



No. 06-011103-A-00004-0000

Fecha: 2012-03-01 15:47:16 Dep. 2020 DIR.NUEVASCR
Tra. 11 PATENTEIYII Eve: 379 FASENACIONALII
Act. 523 RESPUESTA Folios: 13

Clarke, Modet & C^o

COLOMBIA

P-2458

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

DIVISION DE NUEVAS CREACIONES

E. S. D.

Re: Expediente No. 06.011.103A

Solicitud de patente a nombre de GUM BASE CO S.p.A.

Yo, DILIA RODRIGUEZ D'ALEMAN, identificada como aparece al pie de mi firma, domiciliada en la carrera 11 No. 86-53, piso 6, obrando como apoderada de la sociedad **GUM BASE CO S.p.A.**, domiciliada en Lainate, Italia, solicitante de la patente de la referencia, en respuesta al oficio No. 19410 notificado por fijación en lista el 15 de diciembre de 2011, me permito manifestar:

1. Con fundamento en la facultad que confiere el artículo 34 de la Decisión 486 al solicitante para modificar la solicitud de patente en cualquier momento del trámite, presento junto con este memorial un nuevo capítulo reivindicatorio, el cual consta de 1 – 9 reivindicaciones y reemplaza completamente el capítulo presentado anteriormente.

En el nuevo capítulo reivindicatorio se ha corregido el encabezado de las reivindicaciones para establecer que se trata de una “formulación de base de goma” y no una “formulación a base de goma”, ya que éste último no es el objeto de la solicitud a la luz de lo establecido en la descripción. Así mismo, se ha incluido la característica “no pegajosa” de acuerdo a lo establecido en la descripción.

En cuanto a estas modificaciones, me permito decir que las mismas no amplían de ninguna manera la materia objeto de la presente solicitud y se realizaron con el ánimo de superar las objeciones de claridad y altura inventiva planteadas por el examinador en su concepto técnico.

2. Nivel Inventivo

Se objeta el nivel inventivo de la presente solicitud, argumentando que las anterioridades US 6.231.896 (en adelante D1) y US 4.065.578 (en adelante D2) hacen obvia la solución propuesta para cualquier técnico con habilidad ordinaria en la materia. Particularmente, el examinador establece que el problema objetivo de la presente solicitud consiste en “*cómo modificar las composición de una base de chicle no pegajosa conocida en D6 para disminuir la pegajosidad de las bases de goma utilizadas en procesos de fabricación de chicles para hacerlo más eficiente*”. Prosigue el examinador diciendo que “... la no utilización de acetato de polivinilo en la composición para disminuir

P-2458

la pegajosidad ya está divulgada en D7 que se refiere a una goma de mascar baja en azúcar en forma de una goma blanda la cual comprende una goma base, xilitol como agente endulzante y de relleno y un hidrocoloide del grupo seleccionado entre goma de xantana o sus alginatos, para facilitar la formación de una mezcla suave, poco pegajosa y cohesiva". Concluye el examinador diciendo que "... la persona del oficio normalmente versada en la materia, eliminaría de la composición el acetato de vinilo para reducir la pegajosidad de la composición por lo cual se considera obvia".

Al respecto, el solicitante quisiera hacer los siguientes comentarios:

En primer lugar, para el solicitante es claro que el examinador está simplificando el problema que intenta resolver la presente solicitud, así como la solución propuesta. Contrario a los argumentos del examinador, disminuir la pegajosidad de la base de la anterioridad D6 va más allá de simplemente retirarle el acetato de vinilo como lo hace la anterioridad D7. Esencialmente, esto no es del todo cierto ya que las composiciones de D6 y D7 difieren en mucho más que simplemente la ausencia o presencia de acetato de polivinilo. Más aún, el examinador hace una referencia a un Manual del Caucho con el fin de sustentar su opinión, cuando la materia objeto de la presente solicitud y la del Manual en cuestión no guardan absolutamente ninguna relación, y el experto medio en la materia no recurriría a dicha fuente si deseara transformar la formulación de D6.

