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).

Semester VI: (LAB): Physics paper VIII

PHY 609: Project II

(Credits: 02): (60 L, 100M (40 Internal + 60 External))

ASSESSMENT OF PROJECT- SECOND TERM:

Student should submit a Final Project Report on the work done by him/her during the First and Second Phase of the Project i.e. on the topics:

1. Experimental work. (remaining further work in continuation with the work in the first term)
2. Characterize the samples, if any.
3. Discussion of the results.
4. Conclusions.

Instructions:

1. The topic of project of the first term must be continued in the second term.
2. The project report of first term should be maintained and should be produced to examiner of second term.
3. The student will have to give a seminar on the project topic in the practical exam.
4. The student must perform his project presentation by PPT on LCD projector.

Seat No- 356496

A

Project Report on

"Influence of calcium doping on refractive index of Sodium metasilicate gel using hollow prism"

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

BACHELOR OF SCINCE

Submitted by

Miss.Sanika Ravindera Mahajan

Under the guidance of

Prof. Dr. S. J. Baviskar

Department of Physics

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

Year 2022-23

Seat No- 356496.

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

CERTIFICATE

This is certify that Miss. **Sanika Ravindra Mahajan (T.Y.B.Sc)** of T.Y.BSc. Physics has satisfactorily completed the project report on "Influence of calcium doping on refractive index of sodium metasilicate gel using hollow prism" during academic year 2022-23.

Project Guide

Prof. Dr. S. J. Baviskar

S K. Patil
(Ext.)

Head of Department

Prof. Dr. S. J. Baviskar

21-04-2023
R.B. Deshmukh
(Ext)

ACKNOWLADGEMENT

Words are not sufficient to express gratitude to my guide Prof. Dr. S. J. Baviskar for his valuable guidance and suggestion for this project. I am also thankful to Prof. A. P. Sarode, Prof. Dr. R. G. Bavne and Prof. Dr. S. R. Patil for their valuableco-operation, good suggestion during experimentation and while writing project report for providing me all facilities for completion of my project.

I am also thankful to all my class for their co-operation. I am also very much thankful to all teaching and non-teaching staff of Physics Department.

Miss.Sanika Ravindera Mahajan

Result Table -

Obs. No.	Time in hours	Refractive index of (μ)			
		Yellow	Green	Blue	Violet
1	00:00	1.3058	1.3078	1.3061	1.3089
2	24:00	1.3298	1.3278	1.3282	1.3285
3	48:00	1.3432	1.3464	1.3428	1.3454
4	72:00	1.3511	1.3517	1.3592	1.3531
5	96:00	1.3893	1.3849	1.3851	1.3821
6	120:00	1.4153	1.4172	1.4181	1.4193

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).