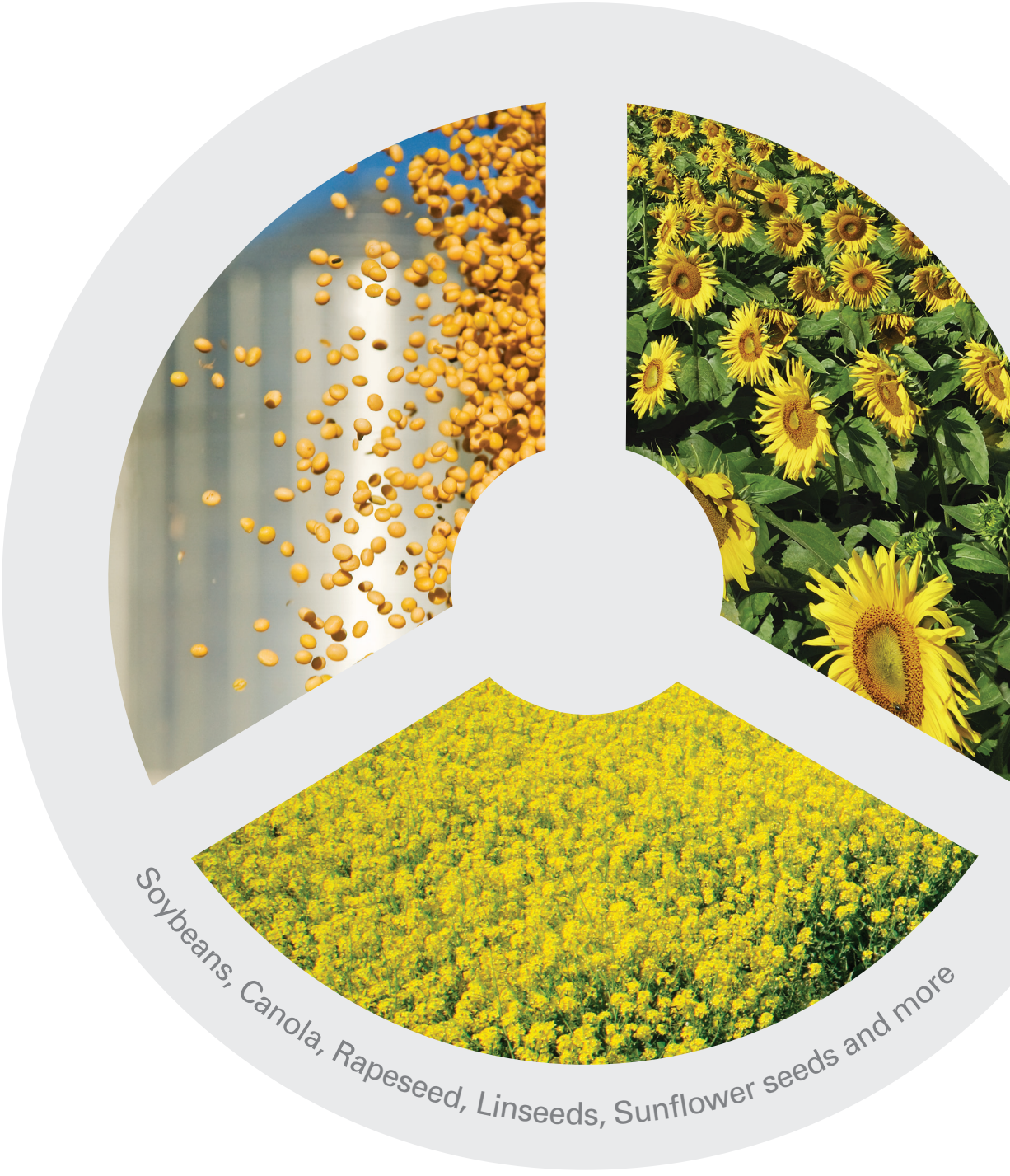
Calibration Package

Oilseed Milling



The DA 7250 is used extensively in the oilseed processing industry. Its accuracy, speed and flexibility make it especially suited for analysis of oilseeds and related products. This calibration package consists of two parts:

Basic which includes most parameters, and Extended parameters which includes calibrations for additional parameters.

