidants in tea may have protective effects against certain types of cancers. The polyphenols in green tea, for instance, have been investigated for their potential anticancer properties.

- ☆ **Better Oral Health:** Tea contains compounds that may help inhibit the growth of bacteria in the mouth, leading to improved oral health. This may contribute to a reduced risk of cavities and gum diseases.
- ☆ **Stress Reduction and Relaxation:** Certain compounds in tea, such as L-theanine, have been associated with promoting relaxation and reducing stress. The combination of caffeine and L-theanine in tea can provide a calming effect without causing drowsiness.
- ☆ **Hydration:** Tea is a hydrating beverage that can contribute to meeting daily fluid intake requirements. Unlike some caffeinated beverages, tea does not have a diuretic effect that leads to excessive fluid loss.
- ☆ **Digestive Health:** Herbal teas, like peppermint or ginger tea, are known for their digestive benefits. They may help alleviate symptoms such as indigestion, bloating, and nausea.
- ☆ **Diabetes Management:** Some research suggests that compounds in tea, particularly green tea, may have a positive impact on blood sugar levels, potentially aiding in diabetes management.

CONCLUSION

In conclusion, this investigatory project aimed to compare the oxalic acid content in different samples of tea powder from Red Label, Parivar, Society. The results revealed varying percentages of oxalic acid, with Red Label exhibiting the highest amount at 9.1%. The procedure involved boiling tea powder, precipitating oxalic acid with calcium carbonate, and determining the weight of the obtained acid.

While the investigation provided insights into oxalic acid levels, it's important to note that the presence of oxalic acid in tea is influenced by multiple factors, including tea plant variety, growing conditions, processing methods, and brewing practices. Furthermore, the project highlighted the potential health benefits of consuming tea, such as its antioxidant properties, heart health benefits, weight management support, and more.