

ASSESSMENT OF NUTRIENT & HEALTH CLAIMS FOR LENTILS

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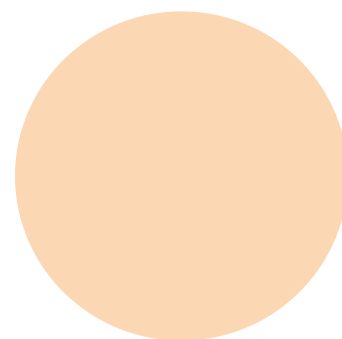
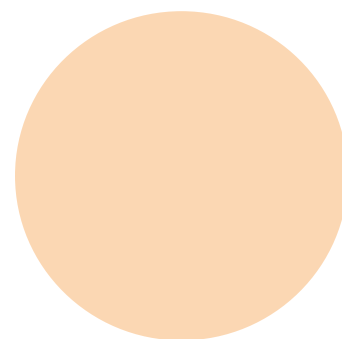
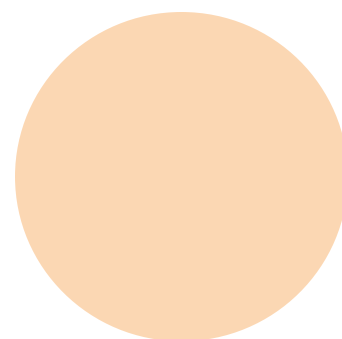
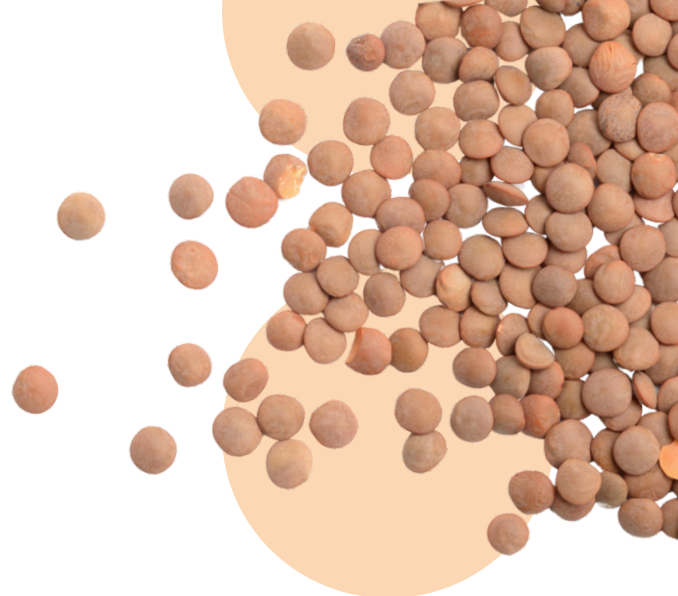
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BACKGROUND

As consumers increasingly prioritize nutritious food choices, and food companies aim to stand out in a competitive marketplace, nutrient-dense ingredients like lentils present a unique opportunity. Packed with protein, fibre, and essential micronutrients, lentils are a nutritional powerhouse that can help companies develop innovative products while leveraging nutrient and health claims to capture consumer attention.

To explore this potential, Pulse Canada engaged Intertek Health Sciences Inc. (Intertek), a leading expert in scientific and regulatory affairs, to conduct a two-pronged evaluation:

1. Determine the eligibility of **whole lentils** for nutrient content and health claims in key global markets: the European Union (EU), United Kingdom (UK), and United States (US).
2. Assess a **series of lentil-rice mixes** to determine their eligibility for nutrient and health claims, offering insights into how whole lentils can empower the food industry to improve the nutritional value of staple products, while capitalizing on the ability to make credible claims that resonate with health-conscious consumers.



EXECUTIVE SUMMARY

European Union and United Kingdom

Five meals composed of varying proportions of boiled red lentils and white rice were assessed for their eligibility to make nutrient content and general function health claims. The evaluation included the European Union (EU) and United Kingdom (UK).

The findings showed a clear trend: as the proportion of lentils in the meals increased, so did the number of nutrients qualifying for content claims (e.g., high protein) and the subset of those nutrients with associated health claims that can be leveraged.

