NZ6705 PB89-869762

Citations from the
Food Science and Technology Abstracts Database

Polydextrose: Applications in Food
(Jan 72 - Aug 89)

017-070 3-018/04
89120216

PUBLISHED SEARCH

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
NTIS®

NZ6705

PB89-869762

Citations from the
Food Science and Technology Abstracts Database

Polydextrose: Applications in Food
(Jan 72 - Aug 89)

017-070 3-018/04
89120216

83L8908ABB269 608 R
Polydextrose: Applications in Food. January 1972-a
ugust 1988 (NSTA), PB88-868534/BBY (72 citations)
Ed:
多葡萄糖：在食品中的应用文献目录 1972年 1月--1988
年 8月 (PB报告)
pp

000900209

BIBLIOGRAPHIC INFORMATION

PB89-869762

Polydextrose: Applications in Food (Jan 72 - Aug 89)

Citations from the Food Science and Technology Abstracts Database

Sep 89

National Technical Information Service, Springfield, VA

Report Period Covered: Jan 72 - Aug 89

Supersedes PB88-868534

This bibliography contains citations concerning the applications of polydexterose in foods. Primarily used as a low calorie sugar substitute, this compound is also used as a bulking agent. Applications of water soluble polydextrose as a shortening substitute are also discussed. Polydextrose containing diet drinks, ice cream, low calorie deserts, and chocolate products are evaluated. Toxicology and legislation are briefly considered. (This updated bibliography contains 85 citations, 13 of which are new entries to the previous edition.)

Price Code: PC NO1 MF NO1

USER INFORMATION

Ordering reports/articles referenced in this Published Search:

There are many sources capable of providing copies of the items listed in this search. Contact either your local library or one of the following commercial suppliers to obtain the copies you need.

NERAC, Inc.
Attn: Document Dept.
One Technology Drive
Tolland, CT 06084
Phone: 203/872-7000
Fax: 203/875-1749

IFIS
Editorial Office
Lane End House
Shinfield, Reading
U.K. RG2 9BB
Phone: (0734) 883895
Fax: (0734) 885065

Universitatsbibliothek
Hannover und Technische
Informationsbibliothek
T I B
Welfengarten 1B
3000 Hannover
Federal Republic of Germany

NOTE: To order reports/articles referenced in this Published Search from NERAC, Inc., supply the NDN order number for each item you wish to purchase. The NDN order number appears within each citation.

To order reports/articles from other sources, supply a photocopy of the complete citation for each item you wish to purchase.

SAMPLE CITATION

Journal &----79-06 E0257 High Gradient Magnetic Separations
Abstract
Number

Title--------A Potential Treatment for Food Processing Wastewater

Author-------Petruska, J.A. Perumpral, J.V.

Source-------Transactions of the ASAE.21 151 993-996, 1978.
NDN- 009-0001-0001-1

Publication--16 ref. En loc of work-Agric. Eng. Dept.,
Virginia Polytechnic Inst. & State Univ.,
Blacksburg, Virginia. USA

Abstract-----Potential use of high gradient magnetic
separation (HGMS) for treating food processing
soluble starch solutions of known concn.
showed that combined use of activated C
adsorption and HGMS achieved adsorption of
the starch, but incomplete removal of activated
C (about 70%) prevented detn. of COD reduction.
HGMS treatment of composite waste water from
processing of turnip greens, green beans, and
corn showed significant reduction in colour and
turbidity, COD, total P and suspended solids.

SAMPLE SUBJECT INDEX ENTRY

Keyword----------Amino Acids in Meat

Citation Page Number----------36 79-06 E0257---FSTA Journal and

ABOUT
Food Science and Technology Abstracts Database
FSTA

Food Science and Technology Abstracts (FSTA) is provided by the International Food Information Service (IFIS), an international organization formed in 1968. The purpose of IFIS is to collect, abstract, collate and distribute information on all matters concerned with research and development in food science and technology.

FSTA is the only source that covers the entire field of food science and technology, dealing with foodstuffs from the "farm gate" until offered for human consumption. The growth of FSTA, which contains over 330,000 abstracts has paralleled the emergence of food science as a discipline with increasing emphasis on large-scale food production, and less emphasis on food production on the farm and in small firms.

ABOUT PUBLISHED SEARCHES

Published searches are special information products developed from a variety of online databases. The NTIS Bibliographic Database, which is the keystone of the Published Search Program, alone contains almost 2 million document/data records of government-sponsored research. Other databases searched include those of the BHRA FLUIDEX; BioBuiness Database (BBUS); Computer Database (CDB); Ei Engineering Meetings Database (EiEM); Energy Database; Engineering Information, Inc. (COMPENDEX); Information Services for the Physics and Engineering Communities (INSPEC); Information Services in Mechanical Engineering (ISMEC); International Food Information Service (FSTA); International Aerospace Abstracts (IAA); Life Sciences Collection (LSC); Management Contents Database (MNC); Metals Abstracts (METADEX); Oceanic Abstracts; Packaging Science and Technology Abstracts (PSTA); Paper and Board Printing and Packaging Industries Research Association (PIRA); Pollution Abstracts; RAPRA (Rubber and Plastics Research Association of Great Britain); Searchable Physics Information Notices (SPIN); Selected Water Resources Abstracts (SWRA); U. S. Patent Bibliographic Database (PTO); World Surface Coatings Abstracts (WSCA); and World Textile Abstracts (WTA).

Published Searches are specially prepared bibliographies referencing reports with full bibliographic citations including informative abstracts (when provided by the database producer) and, when possible, ordering information and price. The abstracts provide a quick, inexpensive way to determine which items are of special interest to a user. The searches are prepared by information specialists and are available in many topic areas. Updated regularly, they are available for $55 in both paper and microfiche form to domestic customers and $70 for those overseas.

The current Master Catalog of Published Searches is available free by calling (703) 487-4650 and requesting PR-186.

Should you have questions concerning this product, please call the NTIS Product Manager at (703) 487-4929.

RELATED PUBLISHED SEARCHES

The Published Searches listed below are recent additions to your topic of interest. When ordering these searches, use the order number appearing in each bibliographic citation. These searches may be ordered from NTIS by calling the Sales Desk at 703/487-4650 or sending a written request to the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161.

