Shri Shivaji Education Society's
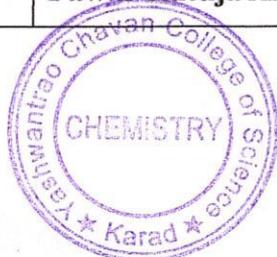## Board for Higher Education Vidyanagar Karad.

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

IQAC & Department of Chemistry

Name of activity: "To Determination of Nitrogen Percentage from Soil by Kjeldahl method."

Year 2024-25

Index

Sr. No.	Name of Students
1.	Mahadik Rahul Ramchandra
2.	Patil Sanskruti Dadaso
3.	Dagale Rajesh Ramchandra
4.	Karande Subhash Sahebrao
5.	Kasid Gorakhnath Uttam
6.	Kadam Dadaso Hanmant
7.	Chavan Sanjay Vilas
8.	Patil Diksha Dinkar
9.	Kadam Sheetal Bhaskar
10.	Gharge Sanika Anil
11.	Kashid Sanjivini Shivaji
12.	Kanase Dhanshree Dipak
13.	Hardas Shreya Popat
14.	Pawar Samruddhi Mukund
15.	Kadam Khasaba Laxman
16.	Mane Natha Baburao
17.	Pawar Nathuram Pandurang
18.	Pawar Suresh Shamrao
19.	Namdas Ganesh Mohan
20.	Pawar Rutuja Anil

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Science, Karad

Yashwantrao Chavan College of Science, Karad

IQAC & Department of Chemistry organizing,
Extension Activity 2024-25

Name of activity- "To determination of Nitrogen percentage from Soil by Kjeldahl method."

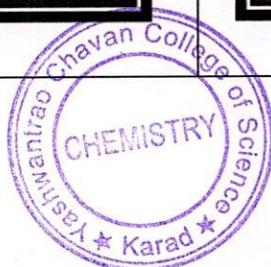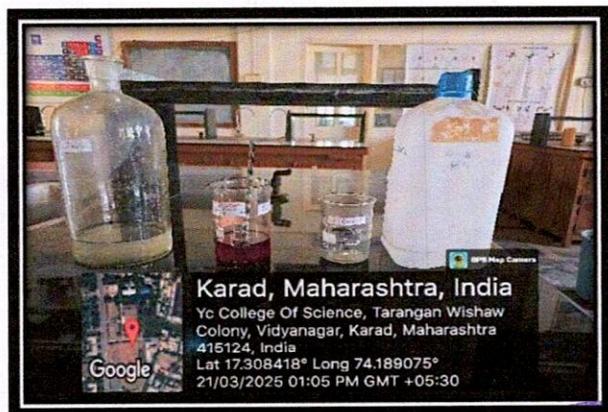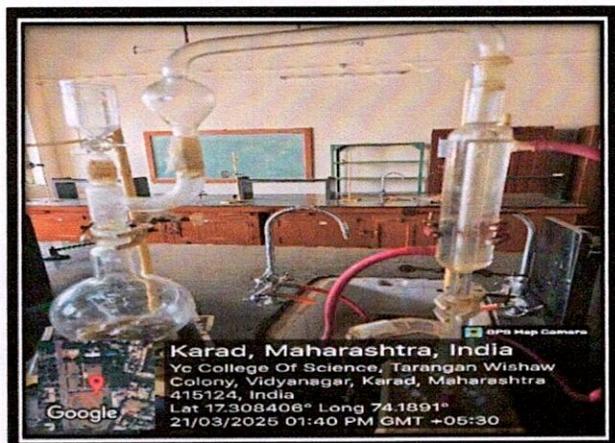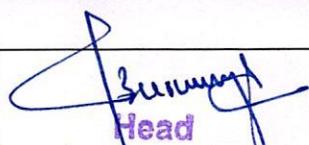|	
Purpose:	**Using the Kjeldahl Method:** The Kjeldahl method is a scientific approach to accurately determine nitrogen content in the soil. **Nitrogen for Plant Growth:** Nitrogen is a fundamental nutrient for plants, influencing their growth, vitality, and overall health. Measuring nitrogen levels helps ensure an optimal environment for plant development. **Agricultural Impact:** Maintaining the right balance of nitrogen in the soil is crucial for crop productivity. This activity supports farmers in making informed decisions about fertilization to enhance plant growth.
No. of beneficiaries:	**20**
Outcome/ success achieved:	**Nutrient Management:** Helps optimize nutrient levels for crop growth and improve agricultural productivity. **Crop Health and Yield:** Adequate nitrogen is crucial for plant growth; the data aids in predicting and enhancing crop yield **Educational Value:** Serves as an educational tool for students and researchers to understand the link between soil nutrients and plant growth.
Teachers involved in the activity	Prof. Dr. S. H. Burungale Prof. Dr. A. V. Mali Mr. A. N. Bhingare Dr. R.S. Patil Dr. B. E. Mahadik Mr. G. B. Dhake Dr. U. P. Lad Dr. V. S. Patil Mr. S. D. Karande Dr. S. D. Jadhav Dr. K. s. Jagadhane Mr. M. I. Maneri Mr. M. K. Mahale Mrs. N. R. Panwal Mrs. R. A. Kadam