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Oilseed calibrations

Product	Parameter	Samples	Range (%)	R	Sample prep.
Canola/Rapeseed	Moisture	2700+	3.6 - 16.8	0,95	None
	Oil	2600+	27.7 - 52.8	0,97	None
	Protein	1900+	15.2 - 32	0,99	None
	Ash	200+	3.2 - 5	0,83	None
	Chlorophyll (ppm)	500+	0.7 - 34	0,76	None
*	Oleic acid	900+	11.5 - 66.7	0,98	None
*	Linoleic acid	1400+	11.3 - 29.9	0,95	None
*	Linolenic acid	1300+	2.6 - 14.8	0,91	None
*	Palmitic acid	400+	3 - 5.6	0,92	None
*	Stearic acid	400+	0.9 - 3	0,9	None
*	Eicosenoic acid	100	0.6 - 12.1	0,95	None
*	Erucic acid	500+	0.04-3.1	0,93	None
*	Saturated fatty acids	900+	4.7 - 7.1	0,9	None
*	Glucosinolates (µmol/g)	800+	6.3 - 123	0,99	None
Linseeds	Moisture	100+	6 - 9	0,9737	None
	Oil	100+	37 - 45	0,9375	None
	Protein	100+	19 - 24	0,8301	None
Soybeans	Moisture	1100+	3 - 16	0,981	None
	Oil	2600+	15.8 - 24.3	0,921	None
	Protein	2700+	32.5 - 53.6	0,97	None
	Ash	800+	4.6 - 6.2	0,594	None
	Fiber	800+	4.2 - 8.6	0,68	None
*	Oleic acid	2200+	13.8 - 47.3	0,85	None
*	Linoleic acid	2200+	38.8 - 71.2	0,84	None
*	Linolenic acid	2300+	1.1 - 14.2	0,92	None
*	Palmitic acid	2200+	3.3 - 13.7	0,883	None
*	Stearic acid	2200+	2.5 - 5.3	0,76	None
*	Aspartic acid	1200+	3.4 - 6.4	0,91	Grinding
*	Threonine	1200+	1.2 - 2.5	0,94	Grinding
*	Serine	1200+	1.4 - 4.2	0,96	Grinding
*	Glutamic acid	1200+	2.7 - 10	0,95	Grinding
*	Proline	1300+	1.5 - 3.2	0,92	Grinding
*	Glycine	1200+	1.3 - 4.9	0,96	Grinding
*	Alanine	1200+	1.4 - 3	0,95	Grinding
*	Cysteine	1000+	0.01-1.1	0,93	Grinding
*	Valine	1200+	1.4 - 3.7	0,94	Grinding
*	Methionine	1000+	0.4 - 1	0,87	Grinding
*	Isoleucine	1200+	1.1 - 2.6	0,92	Grinding
*	Leucine	1200+	1.5 - 4.2	0,96	Grinding
*	Tyrosine	1100+	0.8 - 2.5	0,93	Grinding
*	Phenyalanine	1200+	1.4 - 3.1	0,91	Grinding
*	Lysine	1300+	1.1 - 3.4	0,89	Grinding
*	Histidine	1200+	0.8 - 4	0,95	Grinding
*	Arginine	1200+	2.2 - 4.5	0,88	Grinding
*	Tryptophan	900+	0.2 - 0.6	0,77	Grinding
Sunflower seeds	Moisture	1200+	4.1-11.4	0,95	None
	Oil	1200+	36.2-52.7	0,96	None
*	Oleic acid	200+	19.9-92	0,91	None
*	Linoleic acid	< 100	2.4-67.6	0,94	None

