

Resistant Starch in Foods - Search 'resistant starch' at freetheanimal.com for more information

Bread/Pasta/Cereal	Min	Max	Method	Ref
100g, as eaten				
Bread, Bagels	.7		A	12
Bread, Brioche	1.7		A	12
Bread, Croissant	.4	.7	B	6,12
Bread, Croutons	1.4		A	12
Bread, Crumpets	1		B	6
Bread, English Muffins	1		B	6
Bread, English Muffins	1		A	12
Bread, Focaccia	1.2		B	6
Bread, Focaccia	1.2		A	12
Bread, Italian	.6	1.7	A	12
Bread, Lebanese Flat Bread	1.6		B	6
Bread, Mixed Grain	.9		B	6
Bread, Multigrain	.9		A	12
Bread, Naan	.3		A	12
Bread, Oatmeal	1.2		A	12
Bread, Pancakes	.4	.7	B	6
Bread, Pita, Wheat	1.3		A	12
Bread, Pita, White	1.9		A	12
Bread, Pizza dough	2.8		A	12
Bread, Poori	.6		A	12
Bread, Pumpernickle	4.5	9.4	A	8, 12
Bread, Rye	3.2	4.5		5,6
Bread, Rye, wholemeal	3.2		A	12
Bread, Sourdough	2.1		A	12
Bread, Sweet Rolls	.2		A	12
Bread, Tortilla, Flour	0		A	12
Bread, Tortilla, Wheat	0		A	12
Bread, Wheat	1.2			5
Bread, Wheat Germ	.1		A	12
Bread, Wheat rolls	.1		A	12
Bread, White, Fresh	.55	3.38	B	2,6
Bread, White, Frozen for 30 days	7.35		B	2
Bread, Whole Wheat	1		A	12
Breadsticks	2.3		A	12
Cakes, muffins, pies, waffles	.1	1	A/B	12
Cereal, All Bran	.4	1.10	A	1,12
Cereal, Alpen	0		B	12
Cereal, Bran Buds	.6		B	12

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Cereal, Bran Flakes	.7		B	12
Cereal, Corn Flakes	3.2	6.3		1,5,12
Cereal, Corn Squares	1.3		B	12
Cereal, Flaked Rice	0		B	12
Cereal, Granola	.1		B	12
Cereal, Grapenuts	.8		B	12
Cereal, Hot Porridge	.1		B	6
Cereal, Muesli	1.3	4.3	A/B	1,6,12
Cereal, Oat Bran	1		B	1,12
Cereal, Oatmeal Squares	.6		B	12
Cereal, Porridge Oats	.1			1
Cereal, Puffed Corn	1.4		B	12
Cereal, Puffed Rice	2.3		B	12
Cereal, Puffed Wheat	6.2			5,12
Cereal, Rice Krispies	1	2.5	B	12
Cereal, Rice Squares	4.2		B	12
Cereal, Shredded Wheat	1.2	2.3		1,6,12
Cereal, Smacks	1.6		B	12
Cereal, Special K	1.6		B	12
Cereal, Toasted Oats	1.2		B	12
Cereal, Wheat Squares	1.4		B	12
Cereal, Whole Wheat Flakes	1		B	12
Cereal, Weetabix	0	.2		1,12
Chips/Snacks	.2	1	A/B	12
Chips/Snacks, Pretzels	1		B	6
Cookies/Crackers	0	1	A/B	12
Pasta, Egg Noodles	.9	1.5	B	6
Pasta, Macaroni (100 g dry weight)	6		B	10
Pasta, Spaghetti	.78	3.3	B	2,10
Pasta, Spaghetti - Cooked/Cooled	.84		B	2

Corn Products	Min	Max	Method	Ref
100g as eaten				
Arepas (hi-amylose corn flatbread)	32		B	8
Arepas (low-amylose corn flatbread)	4.2		B	8
Corn - Cooked	3.85		B	2
Corn - Cooked/Cooled	4.4		B	2
Corn Chips (Fritos)	.7		B	6,12
Corn, Masa	2.05	2.27	B	3
Corn, Nixtamal	2.18	2.60	B	3
Corn, Popcorn	.3		B	6