En segundo lugar, aunque la anterioridad D6 se refiere a la goma de mascar y a una base de goma de mascar el objeto **real** de la invención allí divulgada se dirige claramente al uso de ácido carnósico para estabilizar polímeros gomosos en los cuales el acetato de polivinilo está expresamente incluido (col. 5, l. 49-53); por lo tanto, la invención de D6 se refiere la estabilización del polímero gomoso contenido en la goma base mediante el uso de ácido carnósico, y tal polímero puede ser acetato de polivinilo. Más aún, no hay descripción, sugerencia o discusión sobre el problema de pegajosidad o sobre una goma base no pegajosa en todo el documento. Por lo que la anterioridad D6 no reconoce la pegajosidad como un problema y el experto medio no tendría ninguna motivación para basarse en las gomas de dicho documento, si buscara desarrollar las gomas base de la presente invención.

Tercero, en cuanto a D7 es necesario anotar que **no se refiere a formulaciones de goma base** (que es un material de inicio) sino a una goma de mascar acabada, particularmente una goma de mascar sin azúcar que contiene xilitol como sustituto del azúcar. Al momento del desarrollo de la presente invención, el experto medio en la materia reconocía el xilitol como un material inferior que producía goma de mascar de poca calidad y, de hecho, D7 trata de enfrentar **este problema técnico** agregando un hidrocoloide que "*sirve como un aglutinante entre la goma base y el xilitol*" (ver col. 1, l. 18-32). Así, contrario a lo aseverado por el

examinador, es claro que la anterioridad D7 **no busca** solucionar un problema de pegajosidad de la goma base y el hidrocoloide **no se emplea** para reducir la pegajosidad sino para combatir las desventajas generadas por el uso de xilitol, como por ejemplo mejorar la humedad y reducir el jalado seco (ver col 3, l. 32 y col 1, l. 20-21).

Así mismo, D7 claramente incluye el uso de acetato de polivinilo en la composición de la goma base empleada para la preparación de la goma de mascar final a la que se refiere la invención, ver en particular la col. 2, l. 11-18; de hecho, antes de la presente invención (al momento de D7, o sea 1976) el acetato de polivinilo era el ingrediente más usado en las gomas bases. El examinador debe estar al tanto que acetato de polivinilo estaba incluido en la lista de ingredientes positivos de la FDA para gomas de mascar base, según lo demuestra el documento anexo.

Cuarto, es necesario resaltar que la pegajosidad no era un problema para ninguna de las anterioridades citadas, y ninguna de dichas anterioridades ofrecía una solución para dicho problema. Por lo tanto, para el solicitante es nuevamente claro el estudio retrospectivo de la solicitud, ya que la solución propuesta en la misma no puede ser anticipada de ningún modo partiendo de documentos que ni siquiera reconocen el problema planteado. Contrario a lo establecido por el examinador, el problema objetivo de la presente solicitud no puede ser como modificar la formulación de D6 para reducir su pegajosidad, y la solución a dicho problema no puede ser emplear la formulación de D7 cuando ninguna de dichas anterioridades hace referencia a la pegajosidad como un problema a solucionar. Menos aún cuando las formulaciones de D7 comprenden una goma base que, evidentemente, incluye el componente que la presente solicitud ha removido.

El solicitante quisiera nuevamente llamar la atención del examinador a la declaración de la Dra. Del Viscio, presentada en junto con el memorial en respuesta al oficio NO. 4835, radicado el 6 de julio de 2010, en la que se explica claramente que al momento de desarrollar la presente invención el acetato de polivinilo era un material ampliamente utilizados por cualquier experto medio en el campo de la fabricación de gomas base. El solicitante también quisiera llamar la atención del examinador al hecho que la presente solicitud reclama una goma base con propiedades sensoriales y de procesamiento que son superiores a las de una goma base con acetato de polivinilo, algo completamente sorprendente e inesperado a la luz de las anterioridades D1 y D2.

