

## BIO-DATA



### **Dr.T.N.V.V.RAO**

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A Doctorate in Environmental Chemistry from Andhra University, Visakhapatnam and an M.B.A in operations with over 30 years of well-rounded global exposure in the Water Purification technologies and related business development.

**Presently working as Freelance Techno commercial Consultant for various National & International Organizations. Worked in the field of Water treatment technologies, product development, component sourcing, business development, and regulatory research related to water purifiers in specific countries for launch. Due to contacts with researchers/academicians, I can source the new technologies and successfully deploy for pilot and large scale manufacturing. Business & Technology development is my major strength related to water purifiers with my technical knowledge and M.B.A background. Project advisor for ICCW (International Centre for Clean Water), IITM, Chennai. Expert Panel Member at ASCI (Advertisement Standards Council of India). Senior Technical Consultant for Safe Water Network India.**

Established Water Certification business for Underwriters Laboratories (UL) at Bangalore, I had started water business right from scratch and developed business in Asia and established a world class water testing and certification Laboratory which was accredited to ISO/IEC 17025 by NABL. Developed a team of people for sales and business development and laboratory personal for execution of the projects. Well-coordinated with the Global team for developing business in India, which is new to UL. Developed the customer data base and business model for water testing and certification in India. Most of the water purifier manufacturers became UL clients in India based on our quality of work.

Prior to establishing the UL's water business in India, I had associated with companies such as Eureka Forbes, Givaudan & Chemplast (Sanmar group). At Eureka Forbes, I was a member of the Research & Development Team. As the Senior Manager – Projects, contributed for the establishment of manufacturing units for water treatment products (sediment filter & Nano silver media). At Givaudan, as QM & RAPS (Regulatory Affairs & Product Safety) Manager, established Quality & Regulatory Systems. At Chemplast, as Executive Quality Manager & Management Representative, established Quality systems and new method development for bulk drugs and Drug intermediates.

Member in water related technical committees (CII, BIS, WQA, etc.) and delivered technical presentations on 'water' in National & International conferences. Member in CII Environment committee and served the committee for around 3 years. Presently, member in BIS standards committee on Water purifier standards (FAD 30). Actively involved in the development of standards for RO water purifier, Microbiological standard and convener for developing standard for Arsenic, fluoride and Nitrate purification devices.

Worked on various water treatment technologies like UV, Resin, UF, NF, R.O, FO, Nano technology, CDI, etc.

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### **Strengths:**

Good exposure in the field of water & waste water treatment technologies and costing:

- WTP: Development of water treatment process for various requirements of POU & POE for drinking water applications. Conceptualized and developed water purification systems of various sizes using UF, RO, UV, etc. technologies. Associated in development of nano materials and developed a manufacturing facility in industrial scale up to 4 tons per months of production.
- ETP: Well-versed with the technologies used for ETP for various industries. Waste water from industries and the impacts is part of my Ph.D work. Studied the industrial effluents of various industries and impact on ground water quality. In my previous companies (Sanmar Specialty Chemicals, Givaudan), I was taking care of the industrial effluent treatment. At Sparkklean Pvt Ltd, a chemical manufacturing unit in Bangalore, implemented a ZLD concept for waste water treatment and successfully working for the last 5 years. Presently working for one project on the waste water treatment for Cottage Cheese industry in Chennai.
- STP: Conversant with the technologies used for STP. During Water Audits, suggested modifications of the existing STPs and implemented for better treatment. Usage of UF & RO technologies for STP, which will provide the water recycling and reuse. Recently done water audits at 5 locations of Lucas – TVS, where STP is major concerns and suggested the modifications for better treated water quality. Familiar with conventional treatment methods like aerobic & anaerobic treatment process and advanced MBR process, SBR technologies.

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**Present:** Presently working as a ‘Freelance Consultant’ for various National & International Organizations.