Sucrose Ester: Syntheses and Applications in the Food Industry (Jan 72 - Nov 88)

Food Science & Tech. Abstracts (FSTA) 94 citations
ORDER NUMBER PB89-851083/RPS

This bibliography contains citations concerning the use of sugar esters in the food industry. Utilization as emulcifiers, bulking agents, coatings to prevent spoilage, antimicrobial agents, and stabilizers are discussed. Preparation, metabolism, and determination of sucrose esters is briefly considered. (This new bibliography contains 94 citations fully indexed with a title list.)

Low Calorie Fats and Fat Substitutes (Jan 72 - Sep 89)

Food Science & Tech. Abstracts (FSTA) 91 citations
ORDER NUMBER PB89-872790/RPS

This bibliography contains citations concerning fat and oil substitutes and calorie reduced fat and oil compositions. Non-digestable compositions, foam producing emulsifiers, gums, sucrose polyester, and fatty acid esters are among the compositions discussed. Cocoa butter substitutes useful in chocolate are examined. (This updated bibliography contains 91 citations, 19 of which are new entries to the previous edition.)

Steviosides: Low Calorie Natural Sweeteners (Jan 72 - Jan 88)

Food Science & Tech. Abstracts (FSTA) 129 citations
ORDER NUMBER PB88-858048/RPS

This bibliography contains citations concerning the occurance, preparation, and use of steviosides. This natural sweetener is derived from Stevia Rebaudiana, and is 300 times sweeter than sucrose. Stevioside flavor, toxicology, and stability studies are discussed. Methods of extracting the sweetener from the plant are presented. Botanical information of Stevia Rebaudiana, including distribution and growing conditions, are briefly included. (This new bibliography contains 129 citations fully indexed with a title list.)

Aspartame in Foods (Jan 72 - Sep 87)

Food Science & Tech. Abstracts (FSTA) 273 citations
ORDER NUMBER PB87-867677/RPS

This bibliography contains citations concerning the use of aspartame as a sweetener in foods and beverages. Effects on humans and laboratory animals, chemical analyses and properties characterizations, biological and biochemical studies, and toxicity tests are among the topics considered. Detection methods, market acceptance aspects, and comparisons with other sweeteners are also discussed. (This updated bibliography contains 273 citations, 84 of which are new entries to the previous edition.)

TITLE LIST

8. DIABETIC AND DIETETIC ICE CREAM.

8. EDIBLE WATER-IN-OIL EMULSIONS WITH A REDUCED FAT CONTENT AND USE OF SAID EMULSIONS FOR PRODUCING BAKERY PRODUCTS.

8. USE OF CRYOPROTECTANTS TO STABILIZE FUNCTIONAL PROPERTIES OF PRERIGOR SALTED BEEF DURING FROZEN STORAGE.

8. ADI VALUES OF FOOD ADDITIVES. (DIE ADI-WERTE DER ZUSATZSTOFFE.)

9. TRY NEW POLYDEXTROSE IN LOW-CALORIE CANDIES.

9. TEXTURAL OPTIMIZATION OF REDUCED-CALORIE LAYER CAKES USING RESPONSE SURFACE METHODOLOGY.

9. DEVELOPMENT OF SUGAR SUBSTITUTES: TOXICOLOGICAL AND NUTRITIONAL VIEWPOINT.

9. SWEETENERS.

10. BLENDS SUITABLE FOR THE PREPARATION OF FORMED FRUIT OR VEGETABLE PIECES FOR FOOD PRODUCTS.

10. DRY BLENDS SUITABLE FOR THE PREPARATION OF FORMED NUT OR CHOCOLATE MORSELS FOR FOOD PRODUCTS.

10. REDUCED CALORIE CRACKERS.

11. PREPARATION AND USE OF A HIGHLY PURIFIED POLYDEXTROSE.

11. ICE CREAM WITH A LOW ENERGY CONTENT.

11. FUNCTIONS AND APPLICATIONS FOR POLYDEXTROSE IN FOODS.

11. METHOD OF RETARDING THE DETERIORATION OF MEAT PRODUCTS.

12. SUGAR SUBSTITUTES - POSSIBILITIES AND DANGERS.

12. PHASE TRANSITIONS OF WHEAT STARCH-WATER SYSTEMS CONTAINING POLYDEXTROSE.

12. DIETETIC FROZEN DESSERTS CONTAINING ASPARTAME.

12. GETTING THE FAT OUT. RESEARCHERS SEEK SUBSTITUTES FOR FULL-FAT FAT.

12. EFFECTIVE USE OF HEALTH FOOD INGREDIENTS.

13. METHOD OF RETARDING DENATURATION OF MEAT PRODUCTS.

13. METHOD FOR PRODUCING COLD-WATER SOLUBLE GELATIN DESSERT MIXES AND PRODUCTS THEREFROM.

13. PROGRAM AND ABSTRACTS. EIGHTIETH ANNUAL MEETING, JUNE 9-12, 1985. UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN.

14. COLD-WATER-SOLUBLE GELATIN POWDERS.

14. NUTRITION AND FOOD SAFETY - CANADA.

14. SWEETENERS. IV. APPLICATIONS OF POLYDEXTROSE.

14. POLYSACCHARIDES AND FOOD.

15. LOW-CAL ICE XCREAM.

15. SAFETY ASSESSMENT OF POLYOL SWEETENERS - SOME ASPECTS OF TOXICITY.

15. POLYDEXTROSE.

15. ALL THE SATISFACTION OF ICE CREAM, BUT IT'S A DIET BAR.

15. DIET FOODS CAN HAVE FLAVORS TO HELP THEM LIGHTEN UP.

16. FREEZING POINTS OF BULKING AGENTS USED IN MANUFACTURE OF LOW-CALORIE FROZEN DESSERTS.

16. REDUCED CALORIE DESSERTS MADE WITH ASPARTAME AND POLYDEXTROSE.

16. RISK-BENEFIT ANALYSES OF NEW SUGAR SUBSTITUTES: II. THE FORMATION OF SHORT-CHAIN

FATTY ACIDS IN THE CECA OF NON-ADAPTED AND ADAPTED JUVENILE RATS.