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Corn, Sweet Corn	1.16		B	4
Corn, Tortilla	3.12	3.87	B	3
Hominy Grits	8		B	8
Polenta	1.38		B	2
Polenta - Cooked/Cooled	2.22		B	2
Sweet Corn, canned	.3		A	12
Taco Shell	.85		B	6

Legumes/Nuts/Seeds	Min	Max	Method	Ref
100g (as eaten) (approx ½ cup)				
Baked Beans (various preps)	1.5	5.6	B	6
Bean Flakes – Boiled	8		A	8
Black Beans, cooked	10.76		B	10
Black Beans, raw	18.3		B	9
Black Cowpea	4.59		B	4
Black-eyed peas	7		B	10
Butter Beans	1.2	2.6	B	6
Canned Beans in tomato sauce	.9	1.5	A	12
Canned Beans, Kidney	1.5	2.6	A	12
Canned Beans, Black/Brown	1.3	1.9	A	12
Canned Beans, Chickpeas	.8	4.3	A	12
Canned Beans, Peas	1.6	4	A	12
Canned Beans, White	1.8	8.3	A	12
Cashews	12.9		A	11
Chestnut, Fried	4.91		A	11
Chickpeas	2.6	6.6	B	2,5,6
Chickpeas – Cooked/Cooled	6.35		B	2
Hummus	4.1		B	6
Lentils	3.4	9.84		5,10
Lotus Seed	19.7		A	11
Mung Bean	1.3	2.33	B	4,12
Mung Bean, raw	22.9		B	9
Navy beans	10		B	10
Northern Beans	12		B	10
Pea Soup	1.9		A	12
Peanut, Boiled	4.32		A	11

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Peanut, Roasted	4.24		A	11
Peas	1.9	4.97	B	2,5
Peas – Cooked/Cooled	6.7		B	2
Pigeon Peas	1		A	12
Pistachio, Roasted	3.43		A	11
Red Bean, cooked	10.63		B	4
Red Bean, raw	10.3		B	9
Red Kidney Bean	9.54		B	4,10
Red Lentils	13.8		A	8
Speckled Cowpea	8.18		B	4
Split peas	10		B	10
White Beans – Boiled	16.5		A	8
White Beans – Dry heated	5.7		A	8
White Cowpea	7.84		B	4

Oats and Barley	Min	Max	Method	Ref
100g as eaten				
Barley	1.6	16.1	B	6
Oats, cooked	.2	.4	A	12
Oats, Rolled, Uncooked	7.8	14.8	A/B	12
Pearl Barley (Job's Tears)	6.4		B	9
Rolled Oats (100 g dry weight)	8.5		B	10

Plantains /Bananas	Min	Max	Method	Ref
100g (1 small) unless noted				
Banana, Cooked	.8		A/B	12
Plantain, Cooked	3.5		A/B	12
Plantain/Green Banana Flour	35	68	A/B	4,6,9,11,14,16
Ripe Banana	.3	6.2	A/B	5,6,11,12
Unripe Banana	4.7	34	A	6,8,16

Raw Starches/Flours	Min	Max	Method	Ref
100g raw product				
ActiStar (manufactured RS)	58		B	13
Plantain/Green Banana Flour	35	68	A/B	4,6,9,11,14,16
Barley Flour	1.2		A/B	12

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Buckwheat Flour	16	18	B	15
Cassava Starch	44.6	80.8	B	9,11
Cassava Starch, gelatinized	2.2		B	9
Corn Flour	11		A/B	12
Corn Starch	8.1		B	10
Crystalean (manufactured RS)	40.9		B	13
Field Pea Meal	2	6	B	7
Garden Pea Meal	12	18	B	7
Hi-Maize Corn Starch	24.8	58.5	A/B	8,9,10
Hylon VII (manufactured RS)	53.7		B	13
Mungbean Starch	50.3		B	9
Novelose 240 (manufactured RS)	46.9		B	13
Potato Flour	1.7		A/B	12
Potato Starch	66.7	79.3	A/B	10,11,13
Potato Starch—cooked/cooled	3.8		B	13
Rice Flour	1.6		A/B	12
Sorghum Flour	1.6		A/B	12
Soy Flour	.6		A/B	12
Waxy Cornstarch	.7	1	A	8
Wheat Flour	13		A/B	12
White Wheat Flour	5.4		A	8