### **Scope of work:**

- Technical support for the development of water purification systems
- Testing and certification coordination for the products
- Conducting Water Audits
- Sourcing the components for water purification systems
- Conducting Training programs
- Development of ‘Go to market strategy’
- Development of protocols for testing of the products
- Business Development
- Support in ZLD (Zero Liquid Discharge)
- Supporting BIS for development of standards for water purification systems
- Helping Global companies to establish water business in India
- Support in development of world class Laboratory for testing of Water
- Support in providing assistance for certification of products
- Good idea on the practices being followed at both national and international levels in this field
- Good idea on the technology providers at both national and international levels
- Knowledge on the R&D being done in this field at national and international levels

## **Work experience: (Previous)**

### **Eureka Forbes Ltd.: Oct. 1991 to Feb. 1995**

After Doctorate and 2 years postdoctoral experience, Started my professional career as an 'Executive, R&D' in 1991. Was promoted to the level of "Asst. Manager – R&D". Successfully established a laboratory for water testing and evaluation of water purification systems. Carried out the assignment to develop the water purification systems and extended technical support to Sales, Service & Marketing. Product development is the major role in this position. Collaborative studies with leading institutions and implementation of new technologies.

### **Achievements:**

- Establishment of Water testing laboratory and water purifier's evaluation procedures.
- Standardized the test methods
- Development of various types of sediment filters
- Customer queries handling & Training the field staff (sales & service) on water purification

### **Chemplast: Mar '95 to July '98**

As an Executive Manager – QA, developed Quality Systems, methods for the R&D developed products for bulk drugs & drug intermediates and specialty products.

Initiated and completed ISO 9001 as Management Representative.

Maintenance of the Quality Control laboratory in the Factory & monitoring the Effluent Treatment Plant as per local regulations.

### **Achievements:**

- Developed Quality management Systems.
- Documentation of ISO 9001 initiated and completed
- Faced certification & surveillance Audits for ISO 9001
- New Methods development for R&D developed products
- Analysis of Effluent from Treatment plant
- Hands on experience on HPLC, GC, IR, UV, etc.

### **Eureka Forbes Ltd.: Aug. 1998 to Feb. 2006**

- Established & Headed a World class Water Testing and Research Laboratory (Aquadiagnostics water Research and technology Centre of Eureka Forbes Ltd, Bangalore as a **Sr. Manager**.
- This lab got recognition from Water Quality Association, USA and National accreditation Board of Laboratories as per ISO/IEC 17025.
- Developed formulations and manufacturing of cleaning liquids for FMCG market
- New technologies development for water purification
- Worked with BARC scientists to develop ultra filtration technology for water purification and scale up of production
- Worked with Professor Pradeep on Nano technology for the removal of pesticides from water and successfully scaled up the production. This technology was implemented in domestic water purifier (Aquaguard).
- Established a production unit for manufacturing of Nano silver product (4 tons/month capacity)
- Established a sediment filter manufacturing unit for Eureka Forbes
- Training programs conducted for field staff (sales & Service)

## **PREVIOUS POSITION DESCRIPTION:**

Department : Technical  
Job Title : Senior Manager – Projects  
Reports to : Senior Vice president – Technical

Purpose : # to provide cutting edge technical support to the sales and Service functions to aggressively grow the chemical business.  
# Responsible for the establishment of world class Laboratory for the analysis of water & Waste water (key achievement during previous years).  
# Laboratory got accreditation from Water Quality Association, USA under my guidance which was one of the key Achievements.  
# Laboratory got NABL & WQA Accreditation.  
# Responsible for establishing chemicals business including Sourcing of raw materials, manufacturing facility which was Completed successfully.