Finalmente, respecto a la anotación de examinador a cerca de los ésteres de colofonio y/o los ésteres de terpeno como reductores conocidos de la pegajosidad, de acuerdo con el Manual del Caucho, el solicitante no está de acuerdo. Se le recuerda respetuosamente al examinador que para analizar la altura

inventiva de una solicitud, es necesario ubicarse en el momento del desarrollo de la misma y no en el momento en que se está evaluando. A la luz de esta aclaración, el solicitante adjunta una copia de la ficha técnica de una resina de politerpeno de fecha 1998 en la cual claramente se informa que la resina es una resina pegajosa empleada en adhesivos.

Por consiguiente, **al momento del desarrollo de la presente invención** el experto medio en el arte no podría derivar de manera obvia la materia objeto de la presente solicitud partiendo de las enseñanzas de las anterioridades D6 y D7, y sabiendo que los ésteres de colofonio y/o de terpeno tienen propiedades que no son deseables a la luz del objeto de la solicitud en estudio.

En conclusión, gracias a los argumentos anteriormente mencionados la presente solicitud cumple cabalmente con los requisitos de nivel inventivo respecto a la composición divulgada en el capítulo reivindicatorio adjunto. Por lo tanto, solicito comedidamente a ese despacho se sirva reconocer estos requisitos y conceder el privilegio de patente de invención a la solicitud en estudio.

En consecuencia, solicitamos a ese despacho pronunciarse en relación con todos los argumentos presentados en este memorial dando estricta aplicación al principio del debido proceso consagrado en el artículo 29 de la Constitución Nacional. De igual forma, si el examinador considera que subsisten razones para objetar la presente invención ruego expedir otro examen de fondo con los debidos motivos y razones que sustenten su objeción con el fin de que mi mandante tenga la posibilidad de exponer sus argumentos con base en la interpretación de los artículos 45 de la Decisión 486 -el cual otorga la facultad al examinador para emitir los exámenes de fondo-, 35 y 59 del Código Contencioso Administrativo que señala que: *“habiéndose dado oportunidad a los interesados para expresar sus opiniones, y con base en las pruebas e informes disponibles, se tomará la decisión que será motivada al menos en forma sumaria si afecta a particulares”* y *“(.) deberá proferirse la decisión definitiva. Esta se motivará en sus aspectos de hecho y de derecho, y en los de conveniencia si es el caso”*, respectivamente (el subrayado es nuestro).

Señor Superintendente,



DILIA RODRIGUEZ D'ALEMAN

CC. 41.654.882 de Bogotá

TP 20824

Cód. 008

REIVINDICACIONES

1. Una formulación de base de goma no pegajosa que tiene la siguiente composición en porcentaje de peso:

Elastómeros	8 – 14%
Emulsificadores y/o auxiliares tecnológicos	18 – 25%
Adyuvantes	32 – 40%
Resinas de Terpeno	18 – 24%
Esteres de Colofonia	8 – 12%
Antioxidantes	0 – 2%

y que no contiene acetato de polivinilo.

2. Una formulación de base de goma no pegajosa como se reivindica en la reivindicación 1, caracterizada porque los elastómeros son seleccionados de poliisobutileno, copolímero de isobutileno-isopreno, copolímero de estireno-butadieno, chicle, *jelutong*, balata, gutapercha, lechi caspi, sorva o una combinación de los mismos.

3. Una formulación de base de goma no pegajosa como se reivindica en la reivindicación 1, caracterizada porque los emulsificadores y/o auxiliares tecnológicos son seleccionados de monostearato de glicerilo, monoglicéridos acetilados, aceites vegetales hidrogenados, lecitina, triacetina, o una combinación de los mismos.

4. Una formulación de base de goma no pegajosa como se reivindica en la reivindicación 3, caracterizada porque los aceites vegetales hidrogenados son seleccionados de aceite de coco, soya, palma y/o semilla de algodón.