	100% Rice	75% Rice / 25% Lentil	50% Rice / 50% Lentil	25% Rice / 75% Lentil	100% Lentil
Nutrients Qualified for Claims	5	7	9	10	12
Nutrients With Associated Health Claims*	3	5	6	7	9

*Number of nutrients that qualified for nutrient content claims in the dish and have associated health claims that can be made. Analysis based on 100 grams of cooked rice and lentils. See methodology for full details and limitations.

United States

In the United States, claim eligibility is determined based on the reference amount customarily consumed (RACC). Due to differences in the RACC for rice, lentils, and mixed dishes, direct comparisons across all five mixes were not possible. Instead, three blends of lentils and unenriched white rice were analyzed as a "mixed dish" with a RACC of 1 cup cooked. Lentils alone were analyzed separately using their established RACC of 90 grams cooked.

The findings mirrored the trends observed in Europe: as the proportion of lentils increased in the mixed dish, the number of nutrients qualifying for nutrient content claims also increased, although the effect was less pronounced. Health claims associated with the mixes were similar across blend proportions. These results reinforce the potential for lentils to enhance the nutritional profile of foods while supporting credible claims.

	75% Rice / 25% Lentil	50% Rice / 50% Lentil	25% Rice / 75% Lentil
Nutrients Qualified for Claims	15	18	20
Health Claims	8	8	9

Analysis based on 1 cup of mixed dishes. See methodology for full details and limitations

	Red Lentils
Nutrients Qualified for Claims	14
Health Claims	8

Analysis based on 90 grams of boiled lentils.



EUROPEAN UNION & UNITED KINGDOM

Claims

Intertek determined whether the qualifying criteria for nutrition claims and health claims were met. These claim categories are described below, with pertinent definitions taken from Regulation (EC) No 1924/2006.

- **A claim** is “any message or representation, which is not mandatory under Community or national legislation, including pictorial, graphic or symbolic representation, in any form, which states, suggests or implies that a food has particular characteristics”.
- **A nutrient** means “protein, carbohydrate, fat, fibre, sodium, vitamins and minerals listed in the Annex to Directive 90/496/EEC, and substances which belong to or are components of one of those categories”.
- **A nutrition claim** is “any message or representation in labelling or advertising that states, suggests, or implies that a food has particular beneficial nutritional properties due to:
 - (a) the energy (calorific value) it
 - (a) provides;
 - (b) provides at a reduced or increased rate; or
 - (c) does not provide; and/or
 - (b) the nutrients or other substances it
 - (a) contains;
 - (b) contains in reduced or increased proportions; or
 - (c) does not contain”.
- **A health claim** is “any message or representation in labelling and advertising that states, suggests or implies that a relationship exists between a food category, a food or one of its constituents and health”. Health claims include **Article 13 claims and Article 14 claims**.
- **Article 13 claims** are “Health claims describing or referring to:
 - (a) The role of a nutrient or other substance in the growth, development, and functions of the body; or
 - (b) Psychological and behavioural functions; or
 - (c) Slimming, weight-control, a reduction in hunger, an increase in satiety, or the reduction of the available energy from the diet”.
- **Article 14 claims** include reduction of disease risk claims and claims referring to children’s development and health.
- **Reduction of disease risk claims** means “any health claim that states, suggests, or implies that the consumption of a food category, a food or one of its constituents significantly reduces a risk factor in the development of a human disease”.
- Positive listings of Article 13 and 14 claims are provided by the European Commission (EC) in a searchable register, available at <https://ec.europa.eu/food/food-feed-portal/>



Data Identification and Transcription:

In the EU and UK, eligibility for nutrition and health claims must be based on and expressed per 100 g or per portion, if the package contains only a single portion. Nutritional data based on 100 g were identified from McCance and Widdowson's The Composition of Foods Integrated Dataset 2021, made available by Public Health England¹

The foodcodes used were:

- 13-658, "Lentils, red, split, dried, boiled in unsalted water"; and
- 11-862, "Rice, white, long grain, boiled in unsalted water".

