

# **ABHISEK SARKER**

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**CITIZENSHIP:** The USA

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## **OBJECTIVE**

Seeking full time technical research and development oriented position in a food company.

## **EDUCATION**

**The Pennsylvania State University, University Park, PA, USA, 01/2009-05/2011**

Master of Science in Agricultural and Biological Engineering, GPA: 3.67/4.0

*Thesis: Analyzing milk protein fouling due to pasteurization over time and optimizing plate heat exchanger.*

**University of Guelph, Guelph, ON, CANADA, 09-2009-10/2007**

Major: Bachelor of Biological Engineering, GPA: 3.6/4.0

Minor: Food Technology

## **SKILLS**

### **Food Technology**

Food Chemical Analysis, Extrusion, Food Texture Analysis, Flavor Analysis, Spray Drying, Pasteurization, SDS PAGE, FTIR, Pathogen Detection and Enumeration Techniques, Fermentation, Baking, Roasting, Developing Unit Operations, Process Design and Development, Process Optimization, New Product Development-Bench Scale, Designing Standard Operating Procedures

### **Engineering**

Process Design, Process Optimization, 2-D and 3-D Models, Process Flow Diagrams, Piping & Instrumentation Design-Bioreactor, Pump, Piping, Plate Heat Exchanger, Spray Dryer, Extruder, and Optimizing Pasteurization using Plate Heat Exchangers

### **Quality Assurance**

Safe Quality Food, HACCP, GMP, GLP, SOP, Process Validation, Verifying and Validating raw and final products, Sanitation, Sampling for Pathogen Detection and Enumeration, Statistical Analysis using SAS, Applying novel technologies to exterminate pathogens-HTST, UV Light, Radiation, High Pressure Processing and Optimized Pasteurization

### **Computer**

**Programming:** C, Java

**Software Applications:** MS Office Suite, Minitab, SAS, MATLAB, ANSYS, AutoCAD, MS Visio, MS Project, Genesis R&D, BatchMaster, ProcessPro, SolidWorks

### **Languages**

Bengali (Native), English (Fluent) and French (Spoken)

## **WORK EXPERIENCES**

### **Research and Development Analyst, Johanna Foods, Flemington, NJ, USA, 07/2011-12/2011**

- Carried out market research of existing products and health trends
- Designed new juice products formulae and nutritional labels with R&D Team
- Involved in conducting research in novel technologies to decontaminate and deactivate pathogens in juice products
- Developed mathematical models to scale up lab scale new product to mass production
- Conducted sensory analytical tests-color, odor, flavor, taste and texture
- Conducted pathogen growth analysis in different conditions-combinations of various temperatures and moistures
- Collected samples of different juice and juice blends for post production pathogen analysis
- Conducted quality control tests of packaging
- Performed analytical tests-Brix, Acidity, Vitamin C, Calcium
- Responsible for visual check of product labels including unique product code, production and expiry dates
- Recorded down collected data for further statistical analysis

**Tools Used:** MS Word, MS Excel, Genesis R&D, MS Visio, MATLAB, SAS and MS Project

### **Process Engineer, Brick Brewing Company, Kitchener, ON, Canada, 11/2007-12-2008**

- Defined a cost effective, sustainable, and flexible fermentation process, setup the process specifications, optimized the process parameters, and proposed process parameters for the large scale production
- Responsible for updating knowledge for safe handling of materials for new and existing products
- Assisted manufacturing staff in evaluating, designing, and implementing modifications to improve equipment operation, reliability, safety, and ease of operation
- Performed the task of providing assistance in other basic process design engineering tasks as directed
- Responsible for preparing piping and instrumentation drawings, performing calculations and studying design specifications
- Produced detail design calculations and sketches for batch and continuous fermentation systems
- Provided guidelines and instructions to drafters/designers for preparing drawings as required
- Performed the task of producing estimate level preliminary designs and material take-offs suitable for the level of the estimate being performed on the project
- Provided technical support for QC Department to determine product specification requirements at different fermentation stages and optimize a fermentation model applied into production line controlling Company' all products and improving QC efficiency by 20%

**Tools Used:** MS Word, MS Excel, MS Powerpoint, MATLAB, BatchMaster, ProcessPro, SolidWorks, AutoCAD, ANSYS and MS Project

**REFERENCES** are available upon requests