### **Achievements:**

- Established modern Water Research and Testing laboratory in Bangalore
- Got recognition for the lab from Water Quality Association, USA
- Got recognition for the lab from NABL, Delhi as per ISO/IEC 17025
- Established chemicals manufacturing facility and developed many formulations for cleaning liquids
- Developed an additional accessory for vacuum cleaner(Fragrance pad)
- Collaborative work on nano technology with IIT, Chennai
- Selected as member of Dream Team
- Achieved an award for knowledge management systems (Internal)
- Certified Lead Auditor for OHSAS 18001 (Occupational Health and safety Assessment Systems)

### **GIVAUDAN, a Swish based Flavor & Fragrance manufacturing Company:**

**Worked as Quality & Regulatory Affairs Head at Givaudan, a multinational company from Feb, 2006 to Nov, 2008.**

Department : Quality Management  
Job Title : QM-Manager  
Reports to : Operations Manager (administratively) and Global coordinator in France (Functionally)

### **Job responsibilities:**

- Development of Quality systems for the manufacture of Flavors & Fragrances
- Monitoring Quality staff on regular Quality control
- Customer complaint handling
- Handling production non conformances and finding the root cause
- Coordination with Global Quality aspects
- Supporting the perfumers on their development
- Maintaining ISO 9001 certification
- Coordination for Regulatory Affairs & Product Safety

**Underwriters Laboratories (UL), a US based standards development & Certification organization and worked as Head, Water business in Asia from Oct, 2008 to June, 2014.**

Department : Life & Health Sciences  
Job Title : Head- Asia Water Business  
Reports to : Global Head for Life & Health Sciences in USA.

**Job responsibilities:**

- Development of water business in Asia region. Member in National Water Committee, Water Equipment & Management Division, BIS Committee on Water purifier standards, Member in WQA India Task force, etc.
- Established a World class Laboratory for Chemical & microbiological analysis and certification of water products. This lab can test as per NSF/ANSI 60 & NSF/ANSI 61 International standards related to drinking water treatment chemicals & components Certification.
- Established a microbiology test facility to test and certify Drinking water treatment Units for their efficiency (bacteria, virus & cyst)
- In-charge for Product safety certifications for water treatment chemicals, water treatment components, RoHS, etc.
- Actively involved in developing product safety standards for India
- Product safety certification audits in Asia
- Development of new protocols for product safety based on customer requirements
- Development of Food safety certification programs
- Reviewer for product safety certifications
- Meeting the targets of order bookings and revenues
- New business development
- Coordination with Govt. officials for bringing new regulations relevant to India
- Leading a team of chemists & microbiologists
- Interaction with Global team and providing technical information in development of product safety standards
- **Participated in GLP (Global Leadership Program) at China, USA & Japan and learnt many Global leadership techniques. This gives the familiarization of different cultures like Chinese, Japanese, Indian, Europe, American, etc.** This award winning program is only offered to one class per year by nomination and vote by the UL Executive Leadership Core team. It is an intense 6-week training program, over the course of three, two-week sessions includes curriculum focused on leadership, business development and innovation, led by both industry leaders and distinguished professors. The program incorporates experiential learning through Lessons from the Battlefield, led by retired military officers who specialize in Military History.

**Presently working for various organizations as technical consultant/Advisor based on their requirements.**

**Personal information:**

**Date of Birth** : **05/06/1959**  
**Educational Qualifications** : **Ph.D in Environmental Chemistry from  
Andhra University, Visakhapatnam, India**

**EDUCATIONAL QUALIFICATIONS (in detail):**

<b>EXAMINATION PASSED</b>	<b>BOARD/ UNIVERSITY</b>	<b>YEAR OF PASSING</b>	<b>CLASS OBTAINED</b>	<b>SUBJECTS STUDIED</b>
B.Sc	Andhra University, Visakhapatnam	1981	First	Chemistry (Main), Physics & Maths
M.Sc	Andhra University Visakhapatnam	1983	First	Analytical Chemistry as specialization
Ph.D	Andhra University	1989		Environmental chemistry (Thesis title: Impact of Industrialization on the Environment of Visakhapatnam)
M.B.A	Sikkim Manipal University	2014	First	Operations Management

**Marital Status** : **Married.**  
**Family details** : **Wife – House wife**  
**Languages Known** : **English, Hindi, Telugu & Kannada.**