



**ST. MARY'S COLLEGE (AUTONOMOUS)**

**(Re - accredited with 'A+' Grade by NAAC – 4<sup>th</sup> Cycle)**

**Thoothukudi - 628001, Tamil Nadu, India**

**(Affiliated to Manonmaniam Sundaranar University)**

*Department of Chemistry*

*Newsletter 2018-2019*

**Editorial Board**

Dr. J. Martin Rathi (HOD)	Associate Professor
Dr. T. Linda Fernando	Associate Professor
Mrs. S. Rani Jeyamary	Assistant Professor
Dr. Irudaya Antonat Sophia	Assistant Professor
Dr. A. Lakshmi	Assistant Professor
Dr. B. Divya	Assistant Professor
Dr. A. Parveen Sulthana	Assistant Professor
Dr. G. Amala Jothi Grace	Assistant Professor

## DEPARTMENT ACTIVITIES

### ASSOCIATION MEETING

The Association meeting for the academic year 2018 – 2019 was held on 1<sup>st</sup> October 2018. Dr.S.Selvam, Assistant Professor of Geology, V.O.Chidambaram College, Thoothukudi has delivered a talk on the topic” **Microplastics in Coastal Sediments and Identification of Heavy Metals in Fishes**”. The students acquired a clear knowledge on interaction of plastics with biological life. The disturbances of plastics to aquatic life and the distribution of trace metals in the muscle of fish were explained (**No. of Beneficiaries: 146**)





The second Chemistry association meeting was held on 19<sup>th</sup> December. Mr.R.Balasubramanian, Vice-President, Kalpaka Chemicals Private Limited, Thoothukudi presided over the meeting. He delivered a talk on “**Future Scope for Chemistry Graduates**”. He explained briefly, the preparation of activated carbon in Kalpaka Chemicals with a video presentation. He also gave a clear knowledge about the internship programmes, various job opportunities for chemistry graduates and also how to face interviews. The students actively participated with keen interest.

**Integrity and Synergy**



## St. Mary's College (Autonomous)

(Re-accredited with A grade by NAAC)

THOOTHUKUDI - 628001

Department of Chemistry

Cordially invite you for

### **CHEMISTRY ASSOCIATION MEETING**

Future Scope for Chemistry Graduates

Venue: STAR HALL

Date: 19.12.2018

Time: 11.30 a.m.

#### **Resource Person**

Mr.R.Balasubramanian,  
Vice-President,  
Kalpaka Chemicals Private Limited,  
Thoothukudi

Best wishes from

Rev. Sr. Dr. A.S.J. Lucia Rose  
Principal





**St. Mary's College (Autonomous)**

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**Thoothukudi – 628001**

Association Meeting

**CERTIFICATE OF PARTICIPATION**

**This is to certify that Ms. E. Subathra III B.Sc Chemistry of St. Mary's College (Autonomous), Thoothukudi has actively participated in the association meeting invite lecture on "Future Scope for Chemistry Graduates" organized by the Department of Chemistry, St. Mary's College (Autonomous), Thoothukudi on 19.12.2018.**

This computer generated e-certificate doesn't require any signature.

Memorandum of understanding between Department of Chemistry, St.Mary's College (Autonomous) and Kalpaka Chemicals Private Limited

**KALPaka**  
*Enriching Nature*

**Integrity and Synergy**

This memorandum of understanding is signed between the Department of Chemistry, St.Mary's College (Autonomous), Thoothukudi, a well furnished instrumental Department of St.Mary's College (Autonomous), located in 104, North Beach Road, Thoothukudi and **Kalpaka Chemicals Private Limited** a reputed industry that works with a vision of “**ENRICHING NATURE**” having principal location at 2/141, Puthiyamputhur Road, Nainarpuram Post, Thoothukudi on 19<sup>th</sup> December 2018.



A workshop on “**Empowering young Chemist**” was organised on **5<sup>th</sup> March 2019**. Mr.R.Balasubramanian, Vice-President, Kalpaka Chemicals Private Limited, Thoothukudi. Mr.V.Jeyasekaran, Head (quality control) Dhrangadhra Chemical Works, Thoothukudi and E.Rajesh Kumar, Assistant General Manager Technical services, SPIC Ltd., Thoothukudi were the resource persons (No. of Beneficiaries: 144).



