



Properties of Commercially Available Pulse Flours

Analytical Properties ^{1,2}	Chickpea	Faba Bean	French Lentil	Navy Bean
Particle Size Distribution:				
d (0.1) µm	13.9	12.5	4.7	15.5
d (0.5) µm	111.9	135.8	19.1	186.5
d (0.9) µm	423.9	486.9	135.8	788.3
Volume Weighted Mean, µm	172.1	198.0	52.5	306.7
Composition:				
Protein, %	25.2	33.4	25.7	25.7
Starch, %	42.8	46.1	48.2	37.4
Amylose ³, (% w/w)	27.7	30.3	33.0	30.6
Amylopectin ³, (% w/w)	72.3	69.7	67.0	69.4
Pasting Properties:				
Peak Viscosity, RVU	120	128	162	100
Hot Paste Viscosity, RVU	113	127	128	n/a
Breakdown, RVU	6	1	34	n/a
Final Viscosity, RVU	150	257	220	196
Setback, RVU	36	130	92	n/a
Pasting Time, min	6.12	6.32	4.75	6.82
Functional Properties:				
Starch Damage, %	1.67	3.29	1.11	0.43
Water Absorption Capacity, g/g	1.07	1.12	1.33	1.59
Oil Absorption Capacity, g/g	0.89	0.85	0.72	0.83
Foam Capacity, %	22.0	25.0	30.5	44.5
Foam Stability, % 10 min	64.1	90.3	85.9	80.0
30 min	48.4	69.2	65.4	73.1
60 min	32.8	56.4	55.4	64.7
120 min	18.8	46.4	51.3	57.7
Emulsifying Activity, %	39.3	40.4	12.1	32.5
Emulsifying Stability, %	60.4	95.7	44.8	27.5

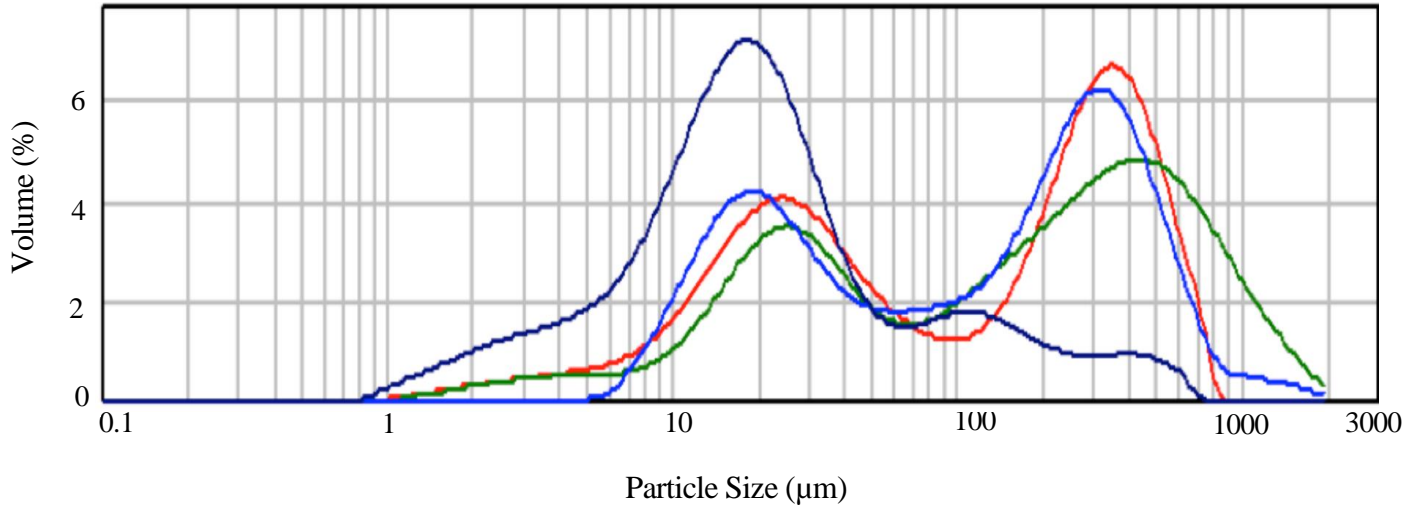
¹ Results reported on a dry weight basis unless otherwise indicated

² For explanation of testing methodology refer to Glossary of Analytical Testing

³ Amylose and amylopectin reported as percentage of starch content and are reported on an “as is” basis



Particle Size Distribution Curves for Commercially Available Pulse Flours



- Faba Bean
- Navy Bean
- Chickpea
- French Lentil

CONTACT US

To learn more or to discuss your application needs please contact:

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Properties of Commercially Available Pulse Flours

Analytical Properties ^{1,2}	Split Red Lentil	Split Yellow Pea	Whole Yellow Pea	Black Bean
Particle Size Distribution:				
d (0.1) µm	8.2	18.1	16.3	13.3
d (0.5) µm	56.8	211.0	170.8	139.6
d (0.9) µm	306.9	747.2	600.1	652.5
Volume Weighted Mean, µm	123.4	308.7	246.1	251.0
Composition:				
Protein, %	29.7	26.6	21.2	24.5
Starch, %	51.6	48.8	47.2	36.8
Amylose ³, (% w/w)	29.8	29.4	29.1	n/a
Amylopectin ³, (% w/w)	70.1	70.6	70.9	n/a
Pasting Properties:				
Peak Viscosity, RVU	221	136	123	134
Hot Paste Viscosity, RVU	187	129	117	130
Breakdown, RVU	34	6	6	4
Final Viscosity, RVU	300	247	179	203
Setback, RVU	113	118	62	73
Pasting Time, min	5.08	5.36	5.05	6.49
Functional Properties:				
Starch Damage, %	2.05	1.28	1.49	0.42
Water Absorption Capacity, g/g	0.91	1.17	1.25	1.80
Oil Absorption Capacity, g/g	0.69	0.74	0.83	0.84
Foam Capacity, %	26.0	30.0	31.0	31.5
Foam Stability, % 10 min	88.3	85.2	81.3	87.0
30 min	74.9	59.2	52.7	77.2
60 min	68.2	45.7	39.5	56.5
120 min	60.0	33.3	26.3	48.9
Emulsifying Activity, %	37.8	37.4	37.6	37.6
Emulsifying Stability, %	75.0	13.6	13.9	23.8

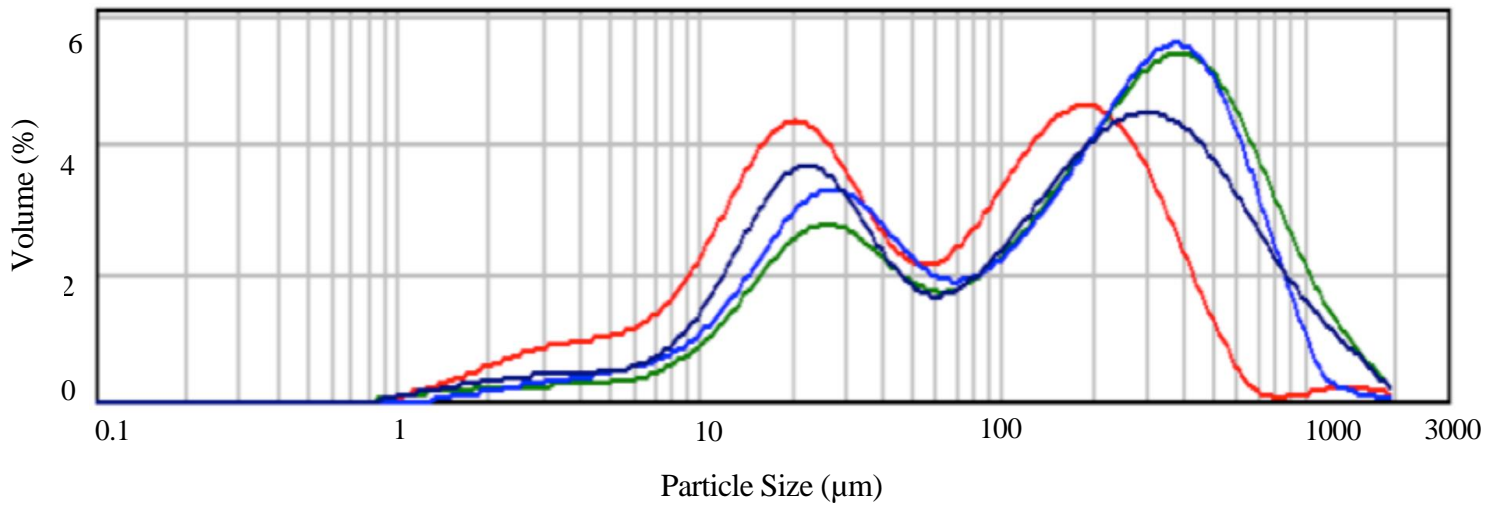
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Particle Size Distribution Curves for Commercially Available Pulse Flours



- Split Red Lentil
- Split Yellow Pea
- Whole Yellow Pea
- Black Bean

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