Oilseed product calibrations

Product	Parameter	Samples	Range (%)	R	Sample prep.
Canola/rapeseed expeller and meal	Moisture	900+	1.5 - 15.3	0.98	None
	Protein	800+	28 - 40	0.97	None
	Oil	700+	0.9 - 15.3	0.98	None
	Fiber	200+	6.7 - 14.7	0.95	None
	Ash	100+	5.2 - 7.2	0.95	None
Expelled Canola/rapeseed meal (ECM)	Moisture	100+	1.6 - 10.5	0.99	Grinding
	Protein	100+	28.6 - 43.9	0.99	Grinding
	Oil	100+	4.9 - 25.7	0.99	Grinding
	Crude fiber	100+	7.1 - 11.3	0.91	Grinding
	Ash	100+	4.4 - 7.1	0.99	Grinding
Cottonseed hulls	Moisture	200+	5.2 - 9.7	0.97	None
	Protein	200+	3.2 - 20	0.96	None
	Oil	200+	0.7 - 4.6	0.96	None
	Fiber	200+	25.4 - 52.6	0.96	None
Cottonseed meal	Moisture	200+	7.1 - 17.3	0.97	None
	Protein	200+	30.9 - 46.3	0.97	None
	Oil	200+	5.2 - 8.6	0.98	None
	Fiber	100+	7.2 - 18.5	0.95	None
Palm expeller	Moisture	<100	4.2 - 11.1	0.99	None
	Protein	<100	14.2 - 16.2	0.91	None
	Oil	<100	5.9 - 10.5	0.91	None
Soymeal	Moisture	1700+	9.2 - 14.6	0.91	None
	Protein	2200+	41.1 - 51.6	0.97	None
	Oil	1600+	0.2 - 3.3	0.9	None
	Fiber	1300+	1.8 - 10.2	0.94	None
	Ash	500+	5.4 - 7.5	0.68	None
*	Aspartic acid	1800+	4.4 - 6.7	0.87	None
*	Threonine	1800+	1.4 - 2.3	0.81	None
*	Serine	1700+	1.6 - 2.8	0.62	None
*	Glutamic acid	1800+	6.7 - 11	0.89	None
*	Proline	1800+	1.8 - 2.9	0.82	None
*	Glycine	1800+	1.5 - 2.4	0.87	None
*	Alanine	1700+	1.7 - 2.5	0.83	None
*	Cysteine	1800+	0.6 - 0.9	0.80	None
*	Valine	1800+	1.8 - 2.9	0.74	None
*	Methionine	1800+	0.6 - 0.8	0.80	None
*	Isoleucine	1800+	1.7 - 2.8	0.78	None
*	Leucine	1800+	3 - 4.6	0.87	None
*	Tyrosine	1800+	1.4 - 2.1	0.84	None
*	Phenylalanine	1800+	2 - 2.9	0.87	None
*	Lysine	1800+	2.5 - 3.7	0.87	None
*	Histidine	1800+	1 - 1.5	0.83	None
*	Arginine	1900+	2.8 - 4.3	0.88	None
*	Tryptophan	1800+	0.5 - 0.8	0.78	None
Expelled Soybean meal (ESBM)	Moisture	400+	3.4 - 11.1	0.99	None
	Protein	500+	41.5 - 50.7	0.98	None
	Oil	400+	3.2 - 18.5	0.99	None
	Fiber	300+	2 - 6.3	0.96	None
	Ash	300+	5.2 - 7.4	0.85	None
	PDI	400+	9 - 99.5	0.98	None

Oilseed product calibrations

Product	Parameter	Samples	Range (%)	R	Sample prep.
Soy flour	Moisture	200+	2.1 - 6.9	0.95	None
	Protein	100+	41.3 - 52	0.95	None
	Oil	100+	0.5 - 1.7	0.96	None
	Fiber	100+	1.6 - 4.1	0.82	None
	PDI (low)	100+	21 - 69	0.99	None
	PDI (mid)	100+	21 - 86	0.98	None
	PDI (high)	100+	52.2 - 98	0.97	None
Soy hulls	Moisture	400+	4 - 16.5	0.99	None
	Protein	100+	9.3 - 20.2	0.98	None
	Oil	300+	0.6 - 5.3	0.97	None
	Fiber	100+	27.5 - 41.3	0.95	None
Soy white flakes	Moisture	300+	3 - 9.6	0.95	None
	Protein	300+	44.2 - 53.2	0.95	None
	Oil	300+	0.4 - 9.6	0.98	None
	Fiber	300+	0.4 - 3.7	0.96	None
Sunflower meal	Moisture	300+	4.8 - 13.6	0.93	None
	Protein	300+	22.7 - 40.6	0.96	None
	Oil	200+	0.5 - 19.8	0.98	None
	Fiber	100+	12.8 - 26.9	0.88	None
	Ash	<100	5.2 - 9.5	0.89	None
Vegetable oils	FFA	300+	0.1 - 7.6	0.94	None
	Phosphorus (ppm)	200+	1 - 359	0.92	None

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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 DA 7250. For most products and parameters a typical accuracy would be 1-1.5 times the accuracy of the reference method.

⋆ Only included in the Extended parameters package

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