Karad, Maharashtra, India
Yc College Of Science, Tarangan Wishaw Colony, Vidyanagar, Karad, Maharashtra 415124, India
Lat 17.308406° Long 74.1891°
21/03/2025 01:40 PM GMT +05:30

Karad, Maharashtra, India
Yc College Of Science, Tarangan Wishaw Colony, Vidyanagar, Karad, Maharashtra 415124, India
Lat 17.308384° Long 74.189133°
21/03/2025 04:14 PM GMT +05:30

Karad, Maharashtra, India
Yc College Of Science, Tarangan Wishaw Colony, Vidyanagar, Karad, Maharashtra 415124, India
Lat 17.308418° Long 74.189075°
21/03/2025 01:05 PM GMT +05:30

Karad, Maharashtra, India
Yc College Of Science, Tarangan Wishaw Colony, Vidyanagar, Karad, Maharashtra 415124, India
Lat 17.308391° Long 74.189106°
21/03/2025 02:13 PM GMT +05:30

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Extension Activity

Name of Activity: "To Determination of Nitrogen Percentage from Soil by Kjeldahl method."

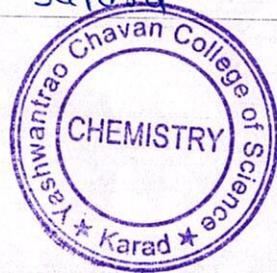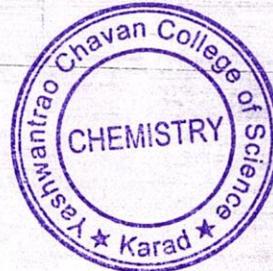| Sr. No.	Name of Farmer	Address	Soil Received Date	Mobile No.	Sign
8.	Patil Diksha Dinkar	AT. post kalgaon Tal patal. Dist Satara	18/01/2025	9165802707	DPatil
9.	kadam sheetal Bhaykar	AT.kadamwadi Post. P.t. Warun Tal- shirala .Dist-sangli	31-01-2025	9172064049	Ssh.
10.	वाशी सानिका आनिल	A.T.Post.GoPuj Tal-Khatav.Dist- Satara	31-1-2025	8149193783	SAGhooge
11.	काशीद संजीवनी शिवाजी	A.T Post. Koparde Tal-karad Dist. satara	21/2/2025	9272830741	Sanjivani
12.	कासे शनश्री दिपक	A.T.Post shenoli Tal-karad Dist- satara	21/2/2025	8308820074	p.Dkamase.
13.	हरवास श्रेया पीपट	A.T Post kaletek Tal-karad Dist- satara	21/2/2025	8799831801	SHARDA
14.	Pawar samruddhi mukund	A.T Post chachegoan Tal-karad Dist -satara	25/2/2025	7387664950	SMPawar

Yashwantrao Chavan College of Science, Karad
IQAC & Department of Chemistry Organizing
Extension Activity

Name of Activity: "To Determination of Nitrogen Percentage from Soil by Kjeldahl method."

