

C.S. SATHEESH KUMARS

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PROFESSIONAL SUMMARY

Experienced Microbiologist and Fermentation Specialist with over 5 years of experience in industrial fermentation, bioprocess development, and quality control for biotechnology and bio-products. Skilled in fermenter operation, process optimization, and upstream & downstream bioprocess management. Proficient in analytical techniques including AAS, GC, HPLC, and UV-Vis spectroscopy, with a strong understanding of GMP, GLP, and ISO 22000 standards. Demonstrated success in developing sustainable microbial and biochemical production processes supporting biofertilizer, biopesticide, and nutrient manufacturing.

CORE SKILLS

- Industrial Fermentation: Batch & Solid-state processes
- Bioreactor Operation: 1000 L to 2500L scale-up, process control, and troubleshooting
- Upstream & Downstream Process Optimization
- Microbial Strain Isolation, Screening, Characterization & Molecular identification
- Process Monitoring & Data Analysis
- GMP/GLP Documentation & SOP Preparation
- Analytical Techniques: PCR, HPLC, GC, AAS, UV-Vis
- Quality Control & Method Validation
- Bioproduct Development (Biofertilizers, Enzymes, Organic Nutrients)

PROFESSIONAL EXPERIENCE

Senior Microbiologist

Aaroh Fertilizers Pvt. Ltd., Kathmandu, Nepal

March 2024 – September 2025

- Led fermentation process optimization for biofertilizer and biopesticide production using microbial consortia.
- Operated and maintained fermentation reactors and steam sterilization systems for scale-up processes.
- Performed AAS-based nutrient and mineral analysis for quality assurance of raw materials and finished goods.
- Designed and implemented SOPs for fermentation, QC, and production activities.
- Developed oil-based biofertilizers and pesticides improving nutrient delivery and sustainability.
- Conducted agronomic trials and prepared detailed scientific and technical reports.

Microbiologist (R&D)

Pinnacle Bioscience Pvt. Ltd., Tamil Nadu, India

May 2020 – February 2024

- Conducted fermentation and cultivation of seaweed, microalgae, and mushroom-based products for nutritional and agricultural applications.
- Performed upstream and downstream process optimization for microbial and algal fermentation systems.
- Handled bioreactor setup, calibration, monitoring, and maintenance.
- Analyzed raw materials and final products using GC, HPLC, and AAS as part of QC operations.
- Isolated and characterized microalgae (*Spirulina*, *Chlorella*, *Dunaliella*) and mushroom species (*Cordyceps*, *Ganoderma*, *Oyster* spp.) for bioactive compound extraction.
- Extracted chitin and identified chitinase-producing bacteria for biopolymer and enzyme development.

EDUCATION

- Master of Science (Microbiology) | 2016 – 2018
Hindustan Arts and Science College, Bharathiar University, Tamil Nadu
- Bachelor of Science (Microbiology) | 2013 – 2016
Nehru Arts and Science College, Bharathiar University, Tamil Nadu

CERTIFICATIONS

- HACCP Level 3 (CODEX Principles) – Highfield ICON, UK (May 2025)
- Food Safety Management for Manufacturing – Level 4 – Highfield ICON, UK (May 2025)
- ISO 22000:2018 Internal Auditor Training – Antibiosis Biotech Research Labs, Kochi, Kerala (May 2025)
- Post Graduate Diploma in Computer Applications (PGDCA) – Emax Computer Education, Tamil Nadu (2019)

PUBLICATION

Satheesh Kumar, C. S. & Mani Vannan, A. (2018). Bio-Degradation of Polyethylene by *Bacillus horikoshii* Isolated from Dump Yard Soil. International Journal of Current Research in Life Sciences, Vol. 07, No. 04, pp. 1672–1678.

LANGUAGES

English | Tamil | Malayalam | Telugu

DECLARATION

I hereby declare that the above information is true to the best of my knowledge and belief.

C. S. Satheesh Kumar