



Marudhar Kesari Jain College for Women (Autonomous), Vaniyambadi



Recognised Under sec 2(f) & 12 (B) of UGC Act, 1956 || Accredited with "A*" Grade by
NAAC (4th cycle) Permanently Affiliated to Thiruvalluvar University ||
Supported by DST-FIST || DBT Star College Scheme||
Marudhar Nagar, Chinnakallupalli, Vaniyambadi - 635 751.

Website: <http://www.mkjc.in>

Tel: +91 4174 225300; 224300

Marudhar Kesari Jain College for Women, Vaniyambadi is proud to be one of the recipient of the DST-FIST, a scheme that provides basic infrastructure and enabling facilities for promoting R&D activities in new and emerging areas.



MKJC has received a grant worth Rs. 95L and has established the DST-FIST lab worth Rs 1.2 Crore with high-end instrumentation facility.

These facilities are made available for Faculty, Scholars and Students of any Academic Institutions and Research Personnels from Research Labs/Industries in and around Vaniyambadi and also from other places for their research purposes.

DST - FIST INCHARGE : DR. C. ASOKAN

Assistant Professor - Dept of Biochemistry
Marudhar Kesari Jain College for Women,
Vaniyambadi - 635 751

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Marudhar Kesari Jain College
for Women (Autonomous)
Vaniyambadi - 635 751
Tirupattur District

DST-FIST Supported SSR Training



S.No.	Facilities Available
01	HPLC
02	Mass Spectrometry
03	Gas Chromatography
04	RT-PCR
05	HPLC
06	GCMS

DST-FIST Instrumentation Lab facilities @ MKJC

- Gas Chromatography-Mass Spectrometer
- High Performance Liquid Chromatography
- RT-PCR
- Fully Automatic Biochemistry Analyser
- Biocomputation facility
- Auto Ignition Flame Photometer



SCHOOL NAME:

ST.CHARLES MATRICULATION HR.SEC SCHOOL, TIRUPATTUR

DATE: 11.07.2026

Services provided through MKJC's
DST-FIST Facility (DFIF)

In addition to sample analysis, we offer several programs through our DST-FIST that includes but not limited to

- HANDS-ON-TRAINING
- WORKSHOP
- INTERNSHIP
- SHORT-TERM PROGRAMS
- FACULTY DEVELOPMENT PROGRAM
- ASSISTANCE TO UG, PG AND HIGH-END RESEARCH PROJECTS
- DOCTORAL RESEARCH STUDIES

All DST-FIST supported programs will accompany kit and certificate

Samples along with the requisition form can be sent by courier or in person to

DST-FIST Instrumentation Facility
Marudhar Kesari Jain College for Women
Marudhar Nagar
Chinnakallupalli
Vaniyambadi
Tirupattur District - 635 751



To obtain requisition forms to avail the facilities
scan the QR code or use the URL

<https://www.mkjc.in/research/research/19>

Registration Fees:

Free

Choose your slots

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

HPLC is a technique that separates analytes which are dissolved in a liquid. It can separate, identify, purify, and quantify the compounds that are present in any liquid sample. HPLC is optimum for the separation of chemical and biological compounds that are non-volatile. It is also used to provide information on the composition of Drug-related samples.



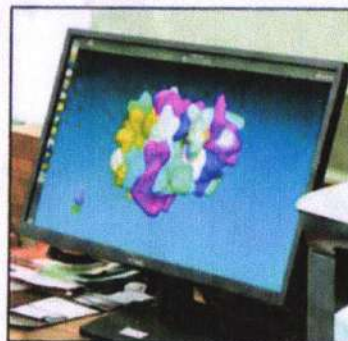
RT-PCR

Reverse transcriptase PCR, instead of DNA, uses mRNA as the starting template. It is a relatively simple and inexpensive technique to determine the expression level of target genes. It helps in detecting and comparing the levels of mRNA and the surface proteins



BIOCHEMISTRY COMPUTATIONAL LAB

High-end workstations of the computational lab will support the performance of computational research such as molecular structure prediction, molecular docking, molecular simulations, molecular interaction studies, cheminformatics & drug designing, mutational studies etc.



FULLY AUTOMATIC BIOCHEMISTRY ANALYSER

An automated analyser is a medical laboratory instrument designed to measure various substances and other characteristics in a number of biological samples quickly, with minimal human assistance. A fully automatic analyser uses serum or urine sample, and measures various components, such as sugar, cholesterol, protein, etc.



AUTO IGNITION FLAME PHOTOMETER

Flame Photometer is an instrument used to analyse inorganic chemicals to determine the concentration of certain metal ions (mainly, any sodium, potassium, calcium, lithium, Barium). Metal concentration in any liquid like blood, urine or any other sample can be detected and quantified.

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GAS CHROMATOGRAPHY-MASS SPECTROMETER

Gas Chromatography - Mass Spectrometer (GC-MS) is an instrumentation facility used to identify individual components of a mixture. Gas chromatography (GC) is used to separate volatile components while mass spectrometer (MS) detects and measures the vaporized compounds separated in the GC for phytochemical, environmental samples, soil samples, food etc.

Analytical services with report for all these instruments are provided for students, scholars, faculty, researchers and industry personnels



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An ISO 21001:2018 Certified Institution || Supported by DST-FIST



R&D Cell, DST - FIST SUPPORTED ONE-DAY TRAINING ON SSR ACTIVITY FOR ST. CHARLESS MATERIC HR SEC SCHOOL, AMMBUR STUDENTS ON GC-MS, RP-HPLC, RT-PCR, AUTOMATIC BIOCHEMISTRY ANALYZER, AUTO IGNITION FLAME PHOTOMETER, AND COMPUTATIONAL WORK STATION.