The food composition profiles for boiled red lentils and boiled long grain white rice were exported to Microsoft Excel. Of note:

- The energy value (kcal) for each food in the McCance and Widdowson's The Composition of Foods Integrated Dataset 2021 is calculated using the following conversion factors: protein 4 kcal/g, fat 9 kcal/g, carbohydrate (available, expressed as monosaccharides) 3.75 kcal/g, and alcohol 7 kcal/g.²
- According to Annex XIV of Regulation (EU) No 1169/2011, the conversion factors that must be used in the estimation of energy (in kcal) are carbohydrate (except polyols), 4 kcal/g; polyols, 2.4 kcal/g; protein, 4 kcal/g; fat, 9 kcal/g; salatrims, 6 kcal/g; alcohol (ethanol), 7 kcal/g; organic acid, 3 kcal/g; fibre, 2 kcal/g; erythritol, 0 kcal/g.³

Thus, the energy value for 100 g of boiled red lentils and 100 g of boiled long grain white rice was calculated using the regulated energy conversion factors.

Assessment of Eligibility of Mixed Meals for Nutrition Claims

Five meals made with boiled red lentils and boiled white rice were assessed for claim eligibility, with meals containing proportions of 100, 75, 50, 25, and 0% lentils mixed with 0, 25, 50, 75, and 100% white rice, respectively (e.g., 75% lentils and 25% rice).

	Meal 1	Meal 2	Meal 3	Meal 4	Meal 5
White Rice	100%	75%	50%	25%	0%
Red Lentils	0%	25%	50%	75%	100%

Once the nutritional composition data were exported into Excel, the values for each nutrient were rounded based on acceptable rounding rules outlined in the guidance document on setting of tolerances for nutrient values (EC, 2012)⁴.

These rounding rules were applied to account for natural variability in nutrient content and to ensure compliance with the standards for nutrition labelling.

Once the values were rounded, the daily reference intake for each nutrient was identified in Annex XIII of Regulation (EU) No 1169/2011⁵, and the corresponding nutrition claim eligibility criteria were identified in Regulation (EC) No 1924/2006⁶ (e.g., a “source of calcium” claim requires $\geq 15\%$ of the nutrient reference value per 100 g in the case of products other than beverages)

While the nutrition and health claim requirements for most nutrients were based on the daily reference intakes, some nutrients had more specific requirements (e.g., protein and total fat). For each nutrient, the eligibility requirements for the respective nutrition claim were provided.

Evaluation of Nutrient Claims and Health Claims Eligibility

Upon completion of the quantitative analysis, Intertek proceeded with an assessment of the nutrition claims that each meal qualifies for⁶.

The options for nutrition claims wording (e.g., free, low, source of, high in) were dependent on the type of nutrient (i.e., fat would be assessed for “fat-free” or “low fat” claims; iron would be assessed for “source of” or “high in” iron claims).

Once the listing of nutrition claims was assembled, Intertek proceeded to examine the general function claims that each meal qualifies for, using the EU Register of Health Claims⁷.

Finally, Intertek determined whether any meal qualifies for any of the reduction of disease risk claims and claims related to children’s health and development that have been authorised by the EC.

Quality Assurance and Validation

To ensure the accuracy of the results, equations were completed in duplicate and reviewed by the project manager, Dr. Kathy Musa-Veloso (Intertek).

Limitations and Cautions of the Methodology

Certificates of analysis showing the true nutritional composition of the final mixed meal, based on a representative sampling of the meal, is strongly recommended, to ensure accuracy and representativeness of the nutritional profile to brand-specific products.



Eligible Nutrient Content Claims in the UK and EU

	100% Rice	75% Rice/ 25% Lentils	50% Rice/ 50% Lentils	25% Rice/ 75% Lentils	100% Lentils	
MACRONUTRIENTS	Protein		Source of Protein	Source of Protein	High Protein	High Protein
	Fibre			Source of Fibre	High Fibre	High Fibre
	Carbohydrate	Source of Carbohydrate	Source of Carbohydrate	Source of Carbohydrate	Source of Carbohydrate	
	Sugar	Sugars-Free	Sugars-Free	Sugars-Free	Sugars-Free	Sugars-Free
	Fat	Fat-Free	Fat-Free	Low Fat	Low Fat	Low Fat
	Saturated Fat	Saturated Fat-Free	Saturated Fat-Free	Saturated Fat-Free	Saturated Fat-Free	Saturated Fat-Free
MINERALS & VITAMINS	Sodium	Very Low Sodium	Sodium-Free	Sodium-Free	Sodium-Free	Sodium-Free
	Iron					Source of Iron
	Phosphorus					Source of Phosphorus
	Copper			Source of Copper	Source of Copper	Source of Copper
	Manganese		Source of Manganese	Source of Manganese	Source of Manganese	Source of Manganese
	Selenium				Source of Selenium	Source of Selenium
	Folate					Source of Folate
TOTAL	5	7	9	10	12	

