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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 03-001550- -00007-0001

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Act. 329 CTOINFORMACION Folios: 6

Señor

SUPERINTENDENTE DE INDUSTRIA Y COM
DIVISION DE NUEVAS CREACIONES

E. _____ S. _____ D. _____

Re: P1.-**SOCIETE DES PRODUITS NESTLÉ S.A.**-Expediente
número **03-001.550.-**

1. Me refiero al memorial de sustitución de poder presentado a ese Despacho el 31 de Agosto de 2004.

2. Por medio del presente, atentamente me permito manifestar a ese Despacho, que hubo un **cambio** de Representante Legal para todos los asuntos de la Propiedad Industrial en Bogotá de **SOCIETE DES PRODUITS NESTLÉ S.A.**, una sociedad organizada y existente de conformidad con las leyes de Suiza, domiciliada en Vevey, Suiza.

3. En consecuencia, atentamente solicito a ese Despacho reconocerme personería, en este asunto, de conformidad con el documento de Representación Legal para todos los asuntos de la Propiedad Industrial en Bogotá de la sociedad **SOCIETE DES PRODUITS NESTLÉ S.A.**, otorgado a favor del **SUSCRITO (GUSTAVO TAMAYO)** y/o a la doctora ALICIA LLOREDA y/o al doctor IGNACIO SANTAMARIA y/o al doctor ENRIQUE ALVAREZ de acuerdo con la copia debidamente autenticada ante Notario Público que adjunto al presente expediente (Artículos 26 y 39 de la Decisión 486 de la Comunidad Andina de Naciones).

4. Anexo al presente acompaño fotocopia, de:

- (a) Documento que acredita al **SUSCRITO** y/o a la doctora ALICIA LLOREDA y/o al doctor IGNACIO SANTAMARIA y/o al doctor ENRIQUE ALVAREZ en los términos del párrafo 1º. del Artículo 543 del Decreto-Ley 410 de 1971, como Representantes Legales en Bogotá para todos los asuntos relacionados con la propiedad industrial de la sociedad **SOCIETE DES PRODUITS NESTLÉ S.A.**, una sociedad organizada y existente de conformidad con las leyes de Suiza, domiciliada en Vevey, Suiza;

(b) Certificación Notarial expedida el 11 de Agosto de 2004; y

(c) Traducción Oficial No. 284/04 correspondiente a las partes pertinentes del documento anterior, también debidamente legalizada hasta por el Ministerio de Relaciones Exteriores bajo el número 061225 de 2 de Septiembre de 2004.

5. Finalmente, llamo la atención de ese Despacho al hecho de que la copia auténtica del documento que me acredita para actuar como Representante Legal de la sociedad peticionaria, reposa en el Expediente número **98-034.405**.

6. Ruego a usted tomar atenta nota de lo anterior y continuar con el trámite correspondiente.

Señor Superintendente,


GUSTAVO TAMAYO

T.P. 37.172

Código 231

TRADUCCIÓN OFICIAL No.284/04 DE UN DOCUMENTO ESCRITO EN FRANCÉS, EL CUAL PARA SU IDENTIFICACIÓN SE SELLA CON EL SELLO DEL TRADUCTOR. ESTA ES UNA TRADUCCIÓN OFICIAL EFECTUADA EL DIA 01 DE SEPTIEMBRE DE 2004 POR JEAN-JACQUES TURPIN, C.E.: 193849 DE BOGOTÁ, TRADUCTOR E INTÉRPRETE OFICIAL SEGÚN RESOLUCIÓN No. 2680/91 DEL 19 DE DICIEMBRE DE 1991, EXPEDIDA POR EL MINISTERIO DE JUSTICIA DE COLOMBIA.

Autenticaciones que se hallan a continuación de un documento de poder conferido en inglés y español por **SOCIÉTÉ DES PRODUITS NESTLE S.A.**, una sociedad organizada y existe de conformidad con las leyes de Suiza, domiciliada en Vevey, Suiza, y otorgado a los Doctores ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARÍA y/o ENRIQUE ÁLVAREZ, todos domiciliados en Bogotá, Colombia, Calle 72 No. 5 – 83 (Piso 6°).

Dado el 5 de agosto de 2004. Firma ilegible de la Señora Paula Nelson, con firma autorizada.

CERTIFICADO NOTARIAL (SOCIEDAD)

Legalización por parte del suscrito Notario de la firma de la Señora **Paula NELSON** quien desempeña el cargo de (en blanco) de la compañía **SOCIÉTÉ DES PRODUITS NESTLE S.A.**, una sociedad legalmente constituida y existente de acuerdo con las leyes de **Suiza**, domiciliada en **Vevey (Suiza)**. Además, dicho Notario certifica que el signatario, según las leyes de **Suiza**, tiene facultad para otorgar el presente documento. Los hechos anteriores le constan por haber examinado los documentos respectivos el 13 de junio de 1997, y de todo ello da fe.

Firma de Jean-Daniel RUMPF. Sello: Jean-Daniel RUMPF – Notario.

284/04

Traducción Oficial No.
JEAN - JACQUES H. TURPIN
Traductor e Intérprete Oficial
FRANCOIS - ESPANOL
Res. Minjusticia No. 2680/91

Legalización No. 7.136. El Notario Jean-Daniel RUMPF, en Vevey, Distrito de Vevey, Cantón de Vaud, Suiza, certifica la firma puesta en la página anterior por la Señora Paula Nelson, quien compromete en forma válida con su firma individual a la SOCIÉTÉ DES PRODUITS NESTLE S.A. en Vevey.

Dado en Vevey, el once de agosto de dos mil cuatro. Firma ilegible del Notario.

Sello: Jean-Daniel RUMPF – Notario. Estampilla de 4 Frs.