5. Una formulación de base de goma no pegajosa como se reivindica en la reivindicación 1, caracterizada porque los agentes adyuvantes son seleccionados de carbonato de calcio, talco o carbonato de magnesio, fosfato de tricalcio, o una combinación de los mismos.

6. Una formulación de base de goma no pegajosa como se reivindica en la reivindicación 1, caracterizada porque las resinas de terpeno son seleccionadas de polímeros de α -pineno, β -pineno y/o d-limoneno.

7. Una formulación de base de goma no pegajosa como se reivindica en la reivindicación 1, caracterizada porque los derivados de colofonia son seleccionados de resinas hidrogenadas o parcialmente hidrogenadas, esterres de glicerol con colofonia natural parcialmente hidrogenada, esterres de pentaeritritol con colofonia natural parcialmente hidrogenada, esterres metílicos de colofonia hidrogenada, esterres de colofonia hidrogenada y glicerol, esterres de colofonia parcialmente dimerizada y glicerol, esterres de colofonia polimerizada y glicerol, esterres de ácidos de resina de aceite de sebo, o combinaciones de los mismos.

8. Una formulación de base de goma no pegajosa como se reivindica en la reivindicación 1, caracterizada porque los antioxidantes son seleccionados de hidroxianisol butilado, hidroxitolueno butilado, tocoferol, propil galato y mezclas de los mismos.

9. Una goma de mascar que contiene una formulación de base de goma no pegajosa como se reivindica en una de las reivindicaciones precedentes.

code of federal regulations



21

Food and Drugs

PARTS 100 TO 199

Revised as of April 1, 1977

The additive is added to the wort before or during cooking in the manufacture of beer.

§ 172.575 Quinine.

Quinine, as the hydrochloride salt or sulfate salt, may be safely used in food in accordance with the following conditions:

Uses	Limitations
In carbonated beverages as a flavor.	Not to exceed 83 parts per million, as quinine. Label shall bear a prominent declaration of the presence of quinine either by the use of the word "quinine" in the name of the article or through a separate declaration.

§ 172.580 Saffrole-free extract of sassafras.

The food additive saffrole-free extract of sassafras may be safely used in accordance with the following prescribed conditions:

(a) The additive is the aqueous extract obtained from the root bark of the plant *Sassafras albidum* (Nuttall) Nees (Fam. Lauraceae).

(b) It is obtained by extracting the bark with dilute alcohol, first concentrating the alcoholic solution by vacuum distillation, then diluting the concentrate with water and discarding the oily fraction.

(c) The purified aqueous extract is saffrole-free.

(d) It is used as a flavoring in food.

§ 172.585 Sugar beet extract flavor base.

Sugar beet extract flavor base may be safely used in food in accordance with the provisions of this section.

(a) Sugar beet extract flavor base is the concentrated residue of soluble sugar beet extractives from which sugar and glutamic acid have been recovered, and which has been subjected to ion exchange to minimize the concentration of naturally occurring trace minerals.

(b) It is used as a flavor in food.

§ 172.590 Yeast-malt sprout extract.

Yeast-malt sprout extract, as described in this section, may be safely used in food in accordance with the following prescribed conditions:

(a) The additive is produced by partial hydrolysis of yeast extract (derived from *Saccharomyces cerevisiae*, *Saccharomyces fragilis*, or *Candida utilis*) using the sprout portion of malt barley as the source of enzymes. The additive contains a maximum of 6 percent 5' nucleotides by weight.

(b) The additive may be used as a flavor enhancer in food at a level not in excess of that reasonably required to produce the intended effect.

Subpart G—Gums, Chewing Gum Bases and Related Substances

§ 172.610 Arabinogalactan.

Arabinogalactan may be safely used in food in accordance with the following conditions:

(a) Arabinogalactan is a polysaccharide extracted by water from Western larch wood, having galactose units and arabinose units in the approximate ratio of six to one.