**Integrity and Synergy**



#### About the college

St. Mary's College, a Catholic Institution of Higher Education for Women, enjoys a heritage of 70 years as a Christian Minority Institution was founded in 1948. Affiliated to Manonmaniam Sundaranar University, the College offers graduate, post-graduate, M.Phil., and Ph.D., programmes in various disciplines. The College became autonomous in 2009, re-accredited with "A" grade by NAAC. Besides the academics, the college aims at the holistic development of the stakeholders. The motto of the college is 'FIDE VIVANT' (Live by Faith).

#### About the Department

Department of Chemistry was established in the year 1957 and upgraded as the PG department in the year 2016. "To be a leading centre of excellence in science education, research and community service for sustainable development and empower every individual with integrity and knowledge" is the vision striving with the motto "Integrity and Synergy". The department has undergone a minor research project funded by UGC.

#### About the workshop

*One day Workshop*

on

**"Empowering Young Chemist"**

5<sup>th</sup> March 2019



Organized by

**DEPARTMENT OF CHEMISTRY**  
**ST. MARY'S COLLEGE, AUTONOMOUS**  
Re-accredited with 'A' Grade by NAAC

Thoothukudi - 628001

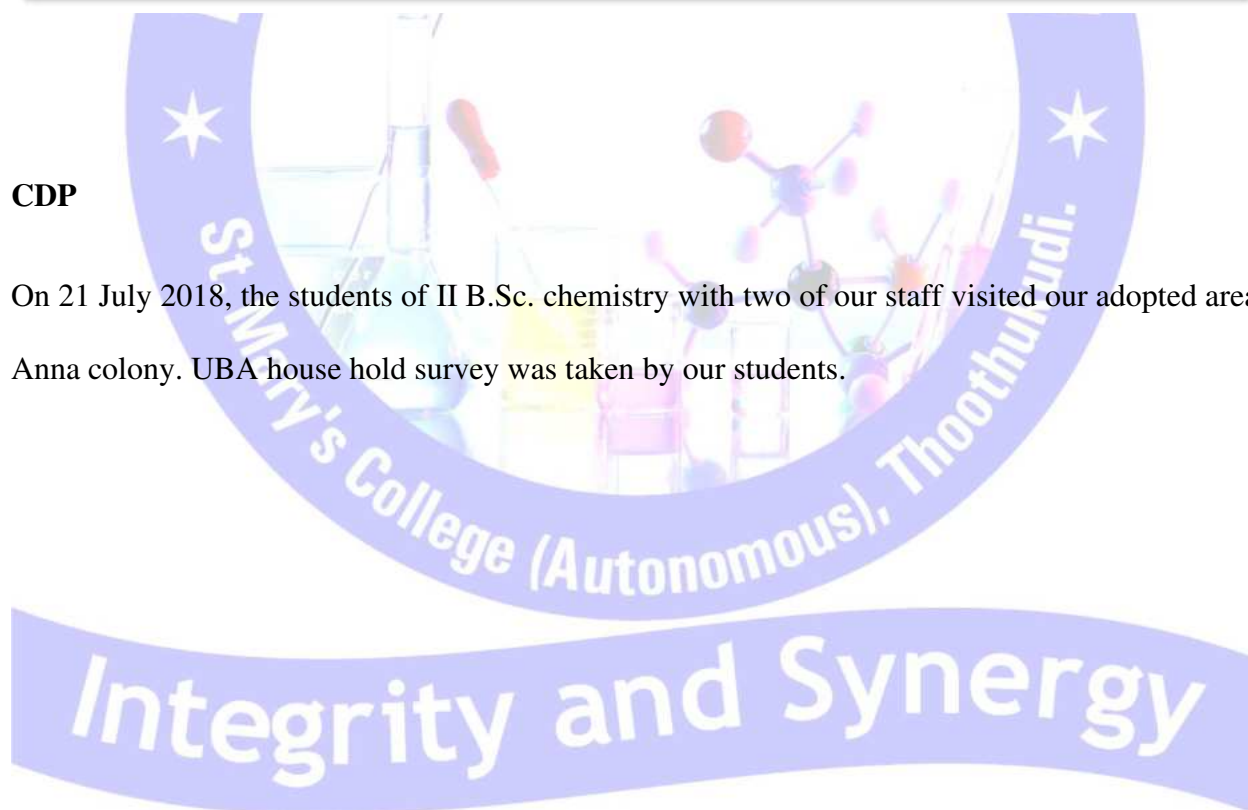
Tamil Nadu



<b>PROGRAMME</b>		
9.00 a.m.- 9.30 a.m.	<b>Registration</b>	3.30 p.m.-4.15 p.m. <b>Valedictory Function</b>
	Venue: Fatima Hall	<b>Registration</b>
9.30 a.m.-10.30 a.m.	<b>Inauguration</b>	Registration fee Rs.100/- per student and Rs.200/- for faculty. Participants are requested to pay the fees by cash at the time of registration.
Keynote Address	Mr.R.Balasubramanian, Vice-President, Kalpaka Chemicals Private Limited, Thoothukudi	Lunch and Refreshments will be provided.
10.30a.m.- 10.45 a.m.	<b>Tea Break</b>	No TA/DA will be provided.
10.45 a.m.-12.00 p.m.	<b>Session-I</b> Mr. R. Balasubramanian, Vice-President, Kalpaka Chemicals Private Limited, Thoothukudi	<b>Chief Patron</b> Rev.Sr.Floria Mary Secretary, St.Mary's College, Thoothukudi