Sr. No.	Name of Farmer	Address	Soil Received Date	Mobile No.	Sign
15.	खाशाबा लक्ष्मण कदम	मु. गंगेवाडी पो. मल्हारपेठ ता. पाटण, जि. सातारा	28/02/2025	9130416467	कदम
16	नाथा बाबुराव माने	मु.पो. नांदेवाडी ठोमसे ता. पाटण जि. सातारा	28-12-2025	7276582298	माने
17	नथुराम पांडुरंग पवार	मु. पो. करपेवाडी ता. पाटण जि. सातारा	12/3/25	8380812420	P. N. Pawar
18	सुरेश शामराव पवार	मु.पो. तळमावले ता.पाटण जि. सातारा	12/3/25	7912687505	पवार
19)	गणेश मोहन नामदास	शेणोली स्टेशन कोरे	15/3/25	9172428912	J.9Namdas
20)	ऋतुजा अनिल पवार	मु. कोडोली. ता. कराड जि. सातारा	15/3/25	9730189990	Pawar

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Extension Activity 2024-25

Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Mahadik Rahul Ramchandra

Address   :A/p. Chinchani Tal. Kadegaon Dist. Sangli

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 11.5 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

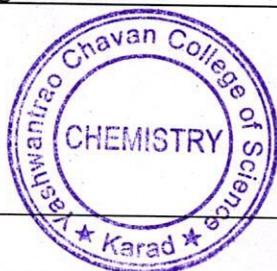$$\% \text{ of N} = \frac{(25 - 11.5) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(13.5) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 1.89 \%$$

Thus, the nitrogen content in the soil sample is **1.89 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Patil Sanskruti Dadaso

Address :A/p. Koregaon Tal. Karad Dist. Satara

Weight of Soil taken = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 18.1 ml

Normality of HCl = 0.1 N

$$\% \text{ of } N = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

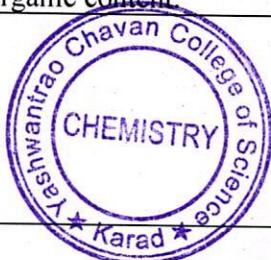$$\% \text{ of } N = \frac{(25 - 18.1) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of } N = \frac{(6.9) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of } N = 0.96 \%$$

Thus, the nitrogen content in the soil sample is **0.96 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Extension Activity 2024-25

Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Dagale Rajesh Ramchandra

Address :A/p. Arewadi Tal. Karad Dist. Satara

Weight of Soil taken = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 15 ml

Normality of HCl = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

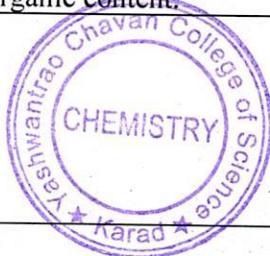$$\% \text{ of N} = \frac{(25-15) \times 0.1 \times 1.401}{1}$$

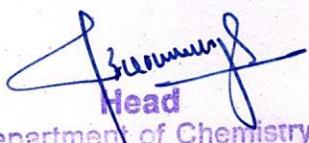$$\% \text{ of N} = \frac{(10) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 1.40 \%$$

Thus, the nitrogen content in the soil sample is **1.40 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Karande Subhash Sahebrao

Address   :A/p. Shalgaon Tal. Karegaon Dist. Sangli

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 15.4 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

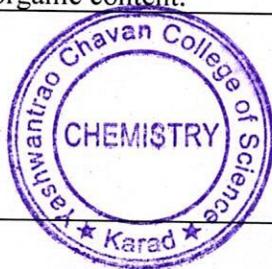$$\% \text{ of N} = \frac{(25 - 15.4) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(9.6) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 1.34 \%$$

Thus, the nitrogen content in the soil sample is **1.34 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Kasid Gorakhnath Uttam