Based on analysis of 100 gram serving of varying proportions of boiled white rice and red split lentils
See methodology for full details and limitations



Eligible Health Claims in the UK and EU

General Function Health Claims	100% Rice	75% Rice/ 25% Lentils	50% Rice/ 50% Lentils	25% Rice/ 75% Lentils	100% Lentils
<p>Protein</p> <ul style="list-style-type: none"> •Protein contributes to a growth in muscle mass¹ •Protein contributes to the maintenance of muscle mass¹ •Protein contributes to the maintenance of normal bones¹ •Protein is needed for normal growth and development of bone in children² 		Eligible	Eligible	Eligible	Eligible
<p>Carbohydrate</p> <ul style="list-style-type: none"> •Carbohydrates contribute to maintenance of normal brain function¹ •Carbohydrates contribute to the recovery of normal muscle function (contraction) after highly intensive and/or long-lasting physical exercise leading to muscle fatigue and the depletion of glycogen stores in skeletal muscle³ 	Eligible	Eligible	Eligible	Eligible	
<p>Saturated Fat</p> <ul style="list-style-type: none"> •Reducing consumption of saturated fat contributes to the maintenance of normal blood cholesterol levels¹ 	Eligible	Eligible	Eligible	Eligible	Eligible
<p>Sodium</p> <ul style="list-style-type: none"> •Reducing consumption of sodium contributes to the maintenance of normal blood pressure¹ 	Eligible	Eligible	Eligible	Eligible	Eligible
<p>Iron</p> <ul style="list-style-type: none"> •Iron contributes to normal cognitive function¹ •Iron contributes to normal energy-yielding metabolism¹ •Iron contributes to normal formation of red blood cells and hemoglobin¹ •Iron contributes to normal oxygen transport in the body¹ •Iron has a role in the process of cell division¹ •Iron contributes to the normal function of the immune system¹ •Iron contributes to the reduction of tiredness and fatigue¹ •Iron contributes to normal cognitive development of children² 					Eligible
<p>Phosphorus</p> <ul style="list-style-type: none"> • Phosphorus contributes to normal energy-yielding metabolism¹ •Phosphorus contributes to normal function of cell membranes¹ •Phosphorus contributes to the maintenance of normal bones¹ •Phosphorus contributes to the maintenance of normal teeth¹ •Phosphorus is needed for the normal growth and development of bone in children² 					Eligible

1. Article 13(1) Claims. 2. Article 14(1)(b) Claims. 3. Article 13(5) Claims.
Based on analysis of 100 gram serving of varying proportions of boiled white rice and red split lentils
See methodology for full details and limitations



Eligible Health Claims in the UK and EU (continued)

General Function Health Claims	100% Rice	75% Rice/ 25% Lentils	50% Rice/ 50% Lentils	25% Rice/ 75% Lentils	100% Lentils
<p>Copper</p> <ul style="list-style-type: none"> •Copper contributes to maintenance of normal connective tissue¹ <ul style="list-style-type: none"> •Copper contributes to normal energy-yielding metabolism¹ •Copper contributes to normal functioning of the nervous system¹ <ul style="list-style-type: none"> •Copper contributes to normal hair pigmentation¹ •Copper contributes to normal skin pigmentation¹ •Copper contributes to normal iron transport in the body¹ •Copper contributes to the normal function of the immune system¹ •Copper contributes to the protection of cells from oxidative stress¹ 			Eligible	Eligible	Eligible
<p>Manganese</p> <ul style="list-style-type: none"> •Manganese contributes to normal energy-yielding metabolism¹ •Manganese contributes to the maintenance of normal bones¹ •Manganese contributes to the normal function of connective tissues¹ •Manganese contributes to the protection of cells from oxidative stress¹ 		Eligible	Eligible	Eligible	Eligible
<p>Selenium</p> <ul style="list-style-type: none"> •Selenium contributes to normal spermatogenesis¹ •Selenium contributes to the maintenance of normal hair¹ •Selenium contributes to the maintenance of normal nails¹ •Selenium contributes to the normal function of the immune system¹ <ul style="list-style-type: none"> •Selenium contributes to the normal thyroid function¹ •Selenium contributes to the protection of cells from oxidative stress¹ 				Eligible	Eligible
<p>Folate</p> <ul style="list-style-type: none"> •Folate contributes to maternal tissue growth during pregnancy¹ <ul style="list-style-type: none"> •Folate contributes to normal amino acid synthesis¹ •Folate contributes to normal blood formation¹ •Folate contributes to normal homocysteine metabolism¹ •Folate contributes to normal psychological function¹ •Folate contributes to the normal function of the immune system¹ <ul style="list-style-type: none"> •Folate contributes to the reduction of tiredness and fatigue¹ •Folate has a role in the process of cell division¹ 					Eligible