(b) It is used in the following foods in the minimum quantity required to produce its intended effect as an emulsifier, stabilizer, binder, or bodying agent: Essential oils, nonnutritive sweeteners, flavor bases, nonstandardized dressings, and pudding mixes.

§ 172.615 Chewing gum base.

The food additive chewing gum base may be safely used in the manufacture of chewing gum in accordance with the following prescribed conditions:

(a) The food additive consists of one or more of the following substances that meet the specifications and limitations prescribed in this paragraph, used in amounts not to exceed those required to produce the intended physical or other technical effect.

Family	Genus and species
Massaranduba balata (and the solvent-free resin extract of Massaranduba balata).	Manilkara huberi (Ducke) Chevallier.
Massaranduba chocolate.	Manilkara solimoesensis Gilly.
Nispero	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Rosidinha (rosadinha)	Micropholis (also known as Sideroxylon) spp.
Venezuelan chicle	Manilkara williamsii Standley and related spp.
Apocynaceae:	
Jelutong	Dyera costulata Hook. F. and Dyera lowii Hook. F.
Leche caspi (sorva)	Couma macrocarpa Barb. Rodr.
Pendare	Couma macrocarpa Barb. Rodr. and Couma utilis (Mart.) Muell. Arg.
Perillo	Couma macrocarpa Barb. Rodr. and Couma utilis (Mart.) Muell. Arg.
Moraceae:	
Leche de vaca	Brosimum utile (H.B.K.) Pittier and Poulsenia spp.; also Lacmellea standleyi (Woodson), Monachino (Apocynaceae).
Niger gutta	Ficus platyphylla Del.
Tunu (tuno)	Castilla faliax Cook.
Euphorbiaceae:	
Chilita	Onidoscolus (also known as Jatropa) elasticus Lundell and Onidoscolus tepiquensis (Cost. and Gall.) McVaugh.
Natural rubber (smoked sheet and latex solids).	Hevea brasiliensis.
Synthetic	Specifications
Butadiene-styrene rubber	Basic polymer.
Isobutylene - isoprene copolymer (butyl rubber).	Do.
Paraffin	Synthesized by Fischer-Tropsch process from carbon monoxide and hydrogen, which are catalytically converted to a mixture of paraffin hydrocarbons. Lower molecular weight fractions are removed by distillation. The residue is hydrogenated and further treated by percolation through activated charcoal. The product has a congealing point of 200° F-210° F as determined by A.S.T.M. D-938-49 method; a maximum oil content of 0.5 percent as determined by A.S.T.M. D-721-56T method; and an absorptivity of less than 0.01 at 290 millimicrons in decahydronaphthalene at 190° F as determined by A.S.T.M. 131 method.
Petroleum wax	Complying with § 172.888.
Petroleum wax synthetic	Complying with § 172.888.
Polyethylene	Molecular weight 2,000-21,000.
Polysobutylene	Minimum molecular weight 37,000 (Flory).
Polyvinyl acetate	Molecular weight, minimum 2,000.
PLASTICIZING MATERIALS (SOFTENERS)	
Glycerol ester of partially dimerized rosin.	Having an acid number of 3-8, a drop-softening point of 109° C-119° C, and a color of M or paler.
Glycerol ester of partially hydrogenated gum or wood rosin.	Having an acid number of 3-10, a drop-softening point of 79° C-88° C, and a color of N or paler.
Glycerol ester of polymerized rosin.	Having an acid number of 3-12, a melting-point range 80° C-126° C, and a color of M or paler.
Glycerol ester of gum rosin.	Having an acid number of 5-9, a drop-softening point of 83° C-96° C, and a color of N or paler. The ester is purified by steam stripping.
Glycerol ester of tall oil rosin.	Having an acid number of 5-12, a softening point (ring and ball) of 80°-88° C, and a color of N or paler. The ester is purified by steam stripping.
Glycerol ester of wood rosin.	Having an acid number of 3-9, a drop-softening point of 88° C-96° C, and a color of N or paler. The ester is purified by steam stripping.

