

Table S1. Comparison of mean nutrient composition of hot cereals, cold cereals, cereal and fruit bars, and breads (unfilled) from the Mintel Database which pass or fail the three carbohydrate metrics

Nutrient	Unit	Simple Ratio			Dual Ratio			Modified Ratio		
		Mean		P	Mean		P	Mean		P
		Pass	Fail	Value	Pass	Fail	Value	Pass	Fail	Value
Hot Cereals (N=279)										
Percentage of Products		75	25		66	34		62	38	
Energy	Kcal	373.8	387.9	0.038	376.9	378.1	0.873	375.8	379.7	0.566
Total Carbohydrates	g	65.4	73.7	<0.001	65.5	71.3	<0.001	65.5	70.6	<0.001
Dietary Fibre	g	10.5	5.7	<0.001	8.3	6.7	<0.001	10.9	6.7	<0.001
Total Sugars	g	5.5	20.3	<0.001	3.5	20.2	<0.001	2.4	19.9	<0.001
Free Sugars	g	4.6	19.8	<0.001	2.5	19.8	<0.001	1.3	19.6	<0.001
Protein	g	12.2	9.9	<0.001	12.6	9.8	<0.001	12.7	10.0	<0.001
xTotal Fat	g	8.1	6.7	<0.001	8.3	6.7	<0.001	8.2	7.0	<0.001
Saturated Fat	g	1.7	2.3	0.073	1.7	2.0	0.210	1.6	2.2	0.013
Sodium	mg	67.0	343.0	<0.001	65.0	276.0	<0.001	65.0	251.0	<0.001
Cold Cereals (N=933)										
Percentage of Products		46	54		37	63		31	69	
Energy	Kcal	386.5	389.4	0.249	382.2	391.5	0.001	381.1	391.2	0.001
Total Carbohydrates	g	70.2	79.9	<0.001	69.7	78.7	<0.001	69.5	78.1	<0.001
Dietary Fibre	g	11.1	4.7	<0.001	11.8	5.3	<0.001	11.5	5.9	<0.001
Total Sugars	g	16.9	25.7	<0.001	15.4	25.3	<0.001	15.0	24.6	<0.001
Free Sugars	g	10.8	23.5	<0.001	7.7	23.4	<0.001	6.0	22.9	<0.001
Protein	g	10.3	8.0	<0.001	10.6	8.2	<0.001	10.5	8.4	<0.001
Total Fat	g	9.2	4.8	<0.001	9.0	5.6	<0.001	8.9	5.9	<0.001
Saturated Fat	g	2.1	1.3	<0.001	2.0	1.5	<0.001	2.1	1.5	<0.001
Sodium	mg	139.0	293.0	<0.001	130.0	276.0	<0.001	124.0	266.0	<0.001
Cereal & Fruit Bars (N=680)										
Percentage of Products		56	44		31	69		19	81	
Energy	Kcal	385.4	398.1	0.002	381.8	395.1	<0.001	379.7	393.6	0.006
Total Carbohydrates	g	62.9	68	<0.001	62.1	66.5	<0.001	60.9	66.1	<0.001
Dietary Fibre	g	10.2	4.0	<0.001	11.9	5.4	<0.001	11.5	6.5	<0.001
Total Sugars	g	27.5	31.1	<0.001	27.4	29.9	<0.001	33.2	28.2	0.001
Free Sugars	g	15.2	26.4	<0.001	8.4	25.4	<0.001	2.4	24.2	<0.001
Protein	g	10.2	6.9	<0.001	10.6	7.9	<0.001	10.4	8.3	0.002
Total Fat	g	13.3	11.8	<0.001	13.3	12.3	<0.001	14.0	12.3	0.002
Saturated Fat	g	4.4	5.2	0.003	4.1	5.0	0.001	4.2	4.9	0.056
Sodium	mg	110.0	168.0	<0.001	95.0	153.0	<0.001	66.0	151.0	<0.001
Breads (Unfilled) (N=306)										
Percentage of Products		34	66							
Energy	Kcal	252.2	290.0	<0.001						
Total Carbohydrates	g	46.2	51.4	<0.001						
Dietary Fibre	g	7.5	2.9	<0.001						
Total Sugars	g	3.1	5.0	<0.001						
Free Sugars	g	0.0	0.0	-	All Breads (Unfilled) which passed for simple ratio also passed for the dual and modified ratios					
Protein	g	9.2	8.7	0.144						
Total Fat	g	4.3	5.9	<0.001						
Saturated Fat	g	1.5	2.4	<0.001						
Sodium	mg	391.0	434.0	0.011						

All Breads (Unfilled) which passed for simple ratio also passed for the dual and modified ratios

Table S2. Proportion of packaged carbohydrate-based foods and beverages which have whole grain claims and/or communication