1. Article 13(1) Claims.

Based on analysis of 100 gram serving of varying proportions of boiled white rice and red split lentils
See methodology for full details and limitations



UNITED STATES

Claims

Intertek determined whether any nutrient or health claims were met, as defined below.

- A **nutrient content claim** is a claim that directly or indirectly characterizes the level of a nutrient in a food or compares the level of a nutrient in a food to that in another food⁸.
- A **health claim** is “any claim made on the label or in labeling of a food, including a dietary supplement, that expressly or by implication, including “third party” references, written statements (e.g., a brand name including a term such as “heart”), symbols (e.g., a heart symbol), or vignettes, characterizes the relationship of any substance to a disease or health-related condition⁹.”

Health claims are divided into the following categories:

- **Nutrition Labeling and Education Act (NLEA)** authorized health claims.
 - NLEA authorized health claims are authorized by Food and Drug Administration (FDA)-issued regulations “based on an extensive review of the scientific literature, generally as a result of the submission of a health claim petition, using the significant scientific agreement standard to determine whether the substance disease relationship is well established¹⁰.”
- **Food and Drug Administration Modernization Act (FDAMA)** claims based on authoritative statements
 - FDAMA claims “can be authorized by submitting a notification to FDA of a claim based on an “authoritative statement” from certain scientific bodies of the U.S. Government or the National Academy of Sciences¹⁰.”
- **Qualified health claims** are based on “emerging evidence for a relationship between a food substance (a food, food component, or dietary ingredient) and reduced risk of a disease or health-related condition, but the evidence is not well enough established to meet the significant scientific agreement standard required for FDA to issue an authorizing regulation”.
 - “The qualified health claim petition process provides a mechanism to request that FDA review the scientific evidence and exercise enforcement discretion to permit the use of the qualified claim in food labeling”.
 - If the FDA finds that the evidence to support the claim is credible, qualifying language is used to convey to the consumer the level of evidence in support of the claim¹⁰.

Positive listings of nutrient content and health claims are provided by the FDA.





Assessment of Eligibility for Nutrition Claims

In the U.S., for most foods, eligibility for nutrient content and health claims is based on the food's reference amount customarily consumed (RACC) per eating occasion. As per 21 CFR 101.12(b)¹¹, the RACC is a regulated amount of food typically consumed in a single eating occasion.

For the purpose of claims analysis, mixtures of cooked lentils and rice were each classified as a "mixed dish", as both "meal products" and "main dish products" have specific definitions under 21 CFR 101.13(l) and 21 CFR 101.13(m) which this mixture would not qualify for¹². The RACC for a mixed dish that is measurable with a cup is 1 cup¹¹. Because both lentils and rice on their own have established RACC values that must be used for claims analysis and these values differ from the RACC for mixed dishes, only the results for the mixed dishes can be directly compared to one another. Claims eligibility for lentils on their own was analyzed separately, using the established RACC for lentils of 90 grams¹¹.

Eligibility of Lentils

Nutritional data based on 100 g of boiled lentils were identified from the United States Department of Agriculture (USDA) FoodData Central database¹³. Data specifically for boiled red lentils were not identified in the database; however, data for Standard Reference (SR) Legacy Foodcode 172421 "Lentils, mature seeds, cooked, boiled, without salt" were identified. The nutritional profile was exported to Microsoft Excel and levels of each macronutrient and micronutrient were calculated for a 90 g RACC serving.

Although total fiber is provided in the USDA, SR Legacy 172421 profile, levels of soluble and insoluble fiber are not delineated. Based on analytical data from Mérieux NutriSciences (2014) provided to Intertek by Pulse Canada¹⁴, 29.87% of the fiber in boiled red lentils is soluble fibre, while 70.13% of the fiber in boiled red lentils is insoluble. These percentages were applied to the total fiber level in the USDA, SR Legacy 172421 profile to estimate levels of soluble and insoluble fiber.

