

## Update

Ministry

Agriculture and Irrigation

### Describe: Basic Job Details

#### Position

Position ID

Position Name (200 character maximum)

Food Scientist, Meat

Current Class

Job Focus

Supervisory Level

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

#### Employee

Employee Name (or Vacant)

#### Organizational Structure

Division, Branch/Unit

☐ Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

### Design: Identify Job Duties and Value

#### Changes Since Last Reviewed

Date yyyy-mm-dd

Responsibilities Added:

Responsibilities Removed:

## Job Purpose and Organizational Context

Why the job exists:

The Alberta Food Centre (AFC) is responsible for developing and commercializing new food products and ingredients unique to Alberta. The AFC fosters growth and commercialization of food companies serving local and global markets. The holder of this position works as a member of the Food and Bio Processing Branch's Food Science and Development (FSAD) Section, leading work in value added meat and/or meat analogue product development and processing for clients and stakeholders based in Alberta.

This scientific position responsible for advancing value added product development and processing through consultation with industry, initiating, designing, conduction and directing product and process development with an emphasis on meat based foods and processing. Projects may include bench top development, pilot plant scale-up and/or in-house development at the client's facility. In addition this position will oversee client interim processing of product for sale. This position provides consultation and advice to industry clients and other FSAD team members. This position will lead innovative projects, contributing to the launch of new products and processes fostering strategic processing and business alliances with industry stakeholders.

Working with industry clients, the incumbent will require a detailed understanding of the technical and scientific aspects of value-added meat related food processing as well as developed competency skills necessary for effective communication with industry clients and management of multiple projects. This position is provincial in scope and reports to the FSAD Director.

## Responsibilities

Job outcomes (4-6 core results), and for each outcome, 4-6 corresponding activities:

**1. Provide scientific and technical leadership to food processors in the development and commercialization of new, market responsive/receptive food products and processes with emphasis on value added meat and/or meat analogue products.**

### Key Activities:

- Identify and lead innovative opportunities for new meat products and/or adoption of new processing technologies.
- Identify market opportunities and consumer trends through market intelligence, networking and communicating new ideas with industry partners, department colleagues and academic researchers.
- Create partnerships and strategic alliances to address opportunities of utilizing value chain principles along the food continuum.
- Evaluate concepts, products, and processing plans to aid in the growth of a viable, competitive value-added agriculture and agri-food industry.
- Initiate, design, conduct and direct food product and process development activities relevant to Alberta's food processing industry to realize new products and/or processes opportunities, increased productivity and/or cost effective product and processes.
- Work with clients and other partners to identify client/project objectives, design, coordinate and conduct developmental project in the laboratory, pilot plant, processing suites, or external commercial facility to meet the request and needs of industry clients.
- Document experimental procedures and data, interpret experimental results and prepare reports for industry clients.
- Oversee the production of new products by clients utilizing the AFC for interim processing.

**2. Establish mechanisms with industry clients and stakeholders to identify strategic innovative opportunities that address industry issues and serve as a catalyst for economic development and competitiveness for Alberta's value-added food processors with and emphasis on meat processing sectors.**

### Key Activities:

- Liaison between groups in industry (processors, equipment and ingredient suppliers), academia and other research institutes.
- Work with industry clients and suppliers to evaluate the potential adaption and adoption of new technologies.
- Transfer scientific data into a product or process that can be commercialized.
- Work with clients to identify and implement processes to improve efficiencies, yields and production cost.
- Troubleshoot associated problems with start-up processes and production changes.

### **3. Provide knowledge and technical skill to the agri-food industry, research institutes and department divisions to maintain and foster a globally competitive industry.**

#### **Key Activities:**

- Provide coaching, training and advice to individual clients through the course of their product/process development and interim processing projects.
- Provide consultation to a broad range of clientele, responding in a timely manner with relevant technical information in a variety of areas of food science, specializing in meat and meat processing, encompassing the technologies of ingredients, processing, thermal processing, packaging, and food regulations.
- Provide training to industry through equipment / ingredient / process demonstrations.
- Organize and participate in seminars, workshops and conferences.
- Provide scientific reports, information bulletins, and personal communications for target markets or publications.
- Work with clients, staff and partners to build and transfer knowledge and technical skills.