12.00 p.m.- 1.15 p.m.	<b>Session-II</b>	<b>Patron</b> Dr.A.S.J.Lucia Rose, Principal,St.Mary's College, Thoothukudi
1.15 p.m.- 2.15 p.m.	<b>Lunch Break</b>	<b>Convener</b> Dr.J.Martin Rathi Head of the Department of Chemistry
2.15 p.m.- 3.30 p.m.	<b>Session-III</b> <b>E.Rajesh Kumar</b> Assistant General Manager Technical services SPIC Ltd., Thoothukudi	<b>Organizing Secretary</b> Dr.A.Lakshmi
		<b>Organizing members</b> Dr.Mrs.T.Linda Fernando Mrs.S.Rani Jeya Mary Dr.Mrs.Inudaya Anant Sophiar Mrs.B.Divya Dr.A.Parveen Sulthana Dr.Mrs.G.Amalia Jothi Grace

## CDP

On 21 July 2018, the students of II B.Sc. chemistry with two of our staff visited our adopted area Anna colony. UBA house hold survey was taken by our students.



**Umat Bharat Abhiyan - Village Survey Form**

**1. Basic Information** Village No: \_\_\_\_\_

Name of the Village	Anna Colony
State	Tamil Nadu
Number of wards	15
Post	
Taluk	Chennai North
District	Chennai North
Pin Code	600 056
Latitude & Longitude	
Area of Village (Acres)	
Water (Self or otherwise)	144
Forest Area (Acres)	840
Area Under Water/Water Storage	850
Crop Area (Acres)	
Average pop. density (and sex ratio)	
Water (per person)	144
Water (per 1000)	

**2. Village Infrastructure and Basic Amenities**

Village Infrastructure/Basic Amenities/Services	Present in village (Yes/No)	Non-Functional	Distance (km. or nearest village)
Primary School	✓		
Primary School (Govt)	✓		
Middle School (Govt)	✓		
Middle School (Private)	✓		
Secondary School (Govt)	✓		
Secondary School (Private)	✓		
ITI (Government)	✓		
ITI (Private)	✓		
College (Govt)	✓		
College (Private)	✓		
Bank / ATM	✓		
Primary Health Centre	✓		
PHC Hospital	✓		
SIH's	✓		
NCH's	✓		
Post Office	✓		
Gas agency	✓		
Training Centre and sports club	✓		
Library Office	✓		
Anganwadi Kendra	✓		
Prison / Police in village	✓		
Home Guard Kendra	✓		
Mini Market	✓		
Fast Food Shop	✓		
Milk Cooperatives / Milkmaid Centre	✓		
Railway Station	✓		
Bus Stop	✓		
Veterinary Care Centre	✓		
Spice Facility/Kendras	✓		
Number of common sanitation complexes	✓		