Eligibility of Lentil-Rice Mixtures

Three mixtures made with boiled red lentils and boiled white rice were assessed for claim eligibility, with meals containing proportions of 75, 50 and 25% lentils mixed with 25, 50 and 75% white rice, respectively (e.g., 75% lentils and 25% rice). Nutritional data based on 100 g of boiled lentils¹³ and 100 g of unenriched white rice¹⁵ were identified from the United States Department of Agriculture (USDA) FoodData Central database. Data specifically for a mixed dish of boiled red lentils and cooked unenriched white rice were not identified in the database. Instead, the nutritional profile for each food was exported to Microsoft Excel and calculations for 1 cup of the mixed dish, with each mixed dish containing a different proportion of cooked lentils and cooked unenriched white rice, were conducted.



The food codes used were:

- Standard Reference (SR) Legacy Food Code 169757: “Rice, white, long-grain, regular, unenriched, cooked without salt”; and
- SR Legacy Food Code 172421: “Lentils, mature seeds, cooked, boiled, without salt”.
 - Although total fibre is provided in the USDA, SR Legacy 172421 profile, levels of soluble and insoluble fibre are not delineated. Based on analytical data from Mérieux NutriSciences (2014) provided to Intertek by Pulse Canada¹⁴, 29.87% of the fibre in boiled red lentils is soluble fibre, while 70.13% of the fiber in boiled red lentils is insoluble. These percentages were applied to the total fibre level in the USDA, SR Legacy 172421 profile to estimate levels of soluble and insoluble fibre.

	Dish 1	Dish 2	Dish 3
White Rice	75%	50%	25%
Lentils	25%	50%	75%

Nutrient Claim Data Analysis

Once the nutritional composition data were exported into Excel, the values for each nutrient were rounded based on acceptable rounding rules outlined in 21 CFR 101.9¹⁶. Rounding rules were applied to account for natural variability in nutrient content and to ensure compliance with the standards for nutrition labelling.

For protein calculations, protein digestibility corrected amino acid score (PDCAAS) values for rice (using rice flour) and red lentils (using whole red lentils) were obtained from Pulse Canada data¹⁷.

Once the values were rounded, the Reference Daily Intake (RDI) or Daily Reference Value (DRV) (hereinafter referred to as Daily Value [DV]) for each nutrient for adults and children 4 years of age and older was identified in 21 CFR 101.9¹⁶, and the nutrient content claims and their eligibility requirements were identified in 21 CFR Subpart D (e.g., a “good source of phosphorus” claim requires 10–19% of the DV per RACC)⁸.

While the nutrient content and health claim requirements for most nutrients were based on the DV, some nutrients had more specific requirements (e.g., total fat). The options for nutrient content claim wording (e.g., “free”, “low”, “good source”, “excellent source”) were dependent on the type of nutrient (e.g., total fat would be assessed for “fat-free” and “low-fat” claims; calcium would be assessed for “good source” and “excellent source” claims).

Evaluation of Health Claim Eligibility

Once the listing of nutrient content claims for which each mixed dish qualifies was assembled, Intertek proceeded to examine the NLEA health claims that each mixed dish qualifies for, as listed in 21 CFR Part 101 Subpart E¹⁸. Required terms and model health claims were provided.

Finally, Intertek determined whether any mixed dish qualifies for any FDAMA health claims¹⁹ or qualified health claims²⁰. Required wordings of FDAMA health claims and qualified health claims were provided.

Quality Assurance and Validation

To ensure the accuracy of the results, the Excel file equations were completed in duplicate and reviewed by the project manager, Dr. Kathy Musa-Veloso.

Limitations and Cautions of Methodology

As there is no USDA profile specifically for boiled red lentils, the USDA profile for boiled lentils was used as the source for the nutritional composition of boiled red lentils; Intertek assumed that the nutritional composition of boiled lentils would approximate that of boiled red lentils.

Of course, certificates of analysis showing the true nutritional composition of a mixed dish of boiled red lentils and cooked unenriched white rice (or of the boiled red lentils and cooked unenriched white rice, separately), based on a representative sampling of the respective foods, is strongly recommended, to ensure accuracy and representativeness of the nutritional profile to brand-specific products.