APOSTILLA

(Convención de La Haya del 5 de octubre de 1961)

- 1. - País: Suiza
- El presente documento público
- 2. - ha sido firmado por el Señor Jean-Daniel RUMPF
- 3. - obrando en calidad de Notario en Vevey
- 4. - con sello de Jean-Daniel RUMPF, Notario

CERTIFICADO

- 5. - En Lausana
- 6. - El 12 de agosto de 2004
- 7. - Por la Cancillería de Estado del Cantón de Vaud
- 8. - Bajo el número 6706
- 9. - Sello: Cancillería del Consejo de Estado – Libertad y Patria - Emolumento de 25 Fr.
- 10. - Por el Canciller de Estado, firma de P. Equey.

Es traducción fiel y completa de la cual se deja copia en los archivos de esta oficina para confrontación y a la cual me remito.

Traducción oficial No. 284/04.
Traductor: Jean-Jacques Turpin.
Bogotá, D.C., 1 de septiembre de 2004.

Traducción Oficial No. 284/04
JEAN - JACQUES H. TURPIN
Traductor e Interpreté Oficial
FRANCOIS - ESPANOL
Reg. Minjusticia No. 2680/91



Los abajo firmados, **SOCIETE DES PRODUITS NESTLE S.A.**, una sociedad organizada y existente de conformidad con las leyes de Suiza

con domicilio en **Vevey, Suiza**

nombramos por el presente a ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ, domiciliados en Bogotá, Colombia, con oficinas en dicha ciudad, Calle 72 No. 5-83, piso 6o., nuestros representantes legales y verdaderos en Bogotá, con facultades para recibir notificaciones y nombrar apoderados judiciales o extrajudiciales, con el fin de dar cumplimiento al parágrafo 1o. del artículo 543 del decreto 410 de 1971.

Los doctores ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ, o los apoderados que cualquiera de ellos designe, quedan especialmente facultados para representarnos ante las autoridades colombianas, administrativas, judiciales o de policía, en todos los trámites relativos a la propiedad industrial, a cuyo efecto les facultamos para dar ante dichas autoridades todos los pasos necesarios al objeto indicado; elevar solicitudes, declaraciones, reclamos, recursos y presentar desistimientos; formular descripciones, enmiendas, limitar el alcance de las solicitudes, presentar oposiciones y apelaciones; instaurar cancelaciones, renunciar total o parcialmente a los registros, abonar todos los impuestos y cuotas y efectuar todo otro pago determinado por la ley; recibir todos los documentos y valores, dando el descargo respectivo; llenar cualesquiera otros requisitos y tomar, en fin, todas las medidas que creyeren conducentes al resguardo de nuestros intereses; y en caso de producirse oposición, pasando los antecedentes a los tribunales, quedan facultados para tomar intervención como demandantes o demandados ante los jueces que sean competentes, pudiendo transar, someter a árbitros, desistir, percibir y apelar, con todas las demás facultades que resulten necesarias, y por el presente declaramos desde ahora válido y bueno cuanto dichos representantes y/o los apoderados que cualquiera de ellos nombre hicieren en nuestro beneficio.

Asimismo, facultamos a los doctores ALICIA LLOREDA y/o GUSTAVO TAMAYO y/o IGNACIO SANTAMARIA y/o ENRIQUE ALVAREZ, para solicitar en la Oficina de Propiedad Industrial la protocolización de este documento y de cualquier poder que cualquiera de ellos otorgue a nombre nuestro.

Dado y firmado

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The undersigned, **SOCIETE DES PRODUITS NESTLE S.A.**, a corporation organized and existing under the laws of Switzerland.

domiciled at **Vevey, Switzerland**

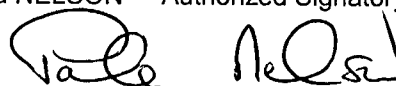
hereby appoint, ALICIA LLOREDA and/or GUSTAVO TAMAYO and/or IGNACIO SANTAMARIA and/or ENRIQUE ALVAREZ, of Bogota, Colombia, with offices in said town, Calle 72 No. 5-83, Sixth Floor, our true and legal representatives in Bogotá, with power to receive notifications and to appoint judicial or extrajudicial agents, so as to comply with paragraph 1o. of article 543 of decree 410 of 1971.

Doctors ALICIA LLOREDA and/or GUSTAVO TAMAYO and/or IGNACIO SANTAMARIA and/or ENRIQUE ALVAREZ, or the agents by any one of them appointed, are especially empowered to represent us before the administrative, judicial or police authorities of Colombia, in all proceedings pertaining to industrial property, for which purpose we authorize them to take before the said authorities all the necessary steps for the said end; to file petitions, declarations, claims, recourses and withdrawals, to draw up specifications; to file amendments, to limit the scope of applications, file oppositions; file cancellations total or partially waive registrations, to pay all installments and effect all other payments prescribed by law; to receive proper receipts, to comply with all other requirements and, in short, to take all those measures which they may deem fit for the protection of our interests; and in case of opposition, where the proceedings be passed over to the courts, we authorize said agents to act on our behalf, as complainants as well as defendants, before the competent judges, with full powers to make arrangements, to submit to arbitrators, to desist, to collect, to appeal and, in short, with all such further powers as may be required, and we hereby declare from now on as valid and good all that said representatives and/or the agents by any one of them appointed may do for our benefit.

We also authorize doctors ALICIA LLOREDA and/or GUSTAVO TAMAYO and/or IGNACIO SANTAMARIA and/or ENRIQUE ALVAREZ, to apply for protocolization of this document and of any power of attorney by any one of them conferred in our name, before the Office of Industrial Property.

Given and signed this (date): 5th August 2004

Paula NELSON - Authorized Signatory



NOTARY SHOULD EXECUTE OTHER SIDE

CERTIFICADO NOTARIAL (SOCIEDAD)

Suiza
Vevey {ss

Hoy 11 de Agosto de 2004
compareció PAULA NELSON, a quien conozco y
de quien me consta que firmó el anterior documento,
y quien debidamente juramentado declaró y dijo que
él es la persona autorizada por sus-
cribir documentos de SOCIETE DES
PRODUITS NESTLE S.A., la compañía nombrada en
el documento que antecede, una sociedad
debidamente organizada y existente conforme a las
leyes de Suiza, domiciliada en la ciudad de
Vevey, Suiza legalmente constituida para un período
de duración que aún no ha terminado, que ejerce su
objeto social; conforme a las leyes de Suiza, que el
declarante está autorizado por dicha Compañía para
conferir este poder; que el sello estampado por él al
pie de tal poder, en nombre y en representación de la
expresada Compañía, es el sello oficial de ella; y que
el objeto para el cual se confiere este instrumento
está comprendido dentro del de la sociedad.
El suscrito Notario ha visto los Estatutos de
incorporación firmados en Vevey, Suiza, con fecha
Noviembre 27, 1936, y certifica que de conformidad
con la legislación de dicho País, la anterior
declaración juramentada es prueba suficiente de que
los hechos sobre que ella versa son ciertos o
verdaderos, de lo cual da fe.