Address :A/p. Masur Tal. Karad Dist. Satara

Weight of Soil taken $\qquad$ = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 12.9 ml

Normality of HCl $\qquad$ = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

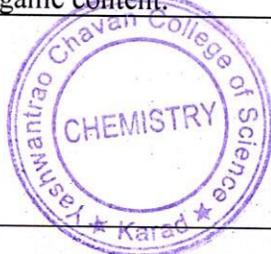$$\% \text{ of N} = \frac{(25 - 12.9) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(12.1) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 1.69 \%$$

Thus, the nitrogen content in the soil sample is **1.69 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4. 00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Extension Activity 2024-25

Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Kadam Dadaso Hanmant

Address   :A/p. Marali Tal. Karad Dist. Satara

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 8.3 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

$$\% \text{ of N} = \frac{(25 - 8.3) \times 0.1 \times 1.401}{1}$$

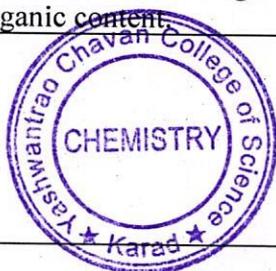$$\% \text{ of N} = \frac{(16.7) \times 0.1 \times 1.401}{1}$$

% of N 2.33 %

Thus, the nitrogen content in the soil sample is **2.33 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4. 00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Chavan Sanjay Vilas

Address :A/p. Kundal Tal. Palus Dist. Sangli

Weight of Soil taken = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 5.2

Normality of HCl = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

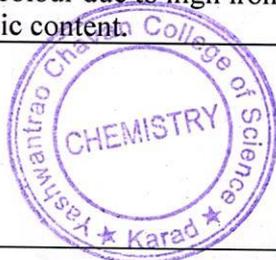$$\% \text{ of N} = \frac{(25 - 5.2) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(19.8) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 2.77 \%$$

Thus, the nitrogen content in the soil sample is **2.77 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Patil Diksha Dinkar

Address   :A/p. Kalgaon Tal. Patan Dist. Satara

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 18.9 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

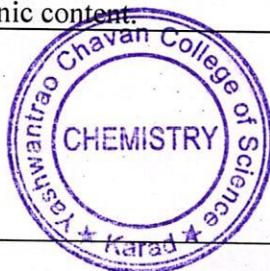$$\% \text{ of N} = \frac{(25 - 18.9) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(6.1) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 0.85 \%$$

Thus, the nitrogen content in the soil sample is **0.85 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Kadam Sheetal Bhaskar

Address :A/p. Kadamwadi Tal. Shirala Dist. Sangli

Weight of Soil taken = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 21.6 ml

Normality of HCl = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

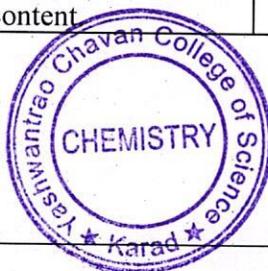$$\% \text{ of N} = \frac{(25 - 21.6) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(3.4) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 0.47 \%$$

Thus, the nitrogen content in the soil sample is **0.47 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Gharge Sanika Anil

Address :A/p. Gopuj Tal. Khatav Dist. Satara

Weight of Soil taken = 1gm

Volume of HCl used for sample Blank titration (V1) = 3.0 ml

Volume of HCl used for blank Back titration (V2) = 11.5

Normality of HCl = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

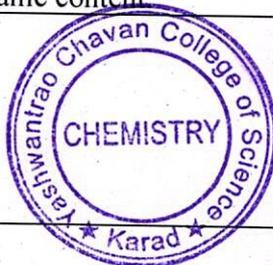$$\% \text{ of N} = \frac{(25-8) \times 0.1 \times 1.401}{1}$$

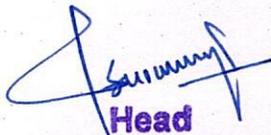$$\% \text{ of N} = \frac{(17) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 2.38 \%$$