16. POLYDEXTROSE FOR REDUCED CALORIE FOODS.

16. INGREDIENTS ROUND TABLE.

17. ASPARTAME AND POLYDEXTROSE IN A CALORIE-REDUCED FROZEN DAIRY DESSERT.

17. SUGARS IN ICE CREAM.

17. NATIONAL FOOD ADMINISTRATION ORDINANCE AMENDING ORDINANCE SLV FS 1980:13 ON FOOD ADDITIVES.

17. LOW-CALORIE, SUGAR-FREE CHEWING GUM CONTAINING POLYDEXTROSE.

17. CALORIC UTILIZATION AND DISPOSITION OF 14CPOLYDEXTROSE IN MAN.

18. COFFEE AND TEA SWEETENERS MAKE PROGRESS ON A NUMBER OF FRONTS.

18. CHEMISTRY OF FOODS AND BEVERAGES: RECENT DEVELOPMENTS.

18. REASONS FOR, BASIC PRINCIPLES OF AND LIMITS TO USE OF SUGAR SUBSTITUTES IN FOODS.

19. NEW INGREDIENT FOR 'LIGHT FOODS' PROVIDES REDUCED CALORIES AND OPTIMUM PERCEIVED SWEETNESS.

19. POLYDEXTROSE FOR REDUCED CALORIE CONFECTIONS.

19. NEWLY APPROVED BULKING AGENT REPLACES HIGHER CALORIE INGREDIENTS.

19. FOOD ADDITIVES AND CONTAMINANTS COMMITTEE REVIEW OF REMAINING CLASSES OF FOOD ADDITIVES USED AS INGREDIENTS IN FOOD. REPORT ON THE REVIEW OF BULKING AIDS.

19. REVIEW OF BULKING AIDS.

20. CALORIC UTILIZATION AND DISPOSITION OF 14CPOLYDEXTROSE IN THE RAT.

20. POLYDEXTROSE AND ITS APPLICATIONS IN FOODS.

20. CARBOHYDRATES AND SUGAR ALCOHOLS - PRESENT AND FUTURE.

21. THE RELATIONSHIP BETWEEN VISCOSITY AND 'BODY' OF NON-ALCOHOLIC BEVERAGES.

21. POLYDEXTROSE-BASED FARINACEOUS COMPOSITIONS.

CONTENTS

CATERING FOR MAN 9 S SWEET TOOTH. - 89-08 L0029

ANON.

CONFECTIONERY MANUFACTURE AND MARKETING 26 (4) 18-19, 22 PUBLISHED- 1989 ISSN- 0007-8654 LANGUAGE(S)- ENGLISH NDN- 009-0030-8399-0

SEVERAL BULK AND INTENSE SWEETENERS CURRENTLY AVAILABLE TO THE CONFECTIONERY INDUSTRY ARE DESCRIBED, I.E. SACCHARIN, XYROFIN PRODUCTS (E.G. MALTITOL, SORBITOL, FRUCTOSE, HIGH PURITY DEXTROSE, XYLITOL), PALATINIT (ISOMALT, A DISACCHARIDE ALCOHOL FROM PALATINIT S H USSUNGSMITTEL GMBH), LACTY (A SUGAR ALCOHOL FROM CCA BIOCHEM BV) AND POLYDEXTROSE (FROM PFIZER CHEMICALS).

CALORIC VALUE OF POLYDEXTROSE. - 89-07 A0086

ANON.

NUTRITION REVIEWS 47 (4) 124-126 11 REF. PUBLISHED- 1989 ISSN- 0029-6643 LANGUAGE(S)- ENGLISH DOCUMENT TYPE- REVIEW NDN- 009-0030-7723-0

STUDIES ON METABOLIZABLE ENERGY (ME) CONTENT OF THE LOW-CALORIE BULKING AGENT POLYDEXTROSE, INTENDED AS A PARTIAL REPLACEMENT FOR SUGAR AND FAT IN FOODS, ARE REVIEWED. REASONS WHY CHICKEN-FEEDING STUDIES MAY BE MORE ACCURATE THAN RAT-FEEDING STUDIES ARE CONSIDERED, AND AN ENZYMIC IN-VITRO SCREENING SYSTEM FOR LOW-CALORIE POLYHEXOSE BULKING AGENTS IS DESCRIBED. IT IS ESTIMATED THAT POLYDEXTROSE HAS AN ME CONTENT FOR HUMANS OF APPROX. 1 KCAL/G.

DEVELOPMENTS IN FOOD LEGISLATION. - 89-06 U0060

BOTMA, Y.

VOEDINGSMIDDELENTECHNOLOGIE 21 (24) 18-19 PUBLISHED- 1988 ISSN- 0042-7934 LANGUAGE(S)- DUTCH LOCATION OF WORK- QUEST INTERNATIONAL, POSTBUS 2, 1400 CA BUSSUM, NETHERLANDS NDN- 009-0030-5278-5

RECENT DEVELOPMENTS IN AUTHORIZATION OF FOOD ADDITIVES IN THE USA, AND APPLICATIONS FOR AUTHORIZATION, ARE BRIEFLY DISCUSSED; ADDITIVES CONSIDERED INCLUDE ASPARTAME, ACESULPHAME, GLYCERYL TRISTEARATE, NISIN, GLUCONO- NE-LACTONE, ALITAME, SUCRALOSE, POLYDEXTROSE, OL-SUGARS AND FAT SUBSTITUTES. NEW LEGISLATION FOR WINE COOLERS IN ITALY IS DISCUSSED; IT IS COMPARED WITH LEGISLATION IN FRANCE, SPAIN, THE FEDERAL REPUBLIC OF GERMANY, NEW ZEALAND AND SWITZERLAND.

POLYDEXTROSE COMPOUNDS AS ANTI-PLEAT LOCK ADDITIVES FOR CELLULOSE CONTAINING CASINGS ((E.G. FOR SAUSAGE MEAT OR PROCESSED CHEESE)). - 89-06 V0054

BRIDGEFORD, D. J. HINE, R. J.