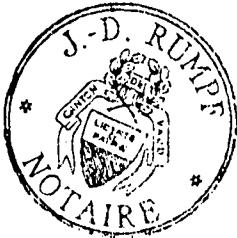
NOTARIAL CERTIFICATE (CORPORATION)

Switzerland
Vevey {ss

On this 11th day of August 2004,
personally came Paula NELSON

to me known, and known to me to be the person who
signed the foregoing instrument, who being by me
duly sworn did depose and say that he/she is the
Authorized Signatory of SOCIETE DES PRODUITS
NESTLE S.A., the company named within, a
Corporation organized and existing under the laws of
the Switzerland, domiciled at the City of Vevey,
Switzerland legally constituted for a period of tenure
not yet expired, which exercises its corporate
purposes according to the laws of Switzerland, that
the deponent is authorized by said Company to
confer this power of attorney; that the seal affixed
hereunto by the deponent in the name and on behalf
of said Corporation is the corporate seal thereof; and
that the purpose for which this instrument is granted
is included within the corporate purposes of the
Company.
The undersigned Notary Public has seen the articles
of Incorporation of said Corporation executed at
Vevey, Switzerland, under date of November 27,
1936, and hereby certifies that under the laws of said
County the foregoing acknowledgment is sufficient
proof that the facts therein contained are true, which
he attests. 1 June 13, 1997

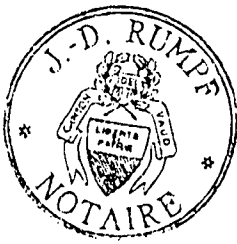
Notary Public (Notario Público).



J.D. Rumpf

Légalisation No 7'136.-

Le notaire JEAN-DANIEL RUMPF, à Vevey, District de Vevey, Canton de
Vaud, Suisse, certifie authentique la signature apposée d'autre ---
part par Mme Paula NELSON, laquelle engage valablement la SOCIETE -
DES PRODUITS NESTLE SA, à Vevey, par sa signature individuelle. ----
VEVEY, LE ONZE AOÛT DEUX MILLE QUATRE. -----



J.D. Rumpf

APOSTILLE
(Convention de La Haye du 5 octobre 1961)

1. Pays: SUISSE

Le présent acte public

2. a été signé par Jean-Daniel Rumpf

3. agissant en qualité de notaire à Vevey

4. est revêtu du sceau/timbre de J.-D. Rumpf notaire

Attesté

5. à Lausanne

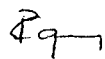
6. le 12 août 2004

7. par la Chancellerie d'Etat du Canton de Vaud

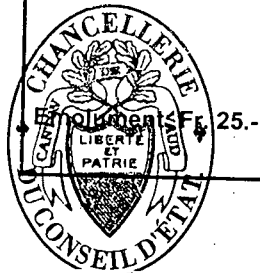
8. sous No 6706

9. Sceau/timbre:

10. Signature
pr le Chancelier d'Etat:



P.Equey



25.-

DIVISION DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No 03-001550

EL EXTRACTO DE LA PRESENTE SOLICITUD DE **PATENTE DE INVENCION**

FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No **536** DE

FECHA **30 DE ENERO DE 2004** EL TERMINO HABIL EÑALADO POR LA LEY

EXPIRA EL **28 DE ABRIL DEL 2004**

NOTA: Dentro del plazo de los seis (6) meses siguientes a partir de la fecha de publicación en la gaceta de Propiedad Industrial, deberá solicitar y cancelar el examen de patentabilidad so pena de que la solicitud caiga en abandono, de acuerdo con lo establecido en el Artículo 44 de la Decisión 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI ☐ _____

NO ☒ _____



US005965153A

United States Patent [19]
Allen

[11] **Patent Number:** **5,965,153**
[45] **Date of Patent:** **Oct. 12, 1999**

[54] **DIETARY SUPPLEMENT FOR PREVENTING OR REDUCING SHEDDING BY ANIMALS**

5,700,457 12/1997 Dixon 424/78.02

[75] **Inventor:** **Barbara A. Allen**, Farmington, Conn.
[73] **Assignee:** **Stabar Enterprises, Inc.**, Farmington, Conn.

Primary Examiner—Thurman K. Page
Assistant Examiner—William E. Benston, Jr.
Attorney, Agent, or Firm—Cooper & Dunham LLP

[21] **Appl. No.:** **09/047,092**
[22] **Filed:** **Mar. 24, 1998**
[51] **Int. Cl.⁶** **A23K 1/165; A23K 1/17**
[52] **U.S. Cl.** **424/442; 424/401**
[58] **Field of Search** 424/442, 489, 424/78.02, 78.06, 401, 72

[57] **ABSTRACT**

A dietary supplement for animals, comprising safflower oil, sunflower oil, olive oil, soya oil, cod liver oil, lecithin, natural flavors, herbs, garlic, and zinc. When fed to a dog or cat daily in a proper dosage, the supplement reduces or eliminates non-seasonal shedding and promotes healthy skin and a glossy, silky coat, without affecting the dog's or cat's natural shedding cycle and without causing any harmful effects. The composition also may be administered topically.

[56] **References Cited**
U.S. PATENT DOCUMENTS
4,862,748 9/1989 Herschler 426/72

11 Claims, No Drawings

DIETARY SUPPLEMENT FOR PREVENTING
OR REDUCING SHEDDING BY ANIMALS

BACKGROUND OF THE INVENTION

The present invention relates generally to compositions for keeping animals' skins and coats healthy. More specifically, the present invention relates to a dietary supplement for dogs and cats that prevents shedding out of season and promotes healthy skin and silky, glossy coats.