Thus, the nitrogen content in the soil sample is **2.38 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Kashid Sanjivini Shivaji

Address   :A/p. Koparde Tal. Karad Dist. Satara

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 22.2 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

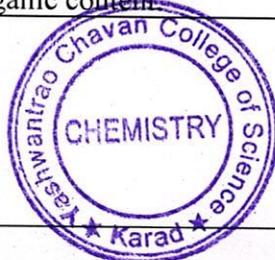$$\% \text{ of N} = \frac{(25 - 23.8) \times 0.1 \times 1.401}{1}$$

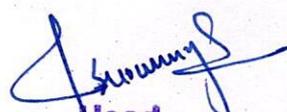$$\% \text{ of N} = \frac{(1.2) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 0.16 \%$$

Thus, the nitrogen content in the soil sample is **0.16 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Kanase Dhanshree Dipak

Address   :A/p. Shenoli Tal. Karad Dist. Satara

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 1.9 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

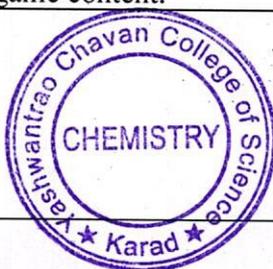$$\% \text{ of N} = \frac{(25 - 1.9) \times 0.1 \times 1.401}{1}$$

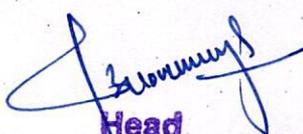$$\% \text{ of N} = \frac{(23.1) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 3.23 \%$$

Thus, the nitrogen content in the soil sample is **3.23 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4. 00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Hardas Shreya Popat

Address :A/p. Kaletek Tal. Karad Dist. Satara

Weight of Soil taken $\qquad$ = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 8.6 ml

Normality of HCl $\qquad$ = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

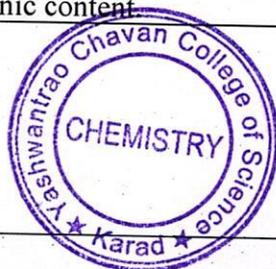$$\% \text{ of N} = \frac{(25 - 8.6) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(16.4) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 2.29 \%$$

Thus, the nitrogen content in the soil sample is **2.29 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Pawar Samruddhi Mukund

Address   :A/p. Chenchegaon Tal. Karad Dist. Satara

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 11.1 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

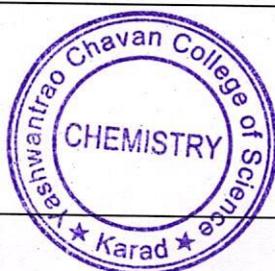$$\% \text{ of N} = \frac{(25 - 11.1) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(13.9) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 1.94 \%$$

Thus, the nitrogen content in the soil sample is **1.94 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Kadam Khasaba Laxman

Address :A/p. Ganewad Tal. Patan Dist. Satara

Weight of Soil taken $\qquad$ = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 14.9 ml

Normality of HCl $\qquad$ = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

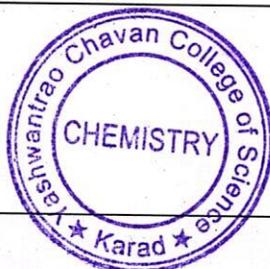$$\% \text{ of N} = \frac{(25 - 14.9) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(10.1) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 1.41 \%$$

Thus, the nitrogen content in the soil sample is **1.41 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Mane Natha Baburao

Address   :A/p. Tambewadi Tal. Patan Dist. Satara

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 1.6 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

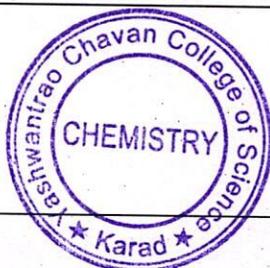$$\% \text{ of N} = \frac{(25 - 0.8) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(24.2) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 3.39 \%$$

Thus, the nitrogen content in the soil sample is **3.39 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4. 00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Pawar Nathuram Pandurang