AGENDA

DATE AND TIME : 11.07.2026, Saturday, 10am to 1.30pm

Venue : Sri Guru Mishri Seminar H

S.NO	PROGRAM DETAILS	TIME	
1	Registration	11.20 am to 11.30am	
2	MCby		Ms.nisha katwal, IIIBSc BT
3	Prayer	10.30 am to 11.35am	
4	Welcome address	11.40 am to 11.45am	Dr.C.Asoken, In-charge, R&D cell DST-FIST LAB
5	Special Address	11.45 am to 12.15pm	Dr.M.Inbavalli, Principal
6	Display videos 1. MKJC 2. Instruments(6) operation in DST-FIST Lab 3.Science 4.DST Scholarship	11.45 am to 12.15pm	Dr.C.Asokan
7	MKJ Campus Tour 1. CS&CA Lab 2. library 3.Chemisry Lab 4.Biochemistry Lab 5.Nutrition and Dietetics Lab 6.Biotechnology Lab 7. Physics Lab 8.CD&ID Lab	12.15 am to 12.45pm	R&D Cell, DST-FIST LAB Members
8	R&D Cell, DST-FIST Lab Insrummentation facility Demonstration at R&D cell, DST-FIST lab		1.Dr.C.Ashokan-RP-HPLC 2.Dr.K. Priy-CWS(Server} 3.Dr.V.Sabari-AIFPM 4.Dr.M Punithvathi-ABA 5.Dr.S.Kavi karunya-GC-MS 6.Dr.R. Ravi-CWS(CADD)
9	Feedback(teacher&student)	1.15 pm to 1.20 pm	R&D Cell, DST-FIST Lab members
10	Vote of thanks		Dr.C.Asoken, in-charge, R&D Cell
11	National anthem		

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[Signature]
In-charge





MARUDHAR KESARI JAIN

College for Women (Autonomous), Vaniyambadi



Activity Report

Topic/ Subject of the Activity

R&D cell, DST FIST Supported one-day Training on SSR activity for St Charless Hr-Sec School Students on GC-MS, RP-HPLC, RT-PCR, Automatic Biochemistry Analyzer, Auto Ignition flame photometer, and computational work station

Objectives (Input)

- The objective of the DST-FIST supported one-day training programme is to provide theoretical training and awareness to school students on modern scientific instruments, laboratory techniques, and computational tools.
- The training focuses on introducing students to the principles, basic operation, applications, and significance of GC-MS, RP-HPLC, RT-PCR, Automatic Biochemistry Analyzer, Auto Ignition Flame Photometer, and Computational Workstations, thereby developing their scientific knowledge, curiosity, and awareness of modern research technologies.

Methodology (Process)

- The one-day training programme was conducted through theoretical lectures, PowerPoint presentations, demonstrations, and interactive discussions. The students were introduced to the basic principles, working mechanisms, applications, and significance of various modern scientific instruments and computational facilities.
- The training covered GC-MS, RP-HPLC, RT-PCR, Automatic Biochemistry Analyzer, Auto Ignition Flame Photometer, and Computational Workstations. The sessions were delivered in a simple and student-friendly manner, with explanations of the instruments, their major components, analytical procedures, and applications in scientific research.
- Students were encouraged to participate through question-and-answer sessions and discussions to improve their understanding of the technologies and their applications in research and laboratory science.

Output

- The one-day training programme improved students' awareness and basic understanding of modern scientific instruments and research technologies.

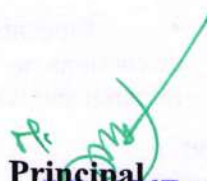
- Students gained knowledge about the **principles, working mechanisms, components, and applications** of GC-MS, RP-HPLC, RT-PCR, Automatic Biochemistry Analyzer, Auto Ignition Flame Photometer, and Computational Workstations.
- The programme helped students understand the **importance of advanced instruments in laboratory analysis, scientific research, and biotechnology**.
- Students developed a basic understanding of how these technologies are used for **sample analysis, molecular studies, biochemical analysis, and computational research**.
- The interactive discussions and question-and-answer sessions **enhanced students' interest, curiosity, and confidence** in modern scientific and research-oriented technologies.
- Overall, the programme provided students with **valuable exposure to advanced laboratory facilities and encouraged them to pursue further learning and research in science and technology**.

Outcomes

- The one-day training programme enhanced the students' awareness and basic understanding of modern scientific instruments and research technologies. The programme helped students to:
- Understand the basic principles and applications of GC-MS, RP-HPLC, and RT-PCR.
- Gain awareness of the functions and applications of the Automatic Biochemistry Analyzer and Auto Ignition Flame Photometer.
- Understand the role of Computational Workstations in modern scientific research and data analysis.
- Develop interest and curiosity towards laboratory science and research activities.
- Improve their knowledge of modern analytical, molecular, biochemical, and computational techniques.
- Become aware of the importance of advanced scientific technologies in research and industry.
- Encourage students to develop a research-oriented and scientific approach towards their future studies and careers.


DEAN


IQAC Director


Principal

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College for Women (Autonomous), Vaniyambadi

33
Years
of Educational
Excellence...

Topic: Training on SSR activity on GC-MS, RP-HPLC, RT-PCR, Automatic Biochemistry Analyzer, Auto Ignition Flame Photometer, and Computational Work Station.

Date: 11.07.2026

Organized by: Research Development Cell

Venue: DST-FIST Lab



Principal

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