There are over 54 million domesticated dogs and over 63 million domesticated cats in the United States. The owners of these pets and other animals have had to cope with the problems associated with keeping the animals indoors and coming into frequent contact with the animals. Additionally, these pet owners deeply care for their pets and want to keep them as healthy and as beautiful as possible.

One of the problems pet owners often encounter is excessive amounts of pet hair clinging to clothes and fabrics and covering surfaces, including floors, carpets, and furniture. This is a result of shedding, the process by which many animals routinely lose their hair. New hair grows to replace that which is lost, so that the animals maintain a full coat.

Shedding is a normal process for certain animals and breeds, and should take place in those animals every spring. However, many individual animals shed throughout the year, not just during their natural shedding cycle. It is this unwanted, non-seasonal shedding that creates the year-round covering of pet hair found in the homes and on the clothes of pet owners.

Pet owners also are interested in keeping their pets healthy, and one aspect of that is healthy skin. Animals may be subject to myriad problems and diseases of the skin, including fungus infections and seasonal dry skin. Additionally, most pet owners want their pets to have a coat that is pleasing to the eye and to the touch. This is especially true for owners of show dogs, but is equally important to owners of household pets. It is desirable that pets have coats that look and feel healthy, glossy, and silky.

In view of the above mentioned problems and considerations, the present invention contemplates a liquid composition that supplements a dog's or cat's food daily, prevents or reduces non-seasonal shedding and promotes healthy skin and a silky, glossy coat. Prior products on the market have partially met this need but have not fully achieved the objective. As described below, the present composition solves the problems and is safe and all-natural, does not interfere with an animal's natural shedding cycle, and is highly palatable to dogs and cats.

OBJECTS AND SUMMARY OF THE
INVENTION

In view of the aforementioned considerations, it is an object of the present invention to provide a liquid composition that reduces or eliminates non-seasonal shedding in dogs and cats.

It is another object of the present invention to provide a composition that, when ingested as a dietary supplement, fosters healthier skin in dogs and cats, including reduction of fungus infections and seasonal dry skin.

It is another object of the present invention to provide a liquid composition that fosters healthy, glossy, silky coats in dogs and cats.

It is yet another object of the present invention to provide a supplement for dogs and cats that reduces or eliminates non-seasonal shedding but does not interfere with their natural shedding cycles.

It is another object of the present invention to provide a supplement for dogs and cats that is comprised entirely of natural products and is not harmful when ingested.

It is still another object of the present invention to provide a liquid dietary supplement that is highly palatable to dogs and cats when mixed with their normal daily food supply.

The present invention contemplates a liquid composition comprising safflower oil, sunflower oil, olive oil, soya oil, cod liver oil, lecithin, natural flavors, herbs, garlic and zinc, (and additional fish oils for cats). At least 3% of the composition is crude protein, at least 86% is crude fat, no more than 1% is crude fiber, and no more than 1% is moisture. When the proper dosage is mixed into a dog's or cat's food, once daily, as a dietary supplement, it has the effects of reducing or eliminating non-seasonal shedding by the animal and fostering healthy skin and a glossy, silky coat on the animal. The supplement does not affect the animal's natural shedding cycle, and the animal does not experience any harmful effects.

DETAILED DESCRIPTION OF THE
INVENTION

In one preferred embodiment of the present invention, a liquid composition is comprised of the following: safflower oil, sunflower oil, olive oil, soya oil, cod liver oil, lecithin, natural flavors, herbs, garlic, and zinc. The relative percentages of these substances in the composition are in the order listed. The resulting composition contains at least 3% crude protein, at least 86% crude fat, no more than 1% crude fiber, and no more than 1% moisture.

The olive, soya, cod liver oils are an important source of vitamins A, B complex and E, and of linolenic and linoleic acids. Additional vitamins and anti-oxidants may be added to the composition where desirable.

Although the exact mechanism of operation of the composition is not known to the applicant, there appears to be a synergistic relationship between the oils and fatty acids which results in the significant achievements of the invention.

The composition preferably is mixed into an animal's food once daily as a dietary supplement. The dosage for a dog depends on the dog's size. Generally, a dog weighing up to 20 pounds should be given one tablespoon daily, a dog weighing between 20 and 45 pounds should be given two tablespoons daily, a dog weighing between 45 and 75 pounds should be given three tablespoons daily, and a dog weighing over 75 pounds should be given four tablespoons daily. The supplement has a taste that dogs enjoy, or, at the very least, do not resist, and is therefore easy to administer.

If the supplement is properly taken, reduction or elimination of non-seasonal shedding by the dog occurs. Seasonal shedding is the loss of hair during an animal's naturally occurring shedding cycle. For many dogs, this occurs every spring. The present composition is designed to reduce or eliminate shedding during the rest of the year, at all times outside the dog's natural shedding cycle. The supplement will not affect the dog's natural shedding cycle, and there are no known harmful effects of taking the supplement.

When properly taken, the supplement fosters healthy skin which includes the reduction or elimination of occurrences of fungus infections and seasonal dry skin. Further, the supplement creates a healthy looking and feeling coat. The dog's coat should be more glossy and silky as a result of taking a daily dose of the supplement.

In another preferred embodiment of the present invention, fish oils are added to the composition set forth above. This

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alternative formulation is specifically useful as a dietary supplement for cats. The positive results set forth above occur in a cat that ingests a proper dosage of the supplement daily, and there are no harmful effects as a result of taking the supplement.

Although the compositions of the invention preferably are administered orally, the compositions may also be topically administered by rubbing into the coat and skin of the animal.

The embodiments described above are illustrative examples of the present invention and the present invention is not limited to these particular embodiments. Various changes and modifications may be made by one skilled in the art without departing from the scope or spirit of the invention as disclosed and claimed herein.

I claim:

1. A composition for reducing or eliminating non-seasonal shedding by an animal and for fostering healthy skin and a glossy, silky coat on the animal, comprising in combination an acceptable dosage of safflower oil; sunflower oil; olive oil; soya oil; cod liver oil; lecithin; natural flavors; herbs; garlic; and zinc.