Required Nutrient Declarations and Caveats for Claims

It is critical that the U.S. Food Labeling Guide²¹ is referenced for full guidance on key considerations of making claims on either lentils or a mixed dish of cooked lentils and rice.



RESULTS: MIXED DISHES

Eligible Nutrient Content Claims in the United States

	75% Rice/ 25% Lentils	50% Rice/ 50% Lentils	25% Rice/ 75% Lentils	
MACRONUTRIENTS	Protein		Good Source of Protein	Good Source of Protein
	Fibre	Good Source of Fibre	Excellent Source of Fibre	Excellent Source of Fibre
	Carbohydrate	Good Source of Carbohydrates	Good Source of Carbohydrates	Good Source of Carbohydrates
	Fat	Low Fat	Low Fat	Low Fat
	Saturated Fat	Saturated Fat-Free	Saturated Fat-Free	Saturated Fat-Free
	Cholesterol	Cholesterol-Free	Cholesterol-Free	Cholesterol-Free
MINERALS	Sodium	Sodium-Free	Sodium-Free	Sodium-Free
	Iron	Good Source of Iron	Excellent Source of Iron	Excellent Source of Iron
	Magnesium		Good Source of Magnesium	Good Source of Magnesium
	Phosphorus	Good Source of Phosphorus	Good Source of Phosphorus	Excellent Source of Phosphorus
	Potassium			Good Source of Potassium
	Copper	Excellent Source of Copper	Excellent Source of Copper	Excellent Source of Copper
	Manganese	Excellent Source of Manganese	Excellent Source of Manganese	Excellent Source of Manganese
	Selenium	Excellent Source of Selenium	Good Source of Selenium	Good Source of Selenium
	Zinc	Good Source of Zinc	Good Source of Zinc	Excellent Source of Zinc
	VITAMINS	Folate	Excellent Source of Folate	Excellent Source of Folate
Niacin				Good Source of Niacin
Pantothenic Acid		Good Source of Pantothenic Acid	Excellent Source of Pantothenic Acid	Excellent Source of Pantothenic Acid
Thiamin			Good Source of Thiamin	Excellent Source of Thiamin
Vitamin B-6		Good Source of Vitamin B-6	Good Source of Vitamin B-6	Excellent Source of Vitamin B-6
TOTAL		15	18	20

Based on analysis of 1 cup "mixed dish" of varying proportions of boiled rice and lentils. See methodology for full details and limitations.



Eligible Health Claims in the United States

	75% Rice/ 25% Lentils	50% Rice/ 50% Lentils	25% Rice/ 75% Lentils
NLEA CLAIMS¹			
<p>Dietary Fat and Cancer (21 CFR 101.73) Development of cancer depends on many factors. A diet low in total fat may reduce the risk of some cancers.</p>	Eligible	Eligible	Eligible
<p>Fiber-Containing Grain Products, Fruits, Vegetables and Cancer (21 CFR 101.76) Low fat diets rich in fiber-containing grain products, fruits, and vegetables may reduce the risk of some types of cancer, a disease associated with many factors.</p>	Eligible	Eligible	Eligible
<p>Fruits, Vegetables and Grain Products that Contain Soluble Fiber and Reduced Risk of Coronary Heart Disease (21 CFR 101.77) Diets low in saturated fat and cholesterol and rich in fruits, vegetables, and grain products that contain some types of dietary fiber, particularly soluble fiber, may reduce the risk of heart disease, a disease associated with many factors.</p>	Eligible	Eligible	Eligible
<p>Sodium and Hypertension (21 CFR 101.74) Diets low in sodium may reduce the risk of high blood pressure, a disease associated with many factors.</p>	Eligible	Eligible	Eligible
<p>Folate and Neural Tube Defects (21 CFR 101.79) Adequate folate in healthful diets may reduce a woman's risk of having a child with a brain or spinal cord birth defect.</p>	Eligible	Eligible	Eligible
<p>Dietary Saturated Fat and Cholesterol, and Risk of Coronary Heart Disease (21 CFR 101.75) While many factors affect heart disease, diets low in saturated fat and cholesterol may reduce the risk of this disease.</p>	Eligible	Eligible	Eligible
<p>Fruits, Vegetables, and Cancer (21 CFR 101.78) Low fat diets rich in fruits and vegetables (foods that are low in fat and may contain dietary fiber, vitamin A, and vitamin C) may reduce the risk of some types of cancer, a disease associated with many factors. Lentils are high in vitamin A and are a good source of dietary fiber.</p>	Eligible	Eligible	Eligible
FDAMA CLAIMS²			
<p>Saturated Fat, Cholesterol, Trans Fat, and Reduced Risk of Heart Disease (No. 2006Q0458) Diets low in saturated fat and cholesterol, and as low as possible in trans fat, may reduce the risk of heart disease.</p>	Eligible	Eligible	Eligible
<p>Potassium, Sodium and the Risk of High Blood Pressure and Stroke Diets containing foods that are a good source of potassium and that are low in sodium may reduce the risk of high blood pressure and stroke.</p>			Eligible