**Umat Bharat Abhiyan - Village Survey Form**

**3. Village Connectivity (Roads)**

Distance of the Village from the nearest Highway/State Dist. Road (in km) 3.5

Is the village connected to the above by a paved road?  Yes  No

If yes, details of the Approach Road / Connecting Road

(1) Length of the Road (in km)	11
(2) Year of construction	60
(3) Scheme under which constructed	RD
(4) Present State (improved/unimproved)	Improved
Length of unpaved roads (km)	12

What is the mode of transport available?  
 Frequency of an available mode of transport  
 (Frequency and frequency) (1000 persons per month)

**4. Land, Forest & Horticulture Profile**


Type of Forest (Natural/Planted)	PL
Community Forest (Acres)	24.6
Government Forest (Acres)	840
Major Forest Type and Species	Bamboo
Forest Production (Yield, which species are available)	

**5. Current Village Electricity Requirements**

Sl. No.	Consumption Phase	Present Appliances (How many and watt)	Additional Appliances (to be installed) and watt (in kw)
1.	Illumination (Kilowatt, CFL, LED, Tubelight)		
2.	Refrigeration		
3.	Community Halls		
4.	Street Lighting	785	785
5.	Other	840	840
6.	Social Organizations (Grain Mills, etc)	840	
7.	Training cum Production Centre	840	
8.	Others	840	

**6. Electrical Appliances:** 1. LED Bulb, 2. CFL, 3. Tubelight, 4. TV, 5. AC, 6. Refrigerator, 7. Washing Machine, 8. Water Pump, 9. Grinder, 10. Mixer, 11. Iron, 12. Heater, 13. Electric Fan, 14. Microwave, 15. Electric Stove, 16. Electric Kettle, 17. Electric Fan, 18. Electric Kettle, 19. Electric Stove, 20. Electric Kettle, 21. Electric Fan, 22. Electric Kettle, 23. Electric Stove, 24. Electric Kettle, 25. Electric Fan, 26. Electric Kettle, 27. Electric Stove, 28. Electric Kettle, 29. Electric Fan, 30. Electric Kettle, 31. Electric Stove, 32. Electric Kettle, 33. Electric Fan, 34. Electric Kettle, 35. Electric Stove, 36. Electric Kettle, 37. Electric Fan, 38. Electric Kettle, 39. Electric Stove, 40. Electric Kettle, 41. Electric Fan, 42. Electric Kettle, 43. Electric Stove, 44. Electric Kettle, 45. Electric Fan, 46. Electric Kettle, 47. Electric Stove, 48. Electric Kettle, 49. Electric Fan, 50. Electric Kettle, 51. Electric Stove, 52. Electric Kettle, 53. Electric Fan, 54. Electric Kettle, 55. Electric Stove, 56. Electric Kettle, 57. Electric Fan, 58. Electric Kettle, 59. Electric Stove, 60. Electric Kettle, 61. Electric Fan, 62. Electric Kettle, 63. Electric Stove, 64. Electric Kettle, 65. Electric Fan, 66. Electric Kettle, 67. Electric Stove, 68. Electric Kettle, 69. Electric Fan, 70. Electric Kettle, 71. Electric Stove, 72. Electric Kettle, 73. Electric Fan, 74. Electric Kettle, 75. Electric Stove, 76. Electric Kettle, 77. Electric Fan, 78. Electric Kettle, 79. Electric Stove, 80. Electric Kettle, 81. Electric Fan, 82. Electric Kettle, 83. Electric Stove, 84. Electric Kettle, 85. Electric Fan, 86. Electric Kettle, 87. Electric Stove, 88. Electric Kettle, 89. Electric Fan, 90. Electric Kettle, 91. Electric Stove, 92. Electric Kettle, 93. Electric Fan, 94. Electric Kettle, 95. Electric Stove, 96. Electric Kettle, 97. Electric Fan, 98. Electric Kettle, 99. Electric Stove, 100. Electric Kettle.