2. The composition according to claim 1, wherein not less than 3% of the composition is crude protein, not less than 86% of the composition is crude fat, not more than 1% of the composition is crude fiber, and not more than 1% of the composition is moisture.

3. The composition according to claim 1, further comprising fish oils.

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4. The composition according to claim 1, wherein the composition is administerable as a dietary supplement.

5. The dietary supplement according to claim 1, wherein the composition is administerable topically.

6. A method for reducing or eliminating non-seasonal shedding by an animal and fostering healthy skin and a glossy, silky coat on the animal, comprising:

feeding the animal, on a daily basis, a dietary supplement comprising safflower oil, sunflower oil, olive oil, soya oil, cod liver oil, lecithin, natural flavors, herbs, garlic, and zinc.

7. The method according to claim 6, wherein the dietary supplement is not less than 3% crude protein, not less than 86% crude fat, not more than 1% crude fiber, and not more than 1% moisture.

8. The method according to claim 6, wherein the dietary supplement additionally comprises fish oils.

9. The method according to claim 6, wherein the daily dose of the dietary supplement fed to the animal ranges from about 0.25 to 6 tablespoons.

10. The method according to claim 6, wherein the animal is a dog.

11. The method according to claim 6, wherein the animal is a cat.

* * * * *

United States Patent [19]

Fraser

[11] **4,208,429**[45] **Jun. 17, 1980****[54] COAT CONDITIONING METHOD AND COMPOSITION FOR DOGS AND CATS****[76] Inventor:** Charles E. O. Fraser, 79 Marlborough Rd., Southborough, Mass. 01772**[21] Appl. No.:** 572,082**[22] Filed:** Apr. 28, 1975**Related U.S. Application Data****[63]** Continuation-in-part of Ser. No. 529,021, Dec. 3, 1974, abandoned.**[51] Int. Cl.²** **A61K 31/23****[52] U.S. Cl.** **424/312; 424/365****[58] Field of Search** **424/312, 365, 195****[56] References Cited****PUBLICATIONS**

Saunders, Blance, *Training You To Train Your Dog*, United Specialists, Inc., (1946), p. 23.
Veterinary Drug Encyclopedia and Therapeutic Index, 12th Ed., Reuben H. Donnelley Corporation, New York, (1965), p. 29.

Ames, Felicia, *The Cat You Care For*, The New American Library Inc., (1968), pp. 46-47.

The Merck Index, 7th Edition, (1960), p. 915.

The Merck Veterinary Manual, 2nd Edition, (1961), pp. 790 and 791.

Principal Register Trademark #823,586-Reg. on 2--7-67 to Lambert-Kay Inc.

Merck Index, 7th Ed., (1960), p. 276,746.

Chemical Abstracts, vol. 75, (1971), p. 2120m.

Chemical Abstracts, vol. 70, (1969), p. 45293j.

Chemical Abstracts, vol. 69, (1968), p. 1086u.

Primary Examiner—V. D. Turner**Attorney, Agent, or Firm**—George E. Kersey**[57] ABSTRACT**

A veterinary composition in which the major ingredient is safflower oil. When fed to an animal, the composition provides an advantageous source of fatty acid to improve the condition of the animal. The palatability of the composition can be enhanced by the addition of a minority amount of oil of cloves, and also enhanced by the addition of a minority amount of cod liver oil.

5 Claims, No Drawings

COAT CONDITIONING METHOD AND COMPOSITION FOR DOGS AND CATS

BACKGROUND OF THE INVENTION

This is a continuation-in-part of application Ser. No. 529,021, filed Dec. 3, 1974 now abandoned.

The invention relates to the conditioning of animals, and, more particularly, to the conditioning of domesticated animals.

In modern circumstances, many animals, such as domesticated pets, find themselves in an artificial environment. Their diets often consist of pre-prepared canned foods and cereals which often are lacking in certain dietary elements, especially those needed for a healthy and natural coat. In addition, the animals are frequently kept in artificially heated buildings where their coats are subjected to an excessive drying effect.

It has been discovered that the foregoing undesirable effects can be countered by the addition of fatty acid supplements to the diets of the animals. A common source of fatty acids for veterinary purposes is linseed oil.

Unfortunately, linseed oil is sometimes insufficiently digestible by animals and causes vomiting. In other cases, linseed oil is unpalatable.

Accordingly, it is an object of the invention to compensate for dietary deficiencies in animals. A related object is to compensate for deficiencies which cause degradation in the condition of animals.

Another object of the invention is to compensate for dietary deficiencies in animals using a more desirable source of fatty acid than linseed oil. A related object is to avoid the objectionable food supplement characteristics of linseed oil.

Still an object is to enhance the palatability of fatty acid veterinary compositions.

SUMMARY OF THE INVENTION

In accomplishing the foregoing and related objects, the invention provides a veterinary composition in which the major ingredient is safflower oil. This was found to improve the condition of dogs and cats by improving their general appearance, coat, texture, appetite, or shedding. Safflower oil was found to provide a relatively bland fatty acid supplement for animal diets, with a high degree of palatability of its own. It was found to be more acceptable by animals and does not have the adverse side effects, like occasional vomiting, associated with sharper tasting substances like linseed oil.

In addition safflower oil was found to provide a richer source of poly-unsaturated fatty acid than linseed oil and other similar substances, and is more digestible.

In accordance with another aspect of the invention, oil of cloves is added in a minority amount to enhance the palatability of the composition. It was found that this additive gives the final composition an unusually high degree of palatability for dogs and makes the composition palatable to cats that often reject other dietary supplements.

In accordance with another aspect of the invention, the composition may be supplemented by cod liver oil, to further increase palatability and provide a non-vegetable source of fatty acid, as well as desired vitamins and minerals.

Other aspects of the invention will become apparent after considering a description of the invention in detail.