### **4. Maintain and enhance scientific, technical and competency skills in order to provide leadership to the department and the industry.**

#### **Key Activities:**

- Increase understanding of strengths, opportunities and trends in meat processing through participation in scientific interest groups, on industry committees and department teams.
- Research existing knowledge and expertise that could be shared, adapted and adopted in Alberta's value added meat industries and be applied to innovative applications.
- Stay abreast of technologies through contact with equipment suppliers, ingredient manufacturers and other research and development institutions.
- Establish and maintain a strong network of peers and close relationships with Alberta's food industry.
- Maintain membership in appropriate professional associations and scientific groups.
- Independently seek opportunities to continue to advance knowledge and/or technical training in new areas of value added meat and/or meat analogue processing technology.
- Independently seek opportunities to continuously improve Alberta public service competencies that will complete scientific expertise.

### **5. Occupational Health and Safety**

#### **Key Activities:**

- This position is responsible to actively participate in activities required by the worksite Health & Safety Committee. This includes reviewing occupational task inventories and hazard assessments.

#### **Scope:**

#### **Variety and Size of Projects:**

- Manages multiple projects on an ongoing basis. These projects are diverse in both variety, size and complexity, covering a wide range of technical and operational expertise for the development and processing of meat and/or meat analogue products. Management of projects with the section and across the branch.
- Responsible for making decisions based on extensive experience and a sound understanding of processing technologies, project management principles, market requirements and relevant regulations.
- Technical services and consultation are provided, identifying and implementing innovative solutions to a variety of product and processing problems.
- Timeframe for these project ranges from short term, less than on month, to long term, one to three years. This position directly impacts the growth and diversity of value added food processing and investment in the province, resulting in improved market access and increased global competitiveness of Alberta's agriculture and food industry.

#### **Impacts:**

- Internal: Source of technical expertise and information for department staff.
- External: Private industry both large and small, producer groups and industry organizations, universities, and research and technology organizations. External clients can range from individual entrepreneurs to multi-national corporations.
- The impact of the section's work can be seen in the introduction of numerous new products to the market each year, the introduction of new technologies and the start-up of new companies annually.

#### **Problem Solving**

Typical problems solved:

This position involves extensive problem-solving in various areas related to value added meat processing.

A challenge faced in this role is the diverse demands and wide scope of projects. The role requires identifying new problems and finding timely solutions to resolve them. The projects, technologies, and market demands continuously evolve and change, necessitating the ability to adapt and re-invent approaches as needed. Each client has unique concerns that require customized solutions, demanding a high level of agility.

When working on complex and unknown processes for client projects, creative thinking becomes essential. Unique processes must be devised within the capabilities of the current equipment to achieve desired results. This may involve reviewing scientific publications to gather relevant methods and conducting bench-top experiments to meet the specific requirements of each client's project.

The problem-solving responsibilities extend beyond individual projects to encompass a variety of product and processing problems. Involvement includes assessing and evaluation new products and technologies for alternative applications within the processing industry. Additionally, playing a role in designing research projects, analyzing and interpreting scientific data, preparing reports, and writing scientific papers is part of the responsibilities. Analytical abilities are crucial in developing Standard Operating Procedures for new product development. Given the nature of working with new product lines, the encountered problems may be less known, and solutions may be unknown. Expertise as a meat scientist is instrumental in identifying industry needs in terms of value added processing, elevating the role to a strategic level that goes beyond mere creativity and problem-solving, encompassing a more comprehensive approach.

Types of guidance available for problem solving:

Existing off-the-shelf solutions do not adequately address the diverse needs of most client service projects. The ultimate solution lies in innovative approaches and fresh ideas. Conducting literature reviews is crucial for drawing inspiration from other fields and discovering applicable concepts.

Direct or indirect impacts of decisions:

Results have had a major impact on the industry as the findings are used for adaptations and/or introductions of new products, processes and/or technologies to the Province of Alberta, and some across

Canada.

Demonstrate technical creativity and support business development colleagues.

The impact of the section's work can be seen in the introduction of numerous new products to the market each year, the assessment and introduction of new technologies and the start-up of new companies and local jobs created annually.

### Key Relationships

Major stakeholders and purpose of interactions:

#### Internal:

- Section Staff: To lead, support and collaborate projects.
- Other Staff: To liaise with other departmental staff on common goals and research/theme information services
- Section Director: To communicate regarding specific assigned technical support projects including, equipment assessment and procurement recommendations.