MASTICATORY SUBSTANCES

NATURAL (COAGULATED OR CONCENTRATED LATICES) OF VEGETABLE ORIGIN

Family	Genus and species
Sapotaceae:	
Chicle	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Chiquibul	Manilkara zapotilla Gilly.
Crown gum	Manilkara zapotilla Gilly and Manilkara chicle Gilly.
Gutta hang kang	Palaquium leiocarpum Boerl. and Palaquium oblongifolium Burck.

Lanolin.....	Having an acid number of 4-8, a refractive index of 1.5170-1.5205 at 20° C, and a viscosity of 23-66 poises at 25° C. The ester is purified by steam stripping.
Methyl ester of rosin, partially hydrogenated.....	Having an acid number of 7-18, a drop-softening point of 102° C-110° C, and a color of K or paler.
Pentaerythritol ester of partially hydrogenated gum or wood resin.....	Having an acid number of 6-16, a drop-softening point of 109° C-116° C, and a color of M or paler.
Pentaerythritol ester of gum or wood rosin.....	Complying with § 172.890.
Rice bran wax.....	Complying with § 172.860.
Stearic acid.....	Complying with § 172.863.
Sodium and potassium stearates.....	Complying with § 172.863.
TERPENE RESINS	
Synthetic resin.....	Consisting of polymers of α -pinene, β -pinene, and/or dipentene; acid value less than 5, saponification number less than 5, and color less than 4 on the Gardner scale as measured in 50 percent mineral spirit solution.
Natural resin.....	Consisting of polymers of α -pinene; softening point minimum 155° C, determined by U.S.P. closed-capillary method.
ANTIOXIDANTS	
Butylated hydroxyanisole.....	Not to exceed antioxidant content of 0.1% when used alone or in any combination.
Butylated hydroxytoluene.....	
Propyl gallate.....	
MISCELLANEOUS	
Sodium sulfate.....	Reaction-control agent in synthetic polymer production.
Sodium sulfide.....	

(b) In addition to the substances listed in paragraph (a) of this section, chewing gum base may also include substances generally recognized as safe in food.

(c) To assure safe use of the additive, in addition to the other information required by the act, the label and labeling of the food additive shall bear the name of the additive, "chewing gum base." As used in this paragraph, the term "chewing gum base" means the manufactured or partially manufactured nonnutritive masticatory substance comprised of one or more of the ingredients named and so defined in paragraph (a) of this section.

§ 172.620 Carrageenan.

The food additive carrageenan may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is the refined hydrocolloid prepared by aqueous extraction from the following members of the families Gigartinaaceae and Solieriaceae of the class Rhodophyceae (red seaweed):

Chondrus crispus.
 Chondrus ocellatus.

Eucheuma cottonii.
 Eucheuma spinosum.
 Gigartina acicularis.
 Gigartina pistillata.
 Gigartina radula.
 Gigartina stellata.

(b) The food additive conforms to the following conditions:

(1) It is a sulfated polysaccharide the dominant hexose units of which are galactose and anhydrogalactose.

(2) Range of sulfate content: 20 percent to 40 percent on a dry-weight basis.

(c) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(d) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the additive, carrageenan.

§ 172.623 Carrageenan with polysorbate 80.

Carrageenan otherwise meeting the definition and specifications of § 172.620 (a) and (b) and salts of carrageenan

otherwise meeting the definition of § 172.626(a) may be safely produced with the use of polysorbate 80 meeting the specifications and requirements of § 172.840 (a) and (b) in accordance with the following prescribed conditions:

(a) The polysorbate 80 is used only to facilitate separation of sheeted carrageenan and salts of carrageenan from drying rolls.

(b) The carrageenan and salts of carrageenan contain not more than 5 percent by weight of polysorbate 80, and the final food containing the additives contains polysorbate 80 in an amount not to exceed 500 parts per million.