Region	Percentage of Foods with Whole Grain Positioning	Percentage of Beverages with Whole Grain Positioning
Australia	31.6% (N=692)	1.6% (N=6)
Southeast Asia	18.8% (N=672)	3.7% (N=82)

Table S3. Association between carbohydrate metrics and whole grain claims and/or communication for foods assessed from the Mintel Database

Number of products	Simple Ratio		Dual Ratio		Modified Ratio	
	Pass	Fail	Pass	Fail	Pass	Fail
Whole Grain Claim	731	633	540	824	438	926
No Whole Grain Claim	781	3628	549	3860	478	3931
Pearson Chi-Square	693.7		501.3		353.0	
P-Value	<0.001		<0.001		<0.001	

Table S4. Association between carbohydrate metrics and whole grain claims and/or communication for beverages assessed from the Mintel Database

Number of products	Simple Ratio		Dual Ratio		Modified Ratio	
	Pass	Fail	Pass	Fail	Pass	Fail
Whole Grain Claim	29	59	18	70	7	81
No Whole Grain Claim	424	2105	163	2366	102	2427
Pearson Chi-Square	15.6		25.9		3.3	
P-Value	<0.001		<0.001		0.070	

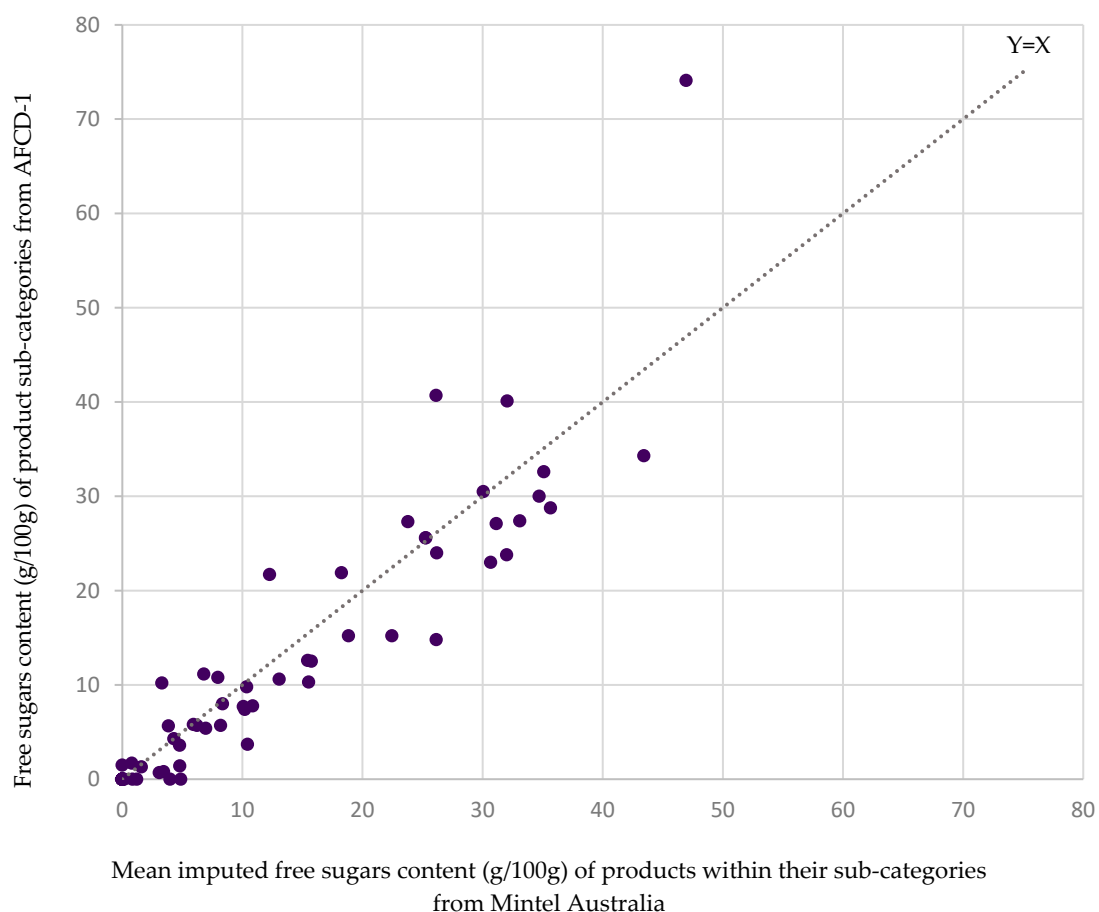


Figure S1. Mean free sugars content of products within a sub-category from Mintel Australia versus the free sugars content of the same sub-category from AFCD-1. Each point represents a product sub-category. The mean free sugars content of 1565 products which belonged to 69 sub-categories in AFCD-1 were tabulated.