Sem	Course type	Course code	Course title	Credits	Total hrs /week	Total teaching periods	Total marks	
							CA	UA
VI	Discipline specific Course (DSC)	PHY 601	Quantum mechanics	3	3	45	40	60
		PHY602	Material Science	3	3	45	40	60
		PHY 603	Nuclear Physics	3	3	45	30	60
		PHY 604	Modern Physics	3	3	45	40	60
	Skill Enhancement course (SEC)	PHY 605	Basic Instrumentation Skills	3	3	45	40	60
	DSE Elective course (Any one)	PHY 606 (A) PHY 606 (B) PHY 606 (C) PHY 606 (D) PHY 606 (E)	Technical Electronics- I or Refrigeration and Air conditioning- II or Vacuum Technology-II or Microprocessor-I or Programming in C++ II	3	3	45	40	60
	DSC CORE Practicals	PHY 607	Physics Practical I	2	4 (per batch)	60	40	60
		PHY 608	Physics Practical II	2	4 (per batch)	60	40	60
		PHY 609	Physics Practical III or Project	2	4 (per batch)	60	40	60
	Non credit audit course (Any one)	AC 601(A)	Soft skill	No credit	2	30	100	
		AC 601(B)	Yoga					
		AC 601(C)	Practicing Cleanliness					
			Total credit	24				

Note: The industrial/study tour is compulsory for students of T. Y. B. Sc. (Physics).

Exam seat no:- 343292

A

Project Report on

"Optical characteristics of magnesium doped sodium metasilicate gel using hollow prism"

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

BACHELOR OF SCINCE

Submitted by

Miss. Bushra N. Shaikh, (T.Y.B.Sc Physics)

Under the guidance of

Prof. Dr. S. J. Baviskar

Department of Physics

Dr. Annasaheb G. D. Bendale Mahila Mahavidyalaya, Jalgaon.

Year 2023-24

Dr. Annasaheb G. D. Bendale Mahila Mahavidyalaya, Jalgaon

Phy - 609 (Project)

CERTIFICATE

This is certify that Miss. Bushra N. Shaikh of T. Y .BSc. Physics has satisfactorily completed the project report on **"Optical characteristics of magnesium doped sodium metasilicate gel using hollow prism"**during academic year 2023-24.

Project Guide

Prof. Dr. S. J. Baviskar

Head of Department

Prof. Dr. S. J. Baviskar

(A. P. Sarode)

6/4/2024

(Prof. N. B. Baviskar)

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Miss. Bushara N. Shaikh

(T.Y.B.Sc)

Result Table

Obs No.	Time in hours	Refractive index of (μ)		
		Yellow	Green	Violet
1	00:00	1.3545	1.3610	1.3737
2	24:00	1.3802	1.3913	1.41177
3	48:00	1.3992	1.4057	1.41843
4	72:00	1.4057	1.43663	1.4429
5	96:00	1.4182	1.4306	1.46699
6	120:00	1.4426	1.4488	1.46077

Conclusions

1. Hollow prism can be used to determine the refractive index of sodium metasilicate gel.

2. As the density of the medium increases, number of particles per unit volume increases. Thus more light is obstructed and the refractive index of the medium increases. Therefore as density increases refractive index also increases. Since the pH of solution is 4.7, the refractive index of sodium metasilicate gel increases with time (days).