Comments, if any: \_\_\_\_\_


 Surveyor  
 Date of Survey: 29/8/18

On 29 August 2018, the students of II B.Sc. chemistry with two of our staff visited our adopted area Anna colony. UBA house hold survey was taken by our students. Grammar classes were also taken by our students.



On 27 October 2018, the students of II B.Sc. chemistry with two of our staff visited our adopted area Anna colony. UBA house hold survey was taken by our students. Awareness program about plastics were conducted



On 8<sup>th</sup> December 2018, the students of II B.Sc. chemistry with two of our staff visited our adopted area Anna colony. UBA house hold survey was taken by our students. Computer classes were also taken for the children of that area. The students enjoyed the computer classes.



26<sup>th</sup> January 2019, the students of II B.Sc. chemistry with two of our staff visited our adopted area Anna colony. We invited the people for the demonstration of science experiments. Children of different ages enthusiastically attend the class and did small experiments based on static electricity, depression of freezing point, acid – bases neutralization reactions etc,with us.



On 2<sup>nd</sup> February 2019, the students of II B.Sc. chemistry with two of our staff visited our adopted area Anna colony. We invited the people for the demonstration of science experiments and grammar class. Children of different ages enthusiastically attend the class. Area cleaning was also done by our students.



On 16<sup>th</sup> March 2019, the students of II B.Sc. chemistry with two of our staff visited our adopted area Anna colony and insisted the people to cast their votes on 18<sup>th</sup> April 2019.



### **BOARD OF STUDIES MEETING**

The Board of Studies Meeting of the Department of Chemistry was conducted on 16<sup>th</sup> February 2019 at 10.30 a.m in the department of Chemistry. Dr.K.Swarnalatha, Associate Professor, Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli as University Nominee. Dr. S. Joseph Selvaraj, Associate Professor, Department of Chemistry, St. Joseph's College (Autonomous), Tiruchirapalli as Subject Expert. Dr. R. Murugesan, Associate Professor, Department of Chemistry, TDMNS College, Kallikulam, Tirunelveli district as Subject Expert. Dr. J. Sidharthan, Associate Professor, Department of Chemistry, V.O.C College Thoothukudi as Subject Expert. Dr. Mrs. J. Rajula Jasmine Usha, Associate Professor, Department of Chemistry, Sarah Tucker College (Autonomous), Tirunelveli as Alumna. Mr.D.Kishore, Assistant Manager, Urea Production , SPIC, Thoothukudi as Industrial Expert.

### **PTA Meeting**

The Parents Teachers Association conducted meetings regularly for all the parents and students of the department. The meetings were held on 11<sup>th</sup> August 2018, 6<sup>th</sup> October 2018 and 8<sup>th</sup> February 2019.

### **Certificate Course**

**St. Mary's College (Autonomous), Thoothukudi**

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#### **Certificate Course 2018-2019**

**Name of the Department :** Chemistry

**Title of the Course :** Soil and Water Analysis

**Offered to :** II B.Sc Chemistry

**Course Code:** 18CACH31

This course helps the students to analyse the parameters of soil and water for a clean environment.

**Objective :**

- To practice a clean and good environment.
- To impart knowledge about importance of minerals of soil and water
- To create an awareness about the pollutants of soil and water

**Outcomes :**

- Students will learn to maintain clean environment by their own
- Students will gain knowledge of minerals required for humans
- Students become an analyst in water resource concern
- They can be employed as soil analyst

**St.Mary's College (Autonomous) Thoothukudi**

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**Certificate Course 2018-2019**

**Name of the Department : Chemistry**

**Title of the Course : Nutritional Food Science**

**Offered to : III B.Sc Chemistry**

**Course Code: 18CACH51**

*This course helps the students to comprehend the diet plans and nutrition requirements to lead a healthy life.*