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Rice	Min	Max	Method	Ref
100g as eaten				
Asian Rice Noodles	.45		B	6
Brown Rice Noodles	2.2		B	9
Glass Noodles	11.3		B	9
Instant Rice Noodles	2.4		B	9
KDML brown rice (type of rice)	2.67		B	4
KDML milled rice (type of rice)	2.15		B	4
Khao Ta Hang (type of rice)	4.85	7.1	B	4,9
Lueng 11 (type of rice)	4.41		B	4
Polished Rice	2.41		B	2
Polished Rice - Cooked/Cooled	3.44		B	2
Puffed Rice Crackers	.7	.96	B	6
Rice Bran (100 g dry weight)	3.4		B	10
Rice Flour Porridge	.4		B	12
Rice Sheet	2.4		B	9
Rice, plain, white	0	3.1	B	6
Vermicelli	4.4		B	9
Waxy Rice	2.72		B	4
White Rice Noodles	3		B	9
Whole Rice	2.63		B	2
Whole Rice – Cooked/Cooled	5.48		B	2

Roots/Tubers/Vegetables	Min	Max	Method	Ref
100g (as eaten)				
Carrots	1.1	2.1	B	6
Cassava	9.69		B	4
Lesser Yam	23.25		B	4
Parsnips	1.1	2.1	B	6
Potatoes – Baked	.17	1		5,12
Potatoes - Boiled	.16	4.62	B	2,5,12
Potatoes - Boiled/Frozen for 30 days	5.71	12.2	A/B	2,8,12
Potatoes – Chips (American style)	3.5	4.5		5,6,12
Potatoes – Cold Potato Salad	.46	2.4	B	6,12
Potatoes – Cooked and Cooled	3.2			5,12
Potatoes – Fried	2.8			5,12
Potatoes – Instant	.2	.8	A	12

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Potatoes – Roasted and Cooled	19.2		A	11,12
Potatoes – Steamed and Cooled	5.8		A	11,12
Pumpkin, Steamed	.87		A	11
Sweet Potato	1.1	3.8	A/B	4,11,12
Tapioca Pearls	4.5		B	6
Taro	2.6	4.12	A/B	4,11
Wax Gourd	0		A	11
White Yam	4.3		B	4
Yam Bean	3.69		B	4

Methods:

A – In vivo (ileostomy or intubation in living human)

B – In vitro (chemical analysis by various labs)

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These tables contain information gleaned from 16 studies on the content of resistant starch in various food products. Where a span was given, or different studies produced different results, a minimum and maximum value was recorded. All values, unless noted, are for 100g of the food, as prepared normally and eaten.

The two different methods used to determine RS content are described here:

A. In vivo method: Performed with humans in a clinical setting. Food is ingested and then recovered before it reaches the large intestine either by intubation or an ileostomy bag. Considered to be more accurate but very difficult to perform.

B. In vitro method: Uses chemicals and processes which mirror actual digestion, the preferred method because it can be done in a laboratory setting. RS measurements done in vitro normally conform to the **Association of Analytical Communities** standards described here:

AOAC Official Method 2002.02 Resistant Starch in Starch and Plant Materials Enzymatic Digestion First Action 2002

A. Principle

Nonresistant starch is solubilized and hydrolyzed to glucose by the combined action of pancreatic -amylase and amyloglucosidase (AMG) for 16 h at 37°C. The reaction is terminated by addition of ethanol or industrial methylated spirits (IMS) and RS is recovered as a pellet by centrifugation. RS in the pellet is dissolved in 2M KOH by vigorously stirring in an ice-water bath. This solution is neutralized with acetate buffer and the starch is quantitatively hydrolyzed to glucose with AMG. Glucose is measured with glucose oxidase-peroxidase reagent (GOPOD), which is a measure of RS content. Nonresistant starch (solubilized starch) is determined by pooling the original supernatant and the washings and measuring the glucose content with GOPOD.