(c) The carrageenan and salts of carrageenan so produced are used only in producing foods in gel form and only for the purposes defined in § 172.620(c) and § 172.626(b), respectively.

(d) The carrageenan and salts of carrageenan so produced are not used in foods for which standards of identity exist unless the standards provide for the use of carrageenan, or salts or carrageenan, combined with polysorbate 80.

(e) The carrageenan and salts of carrageenan produced in accordance with this section, and foods containing the same, in addition to the other requirements of the act, are labeled to show the presence of polysorbate 80, and the label or labeling of the carrageenan and salts of carrageenan so produced bear adequate directions for use.

§ 172.626 Salts of carrageenan.

The food additive salts of carrageenan may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive consists of carrageenan, meeting the provisions of § 172.620, modified by increasing the concentration of one of the naturally occurring salts (ammonium, calcium, potassium, or sodium) of carrageenan to the level that it is the dominant salt in the additive.

(b) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(c) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the salt of carrageenan that dominates the mixture by reason of the modification, e.g., "sodium carrageenan", "potassium carrageenan", etc.

§ 172.655 Furcelleran.

The food additive furcelleran may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is the refined hydrocolloid prepared by aqueous extraction of furcellaria fastigiata of the class Rhodophyceae (red seaweed).

(b) The food additive conforms to the following:

(1) It is a sulfated polysaccharide the dominant hexose units of which are galactose and anhydrogalactose.

(2) Range of sulfate content: 8 percent to 19 percent, on a dry-weight basis.

(c) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(d) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the additive, furcelleran.

§ 172.660 Salts of furcelleran.

The food additive salts of furcelleran may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive consists of furcelleran, meeting the provisions of § 172.655, modified by increasing the concentration of one of the naturally occurring salts (ammonium, calcium, potassium, or sodium) of furcelleran to the level that it is the dominant salt in the additive.

(b) The food additive is used or intended for use in the amount necessary for an emulsifier, stabilizer, or thickener in foods, except for those standardized foods that do not provide for such use.

(c) To assure safe use of the additive, the label and labeling of the additive shall bear the name of the salt of furcelleran that dominates the mixture by reason of the modification, e.g., "sodium furcelleran", "potassium furcelleran", etc.

§ 172.695 Xanthan gum.

The food additive xanthan gum may be safely used in food in accordance with the following prescribed conditions:

(a) The additive is a polysaccharide gum derived from *Xanthomonas campestris* by a pure-culture fermentation process and purified by recovery with isopropyl alcohol. It contains D-glucose, D-mannose, and D-glucuronic acid as the dominant hexose units and is manufac-

INTRODUCTION / Rosin - a product of the forest

The pine tree is the basic source of gum, wood and tall oil rosins. For hundreds of years only gum rosin, obtained from the exudate of the living tree, was produced commercially. However, at the turn of this century both aged pine stumpwood and tall oil became of interest as alternate raw materials for the production of rosin. The first of these to be processed commercially was stumpwood, from which wood rosin is obtained. Since its commercial introduction in 1909 wood rosin rapidly gained major importance in the marketplace, and eventually its production exceeded that of gum rosin.

Because of technological problems tall oil was not utilized as a major source of rosin until after World War II when Arizona Chemical Company successfully developed a practical fractional distillation process for the production of high quality tall oil rosin. In 1949 Arizona's pioneering efforts were culminated with the construction and operation of a large tall oil fractionating plant at Panama City, Florida, designed to produce rosin with a fatty acid content as low as one per cent. Effective November 1, 1950, ACINTOL® R Tall Oil Rosin was the first rosin to be admitted by the United States Department of Agriculture under the Naval Stores Act as a new type, designated "*Tall Oil Rosin*". Today, the production and consumption rates of tall oil rosin are growing so rapidly it can be concluded that, soon, this product will be the most widely used of all types of rosin.