**Objective :**

- To practice a proper balanced diet
- To impart knowledge about Nutrition and its importance
- To create an awareness about the use of adulterants in food products

**Outcomes :**

- Students will learn to prepare nutritional food by their own
- Students will gain knowledge of calories required for healthy diet
- Students become an Entrepreneur in preparation of food products
- They can be employed as Food analyst

## Seminars/ Conferences/Workshops attended by staff

**Dr.T.Linda Fernando**

Title of Workshop/ Seminar/ FDP/ Conferences	Type	Paper Presented/ Participated	Title of the Paper	Organized By	Date
Fostering Transparency :Routing out Plagiarism A to Z	National Seminar	Participated	-	Research Forum St.Mary's College (Autonomous) Thoothukudi	20 <sup>th</sup> July ,2018

**Dr.Irudaya Antonat Sophia**

Title of Workshop/ Seminar/ FDP/ Conferences	Type	Paper Presented/ Participated	Title of the Paper	Organized By	Date
Hands on Training on Data Analytics using SPSS	Workshop	Participated	-	Research Forum St.Mary's College (Autonomous) Thoothukudi	24.08.2018
Fostering Transparency: Routing out Plagiarism A to Z	National Seminar	Participated	-	Research Forum and Department of Library, St.Mary's College (Autonomous) Thoothukudi	20-07.2018

## Research Papers published by staff

- 1.Kitherian Sahayaraj, Rajesh Sathiyamoorthy, **J. Martin Rathi**, Vivek Kumar, Green preparation of seaweed-based silver nano-liquid for cotton pathogenic fungi management IET Nanobiotechnology October 2018, DOI: 10.1049/iet-nbt.2018.5007 [scopus]



2. **B.Divya**, D.Kanagavel, P.Karpagavinayagam and C.Vedhi, “Microwave synthesis, electrochemical studies and capacitance of benzalazine” International journal of research in advent technology, Vol.6, issue.9, 2018, pp 2414-2419.

3. Kalarani, Parthiban, **B. Divya** and Chandra Lekha “Comparative study of green synthesized silver nanoparticles using leaf and stem extract of *pauzolziabennettiana* and its antimicrobial activity” International journal of management, technology and engineering ISSN NO: 2249-7455, Volume. 8, IssueXII, 2018, pp 3013-3024.

4. Parthiban, Chandralekha, Kalarani, **Divya**, Synthesis and characterization of silver nanoparticles using seaweed *Sargassum tennerimum* and their antioxidant activity, Journal of emerging technologies and innovative research, ISSN NO:2349-5162, volume 6, issue 2, 2019, pp. 416 – 421

#### Student Activities

S.No	Students Name	Event	Venue	Date	Detail
1	G.Varathalakshmi	Rangloli Competition	Sri parasakthi college for women Courtallam	21.08.2018	First Position
2	G. Pasungkili	Rangloli Competition	Sri parasakthi college for women Courtallam	21.08.2018	First Position
3	S.Loga priya	Development programme-smart phone servicing	St.Mary’s college (Autonomous), Thoothukudi	29.09.2018	Participated
4	R.Antony Felis	Essay Writing Ganthian thought & Ganthian philosophy	St.Mary’s college (Autonomous), Thoothukudi	09.10.2018	First Position

## Sports

S.No	Students Name	Department	Event	Venue	Date	Details
1	K. Kiruthika	Chemistry	Basket ball	SRM University, Chennai.	4.11.2018 – 8.11. 2018	Participated
2	Swetha	Chemistry	Badminton - single	Annual sports meet St.Mary's college (Autonomous), Thoothukudi	9. 2. 2019	First Position
3	Swetha and K. Kiruthika	Chemistry	Badminton - doubles	Annual sports meet St.Mary's college (Autonomous), Thoothukudi	9. 2. 2019	First Position

## NCC

Name	Duration	Name Of The Camp	Venue	Rank
V.Viji II B.Sc.,	29.06.2018 to 08.07.2018	BLC-CATC Cum &TSC Training Camp	8(TN) Battalion NCC Kumbakonam.	CDT