modify texture. While those ingredients may be somewhat effective in preventing moisture loss to the environment, their effectiveness in preventing moisture transfer to protein ingredients is minimal. Increasing the amount of carbohydrates, such as maltodextrin, that take on a crystalline-like form upon moisture loss, is believed to enhance the firming effect during shelf life, thus reducing commercial acceptability.

[0005] There is therefore a need for nutritional bars and related nutritional formulations that provide the intended nutrition, energy, and the like, that maintain a soft texture over time leading to an improved shelf life.

SUMMARY OF THE DISCLOSURE

[0005a] In one aspect, there is provided a composition comprising an ultrasonically-treated nutritional formulation and a

sealed package, the nutritional formulation comprising from about 5% to about 95% (by weight) carbohydrate, from about 5% to about 95% (by weight) protein, and from about 1% to about 30% (by weight) lipid, wherein the ultrasonically-treated nutritional formulation has been subjected to high power ultrasound during manufacture while in a flowable state.

[0005b] In one aspect, there is provided a process of manufacturing an ultrasonically-treated nutritional formulation, the process comprising:

combining a protein, a carbohydrate, a lipid, a binder, and water to form a slurry;

subjecting the slurry to high power ultrasound; and

extruding the slurry to produce the ultrasonically-treated nutritional formulation.

[0005c] In one aspect, there is provided a process of manufacturing an ultrasonically-treated nutritional formulation, the process comprising:

combining a protein, a carbohydrate, a lipid, a binder and water to form a slurry;

subjecting the slurry to high power ultrasound; and

slabbing the ultrasonically-treated slurry to produce the ultrasonically-treated formulation.

[0006] The present disclosure is directed to a composition comprising an ultrasonically-treated nutritional formulation and a sealed package, the nutritional formulation comprising a carbohydrate in an amount of from about 5% to about 95% by weight of the nutritional formulation a protein in an amount of from about 5% to about 95% by weight of the nutritional formulation, and a lipid in an amount of from about 1% to about 30% by weight of the nutritional formulation, wherein the nutritional formulation has a shelf life of at least three months.

[0007] The present disclosure is further directed to a process of manufacturing an ultrasonically-treated nutritional formulation having improved shelf life. The process comprises combining a protein, a carbohydrate, a lipid, a binder, and water to form a slurry, subjecting the slurry to high power ultrasound, and extruding the slurry to produce the ultrasonically-treated nutritional composition.

[0008] The present disclosure is further directed to a process of manufacturing an ultrasonically-treated nutritional formulation having improved shelf life. The process comprises combining a protein, a carbohydrate, a lipid, a binder and water to form a slurry, subjecting the slurry to high power ultrasound, and slabbing the ultrasonically-treated slurry to produce the ultrasonically-treated composition

[0009] It has been found that high power ultrasound can be utilized to manufacture a nutritional bar having an extended shelf life. By subjecting a nutritional