Address :A/p. Karpewadi Tal. Patan Dist. Satara

Weight of Soil taken = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 4 ml

Normality of HCl = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

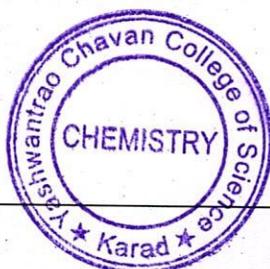$$\% \text{ of N} = \frac{(25 - 4.0) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(21) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 2.90 \%$$

Thus, the nitrogen content in the soil sample is **2.90 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Pawar Suresh Shamrao

Address :A/p. Talmavale Tal. Patan Dist. Satara

Weight of Soil taken = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 2.6 ml

Normality of HCl = 0.1 N

$$\% \text{ of } N = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

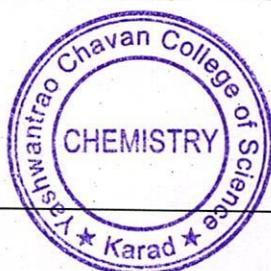$$\% \text{ of } N = \frac{(25 - 3.6) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of } N = \frac{(21.4) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of } N = 2.99 \%$$

Thus, the nitrogen content in the soil sample is **2.99 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4. 00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Namdas Ganesh Mohan

Address   :A/p. Shenoli St. (Shere) Tal. Karad Dist. Satara

Weight of Soil taken   = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2)   = 20.1 ml

Normality of HCl   = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

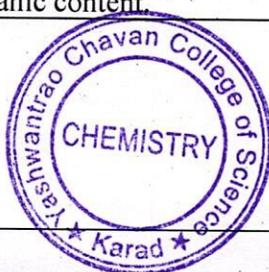$$\% \text{ of N} = \frac{(25 - 20.1) \times 0.1 \times 1.401}{1}$$

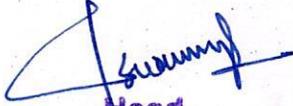$$\% \text{ of N} = \frac{(4.9) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 0.68 \%$$

Thus, the nitrogen content in the soil sample is **0.68 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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Name of Activity: To determination of Nitrogen percentage from Soil by Kjeldahl method.

Name of Farmer: Pawar Rutuja Anil

Address :A/p. Kadoli Tal. Karad Dist. Satara

Weight of Soil taken = 1gm

Volume of HCl used for sample Blank titration (V1) = 25 ml

Volume of HCl used for blank Back titration (V2) = 6.3 ml

Normality of HCl = 0.1 N

$$\% \text{ of N} = \frac{(V2-V1) \times N \times 14.01}{W \times 1000} \times 100$$

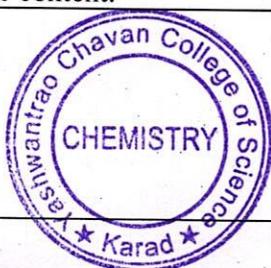$$\% \text{ of N} = \frac{(25 - 6.3) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = \frac{(18.7) \times 0.1 \times 1.401}{1}$$

$$\% \text{ of N} = 2.61 \%$$

Thus, the nitrogen content in the soil sample is **2.61 %**.

Soil Type Characteristics Nitrogen Content (%)

Soil Type	Characteristics	Standard Range (%)	Experimentally Nitrogen Content (%)
Clay Soil	Small particles, high water retention, mineral-rich	0.10 – 2.00	1.80
Sandy Soil	Loose, poor in organic matter, large particles, poor water retention, low nutrients	0.02 – 1.00	0.90
Alluvial Soil	Nutrient-rich, found in river plains	0.05 – 2.50	2.10
Red/Laterite Soil	Rich in iron oxides	0.10 – 1.80	1.50
Saline Soil	High salt content, poor drainage, unfriendly for crops	0.02 – 0.10	1.10
Peaty Soil	High organic matter, found in wet regions	2.50 – 4.00	3.20
Loam/Black Soil	High in clay, ark black or deep brown in colour due to high iron and organic content.	1.50 – 3.00	2.50

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