**Jayalal**

I am an admirer of chemical and polymer engineering, Having 3 years of experience in adhesive and Tyre industries. Did post graduation in Chemical Engg and Bachelors in Polymer Engg. Looking for a suitable position for my profile to implement my academic knowledge and technical experience.

jayalal-390153@2freemail.com



**EXPERIENCE**

**Bostik India Pvt Ltd**

R&D Chemist

*August 2015 - August 2016*

 *(1-year 1 month)*

I had worked for Bostik India Pvt Ltd, as a R&D Chemist for 1 year.

My main responsibilities and achievements were,

\* Developed Reacted Poly Urethane adhesives for synthetic footwear materials,

\* Developed Grafted Neoprene Rubber Adhesives for synthetic footwear materials with high heat resistance properties,

\* Developed Poly Amide primer for footwear adhesives with quick drying time

\* Developed water-based Poly Urethane adhesives for the footwear

\* UV based primer is modified

\* Product testing was performed like Hydrolysis test, UTM test, Bond strength Testing, Cutting Analysis, viscosity test, tensile test.

\* Customer complaint handling, customer visit and re-usage of scrap materials is done



**JK Tyres and Industries Ltd**

Quality officer

*June 2010 - July 2012 (2 years 2 months)*

I also had 2 years of working Experience in JK tyres and Industries Ltd, Mysore as a Quality officer. My main responsibilities were As a Quality officer my responsibilities were,

\* Process and product Audit

\* Final product inspection

\* Rework and Repair of damaged product

\* Cut tyre analysis

\* Raw material inspection

\* Testing of plies (UTM)

\* Documentation and presentation

\* Customer complaint handling

\* Man, power handling



**EDUCATION**



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| **Manipal Institute of Technology** | *2016 - 2018* |
| Master of Technology - MTech, Chemical Engineering, |  |
| Theoretical and practical exposures of chemical process. pursued 8.124 gpa. |  |
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| **Sri Jayachamarajendra college of Engineering, Mysore**  | *2012 - 2015* |
| Bachelor of Engineering -(B.E), Polymer Science and Engineering |  |
| Activities and Societies: Practical exposers with theoritical knowledge. Chemistry mechanism and detailed study of polymer |  |
|  |  |
| **Karnataka polytechnic Mangalore** | *2006 - 2010* |
| Diploma, Plastics and Polymer Engineering Technology/Technician, |  |

Activities and Societies: Theoritical and practical exposers in polymer field. With communication skills and personal development skills. Machine Operating skills like roll mills, presses and moulding machines



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| **St Francis Xavier's school** | *1995 - 2005* |

SSLC, School,

Activities and Societies: School education with extra activities in sports and academic field. Participated competitions like essay writing, speech, drama acting



**SKILLS**



* Handling the reactors (lab, pilot and production scales)
* Graft and additional polymerisation
* Batch and semi batch reactors
* Monomer characterisation
* Oven curing methods
* TSC and Ash content
* Testing of Adhesive
* Peel strength analyzing (UTM)
* Molding & Extrusion technics of plastics and rubber
* Cut Tyre Analysis
* Lot and Process Audit (Bias and OTR Tyres)
* Gas Chromatography
* Team management
* Task management
* Project planning and development
* Quality control and assurance
* Engineering Tools - AutoCAD (Machine Drawing), Pro-E, MATLAB, Aspen plus



**PROJECTS**

**Grafted Neoprene Adhesive**

*August 2015 - August 2016 (1 year 1 month)*



Company: Bostik India Pvt Ltd

Technology Used: Grafted polymerization

Description: The objective of this project was to achieve the strong adhesion in synthetic materials and to get good heat resisting Adhesive for industrial uses. The main method is to Graft Methyl methacrylate monomer into the neoprene rubber. Grafted polymerisation (bulk) was the reaction. MMA monomer was grafted into the main chain of neoprene rubber by the use of catalyst. Under the temperature of 80 -90 degree. Done many pilot scale reactions and production scale. Its testing and characterization have been analysed. Its commercialization is done.

And simultaneously worked with other smart adhesives like Water based poly urethane adhesives, Reacted Poly Urethane Adhesives and Synthetic Rubber Adhesives. This includes the production, Quality control, R&D and marketing of above mentioned Adhesives.



**Optimization of Biogas production** *May 2017-May 2018*

Institution: Manipal Institute of technology

Technologies Used: Anaerobic Reaction of Bacterial decomposition

Description: The main objective of this project is to improve the biogas production by optimizing its process temperature, Feed ratio,

Chemical additives and design. This project outcome is also including the compact biogas system. This project is achieved the objectives.

And its Technical paper is published.



**Development of EPDM compounds in O-rings** *Jan 2015- May 2015*

Company: Triton Valves and Industries

Technologies Used: Two roll mill, Compression Molding.

Description: The objective of the project was to develop a formulation for EPDM O-rings, which is a free from the defects like, short fillings, flow cracks. And to achieve good mechanical properties like compression strength. This product and formula has been commercialized.



**PUBLICATIONS**



**Effect of feed dilution ratio on biogas production in batch and** *on press*

**semi-continuous anaerobic digestion**

International journal of Green energy

.Different feed ratios of Cow dung and water in lab scale biogas batch digesters and Semi continuous batch reactors is been studied. Under controlled mesophilic temperature range and ambient temperature range. From these studies we found out that 1:3 feed ratio is giving more biogas yield (normalized biogas yield) that is around 50% more biogas while compare to 1:1 feed ratio. And, it is observed that 1:3.5 and 1:4 feed ratio is giving less biogas yield. From these studies it is concluded that 1:3 feed ratio is the optimum feed ratio for highest biogas yield. And its biogas composition is also measured by using Gas chromatography.



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| **CERTIFICATIONS** |  |
| **Short course on "Rubber Science and Technology"** | *2011* |

HASETRI & IRI at Rajasthan

Attended a short-term course on “Rubber Science and Technology “which was jointly organized by HASETRI & IRI at Rajasthan in the year 2011.



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| **6th National Conference on “Advances in Polymeric Materials”** | *2014* |

Department of Polymer science and Technology and Indian Rubber Institute, Karnataka branch at SJCE, Mysore

Participated in “POLYCON 2014 “, the 6th National Conference on “Advances in Polymeric Materials” jointly organized by Department of Polymer science and Technology and Indian Rubber Institute, Karnataka branch at SJCE, Mysore



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| **Second prize in paper presentation** | *2017* |

Techtatva-2017, MIT Manipal

paper presentation on "optimization of biogas" got second prize.



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| **First prize for the “project poster presentation”** | *2018* |

“CHEMEXCEL”, “Bapuji Institute of Engineering and Technology”, Davangere

project poster presentation on "optimization of biogas production with dilution ratio" got first prize



**LANGUAGES**



**English** (Full professional proficiency),

**Hindi** (Full professional proficiency),

**Kannada** (Native proficiency),

**Malayalam** (Full professional proficiency),

**Tamil** (Limited working proficiency)

**PERSONAL DETAILS**

FULL NAME: Jayalal

DATE OF BIRTH: 03rd May 1990

NATIONALITY: Indian

MARTIAL STATUS: Single

RELIGION: Christian



