

## Properties of Commercially Hammer Milled Yellow Pea<sup>1</sup> Flours

Flour Properties <sup>2,3</sup>	Split Flour	Whole Flour
Special Crops Code:	SC072-12	SC073-12
Particle Size Distribution:		
d (0.1) µm	15.1 ± 0.10 <sup>b</sup>	18.0 ± 0.10 <sup>a</sup>
d (0.5) µm	142.4 ± 6.22 <sup>b</sup>	245.7 ± 3.49 <sup>a</sup>
d (0.9) µm	405.9 ± 7.96 <sup>b</sup>	593.6 ± 9.34 <sup>a</sup>
Volume Weighted Mean, µm	175.5 ± 4.47 <sup>b</sup>	274.2 ± 4.54 <sup>a</sup>
Composition <sup>4</sup> :		
Protein, %	24.4 ± 0.06 <sup>a</sup>	22.1 ± 0.10 <sup>b</sup>
Total Starch, %	51.9 ± 0.95 <sup>a</sup>	45.7 ± 1.93 <sup>b</sup>
Total Dietary Fibre, %	12.0	21.8
Soluble Fibre, %	1.3	2.3
Insoluble Fibre, %	10.7	19.5
Pasting Properties:		
Peak Viscosity, RVU	137.00 ± 1.06 <sup>a</sup>	128.83 ± 5.66 <sup>a</sup>
Hot Paste Viscosity, RVU	123.92 ± 1.53 <sup>a</sup>	105.50 ± 2.59 <sup>b</sup>
Breakdown, RVU	13.09 ± 0.47 <sup>b</sup>	23.34 ± 3.06 <sup>a</sup>
Final Viscosity, RVU	212.29 ± 2.42 <sup>a</sup>	159.00 ± 1.88 <sup>b</sup>
Setback, RVU	88.38 ± 0.88 <sup>a</sup>	53.50 ± 0.71 <sup>b</sup>
Pasting Time, min	5.19 ± 0.09 <sup>a</sup>	4.82 ± 0.05 <sup>b</sup>
Functional Properties:		
Starch Damage, %	1.31 ± 0.00 <sup>a</sup>	1.01 ± 0.01 <sup>b</sup>
Water Absorption Capacity, g/g	1.12 ± 0.06 <sup>b</sup>	1.57 ± 0.07 <sup>a</sup>
Oil Absorption Capacity, g/g	0.74 ± 0.01 <sup>b</sup>	0.86 ± 0.01 <sup>a</sup>
Foam Stability, % 10 min	87.5 ± 1.98 <sup>a</sup>	85.7 ± 0.57 <sup>a</sup>
30 min	75.0 ± 3.96 <sup>a</sup>	60.0 ± 1.63 <sup>b</sup>
60 min	47.2 ± 3.96 <sup>a</sup>	41.2 ± 12.45 <sup>a</sup>
120 min	33.4 ± 7.85 <sup>a</sup>	27.0 ± 8.98 <sup>a</sup>
Foam Capacity, %	23.0 ± 1.41 <sup>a</sup>	21.5 ± 2.12 <sup>a</sup>
Emulsifying Activity, %	43.1 ± 2.69 <sup>a</sup>	42.6 ± 2.62 <sup>a</sup>
Emulsifying Stability, %	29.4 ± 1.84 <sup>a</sup>	7.4 ± 3.04 <sup>b</sup>
Colour:		
L*	74.1 ± 0.01 <sup>a</sup>	72.5 ± 0.03 <sup>b</sup>
a*	3.07 ± 0.01 <sup>a</sup>	0.52 ± 0.01 <sup>b</sup>
b*	37.3 ± 0.01 <sup>a</sup>	33.5 ± 0.02 <sup>b</sup>

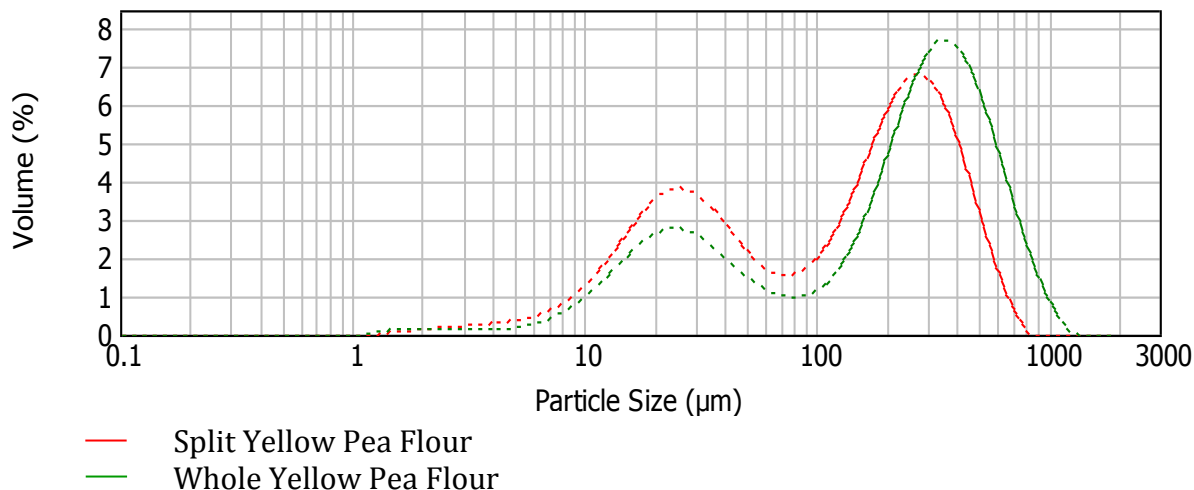
<sup>1</sup> Variety: unknown.

<sup>2</sup> For explanation of testing methodology refer to Glossary of Analytical Terminology.

<sup>3</sup> Values with the same letter within a row are not significantly different (p < 0.05). Significant differences for fibre not established.

<sup>4</sup> Dry weight basis.

## Particle Size Distribution Curves for Commercially Hammer Milled Yellow Pea Flours



### CONTACT US

To learn more about the Cigi Pulse Milling Project or to discuss your application needs please contact:

**Heather Maskus, MSc**  
Project Manager  
Cigi Pulse Milling Project  
Tel: 204-984-3139  
hmaskus@cigi.ca

**Lindsay Bourré, MSc**  
Technical Specialist  
Cigi Pulse Milling Project  
Tel: 204-984-1063  
lbouurre@cigi.ca

### Project Partners and Funders