#### External:

- Industry clients: To act as project leader for industry initiated projects, identify priorities, provide information services. External clients can range from individual entrepreneurs to multi-national corporations.
- Producer groups, industry organizations, University of Alberta and NAIT. To foster collaborative relationships and support industry led research.
- Private sector companies, equipment suppliers, vendors, trade agencies: Stay connected on challenges the industry is facing and the advancements available with equipment and ingredient suppliers.

### Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Master's Degree	Science		

If other, specify:

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Job-specific experience, technical competencies, certification and/or training:

#### Education:

- Advance Degree (M.Sc. or Ph.D) in Food Science or related field with a specialty in meat or value added meat processing.

#### Experience:

- 4 years industry/applied experience in the application of industrial processing applications.

#### Knowledge:

- Specialized knowledge of protein functionality and processing technologies utilized in processed meat and meat alternatives.
- Advanced knowledge of food chemistry, microbiology and scientific research principles.
- Specialized knowledge of analytical techniques and assessment of physiochemical and rheological properties.
- Knowledge of policy and regulations for the meat and meat alternative process food sectors.
- Knowledge of global trends in agriculture, food and related industries.
- Knowledge of relevant research being conducted globally.
- Knowledge of the individual food processors in the province.
- Knowledge of the Canadian Food and Drug Regulations, principles of HACCP (Hazard Analysis Critical

Control Points) and GMP (Good Manufacturing Practice), and trained in WHMIS (Workplace Hazardous Material Information System).

- Knowledge of the goals and strategies of the Ministry of Agriculture and Irrigations and the Alberta Food Centre.
- Knowledge of department policies in human resources, finance and information technology.

**Skills and Abilities:**

- Project management skills to coordinate several concurrent projects and deliver accurate and high quality results within appropriate time frame.
- Be creative and original in product/process development and problem solving.
- Conduct independent and innovative research using advanced research methodologies.
- Possess leadership skills with adaptability and flexibility to work in a team environment for the common project goal.
- Effective communication and listening skills to understand client's needs and to effectively disseminate information and results to individual clients or large groups.
- Write in both scientific language for technical publications and plain language for non-scientific populations.
- Assimilate and evaluate scientific literature and data.
- Possess supervisory skills to manage client activities, technical staff and personnel in the project.
- Ability to deal with a wide range of production problems where no set solution exists.
- Ability to coach and mentor clients in all aspects of food processing.
- Provide mentorship to junior scientists and technical staff.
- Utilizes Microsoft Office (Word, Excel, PowerPoint) and specialized software applications for the execution of projects and reporting on project results.
- Operate a wide range of laboratory and commercial processing equipment.
- Possess a current Alberta Driver's License.

**Behavioral Competencies**

Pick 4-5 representative behavioral competencies and their level.

Competency	Level					Level Definition	Examples of how this level best represents the job
	A	B	C	D	E		
Systems Thinking	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Takes a long-term view towards organization’s objectives and how to achieve them:</p> <ul style="list-style-type: none"> <li>• Takes holistic long-term view of challenges and opportunities</li> <li>• Anticipates outcomes and potential impacts, seeks stakeholder perspectives</li> <li>• Works towards actions and plans aligned with APS values</li> <li>• Works with others to identify areas for collaboration</li> </ul>	<p><b>1. Understanding interconnected project elements:</b> Recognizing the interdependencies and interactions amongst various components within a project. This including understanding how changes in experimental variables, methodologies, or data collection techniques can impact the overall research and development outcomes.</p> <p><b>2. Holistic analysis of valueadded meat systems:</b> Analyzing various variables, such as meat composition, and ingredient functionality</p>