EUROPEAN PATENT APPLICATION EP 0 289 967 A1 US 174647 (880329) ((TEEPAK INC., OAKBROOK, IL, USA)) PUBLISHED- 1988 LANGUAGE(S)- ENGLISH CORPORATE AUTHOR(S)- TEEPAK INC. NDN- 009-0030-5222-0

NO-ABSTRACT

METHOD OF PURIFYING POLYDEXTROSE AND COMPOSITION CONTAINING SAME. - 89-06 V0097

BUNICK, F. J. LUO, S. J.

EUROPEAN PATENT APPLICATION EP 0 289 461 A2 US 043793 (870429) ((WARNER-LAMBERT CO., MORRIS PLAINS, NJ, USA)) PUBLISHED- 1988 LANGUAGE(S)- ENGLISH CORPORATE AUTHOR(S)- WARNER-LAMBERT CO. NDN- 009-0030-5179-3

PROCESS FOR PURIFYING POLYDEXTROSE FOR FOOD USE INVOLVES CONTACTING AN AQUEOUS

SOLUTION OF POLYDEXTROSE (CONCN. 10-90%) WITH A POLAR ORGANIC SOLVENT IN A RATIO OF ABOUT 5-45 PARTS BY WT. POLYDEXTROSE TO ABOUT 35-85 PARTS SOLVENT. THE MIXTURE IS ALLOWED TO EQUILIBRATE TO FORM SUBSTANTIALLY CONTAMINANT- AND POLYDEXTROSE-CONTAINING FRACTIONS, WHICH ARE THEN SEPARATED. ((FROM EN SUMM.))

FRUCTOSE FOR THE HEALTH CONSCIOUS. - 89-05 L0007

ANON.

DAIRY INDUSTRIES INTERNATIONAL 53 (12) 25, 27 PUBLISHED- 1988 ISSN- 0308-8197 LANGUAGE(S)- ENGLISH NDN- 009-0030-4523-9

ADVANTAGES IN THE USE OF FRUCTOSE OVER SUCROSE ARE DISCUSSED, INCLUDING: THAT DIFFERENT METABOLISM OF FRUCTOSE PRODUCES A LOWER EFFECT ON FLUCTUATIONS IN BLOOD GLUCOSE, AND SO IT IS SUITABLE FOR USE IN DIABETIC PRODUCTS; FAST ABSORPTION OF FRUCTOSE IN THE BODY MEANS IT MAY BE USED AS A REHYDRATER IN ISOTONIC SPORTS DRINKS; IT MAY BE USED IN ITS CRYSTALLINE FORM AND BLENDED WITH ARTIFICIAL SWEETENERS TO MASK THEIR BITTER TASTE; AND THOUGH FRUCTOSE HAS THE SAME CALORIES WT. FOR WT. AS SUCROSE, IT IS APPROX. 80% SWEETER, AND A SMALLER AMOUNT THEREFORE GIVES THE SAME DEGREE OF SWEETNESS. USE OF FRUCTOSE IN ICE CREAM MANUFACTURE ALSO HAS SEVERAL ADVANTAGES: REDUCTION IN BULK DUE TO THE DEGREE OF SWEETNESS OF FRUCTOSE MAY BE MADE UP BY POLYDEXTROSE, WHICH REPLACES SOME OF THE FAT (REDUCING CALORIES FURTHER) AND GIVES A CREAMY PRODUCT; FRUCTOSE DEPRESSES THE FREEZING POINT MORE THAN SUCROSE AND CRYSTALLIZES DIFFERENTLY, GIVING A SOFTER, MORE EASILY SCOOPABLE PRODUCT WHEN HELD AT -18 O C; AND FRUCTOSE ENHANCES FRUIT FLAVOURS. USE OF FRUCTOSE TO CONTROL APPETITE WAS DEMONSTRATED, WHERE A FRUCTOSE PRE-LOAD SIGNIFICANTLY REDUCED FOOD INTAKE AT A SUBSEQUENT MEAL.

THERMAL TRANSITIONS OF WHEAT STARCH AS MODIFIED BY OTHER CARBOHYDRATE COMPONENTS: C-13 NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY AND DIFFERENTIAL SCANNING CALORIMETRY STUDIES. - 89-05 M0023

HANSEN, L. M.

DISSERTATION ABSTRACTS INTERNATIONAL, B 49 (3) 588: ORDER NO. DA8806241, 162PP. PUBLISHED- 1988 ISSN- 0419-4217 LANGUAGE(S)- ENGLISH LOCATION OF WORK- KANSAS STATE UNIV., MANHATTAN, KS 66506, USA DOCUMENT TYPE- ABSTRACT OF THESIS NDN- 009-0030-4480-6

POLYDEXTROSE AND SUCROSE SOLUTIONS AT EQUAL CONCN. HAD SIMILAR EFFECTS ON PHASE TRANSITIONS OF WHEAT STARCH. OF 6 POLYDEXTROSE FRACTIONS VARYING IN MOL. WT., THOSE WITH A DEGREE OF POLYMERIZATION (DP) OF 6-7 HAD THE GREATEST EFFECT IN DELAYING THE ONSET TEMP. OF STARCH GELATINIZATION, WHILE THOSE WITH A DP >30 HAD THE LEAST EFFECT. STUDIES OF SUGAR-STARCH SYSTEMS BY #H1 #H3C NMR SUGGESTED THAT SUGAR-STARCH INTERACTIONS OCCUR DURING HEATING OF STARCH. DIFFERENTIAL SCANNING COLORIMETRY INDICATED THAT INTERACTIONS POSSIBLY OCCUR JUST PRIOR TO AND WITHIN THE TEMP. RANGE OF STARCH GELATINIZATION. STUDIES WITH GLUCOSE-STARCH AND FRUCTOSE-STARCH SYSTEMS SHOWED THAT LARGE CHANGES IN CHEMICAL SHIFTS OCCURRED PRIOR TO THE ONSET OF STARCH GELATINIZATION AND THAT LITTLE CHANGE OCCURRED IN CHEMICAL SHIFTS AFTER GELATINIZATION. COMPARISONS OF SUCROSE, GLUCOSE AND FRUCTOSE SYSTEMS REVEALED THAT THE MAJOR DIFFERENCE BETWEEN SUCROSE-STARCH AND GLUCOSE-STARCH CHEMICAL SHIFT CHANGES WAS THE MAGNITUDE OF THE DIFFERENCES.

