

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

Flour Properties <sup>2,3</sup>	Refined Flour	Unrefined Flour
Special Crops Code:	SC050-12	SC079-12
Particle Size Distribution:		
d (0.1) µm	13.8 ± 0.18 <sup>b</sup>	15.6 ± 0.02 <sup>a</sup>
d (0.5) µm	48.7 ± 0.78 <sup>b</sup>	71.5 ± 0.81 <sup>a</sup>
d (0.9) µm	132.1 ± 0.43 <sup>b</sup>	834.8 ± 9.13 <sup>a</sup>
Volume Weighted Mean, µm	62.3 ± 0.48 <sup>b</sup>	236.8 ± 3.69 <sup>a</sup>
Composition <sup>4</sup> :		
Protein, %	23.9 ± 0.05 <sup>a</sup>	22.1 ± 0.01 <sup>b</sup>
Total Starch, %	54.7 ± 1.38 <sup>a</sup>	49.5 ± 0.94 <sup>b</sup>
Total Dietary Fibre, %	7.0	16.0
Soluble Fibre, %	0.4	1.4
Insoluble Fibre, %	6.6	14.5
Pasting Properties:		
Peak Viscosity, RVU	228.42 ± 3.77 <sup>a</sup>	175.09 ± 0.59 <sup>b</sup>
Hot Paste Viscosity, RVU	187.88 ± 3.12 <sup>a</sup>	134.25 ± 0.47 <sup>b</sup>
Breakdown, RVU	40.55 ± 6.89 <sup>a</sup>	40.84 ± 0.12 <sup>a</sup>
Final Viscosity, RVU	349.59 ± 2.95 <sup>a</sup>	211.08 ± 2.83 <sup>b</sup>
Setback, RVU	161.71 ± 0.18 <sup>a</sup>	76.84 ± 2.35 <sup>b</sup>
Pasting Time, min	5.05 ± 0.10 <sup>a</sup>	4.65 ± 0.00 <sup>b</sup>
Functional Properties:		
Starch Damage, %	2.98 ± 0.01 <sup>a</sup>	2.75 ± 0.11 <sup>a</sup>
Water Absorption Capacity, g/g	1.35 ± 0.03 <sup>a</sup>	1.41 ± 0.00 <sup>a</sup>
Oil Absorption Capacity, g/g	0.82 ± 0.01 <sup>a</sup>	0.85 ± 0.03 <sup>a</sup>
Foam Stability, % 10 min	86.1 ± 6.01 <sup>a</sup>	83.8 ± 13.51 <sup>a</sup>
30 min	65.9 ± 6.51 <sup>a</sup>	59.2 ± 10.68 <sup>a</sup>
60 min	52.0 ± 0.49 <sup>a</sup>	44.3 ± 3.39 <sup>a</sup>
120 min	42.1 ± 4.81 <sup>a</sup>	34.5 ± 7.78 <sup>a</sup>
Foam Capacity, %	20.0 ± 14.14 <sup>a</sup>	18.0 ± 2.83 <sup>a</sup>
Emulsifying Activity, %	42.8 ± 0.28 <sup>a</sup>	38.7 ± 2.62 <sup>a</sup>
Emulsifying Stability, %	16.6 ± 3.82 <sup>a</sup>	8.1 ± 4.31 <sup>a</sup>
Colour:		
L*	75.6 ± 0.00 <sup>a</sup>	74.3 ± 0.00 <sup>b</sup>
a*	1.48 ± 0.00 <sup>a</sup>	0.88 ± 0.01 <sup>b</sup>
b*	38.6 ± 0.00 <sup>a</sup>	34.7 ± 0.01 <sup>b</sup>

<sup>1</sup> Variety: CDC Meadow.

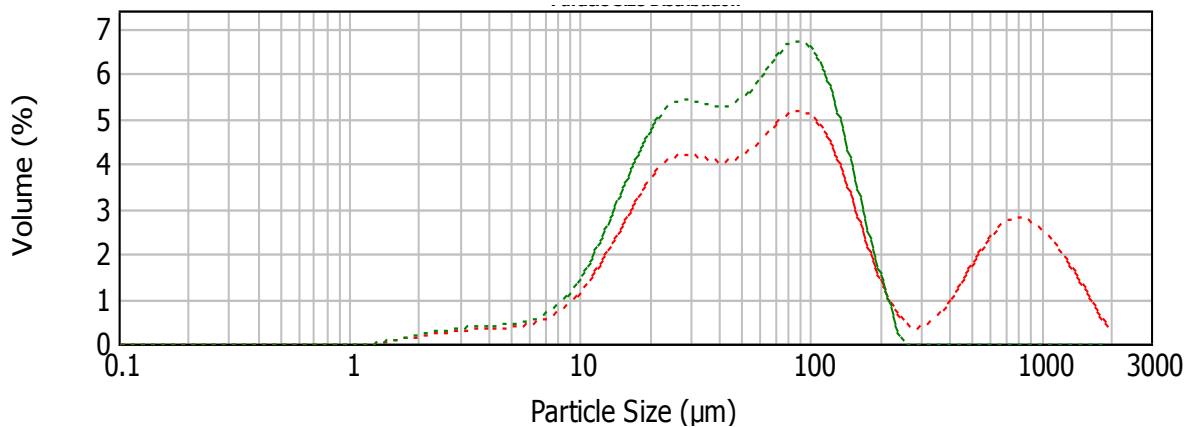
<sup>2</sup> For explanation of testing methodology refer to Glossary of Analytical Terminology.

<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 Roller Milled Yellow Pea Flours



- Unrefined Yellow Pea Flour
- Refined Yellow Pea Flour

### CONTACT US

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### Project Partners and Funders