DETAILED DESCRIPTION

The invention is illustrated by the following, non-limiting example:

To prepare a representative sample of approximately 14 fluid ounces (413.5 milliliters), approximately 13.96 fluid ounces (413 milliliters) of safflower oil are mixed with approximately 0.04 fluid ounces (0.05 milliliters) of oil of cloves. Although the safflower oil may be used independently, it is advantageous to add the oil of cloves in order to increase the palatability of the resulting composition. It has been observed empirically that the addition of oil of cloves makes the composition particularly palatable to domestic animals, and that no dispersal agent is needed.

When safflower oil is used with only the oil of cloves additive, it has been found that the optimum percentage of the latter is about 0.121 percent of the fluid volume.

Experimental results indicate that this percentage gives the best acceptance and appetite stimulation, but lesser and slightly greater percentages also have a desirably effect.

The safflower oil is substantially pure (aside, for example, for preservatives such as BHA, BHT, or the like present in small amounts) and is represented by the product sold and marketed by General Mills under the trade name of "Betty Crocker Safflower".

The oil of cloves is also substantially pure and is of the type that is readily available commercially.

The foregoing composition is desirably supplemented by cod liver oil and fat-soluble vitamins such as A, D₂, and E which have a further, beneficial effect. The cod liver oil further enhances the palatability of the composition and provides a nonvegetable source of fatty acid. It may be used with the safflower oil alone.

The foregoing mixture of safflower oil and oil of cloves is further mixed with approximately 1.76 fluid ounces (52 milliliters) of substantially pure cod liver oil, for example, the product sold under the name "Norwegian Cod Liver Oil" by the Marine Products Company of Boston, Mass.; approximately 0.0034 fluid ounces (0.1 milliliters) of vitamin A in the form palmitate; approximately 0.05 fluid ounces (1.5 milliliters) of vitamin D₂ in the form of calciferol; approximately 0.01 fluid ounces (0.3 milliliters) of vitamin E in the form of acetate; and approximately 0.203 fluid ounces (6.0 milliliters) of dispersion agent in the form of polyoxyethylene-mono-oleate, such as the product also known as "Sorbitan" and sold and marketed by company under the name "Tween 80" by the Sigma Chemical Company of St. Louis, Mo. A trace of the product sold and marketed under the name "BHA" is desirably added as preservative.

The resulting composition was found on analysis to contain about 250,000 milligrams of linoleic acid; 10,000 milligrams of oleic acid; 5,000 milligrams of palmitoleic acid; 12,000 milligrams of polyethenoic acid; 75,000 U.S.P. units of palmitate (vitamin A); 3,000,000 U.S.P. units of calciferol (vitamin D₂); and 300 U.S.P. units of acetate (vitamin E).

After being mixed with the vitamin and other additives the percentage of safflower oil in the composition was reduced to 87.24 percent, as compared with 87.9 percent in a two ingredient composition. The corresponding range for the oil of clove additive is 0.1056

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percent to 0.1209 percent in a two ingredient composition.

The percentage of cod liver oil is approximately 10.98 percent, and is as high as approximately 11.2 percent when mixed with only safflower oil.

Although the example makes use of vitamin E, for example, in the form of acetate, the only requirement for it, and for the other vitamin additives is that they be fat soluble, and vitamin E in the form of a suitable material may also be used.

A coat conditioner prepared in accordance with the foregoing example and containing about 87.24 percent safflower oil, about 0.12 percent oil of cloves, about 10.98 percent cod liver oil and the remainder about 1.66 percent as vitamin supplements was tested on a number of animals in accordance with the following dosage table.

DOSAGE TABLE

Weight	Dosage
1-10 pounds	$\frac{1}{4}$ teaspoon daily
10-20 pounds	$\frac{1}{2}$ teaspoon daily
20-50 pounds	1 teaspoon daily
over 50 pounds	1 $\frac{1}{2}$ teaspoon daily.

The following illustrative results are obtained:

TEST I

A Norwegian Elkhound weighing under 20 pounds at age 5 months was observed to have a dry coat and shedding of scurf (dry scales). After two weeks of treatment in accordance with the Dosage Table the dryness had decreased, the skin was much improved and the weight of the animal had increased to 23 pounds. After an additional 10 days of treatment the coat was observed to be much improved, with the scaling and shedding much reduced. Appetite had increased and the weight of the animal was 26.5 pounds.

TEST II

A German Shepherd weighing 78 pounds at 4 years had a dry coat and heavy shedding during winter. After 13 days of treatment in accordance with the Dosage Table, the coat, general appearance and appetite were much improved, and there was a reduction in shedding. The treatment was continued for another month and further improvements were noted. A number of months after the original treatment had been completed, the dog was again observed to be shedding during the winter. The treatment was recommenced in accordance with the Dosage Table, and in about one month the appetite, coat texture, shedding and general appearance of the dog were much improved.

TEST III

A Mixed Canine weighing 17 pounds at 11 weeks was observed to have a very dry coat. After 5 days of treatment in accordance with the Dosage Table the weight had increased to 20 pounds. After about an additional six weeks the weight had increased to 33 pounds and the texture of the coat and general appearance of the animal were much improved.

TEST IV

A cat weighing 10 pounds at two years and a second cat weighing 8 pounds at two years were both observed

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to have heavy shedding during the summer. After about a month of treatment in accordance with the Dosage Table the general appearance of both animals had improved, shedding had been reduced and appetite was noticeably improved. A number of months after the original treatment had been completed, it was recommenced in winter in accordance with the Dosage Table. In about a month there was a marked increase in appetite. In addition, general appearance, coat texture and the shedding condition were much improved.

As a result of the foregoing and other tests, it was observed that the composition gave improvement in some cases in about 7 days; in approximately fifty percent of the cases in about 14 days; and in substantially the remainder of the cases in about 21 days. Not only was the general condition of the animals improved, their coats generally became softer and less brittle, and had a glossier appearance, i.e. better quality. Although it is normal for animals to shed in the spring, the composition was able, in a number of cases, to provide a beneficial control of shedding at other times of the year.

In general the composition was found to be palatable to 96 percent of the dogs on which it was tested. It produced an improvement in general appearance in 96 percent of those cases, an improvement in coat texture in 88 percent, an improvement in appetite in 87 percent and improvement in shedding in 85 percent of the cases.