Since 1949 a continuing program of re-

search and development by Arizona Chemical Company has resulted in tall oil rosin of greatly improved purity, color, and color stability. The number of tall oil rosins and derivatives for specific applications has been extended to allow their use in the production of paper size, synthetic rubber, esters, printing inks, plasticizers, tackifiers, paints and varnishes.

Large scale production methods and modern chemical techniques are well suited to the processing of tall oil, and the resultant products are obtained more economically and certainly more efficiently than by previous methods. By way of contrast, in the manufacture of gum rosin, pine trees must be tapped individually to yield pine gum; this is collected, drummed and then taken to distilleries where turpentine and gum rosin are separated. To produce wood rosin, aged pine stumps are uprooted and transported, often over long distances, to extraction plants. There, the stumps are chipped and then subjected to solvent extraction. The extract then undergoes distillation to separate the rosin from the turpentine.

Arizona Chemical Company operates two refineries for the fractional distillation of tall oil: one at Panama City, Florida, and the other at Springhill, Louisiana. Black liquor soap, skimmed from the byproduct liquors of paper mills, is acidulated at these plants to liberate tall oil. The tall oil is then separated by fractional distillation into rosin and fatty acids.

Arizona Chemical Company, originated in 1930 as a joint venture of American Cyanamid Company and International Paper Company, is the world's largest merchant supplier of the basic chemicals—tall oil rosins, tall oil fatty acids and terpenes—obtained from by-products of the kraft, or sulfate, process used to manufacture cellulose wood pulp for paper production.

This booklet will acquaint the reader with one of these product areas—Arizona tall oil rosins. It contains specific information on the properties and applications of the various grades and types of ACINTOL and ARIZONA rosin products as well as general information about the chemistry of tall oil rosin. Other Arizona publications dealing with ACINTOL® tall oil products and ACINTENE® terpenes are available on request.





SHEET
No. 6307

ARIZONA CHEMICAL COMPANY • 1001 East Business Highway 98, Panama City, FL 32401 • Toll Free 800/526-5294

SYLVAGUM® TR 7115C Resin

(Formerly ZONAREZ® 7115C)

SYLVAGUM® TR 7115C Resin is a stable polyterpene tackifier that provides excellent properties to a variety of gum bases based on various polymers. SYLVAGUM TR 7115C Resin is designed as a plasticizer and softener for use in chewing gum.

FEATURES

Excellent taste and low odor

Compatibility

Stable

BENEFITS

- Reduces interference with flavoring compounds and improves overall gum flavor.
- Provides desired texture in gum bases.
- Will provide a stable gum base resistant to oxidative breakdown.

SUGGESTED APPLICATIONS:

- Bubble gum and stick gum

AVAILABLE FORMS/PACKAGING:

- Pastillated in multiwall bags, net 50 lbs.

SHIPPING POINT:

- Panama City, Florida

SAFETY INFORMATION:

- Please refer to Material Safety Data Sheet #6374

SYLVAGUM® TR 7115C Resin

(Formerly ZONAREZ® 7115C)

PRODUCT PROPERTIES

	<u>Specifications</u>	<u>Typical Analysis</u>
Softening Point (R&B), °C ¹	112 - 118	115
Color, Neat ²	6 max.	4
Chlorine Content ³	negative	negative

Method of Analysis:

1. Arizona Chemical Test Method (correlates to ASTM E 28-92)
2. Arizona Chemical Test Method (correlates to ASTM D 1544-86; 1963)
3. Arizona Chemical Test Method available upon request; Beilstein

FOOD AND DRUG ADMINISTRATION COVERAGE

SYLVAGUM TR 7115C Resin is approved for use under the following section of Title 21 (Food and Drug) of the Code of Federal Regulations:

172.615 Chewing Gum Base

The information and statements herein are believed to be reliable, but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability of their own particular purpose of any information or product referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE. Nothing herein is to be taken as permission, inducement, or recommendation to practice any patented invention without a license.

Printed: May 13, 1998
SQ7115C.ssm