THE INCREDIBLE BULK. - 89-05 T0023

TULEY, L.

FOOD MANUFACTURE 64 (1) 17-18 PUBLISHED- 1989 ISSN- 0015-6477 LANGUAGE(S)- ENGLISH NDN- 009-0030-4051-5

SOURCES AND USES OF NATURAL FIBRE CONCENTRATES (FROM OATS, PEAS, SUGAR BEET, APPLES, BLACKCURRANTS, AND PEARS), NEUTRAL AND FLAVOURED FIBRES, AS WELL AS ALTERNATIVE BULKING AGENTS (E.G. POLYDEXTROSE) ARE BRIEFLY DISCUSSED.

POLYDEXTROSE. ((IN) LOW-CALORIE PRODUCTS 9 . CONFERENCE. 25-26 MARCH 1987. READING UNIVERSITY, READING, UK. BARKING IG11 8JU, UK; ELSEVIER APPLIED SCIENCE PUBLISHERS LTD. ISBN 1-85166-161-1 ((SEE FSTA (1989) 21 1G11)).)) - 89-01 L0053

MURRAY, P. R. UNITED KINGDOM, NATIONAL COLLEGE OF FOOD TECHNOLOGY ((LOW CALORIE FOODS SYMPOSIUM))
PP. 83-100 16 REF. PUBLISHED- 1988 LANGUAGE(S)- ENGLISH LOCATION OF WORK- PFIZER CHEM., SANDWICH, KENT, UK DOCUMENT TYPE- LECTURE NDN- 009-0029-9202-6

THIS PAPER IS GIVEN UNDER HEADINGS OF: POLYDEXTROSE - PRODUCT DESCRIPTION, COMPOSITION AND STRUCTURE; PROPERTIES (SOLUBILITY, STABILITY, VISCOSITY, HUMECTANCY, EQUILIBRIUM RH, MELTING PROPERTIES, SWEETNESS); FUNCTIONALITY (BULKING AGENT, FORMULATION AID, HUMECTANT, TEXTURIZER); METABOLISM AND CALORIC VALUE (CALORIC VALUE, TOLERATION, DIABETIC SUITABILITY); REDUCED CARIOGENICITY (VS. SUGAR); REGULATORY APPROVAL AND LABELLING; APPLICATIONS (ICE CREAM/DAIRY DESSERTS, BAKED GOODS, DESSERTS, CONFECTIONERY, LOW-CALORIE YOGHURTS, JAMS, EXTRUDED SNACKS, LOW-CALORIE SOFT DRINKS, OTHER PRODUCTS); AND THE DEVELOPING MARKET.

POLYDEXTROSE. (POLYDEXTROSE.) - 88-12 L0049

MURRAY, P. R.

GORDIAN 87 (6) 115-116 PUBLISHED- 1987 ISSN- 0017-2243 LANGUAGE(S)- GERMAN NDN- 009-0029-7725-6

THIS ARTICLE DESCRIBES THE CHEMICAL PROPERTIES, AVAILABLE FORMS, SOLUBILITY, MOISTURE-HOLDING CAPACITY, EQUILIBRIUM MOISTURE VALUES, STABILITY, SWEETENING POWER, METABOLIC ACTION AND CALORIFIC VALUE, PHYSIOLOGICAL TOLERANCE, AND CARIOGENIC EFFECT OF A WATER-SOLUBLE HOMOGENEOUS POLYCONDENSATE OF DEXTROSE (POLYDEXTROSE). POLYDEXTROSE CONTAINS SMALL AMOUNTS OF GLUCOSE, SORBITOL AND CITRIC ACID AND TO-DATE IS PERMITTED FOR FOOD USE IN GREAT BRITAIN, THE USA, CANADA, IRELAND, SWITZERLAND, SWEDEN, JAPAN, AUSTRIA, NORWAY, THE NETHERLANDS, AUSTRALIA AND NEW ZEALAND. PERMISSION TO USE POLYDEXTROSE HAS BEEN APPLIED FOR IN GERMANY, FRANCE, BELGIUM, SPAIN AND FINLAND. IT IS RECOMMENDED FOR FOODS FOR DIABETICS IN BRITAIN, SWEDEN AND NORWAY AND HAS BEEN SUCCESSFULLY USED AS A LOW-CALORIE BULKING AGENT IN ICE CREAM, FROZEN MILK AND OTHER DESSERTS, BAKERY PRODUCTS AND CONFECTIONERY.

POLYDEXTROSE - A NEW INGREDIENT FOR LOW AND REDUCED ENERGY FOODS. - 88-09 T0039

BILL, D. L.

FOOD TECHNOLOGIST 18 (1) 7-9 6 REF. PUBLISHED- 1988 ISSN- 0111-6606 LANGUAGE(S)- ENGLISH LOCATION OF WORK- PFIZER CHEMICALS, SYDNEY, AUSTRALIA NDN- 009-0029-2999-7

ASPECTS OF USE OF POLYDEXTROSE AS A BULKING AGENT AND REPLACEMENT FOR SUGAR OR FAT ARE DISCUSSED, I.E. COMPOSITION, PROPERTIES OF THE VARIOUS FORMS AVAILABLE (POWDER, BUFFERED POWDER AND 70% SOLUTION), METABOLISM, SAFETY, FUNCTIONALITY (ACTS AS A BULKING AGENT, TEXTURIZER, IMPROVES MOUTHFEEL, IS A HUMECTANT AND AIDS FORMULATION) AND APPLICATIONS.

DEVELOPMENTS IN FOOD LEGISLATION. - 88-09 U0004

BOTMA, Y.

VOEDINGSMIDDELENTECHNOLOGIE 21 (8) 26-27 PUBLISHED- 1988 ISSN- 0042-7934 LANGUAGE(S)- DUTCH LOCATION OF WORK- QUEST INTERNATIONAL, POSTBUS 2, 1400 CA BUSSUM, NETHERLANDS NDN- 009-0029-2964-0

DEVELOPMENTS IN FOOD LEGISLATION ARE BRIEFLY DISCUSSED, INCLUDING: LEGISLATION PERMITTING USE OF ASPARTAME IN SELECTED FOODS IN THE FEDERAL REPUBLIC OF GERMANY; REQUIRED JUICE % IN CARBONATED FRUIT BEVERAGES IN VARIOUS COUNTRIES; LEGISLATION FOR SOFT DRINKS IN THE FEDERAL REPUBLIC OF GERMANY; USE OF ASPARTAME IN SOFT DRINK CONCENTRATES IN THE NETHERLANDS; AND USE OF POLYDEXTROSE IN FOODS IN VARIOUS COUNTRIES.