			<p>to evaluate their influence on process efficiency, product yield and quality.</p> <p><b>3. Identifying patterns and optimization opportunities:</b> Identifying recurring patterns or trends within the obtained data and leveraging that knowledge to optimize project processes. This includes recognizing opportunities for improved experimental design, data analysis techniques, or sample preparation methods to enhance the overall quality and efficiency of the outcomes.</p> <p><b>4. Integrative decision making in projects:</b> collaborating with experts from different disciplines to make informed decisions, such as ingredient functionality and optimizing processing.</p>
Creative Problem Solving	○ ○ ○ ● ○	<p>Works in open teams to share ideas and process issues:</p> <ul style="list-style-type: none"> <li>• Uses wide range of techniques to break down problems</li> <li>• Allows others to think creatively and voice ideas</li> <li>• Brings the right people together to solve issues</li> <li>• Identifies new solutions for the organization</li> </ul>	<p>1. Designing innovative experiments and methodologies to address complex scientific problems.</p> <p>2. Generating creative solutions by thinking outside the box and proposing novel ideas.</p> <p>3. Identifying emerging industry areas and developing projects to address them.</p> <p>4. Facilitating collaboration among multidisciplinary teams to solve complex problems.</p> <p>5. Taking initiative to anticipate and address potential challenges in the experimental process.</p>
Agility	○ ○ ● ○ ○	Identifies and manages required change and the associated risks:	This position collaborates with partners/ stakeholders in project



		<ul style="list-style-type: none"> <li>• Identifies alternative approaches and supports others to do the same</li> <li>• Proactively explains impact of changes</li> <li>• Anticipates and mitigates emotions of others</li> <li>• Anticipates obstacles and stays focused on goals</li> <li>• Makes decisions and takes action in uncertain situations and creates a backup plan</li> </ul>	<p>development, proposals development and works directly with external clients. It requires an ability to manage and react to unanticipated changes. The position requires to create backup plans, to think outside of the box, to be proactive to manage and mitigate changes. The position should hold high level of agility to provide customized solution to each client.</p> <p>Specifically:</p> <ol style="list-style-type: none"> <li>1. Adapting quickly to changing project priorities and reallocation resources as needed.</li> <li>2. Embracing new technologies and methodologies to improve research efficiency and effectiveness.</li> <li>3. Managing multiple projects and deadlines with strong organizational and time management skills.</li> <li>4. Being comfortable and adaptable in dynamic working environments with unexpected changes.</li> <li>5. Collaborating effectively with colleagues and clients from diverse backgrounds and disciplines.</li> </ol>
Drive for Results	○ ○ ○ ● ○	<p>Works to remove barriers to outcomes, sticking to principles:</p> <ul style="list-style-type: none"> <li>• Forecasts and proactively addresses project challenges</li> <li>• Removes barriers to collaboration and achievement of outcomes</li> <li>• Upholds principles and confronts problems directly</li> <li>• Considers complex factors and aligns solutions with broader</li> </ul>	<p>Given that many challenges this position faces are new with limited available references, examples can be:</p> <ol style="list-style-type: none"> <li>1. Pursuing innovative project objectives and advancing knowledge in unexplored areas.</li> <li>2. Overcoming obstacles and persistently working towards achieving desired outcomes.</li> <li>3. Maintaining a high</li> </ol>



		organization mission	level of research execution and ensuring the quality and rigor of scientific investigations. 4. Taking initiative to maximize the impact of research outcomes. 5. Collaborating effectively to accelerate progress and achieve meaningful results.
Develop Self and Others	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Seeks out learning and knowledge-sharing opportunities: <ul style="list-style-type: none"> <li>• Reflects on performance and identifies development opportunities</li> <li>• Takes initiative to stay current</li> <li>• Shares with the team even when not asked</li> <li>• Actively coaches and mentors direct reports</li> </ul>	1. Actively updating knowledge of value added ingredients, new processing techniques, industry trends, webinars, seminars and participating in industrial conferences to stay current with the latest advancement in the field. Sharing acquired knowledge with colleagues to enhance their understanding as well. 2. Facilitating brainstorm with clients or expertise from universities or related industries, fostering collaboration and knowledge exchange. Similarly, encouraging idea generating and collaborating within multidisciplinary teams on project withing the section or brand to stimulate collective growth and development.

**Benchmarks**

List 1-2 potential comparable Government of Alberta: [Benchmark](#)

## Assign

The signatures below indicate that all parties have read and agree that the job description accurately reflects the work assigned and required in the organization.

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Employee Name

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Date yyyy-mm-dd

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Employee Signature

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Supervisor / Manager Name

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Date yyyy-mm-dd

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Supervisor / Manager Signature

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Director / Executive Director Name

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Date yyyy-mm-dd

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Director / Executive Director Signature

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ADM Name

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Date yyyy-mm-dd

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ADM Signature

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DM Name

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Date yyyy-mm-dd

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