

L-cystine ethyl ester, N,N'-diacetyl L-cystine methyl ester, N-acetyl L-cysteine ethyl ester, N-enanthoyl L-cysteine ethyl ester, N-propionoyl L-cysteine propyl ester, respectively, no off-flavors attributable to degradation of products of the derivatives are perceived.

EXAMPLE III

A fortified peanut butter composition is made by adding 0.6 parts by weight N-acetyl L-methionine methyl ester to a commercial peanut butter of the following composition:

Component	Parts by Weight
Peanut paste	90.0
Salt	1.2
Sucrose	5.8
Molasses	0.5
Soybean monoglycerides	0.7
Rapeseed oil (iodine value 2)	0.56
Soybean oil (iodine value 2)	0.84
Soybean oil (iodine value 107)	0.40

A sample of this fortified peanut butter is heated in a water bath at 95°C for 2½ hours. No off-flavors or odors are detected. However, when an otherwise identical peanut butter is formulated with 0.4 parts by weight L-methionine, strong odors and off-flavors were apparent after 2 hours of heating in a water bath at 95°C.

When in Example III the peanut paste is replaced by an equivalent amount of a bland soybean paste (hulled, deflavored comminuted whole beans), equivalent results are obtained with respect to flavor on fortification with N-acetyl L-methionine methyl ester.

EXAMPLE IV

A canned pet food product embodied by the present invention is prepared by mixing and sealing the following in cans:

Component	Parts by Weight
Water	56
Wheat flour	5
Soybean concentrate	25
N-Acetyl L-methionine propyl ester	1
Collagen	1
Iodized salt	0.3
Beef extract flavor	2
Corn meal	10
Fat	10

The canned product is autoclaved at 150°C for 30 minutes, and on opening no evidence of methionine degradation is perceived.

EXAMPLE V

A complete cattle feed composition embodied by the present invention is prepared by grinding and mixing the following:

Component	Parts by Weight
Timothy hay	960
Dehydrated alfalfa	40
Yellow corn	600
Corn starch	300
Iodized salt	10
Bone meal	20
Soybean meal	30

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Component	Parts by Weight
N-acetyl-L-Methionine ethyl ester	1.0
Biuret	28

This composition is fed to 400 pound steers at the rate of approximately 12 pounds per day. Animals placed on this diet experience optimum growth rates and the feed is characterized by the absence of potentially toxic degradation products of the methionine supplement.

What is claimed is:

1. A proteinaceous foodstuff comprising an edible sulfur-containing amino acid deficient protein and a nutritionally supplemental amount of a sulfur-containing amino acid derivative selected from the group consisting of N-acyl L-methionine ester, N,N'-diacyl L-cystine ester and N-acyl L-cysteine ester, wherein the acyl group is derived from fatty acids having from 1 to 9 carbon atoms, and the ester group is derived from fatty alcohols having from 1 to 22 carbon atoms.

2. The foodstuff of claim 1 where said foodstuff is derived from a member selected from the group consisting of: animal by-products, microbial cells, oil seeds, cereal grains and plant vegetation.

3. The foodstuff of claim 1 wherein the foodstuff is selected from the group consisting of: texturized vegetable protein meat analogs, vegetable protein derived cheese analogs, beverages, nut butters, breakfast-like cereal formulations, and convenient proteinaceous snack foods.

4. The foodstuff of claim 1 where the sulfur-containing amino acid derivative is N-acyl-L-methionine ester.

5. The foodstuff of claim 4 where the acyl group is derived from fatty acids having from 1 to 4 carbon atoms and the ester group is derived from fatty alcohols having from 1 to 10 carbon atoms.

6. The foodstuff of claim 5 where the ester group is derived from fatty alcohols having from 1 to 4 carbon atoms.

7. The foodstuff of claim 6 wherein the derivative is selected from the group consisting of N-formyl L-methionine methyl ester, N-formyl L-methionine ethyl ester, N-acetyl L-methionine methyl ester and N-acetyl L-methionine ethyl ester.

8. A method of fortifying proteinaceous foodstuffs with sulfur-containing amino acids comprising adding to said foodstuffs a nutritionally effective amount of an amino acid derivative selected from the group consisting of N-acyl L-methionine ester, N,N'-diacyl L-cystine ester and N-acyl L-cysteine ester, wherein the acyl group is derived from fatty acids having from 1 to 9 carbon atoms, and the ester group is derived from fatty alcohols having from 1 to 22 carbon atoms.

9. The method of claim 8 wherein the acyl group is derived from fatty acids having from 1 to 4 carbon atoms.

10. The method of claim 8 where the ester group is derived from fatty alcohols having from 1 to 10 carbon atoms.

11. The method of claim 10 where the ester group is derived from fatty alcohols having from 1 to 4 carbon atoms.

12. The method of claim 11 wherein the derivative is selected from the group consisting of N-acetyl L-methionine methyl ester and N-acetyl methionine ethyl ester.

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