GRAVITATIONALLY-STABILIZED PEANUT-CONTAINING COMPOSITION. - 88-09 V0075

AVERA, F. L. KUEHN, J. W., SR.
UNITED STATES PATENT US 4 728 526 US 943681 (861218) ((KUEHN, BURNSVILLE, MN, USA))
PUBLISHED- 1988 LANGUAGE(S)- ENGLISH NDN- 009-0029-2834-8

PEANUT BUTTER AND PEANUT FLAVOURING COMPOSITIONS ARE GRAVITATIONALLY STABILIZED TO PREVENT OIL SEPARATION USING AN AQUEOUS SOLUTION OF POLYDEXTROSE.

COATINGS BASED ON POLYDEXTROSE FOR AQUEOUS FILM COATING OF PHARMACEUTICAL, FOOD AND CONFECTIONERY PRODUCTS. - 88-09 V0096

WOZNICKI, E. GRILLO, S. M.

PCT INTERNATIONAL PATENT APPLICATION WO 87/07902 A1 US 876186 (860619) ((COLORCON, WEST POINT, PA 19486, USA)) PUBLISHED- 1987 LANGUAGE(S)- ENGLISH CORPORATE AUTHOR(S)- COLORCON INC. NDN- 009-0029-2813-0

AQUEOUS FILM COATING SUSPENSIONS COMPRISING POLYDEXTROSE, PLASTICIZER, DETACKIFIER, A SECONDARY FILM FORMER (E.G. HYDROXYPROPYL METHYLCELLULOSE) AND COLORANTS, ARE DESCRIBED. THEY CAN BE PREPARED IN A DRY FORM FOR DISTRIBUTION TO END-USERS WHO PREPARE THE SUSPENSIONS BY MIXING WITH WATER. THE COATINGS ARE LOW CALORIE AND NON-CARIOGENIC, AND ARE PARTICULARLY USEFUL FOR COATING TABLETS WITH A WAXY MATRIX.

FROZEN FOOD COMPOSITION. - 88-09 V0131

MINGHELLA, E.

UK PATENT APPLICATION GB 2 193 873 A GB 8619827 (860814) PUBLISHED- 1988 LANGUAGE(S)- ENGLISH CORPORATE AUTHOR(S)- MINGHELLA 9 S ISLE OF WIGHT LTD. NDN- 009-0029-2778-2

FROZEN ICE-CREAM-LIKE PRODUCTS ARE DESCRIBED THAT ARE LOW-ENERGY (98 KCAL/100 G) BUT BELOW THE UK LEGAL REQUIREMENTS FOR FAT AND MILK SOLIDS IN ICE CREAM. THE MIX CONTAINS SP5% FAT AND SP7.5% MILK SNF, >10% POLYDEXTROSE, 5% FRUCTOSE, 0.2% GUAR GUM AND 0.2% EMULSIFIER. THE PRODUCT IS PREFERABLY BASED ON MILK AND CREAM OR BUTTER.

EFFECTS OF CRYOPROTECTANTS ON PROPERTIES OF BEEF PROTEIN DURING FROZEN STORAGE. - 88-08 S0067

PARK, J. W.

DISSERTATION ABSTRACTS INTERNATIONAL, B 47 (2) 450-451: ORDER NO. DA8608043, 127PP. PUBLISHED- 1986 LANGUAGE(S)- ENGLISH LOCATION OF WORK- N. CAROLINA STATE UNIV., RALEIGH, N. CAROLINA 27607, USA NDN- 009-0029-1753-3

THE EFFECT OF ADDED CRYOPROTECTANTS (5.6% POLYDEXTROSE AND A MIXTURE OF 2.8% SUCROSE AND 2.8% SORBITOL) ON THE FUNCTIONAL PROPERTIES (GEL-FORMING ABILITY, WATER-HOLDING CAPACITY, PROTEIN SOLUBILITY) OF SALTED PRE- AND POST-RIGOR BEEF STORED FOR 6 MONTHS AT -28 O C WAS EXAMINED. ADDITION OF THE CRYOPROTECTANTS EFFECTIVELY REDUCED THE ACCELERATED DESTABILIZATION OF THE FUNCTIONAL PROPERTIES OF MYOFIBRILLAR PROTEINS CAUSED BY NACL. IN A SECOND STUDY, THE EFFECT OF THE SAME CRYOPROTECTANTS ON PHYSICOCHEMICAL CHANGES IN BOVINE ACTOMYOSIN EXTRACTED FROM PRE-RIGOR SEMIMEMBRANOSUS MUSCLE WAS EXAMINED DURING STORAGE AT -28 O C. THE CRYOPROTECTANTS REDUCED, TO SOME EXTENT, THE DESTABILIZATION OF PROTEINS IN THE ACTOMYOSIN SYSTEM (WHICH OCCURS DURING FREEZING AND FROZEN STORAGE).

LOW CALORIE CHEWING GUM AND METHOD FOR ITS PREPARATION. - 88-08 V0062

CHERUKURI, S. R. HRISCISCE, F. WEIS, Y. C.

EUROPEAN PATENT APPLICATION EP 0 252 874 A2 US 859108 (860502) ((WARNER-LAMBERT, MORRIS PLAINS, NJ 07950, USA)) PUBLISHED- 1988 LANGUAGE(S)- ENGLISH CORPORATE AUTHOR(S)- WARNER-LAMBERT CO. NDN- 009-0029-1456-8

A HIGHLY PALATABLE LOW CALORIE CHEWING GUM COMPOSITION WITH ENHANCED MOUTH-FEEL AND IMPROVED CHEW IS DESCRIBED, WHICH CONTAINS 5-10% POLYDEXTROSE, 35-70% NON-BUTADIENE-STYRENE COPOLYMER/POLYVINYL ACETATE ELASTOMER BASE, 3-6% MICRO-CRYSTALLINE NA- OR POWDER CELLULOSE, EMULSIFIERS, SWEETENERS (SUGAR, POLYOLS, DIPEPTIDES OR ARTIFICIAL SWEETENERS), COLOURS, FLAVOURS AND 10% FILLERS (E.G. CALCIUM

CARBONATE, TALC, ALUMINA, AL-SILICATES, ETC.).

