

SHIQI (KAY) HUANG

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Guelph, Ontario, Canada

SUMMARY OF QUALIFICATIONS

- 4 years' experience in testing innovative ingredients and developing new food products
- 8 years' diverse research experience in food chemistry, meat processing, food safety/microbiology, and sensory
- Proven experimental design ability developed through leading multiple research projects
- Strong ability to run and manage multiple projects efficiently and effectively in a fast-paced environment
- Strong communication and interpersonal skills developed through working on collaborative research projects with research teams from varying departments

WORK EXPERIENCE

Research Assistant and Lab Technician

May 2017 to Aug 2020

Meat Processing Lab

Food Science Department, University of Guelph, Guelph, Ontario

- Consolidated specialized knowledge about meat processing and ingredient formulation development
- Led multiple research projects as well as designed, planned, and executed experiments
- Evaluated composition and functionalities of flours and starches including water/oil holding capacity, swelling power, solubility, pH, pasting and thermal properties
- Formulated various sausage and patty recipes using innovative flours (breadfruit, banana) and traditional flours/starches (wheat, corn, tapioca, soy) at different concentrations and observed their effects on nutrient composition, texture profile analysis, color, water holding capacity, microstructure, etc.
- Developed bacon and investigated the effect of belly pump uptake and cook yield during processing on bacon slice composition, shelf-life, and sensory attributes
- Worked closely with a research team from the Engineering Department on a collaborative research project that focused on the modification of breadfruit flour using a twin-screw extruder
- Assisted in the training and conduction of a 2-month sensory panel in a Food Science sensory lab to assess sensory attributes of poultry breasts and thighs
- Assisted in the conduction of a research project that focused on the effects of feeding essential oils and(or) benzoic acid to finishing steers on fatty acid profile, self-life stability, and oxidative stability (color and lipid oxidation) of beef longissimus thoracis steaks and ground beef patties
- Assisted in the conduction of a research project that focused on injecting crude pear, apple, and kiwifruit extracts into beef semitendinosus muscle and measuring for color, cooking loss, shear force, thiobarbituric acid reactive substances (TBARS)/acidity, and pH
- Completed a literature review on the amino acid concentration of high protein food products and an overview of the current methods used to determine protein quality
- Collected, analyzed, and managed thousands of data using Microsoft Excel and SAS/SPSS Statistics
- Presented results and findings on-site or remotely using Microsoft PowerPoint, Teams, Zoom, or Cisco Webex
- Developed leadership skills by supervising and training undergraduate research assistants involved in my doctoral dissertation research
- Developed adaptability to working in different situations such as in a new lab and in various projects
- Developed written skills and effectively communicated research findings as evidenced by publishing 8 peer-reviewed journal articles (6 first-authored and 2 co-authored) and 8 peer-reviewed meat conference proceedings
- Developed verbal communication skills and interpersonal skills by cooperating with scientists/researchers from different countries
- Assisted in setting up a new laboratory

- Managed existing and incoming chemicals and equipment, orders of supplies and chemicals, chemical waste disposal, regular maintenance of the equipment, as well as the coordination of the schedule of equipment usage to ensure that laboratories operate smoothly
- Prepared standard operating procedures and trained new lab users on instruments

Research Assistant

Nov 2016 to Apr 2017

Food Safety and Microbiology Lab

Food Science Department, University of Guelph, Guelph, Ontario

- Worked in a biosafety level II lab
- Worked on an industry-academic collaboration research project that focused on determining the persistence of relevant *Salmonella* on different tea blends and thermal inactivation kinetics during a range of brewing conditions
- Researched an applied food safety issue of direct relevance to the industry
- Acquired techniques on validation methods for risk assessment of pathogens on dry ingredients and foods
- Used selective media to enumerate/detect various pathogens from sand samples which were collected from dairy farms operating a sand bedding system
- Extracted DNA from sand samples using nucleic acid extraction kits

Visiting Researcher

Jan 2015 to Jan 2016

Food Safety and Microbiology Lab

Food Science Department, University of Guelph, Guelph, Ontario

- Worked on an industry-academic collaboration research project regarding the examination of the efficacy of SunWash coatings in preventing the formation of biofilms stability when subject to repeated sanitation cycles
- Collected and analyzed data as well as prepared and presented technical progress reports to the participating company
- Published a first-authored journal article on antimicrobial coatings for controlling *Listeria Monocytogenes* based on polylactide modified with titanium dioxide and illuminated with UV-A.

Research Skills Gained from Research Experiences

- Food analysis (chemical characterization, physical properties, compositional analysis, chromatography, spectroscopy)
- Food ingredient substitutions
- Processed meat product development (sausage, patty, bacon), meat quality improvements
- Good understanding of changes of meat ingredient formulation and their effects on the quality of meat products (nutritional, technological, sensory, and safety properties)
- Food sensory quality evaluation (training, experimental design, product preparation)
- Food safety/microbiology testing methodologies (Biosafety Level II labs)
- Extraction methodologies for bioactive compounds, fractional distillation, titrations, filtrations, fermentation
- Lab management skills

EDUCATION

Doctor of Philosophy in Food Science

Sep 2017 to Oct 2020

University of Guelph, Canada – full time

Visiting Master Student in Food Science

Jan 2015 to Jan 2016

University of Guelph, Canada – full time

Master of Science in Food Science

Sep 2013 to June 2016

Zhongkai University of Agriculture and Engineering, China – full time

Certificate in Postgraduate Business Management Program

Sep 2013 to Sep 2016

South China University of Technology, China – part time