The composition was palatable to all tested cats whose conditions needed improvement, and it produced an improvement in general appearance, coat texture, appetite, and shedding in all cases.

In the typical case the composition improved the appetite of the animal being treated in 48 to 72 hours.

Other aspects of the invention will occur to those skilled in the art based on the foregoing disclosure and such modifications, including the substitution of equivalents for what has been shown and described, may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

What is claimed is:

1. The method of improving the condition of the coat of a dog or cat, in need of improvement, comprising feeding the dog or cat with safflower oil in an amount effective to improve its coat condition, said condition resulting from a lack of dietary elements or excessive drying of the coat, with oil of cloves added to said safflower oil in an amount effective to enhance its palatability.

2. The method of claim 1 in which cod liver oil is added to said safflower oil in an amount effective to further enhance its palatability and provide a non-vegetable source of fatty acid.

3. The method of claim 1 in which said safflower oil is at least eighty-seven percent of the total amount fed.

4. The method of claim 2 in which said safflower oil is at least eighty-seven percent of the total amount fed and said cod live oil is less than eleven percent of the total amount fed.

5. The method of claim 2 in which an oil soluble vitamin selected from the class consisting of A, D₂ and E is added to said safflower oil in an amount effective to provide a vitamin supplement.

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(21) International Application Number: PCT/US99/13894 (22) International Filing Date: 22 June 1999 (22.06.99) (30) Priority Data: 60/090,303 23 June 1998 (23.06.98) US (71) Applicant (for all designated States except US): UNIVERSITY OF MARYLAND [US/US]; 4312 Knox Road, College Park, MD 20742 (US). (72) Inventor; and (75) Inventor/Applicant (for US only): TETER, Beverly, B. [-/US]; 3731 Marlborough Way, College Park, MD 20740 (US). (74) Agents: JOYCE, Catherine, M. et al.; Millen, White, Zelano & Branigan, P.C., Suite 1400, Arlington Courthouse Plaza 1, 2200 Clarendon Boulevard, Arlington, VA 22201 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>With amended claims.</i>	
(54) Title: USE OF OILS HAVING A HIGH LAURIC ACID CONTENT AS AN ANIMAL FEED (57) Abstract Disclosed herein are compositions and methods related to the reduction of antibiotic use in production animals through the use of an anti-microbial fatty acid component in feed or as a feed supplement. The invention particularly relates to the use of natural oils that are high in lauric acid content.			

USE OILS HAVING A HIGH LAURIC ACID CONTENT AS AN ANIMAL FEED

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BACKGROUND OF THE INVENTION

The invention relates to the field of livestock production. About one quarter of antibiotics dispensed in the United States are administered in sub-therapeutic doses to promote weight gain in apparently healthy livestock. Increasingly, the use of antibiotics at sub-therapeutic levels in livestock has been implicated in the development of antibiotic resistance in bacteria, including human pathogenic bacteria and foodborne bacteria. J. Raloff, 1998, *Science News* 154:39; J. Raloff, 1999, *Science News* 155:356. Additionally, antibiotic residues in meat products is also of concern. Therefore, effective methods and compositions for reducing the use of antibiotics in the agricultural sector are needed.

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SUMMARY OF THE INVENTION

In accordance with the current invention, methods and compositions for reducing or eliminating the use of antibiotics to promote the growth of animals have been discovered. The methods and compositions relate to the use of an anti-microbial fatty acid component as part of the animal feed, either combined with the feed or administered separately as a feed supplement. The methods and compositions of the invention allow for the elimination or reduction of the use of antibiotics as growth promoters in animals. This reduction or elimination is important for several reasons, including but not limited to the following: (1) use of antibiotics as growth promoters in animals is known to contribute to the development of antibiotic resistance in microorganisms, particularly foodborne microorganisms; (2) use of antibiotics as growth promoters in animals results in antibiotic residue in animal tissue used for human food; and (3) use of antibiotics as growth promoters contributes to the introduction into the ecosystem of mutant, antibiotic resistant forms of common organisms, through the exposure of microorganisms to antibiotics in the animal and to antibiotics excreted in fecal matter. Therefore, in allowing for the elimination or reduction in the use of antibiotics in livestock management and in the management of

other production animals, the methods and compositions of the invention address a pressing problem in the agricultural sector.

One aspect of invention is a method for reducing the antibiotic content of animal feed comprising feeding the animals an anti-microbial fatty acid component as part of the animal feed, either combined with the feed or administered separately as a feed supplement. Animal feed, as used herein, includes all solid or semi-solid feeds, as well as liquid feed such as milk-replacers. The anti-microbial fatty acid component may comprise at least one fatty acid or glyceryl ester of a fatty acid, or a derivative thereof, which has an anti-microbial activity and which is suitable for use as animal feed. The anti-microbial fatty acid component may also comprise at least one precursor to a fatty acid or glyceryl ester of a fatty acid, or derivative thereof, having anti-microbial activity, provided the precursor is suitable for use as animal feed and is convertible to a form that is active as an anti-microbial by the animal's digestive process. Preferred anti-microbial fatty acid components, either provided directly to the animal or in precursor form, are those described in Kabara et al. (U.S. Pat. No. 4,002,775), Iwasaki et al. (4,961,934), Olund et al. (U.S. Patent No. 5,550,145), and Hayashi (U.S. Patent No. 5,462,967). For example, preferred anti-microbial fatty acid components, either provided directly to the animal or in precursor form, are lauric acid, monolaurin, other medium chain length fatty acids (C6 to C14) and glyceryl monoesters thereof, and palmitoleic (C16:1) and oleic acid (C18:1), and glyceryl monoesters thereof. Preferred precursor forms of fatty acids or glyceryl monoesters of fatty acids are diglycerides and triglycerides having lauroyl substituents.