LOW-CALORIE, SUGAR-FREE CHEWING GUM CONTAINING POLYDEXTROSE. - 88-06 V0090

KLOSE, R. E. SJONVALL, R. E.

EUROPEAN PATENT EP 0 123 742 B1 EP 83-302394 (830427) ((GENERAL FOODS, WHITE PLAINS, NY 10625, USA)) PUBLISHED- 1987 LANGUAGE(S)- ENGLISH CORPORATE AUTHOR(S)- GENERAL FOODS CORP. NDN- 009-0028-8813-2

POLYDEXTROSE PROVIDES THE SOLE SOLUBLE BULKING AGENT IN THE NOVEL, SUGAR FREE CHEWING GUM, WITH ASPARTAME BEING THE SWEETENER. A TYPICAL FORMULATION IS AS FOLLOWS: SPRAY DRIED POLYDEXTROSE 70%, GUM BASE 27%, SPEARMINT FLAVOUR 1.1%, LECITHIN 0.6%, ASPARTAME 0.6%.

FIXING FORMULATIONS. - 88-05 G0015

HART, B.

FOOD PROCESSING, UK 57 (1) 15-16, 21 PUBLISHED- 1988 LANGUAGE(S)- ENGLISH LOCATION OF WORK- LEATHERHEAD FOOD RES. ASS, LEATHERHEAD, SURREY, UK NDN- 009-0028-8522-2

GENERAL USES OF HYDROCOLLOIDS ARE DISCUSSED, AND RECENT ADDITIONS TO THE MARKET ARE INTRODUCED, E.G. POLYDEXTROSE, XANTHAN,) METHOCEL 9 (INCLUDING A RANGE OF METHYL ETHERS OF CELLULOSE), POTATO STARCHES, LOCUST BEAN GUM, AND PROTEINS (WHEY PROTEIN AND CLUPEINE). USE OF EMULSIFIERS, SUCH AS LECITHIN, PECTIN, CARRAGEENAN AND CARBOXYMETHYL CELLULOSE, IS ALSO DESCRIBED.

THE SEARCH FOR A LOW-CALORIC OIL. - 88-05 N0003

LABARGE, R. G.

FOOD TECHNOLOGY 42 (1) 84, 86-88, 90 49 REF. PUBLISHED- 1988 LANGUAGE(S)- ENGLISH LOCATION OF WORK- PERFORMANCE PRODUCTS & NEW VENTURES, DOW CHEM. USA, 2040 ABBOTT ROAD, MIDLAND, MICHIGAN 48674, USA NDN- 009-0028-8117-4

EARLY STUDIES ON THE PERFECT LOW-CALORIE FAT SUBSTITUTE ARE DISCUSSED AND VARIOUS AVENUES INVESTIGATED ARE OUTLINED, I.E. WATER-SOLUBLE COMPOUNDS (POLYDEXTROSE, N-OIL R - A TAPIOCA DEXTRIN, MALTODEXTRINS), TRIGLYCERIDE MODIFICATION, POLYCARBOXYLIC ACID ESTERS, STERICALLY HINDERED ESTERS, MEDIUM CHAIN TRIGLYCERIDES AND POLYGLYCERINS, ETHERS AND OTHER COMPOUNDS (E.G. MICROCRYSTALLINE CELLULOSE, JOJOBA OIL, SILICONE OILS). THE DIFFICULTY OF PREDICTING HOW A SPECIFIC PROPOSED SUBSTITUTE WILL BEHAVE IS EMPHASIZED.

CRYOPROTECTIVE EFFECTS OF SUGAR, POLYOLS, AND/OR PHOSPHATES ON ALASKA POLLACK SURIMI. - 88-05 R0059

PARK, J. W. LANIER, T. C. GREEN, D. P.

JOURNAL OF FOOD SCIENCE 53 (1) 1-3 16 REF. PUBLISHED- 1988 LANGUAGE(S)- ENGLISH LOCATION OF WORK- DEP. OF FOOD SCI., BOX 7624, N. CAROLINA STATE UNIV., RALEIGH, N. CAROLINA 27695-7624, USA NDN- 009-0028-7905-2

FREEZE-INDUCED PROTEIN DENATURATION OF POLLACK SURIMI WAS INVESTIGATED, AS AFFECTED BY ADDITION OF SUGAR AND/OR POLYOL, INCLUDING A STARCH HYDROLYSATE PRODUCT, AND/OR PHOSPHATES DURING 8 MONTHS FROZEN STORAGE. POLYDEXTROSE R APPEARED TO SUBSTITUTE FOR THE SUCROSE/SORBITOL NOW USED IN SURIMI MANUFACTURE WITHOUT CHANGING THE CRYOPROTECTIVE EFFECT. MALTODEXTRIN ADVERSELY AFFECTED GEL-FORMING PROPERTIES, ALTHOUGH IT MAINTAINED THE SALT-SOLUBLE PROTEIN EXTRACTABILITY NEARLY AS WELL AS DID SUCROSE/SORBITOL OR POLYDEXTROSE R . THE CRYOPROTECTIVE EFFECTS OF PHOSPHATE ADDITION SEEMED TO DEPEND ON PH AND/OR SPECIFIC PHOSPHATE ION USED.

