

Calibration List IM 9500

Product	Parameter	Samples	Range (%)	R	Sample prep.
Whole Grain					
Barley	Moisture *	4000+	7.2 - 25.6	0.99	None
	Protein *	7300+	7.1 - 17.74	0.98	None
	Nitrogen	2000+	1.08 - 2.81	0.96	None
	Starch	3000+	58.8 - 67.1	0.85	None
Canola/Rapeseed	Moisture *	2500+	4.4 - 21.8	0.99	None
	Oil *	2500+	36.7 - 52.3	0.97	None
	Protein	1000+	12 - 27.18	0.94	None
Corn	Moisture *	1000+	5.7 - 44.7	1.00	None
	Protein *	800+	5.2 - 15.9	0.97	None
	Oil *	800+	2.7 - 18.5	0.97	None
	Starch	300+	60.0 - 74.8	0.98	None
Field Beans	Moisture	800+	8.6 - 29.6	0.99	None
	Protein	700+	22.5 - 37.4	0.86	None
Field Peas	Moisture	900+	8.8 - 22.6	0.99	None
	Protein	700+	17.2 - 27.6	0.92	None
Malted Barley	Moisture	400+	2.3 - 6.3	0.83	None
	Protein	400+	7.3 - 15.0	0.91	None
	Soluble Protein	400+	3.3 - 6.1	0.81	None
	Soluble Nitrogen	400+	0.53 - 0.98	0.72	None
	Extract FG	300	76.0 - 85.0	0.86	None
Mustard	Moisture	1700+	3 - 11	0.91	None
	Oil	1800+	36.2 - 47.8	0.9	None
Oats	Moisture *	1100+	7.8 - 25.3	0.99	None
	Protein *	1200+	7.17 - 16.57	0.94	None
Rice, brown and polished	Moisture	100	11.2 - 16.0	0.97	None
	Protein	100	7.1 - 10.2	0.94	None
Rice, paddy	Moisture	100+	10.0 - 27.2	0.99	None
	Moisture *	1100+	9.1 - 27	1.00	None
Rye	Protein *	900+	5.7 - 14.5	0.99	None
	Moisture	200+	10.4 - 18.7	0.99	None
Sorghum	Protein	100+	8.0 - 13.8	0.93	None
	Moisture *	1200+	5.3 - 18.1	0.99	None
Soybeans	Protein *	700+	32.2 - 54.7	0.99	None
	Oil *	700+	15.6 - 28.9	0.98	None
	Fiber	700+	4.2 - 6.3	0.97	None
	Moisture	4000+	7.1 - 25.7	1.00	None
	Protein	4000+	7.2 - 23.8	0.99	None
Wheat (soft and durum)	Moisture *	6000+	7.1 - 25.7	0.99	None
	Protein *	18500+	6.9 - 22.4	0.99	None
	Starch	2000+	65.2 - 73.0	0.92	None
	Wet gluten *	6000+	11.3 - 45.5	0.98	None
	Zeleny sedim.	2000+	8.6 - 78.4	0.94	None
Flour Module					
Wheat Flour Part no. 35370	Moisture	2500+	9.15 - 16.2	0.97	Flour cuvette
	Protein	1500+	6.0 - 21.6	0.99	Flour cuvette
	Ash	2500+	0.32 - 0.90	0.97	Flour cuvette
	Wet gluten	1500+	16.0 - 53.0	0.93	Flour cuvette
	Zeleny sedimentation	800+	7 - 54	0.91	Flour cuvette
	Brightness L	500+	83.9 - 92.8	0.95	Flour cuvette
Whole meal Flour Part no. 35370	Moisture	2500+	9.15 - 16.2	0.97	Flour cuvette
	Protein	1500+	6.0 - 21.6	0.99	Flour cuvette
	Ash	3000+	0.26 - 2.19	0.98	Flour cuvette
	Brightness L	400+	83.9 - 92.8	0.95	Flour cuvette
Rye Flour Part no. 35370	Moisture	150	9.8 - 15.2	0.99	Flour cuvette
	Protein	1000+	6.1 - 21.3	0.99	Flour cuvette
	Ash	180	0.53 - 4.06	0.98	Flour cuvette
Wheat Bran Part no. 35390	Moisture	200	10.8 - 13.8	0.85	Semolina cuvette
	Protein	100	14.7 - 18.7	0.86	Semolina cuvette
	Ash	200	5.9 - 7.3	0.67	Semolina cuvette
Semolina/Durum Flour Part no. 35390	Moisture	250	9.5 - 15.4	0.99	Semolina cuvette
	Protein	250	10.5 - 15.6	0.97	Semolina cuvette
	Ash	500	0.61 - 7.55	0.99	Semolina cuvette
	Yellowness b	380	17.1 - 38.4	0.91	Semolina cuvette
	Brightness L	250	77.7 - 89.2	0.97	Semolina cuvette
Small sample cuvette					
Green Malt part no. 33741	Moisture	100+	32-52	0.96	Small sample cuvette

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NIR is an indirect method and the actual accuracy will depend on the accuracy of the reference method which is used for comparison with the IM 9500. For most products and parameters a typical accuracy would be 1-1.5 times the accuracy of the reference method.

* IM 9500 is delivered with these calibrations pre-installed.

Please contact your local Pertten representative with request on other products and/or parameters