Anti-microbial, as used herein, refers to a compound or composition having measurable activity against any of bacteria, fungi, viruses, protozoa, etc., or combinations thereof. Assays for describing such activity of fatty acid components are well known in the art and are described for example in Fletcher et al., 1985, Effect of monoglycerides on *Mycoplasma pneumonia* growth, in *The Pharmacological Effects of Lipids II* (J.J. Kabara ed., The American Oil Chemists' Society, Champaign, Illinois); Schemmel and Kabara, 1985, Fatty Acids, Monoglycerides and Sucrose Esters as Anticaries Agents Review, in *The Pharmacological Effects of Lipids II* (J.J. Kabara ed., The American Oil Chemists' Society, Champaign, Illinois);

Kabara, 1985, Inhibition of *Staphylococcus aureus* in a model sausage system by monoglycerides, in *The Pharmacological Effects of Lipids II* (J.J. Kabara ed., The American Oil Chemists' Society, Champaign, Illinois); Sands et al., 1978, Antiviral effects of fatty acids and derivatives; lipid-containing bacteriophages as a model
 5 system, in *The Pharmacological Effects of Lipids I* (J.J. Kabara ed., The American Oil Chemists' Society, Champaign, Illinois); Li and Kabara, 1978, Effects of lauricidin on *Fomes annosus* and *Phellinus weirii*, in *The Pharmacological Effects of Lipids I* (J.J. Kabara ed., The American Oil Chemists' Society, Champaign, Illinois); Kabara, 1978, Fatty acids and derivatives as antibiotic agents; A review, in *The*
 10 *Pharmacological Effects of Lipids I* (J.J. Kabara ed., The American Oil Chemists' Society, Champaign, Illinois);

A preferred anti-microbial fatty acid component contains lauric acid or monolaurin or contains precursors for lauric acid or monolaurin. A particular preferred anti-microbial fatty acid component comprises natural oils wherein a high
 15 percentage of fatty acid substituents on the triglycerides, diglycerides and monoglycerides are lauroyl substituents (referred to herein as "high lauric acid oils"). High lauric acid oils preferably comprise at least about 20% lauric acid as acylated fatty acids in the triglyceride, more preferably at least about 40%, and most preferably at least about 50%. Such natural oils include, but are not limited to coconut oil,.
 20 rapeseed oil, palm kernel oil, murumuru tallow, and tucum oil. As used herein natural oils means any oil derived from plant or animal material including, but not limited to, oils that are derived from plants that have been genetically modified either through traditional breeding or through genetic engineering techniques. As one example, canola oil, rapeseed oil or soybean oil, derived from plants that have been
 25 genetically modified to have a high lauric acid content may be employed. Such an oil is available, for example, under the tradename Laurical® from Calgene Inc., Davis, California. When high lauric acid oils are ingested by an animal, the digestive enzymes release lauric acid and monolaurin. The lauric acid and monolaurin are then either absorbed through the intestinal wall into the blood stream or remain in the
 30 digestive tract. Therefore, the lauric acid or monolaurin can exert an anti-microbial effect systemically within the animal or within the digestive tract.

WHAT IS CLAIMED IS:

1. A method for reducing the antibiotic content of animal feed comprising providing an animal feed to the animals, wherein the animal feed comprises an anti-microbial fatty acid component.
2. A method according to claim 1, wherein the anti-microbial fatty acid component is derived from a natural oil.
3. A method according to claim 2, where in the natural oil is a high lauric acid oil.
4. A method according to claim 2, wherein the high lauric acid oil is coconut oil, palm kernel oil, or high lauric acid rapeseed oil.
5. A method according to claim 3, wherein lauric acid in the high lauric acid oil comprises from 0.5 % to 10 % of the animal feed.
6. A method according to claim 5, wherein the animal feed is essentially free of other antibiotics.
7. A method according to claim 5, wherein antibiotics present in the animal feed comprise less than 50% of the optimal antibiotic supplement.
8. A method according to claim 5, wherein antibiotics present in the animal feed comprise less than 50% of the maximal antibiotic supplement.
9. A method according to claim 5, wherein the animals are chickens, turkeys, lambs or veal calves produced for human consumption.
10. A method according to claim 9, wherein the animal feed comprises less than 50% of the optimal antibiotic supplement for controlling *Salmonella typhimurium*.

11. A method according to claim 9, wherein the animal feed comprises less than 50% of the optimal antibiotic supplement for controlling *Salmonella typhimurium*.
12. An animal feed composition comprising an anti-microbial fatty acid component.
13. An animal feed composition according to claim 12, wherein the anti-microbial fatty acid component is derived from a natural oil.
14. An animal feed composition according to claim 13, wherein the natural oil is a high lauric acid oil.
15. An animal feed composition according to claim 14, wherein the high lauric acid oil is coconut oil, palm kernel oil, or a high lauric acid rapeseed oil.
16. An animal feed composition according to claim 14, wherein lauric acid in the high lauric acid oil comprises 0.5 % to 10 % of the animal feed.
17. An animal feed composition according to claim 14, wherein the animal feed composition is essentially free of other antibiotics.
18. An animal feed composition according to claim 14, wherein antibiotics in the animal feed comprise less than 50% of an optimal antibiotic supplement.
19. An animal feed composition according to claim 15, wherein antibiotics in the animal feed comprise less than 50% of a maximal antibiotic supplement.

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20. An animal feed composition according to claim 15, wherein antibiotics in the animal feed comprise less than 50% of an optimal antibiotic supplement for controlling *Salmonella typhimurium*.

21. An animal feed composition according to claim 15, wherein antibiotics in the animal feed comprise less than 50% of an allowable antibiotic supplement for controlling *Salmonella typhimurium*.

22. An animal feed composition according to claim 16, wherein the feed composition is feed for chickens, turkeys, lambs or veal calves produced for human consumption.

23. A method for reducing the antibiotic content of an animal feed which contains antibiotics comprising replacing all or a portion of the antibiotics in the animal feed with an anti-microbial fatty acid component to obtain modified feed, wherein the antibiotic effect of the animal feed in enhancing feed efficiency is maintained in the modified feed.

24. A method according to claim 23, wherein less than 50% of an optimal antibiotic supplement is present in the modified feed.

25. A method according to claim 23, wherein less than 50% of an allowable antibiotic supplement is present in the modified feed.