COMBINED EFFECTS OF PHOSPHATES AND SUGAR OR POLYOL ON PROTEIN STABILIZATION OF FISH MYOFIBRILS. - 88-03 R0042

PARK, J. W. LANIER, T. C.
JOURNAL OF FOOD SCIENCE 52 (6) 1509-1513 38 REF. PUBLISHED- 1987 LANGUAGE(S)- ENGLISH LOCATION OF WORK- DEP. OF FOOD SCI., BOX 7624, N. CAROLINA STATE UNIV., RALEIGH, N. CAROLINA 27695-7624, USA NDN- 009-0028-4951-5

STABILIZATION OF FISH MYOFIBRILS WAS INVESTIGATED WITH RESPECT TO FREEZE- AND HEAT-INDUCED DENATURATION, AS AFFECTED BY THE ADDITION OF PHOSPHATES (0.25, 0.5% OF SODIUM TRIPOLYPHOSPHATE OR NEUTRALIZED PYROPHOSPHATE), ALONE OR IN COMBINATION WITH 8% POLYDEXTROSE R OR A SUCROSE/SORBITOL MIXTURE. FREEZE-INDUCED AGGREGATION WAS REDUCED EFFECTIVELY BY COMBINATION OF PHOSPHATES AND CARBOHYDRATES, AND, LESS EFFECTIVELY, BY PHOSPHATES OR CARBOHYDRATES ALONE. THE MOST EFFECTIVE TREATMENT CONSISTED OF 0.5% OF EITHER PHOSPHATE TREATMENT COMBINED WITH EITHER CARBOHYDRATE TREATMENT. DIFFERENTIAL SCANNING CALORIMETRY REVEALED THAT PHOSPHATE ADDITION INDUCED STABILIZATION OF MYOSIN AND CARBOHYDRATE ADDITION GENERALLY INDUCED A ONE-STEP DENATURATION PROCESS FOR MYOSIN. NO DIFFERENCES DUE TO PHOSPHATE TYPE WERE OBSERVED IN ANY MEASURED PARAMETER.

EFFECTS OF CRYOPROTECTANTS IN MINIMIZING PHYSICOCHEMICAL CHANGES OF BOVINE NATURAL ACTOMYOSIN DURING FROZEN STORAGE. - 88-03 S0073

PARK, J. W. LANIER, T. C. SWAISGOOD, H. E. HAMANN, D. D. KEETON, J. T.

JOURNAL OF FOOD BIOCHEMISTRY 11 (2) 143-161 28 REF. PUBLISHED- 1987 LANGUAGE(S)- ENGLISH LOCATION OF WORK- DEP. OF FOOD SCI., BOX 7624, N. CAROLINA STATE UNIV., RALEIGH, N. CAROLINA 27695-7624, USA NDN- 009-0028-4860-2

PHYSICOCHEMICAL CHANGES IN BOVINE NATURAL ACTOMYOSIN EXTRACTED FROM PRERIGOR SEMIMEMBRANOSUS MUSCLE WERE INVESTIGATED DURING FROZEN STORAGE AT -28 O C AS AFFECTED BY THE ADDITION OF CRYOPROTECTANTS (5.6% POLYDEXTROSE R OR 5.6% MIXTURE (1:1) OF SUCROSE AND SORBITOL). PROTEINS WERE DESTABILIZED DURING FREEZING AND FROZEN STORAGE AS REFLECTED BY DECREASES IN PROTEIN SOLUBILITY, THE VISUAL APPEARANCE OF AGGREGATES IN PROTEIN SOLS, DECREASE IN INTENSITY OF FLOW BIREFRINGENCE, INTRINSIC VISCOSITY AND ATPASE ACTIVITY, AND CHANGES IN SIZE, SHAPE, OR CHARGE OF THE PROTEIN (ESPECIALLY MYOSIN) AS EVIDENCED BY NONDENATURING ELECTROPHORESIS. THESE EFFECTS WERE REDUCED TO SOME EXTENT BY THE 2 CRYOPROTECTANT TREATMENTS.

BULKING IN WEIGHT WATCHERS DESSERTS FROM: POLYDEXTROSE. - 88-02 G0020

ANON.

FOOD ENGINEERING 58 (7) 55-56 PUBLISHED- 1986 LANGUAGE(S)- ENGLISH NDN- 009-0028-4278-8

USE OF POLYDEXTROSE, A WATER-SOLUBLE POLYMER OF DEXTROSE, TO REPLACE SUGAR (300 4 THE SWEETENING POWER) BY WEIGHT WATCHERS IN THEIR DESSERT PRODUCTS AND PROVIDE GOOD FILLER CHARACTERISTICS IS DESCRIBED. OTHER POTENTIAL USES OF POLYDEXTROSE INCLUDE BAKERY PRODUCTS (E.G. BAKING MIXES), CHEWING GUM, CONFECTIONS AND FROSTINGS, FROZEN DAIRY DESSERTS, GELATINS AND PUDDINGS, AND HARD AND SOFT CANDY.

DEVELOPMENTS IN DIETETIC CHOCOLATE. - 88-02 K0002

CRIDLAND, A.

CONFECTIONERY MANUFACTURE AND MARKETING 24 (10) 2, 4, 6 PUBLISHED- 1987 LANGUAGE(S)- ENGLISH NDN- 009-0028-3983-2

CHOCOLATE PRODUCTS FOR DIABETICS, IN WHICH SUCROSE IS REPLACED BY SORBITOL, FRUCTOSE, POLYDEXTROSE, ISOMALT, MALTITOL, XYLITOL AND LACTITOL, ARE OUTLINED. THE CONCEPT OF) HEALTHY 9 CHOCOLATE IS DISCUSSED. FOR PEOPLE OBJECTING TO MILK THERE ARE PLAIN CHOCOLATE FORMULATIONS AVAILABLE; CASEINATES HAVE BEEN USED TO CATER FOR LACTOSE INTOLERANT CONSUMERS; WHITE CHOCOLATE CONTAINS NO COCOA SOLIDS. CAROB AS A CHOCOLATE SUBSTITUTE IS CONSIDERED, AND YOGHURT-BASED PREPARATIONS USED TO FILL OR COAT PRODUCTS PREVIOUSLY CONTAINING CHOCOLATE (E.G. PANNED NUTS AND RAISINS) ARE ASSESSED. FAT IS THE ONLY CONSTITUENT OF CHOCOLATE TO WHICH NO ALTERNATIVES ARE AVAILABLE. THIS IS BECAUSE OF THE TEXTURAL AND TECHNICAL (MOULDING, DEPOSITING, ENROBING) REQUIREMENTS OF CHOCOLATE.