1. Nutrition Labeling and Education Act Claims. See reference 10.

2. FDA Modernization Act Claims. See reference 18.

Results based on analysis of 1 cup "mixed dish" of varying proportions of boiled rice and lentils. See methodology for full details and limitations.



RESULTS: LENTILS

Eligible Nutrient Content Claims in the United States

Lentils		
MACRONUTRIENTS	Fibre	Excellent Source of Fibre
	Fat	Fat-Free
	Saturated Fat	Saturated Fat-Free
	Cholesterol	Cholesterol-Free
MINERALS	Sodium	Sodium-Free
	Iron	Good Source of Iron
	Phosphorus	Good Source of Phosphorus
	Copper	Excellent Source of Copper
	Manganese	Excellent Source of Manganese
	Zinc	Good Source of Zinc
VITAMINS	Folate	Excellent Source of Folate
	Pantothenic Acid	Good Source of Pantothenic Acid
	Thiamin	Good Source of Thiamin
	Vitamin B-6	Good Source of Vitamin B-6

Based on analysis of 90 grams of boiled lentils. See methodology for full details and limitations.



Eligible Health Claims in the United States

Lentils	
NLEA CLAIMS¹	
<p>Dietary Fat and Cancer (21 CFR 101.73) Development of cancer depends on many factors. A diet low in total fat may reduce the risk of some cancers.</p>	Eligible
<p>Fiber-Containing Grain Products, Fruits, Vegetables and Cancer (21 CFR 101.76) Low fat diets rich in fiber-containing grain products, fruits, and vegetables may reduce the risk of some types of cancer, a disease associated with many factors.</p>	Eligible
<p>Fruits, Vegetables and Grain Products that Contain Soluble Fiber and Reduced Risk of Coronary Heart Disease (21 CFR 101.77) Diets low in saturated fat and cholesterol and rich in fruits, vegetables, and grain products that contain some types of dietary fiber, particularly soluble fiber, may reduce the risk of heart disease, a disease associated with many factors.</p>	Eligible
<p>Sodium and Hypertension (21 CFR 101.74) Diets low in sodium may reduce the risk of high blood pressure, a disease associated with many factors.</p>	Eligible
<p>Folate and Neural Tube Defects (21 CFR 101.79) Adequate folate in healthful diets may reduce a woman's risk of having a child with a brain or spinal cord birth defect.</p>	Eligible
<p>Dietary Saturated Fat and Cholesterol, and Risk of Coronary Heart Disease (21 CFR 101.75) While many factors affect heart disease, diets low in saturated fat and cholesterol may reduce the risk of this disease.</p>	Eligible
<p>Fruits, Vegetables, and Cancer (21 CFR 101.78) Low fat diets rich in fruits and vegetables (foods that are low in fat and may contain dietary fiber, vitamin A, and vitamin C) may reduce the risk of some types of cancer, a disease associated with many factors. Lentils are high in vitamin A and are a good source of dietary fiber.</p>	Eligible
FDAMA CLAIMS²	
<p>Saturated Fat, Cholesterol, Trans Fat, and Reduced Risk of Heart Disease (No. 2006Q0458) Diets low in saturated fat and cholesterol, and as low as possible in trans fat, may reduce the risk of heart disease.</p>	Eligible

1. Nutrition Labeling and Education Act Claims. See reference 10.

2. FDA Modernization Act Claims. See reference 18.

Results based on analysis of 90 grams of boiled lentils. See methodology for full details and limitations.



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