Executive Summary
The purpose of this project was to describe the physical behaviour of pulse flours and fractions in various food systems and to show their efficient utilization in the development of new food products. Four subprojects were completed concurrently, focusing on the incorporation of pulse flours and fractions into an extruded snack product, an extruded meat analogue, emulsified meat products, and snack crackers.

Development of a Pea Protein-Based High Moisture Meat Analog by Twin-Screw Extrusion
Preliminary tests showed that pea-protein could be texturized to produce a high moisture meat analog. In order to accomplish preliminary trials of this product, a custom-built cooling die was fabricated because commercial units are not available for the extruder used in this study. Difficulties experienced during this experiment have helped researchers to determine recommendations for an improved die design that could be fabricated for use in future work in this area. Successful preparation of meat analog products from pea protein will also rely on careful attention to the composition of the feed material and require careful selection and control of extrusion variables, including extruder barrel temperature, feed rate, screw speed, and die cooling.

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