



Seeds, Spices and Grains for the Baking Industry

GRAIN & SEED NUTRITIONAL COMPARISON

Whole Grain Formulation Guide for Nutrition with Flavor

		Whole Grain Components								Flavor Components					
		28.00% 0.00% 37.50% 22.00% 0.00% 0.00% 0.00% 0.00%								0.00% 12.50% 0.00% 0.00% 0.00% 0.00%					
		Millet	Quinoa	Spelt	Wheat	Corn	Rice	Barley	Oats	Amaranth	Flax	Sesame	Sunflower	Pumpkin	Chia
Proximates															
Water	g	8.67	9.3	6.62	10.27	10.26	11.89	12.11	8.22	9.84	8.75	4.81	5.36	6.92	4.9
Energy	kcal	378	374	382	339	362	366	345	389	374	492	592	570	541	490
Protein	g	11.02	13.1	14.26	13.7	8.12	5.95	10.5	16.89	14.45	19.5	20.33	22.78	24.54	15.62
Total lipid (fat)	g	4.22	5.8	2.94	1.87	3.59	1.42	1.6	6.9	6.51	34	54.78	49.57	45.85	30.75
Ash	g	3.25	2.9	1.67	1.6	1.13	0.61	1.28	1.72	3.04	3.5	4.64	3.53	4.88	4.87
Carbohydrate, by difference	g	72.85	68.9	60.07	72.57	76.89	80.13	74.52	66.27	66.17	34.25	15.44	18.76	17.81	43.85
Fiber, total dietary	g	8.5	5.9	9.3	12.2	7.3	2.4	10.1	10.6	15.2	27.9	12.7	10.5	3.9	37.7
Minerals															
Calcium, Ca	mg	8	60	6.96	34	6	10	32	54	153	199	131	116	43	631
Iron, Fe	mg	3.01	9.25	4.17	3.88	3.45	0.35	2.68	4.72	7.59	6.22	7.8	6.77	14.97	0
Magnesium, Mg	mg	114	210	0	138	127	35	96	177	266	362	347	354	535	466
Phosphorus, P	mg	285	410	0	346	241	98	296	523	455	498	776	705	1174	948
Potassium, K	mg	195	740	385	405	287	76	309	429	366	681	407	689	807	160
Sodium, Na	mg	5	21	1.72	5	35	0	4	2	21	34	40	3	18	19
Zinc, Zn	mg	1.68	3.3	3.4	2.93	1.82	0.8	2	3.97	3.18	4.17	10.25	5.06	7.46	3.49
Copper, Cu	mg	0.75	0.82	0.62	0.382	0.193	0.13	0.343	0.626	0.777	1.041	1.46	1.752	1.387	0.188
Manganese, Mn	mg	1.632	2.26	2.9	3.799	0.498	1.2	1.034	4.916	2.26	3.281	1.43	2.02	3.021	2.167
Vitamins															
Vitamin C, total ascorbic acid	mg	0	0	0	0	0	0	0	0	4.2	1.3	0	1.4	1.9	0
Thiamin	mg	0.421	0.198	0.649	0.447	0.385	0.138	0.37	0.763	0.08	0.17	0.722	2.29	0.21	0
Riboflavin	mg	0.29	0.396	0.227	0.215	0.201	0.021	0.114	0.139	0.208	0.16	0.085	0.25	0.32	0
Niacin	mg	4.72	2.93	8.46	6.365	3.632	2.59	6.269	0.961	1.286	1.4	4.682	4.5	1.745	0
Vitamin B-6	mg	0.384	0.223	0	0.341	0.304	0.436	0.396	0.119	0.223	0.927	0.146	0.77	0.224	0
Folate, food	mcg	85	49	0	44	25	4	8	56	49	278	96	227	58	0
Vitamin A, IU	IU	0	0	41	9	214	0	0	0	0	0	66	50	380	0
Lipids															
Fatty acids, total saturated	g	0.723	0.59	0.7	0.322	0.505	0.386	0.335	1.217	1.662	3.196	7.672	5.195	8.674	3.176
monounsaturated	g	0.773	1.535	0.7	0.232	0.948	0.442	0.205	2.178	1.433	6.868	20.687	9.462	14.258	2.115
polyunsaturated	g	2.134	2.347	2.2	0.779	1.638	0.379	0.771	2.535	2.891	22.44	24.011	32.735	20.904	23.335
Cholesterol	mg	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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100.00%

Your Blend
8.26
385.17
13.88
6.95
2.33
63.17
12.04

37.21
4.04
107.53
218.17
373.20
6.75
2.91
0.66
2.79

0.16
0.48
0.23
6.07
0.30
68.23
17.36

0.94
1.39
4.40
0.00