

原著論文

《放射性物質影響研究コーディネーター》

日本食品科学工学会誌, 62(12), 579-584(2015)

炊飯調理における放射性セシウムの動態解析

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Keywords : radioactive cesium, brown rice, removal ratio of bran, rice cooking

キーワード : 放射性セシウム, 玄米, 分づき米, 炊飯

日本食品科学工学会誌, 63(3), 133-136(2016)

放射能の不均一分布がゲルマニウム半導体検出器を用いた食品の放射能測定値に及ぼす影響

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Keywords : germanium semiconductor detector, radioactive cesium, radioactivity, food, inhomogeneity

キーワード : ゲルマニウム半導体検出器, 放射性セシウム, 放射能, 食品, 不均一性

RADIOISOTOPES, 65(3), 129-135(2016)

カキ果実におけるへたを經由した放射性セシウム-137の移行

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Keywords : calyx, caesium-137, dried persimmon, fruit, Japanese persimmon, translocation

キーワード : へた, セシウム-137, あんぽ柿, 果実, 日本柿, 転流

《食品機能研究領域》

International Archives of Allergy and Immunology, 166(2), 84-90(2015)

Inhibition of MMP-2-Mediated mast cell invasion by NF-κB inhibitor DHMEQ in mast cells

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Keywords : (-)-DHMEQ, NF-κB, MMP-2, Invasion, Mast cell

キーワード : (-)-DHMEQ, NF-κB, マトリクスメタロプロテイナーゼ-2, 浸潤, マスト細胞

Scientific Reports, 5 (9474), 1-8 (2015)

Metabolic profiling-based data-mining for an effective chemical combination to induce apoptosis of cancer cells

Motofumi Kumazoe^{*1}, Yoshinori Fujimura^{*1}, Shiori Hidaka^{*1}, Yoonhee Kim^{*1}, Kanako Murayama^{*1}, Mika Takai^{*1}, Yuhui Huang^{*1}, Shuya Yamashita^{*1}, Motoki Murata^{*1}, Daisuke Miura^{*1}, Hiroyuki Wariishi^{*1}, Mari Maeda-Yamamoto^{*2}, Hirofumi Tachibana^{*1}

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Keywords : Green tea extract, Cancer apoptosis, EGCG, 67-kDa laminin receptor, metabolic profiling

キーワード : 茶抽出液, がんアポトーシス, EGCG, 67kDaラミニンレセプター, メトボリックプロファイリング"

Food Science and Technology Research, 21 (3), 333-340 (2015)

Quercetin glycosides-rich tea cultivars (*Camellia sinensis* L.) in Japan

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Keywords : Quercetin glycoside, Tea cultivars, Contents

キーワード : ケルセチン配糖体, 茶品種, 含有量

診療と新薬, 52(7), 42-50(2015)

エピガロカテキンを主要カテキンとする水出し緑茶飲用によるインフルエンザワクチン接種後の抗体価上昇効果の検討

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Keywords : Epigallocatechin (EGC), Green tea cold water extraction, Influenza virus antibody titer, Human clinical trial,

ELISPOT method

キーワード : エピガロカテキン (EGC), 水出し緑茶, インフルエンザウイルス抗体価, ヒト介入試験, ELISPOT法

Natural Science, 7 (3), 143-150, (2013)

Phylogenetic analysis and taste cell expression of calpain 9 in catfish (*Ictalurus punctatus*)

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^{*7} Veterans Affairs Medical Center, University of Pennsylvania, Philadelphia, USA.

Keywords : Gene Evolution, Taste, Novel Type

Food Research International, 75, 289-294 (2015)

Mode of pancreatic lipase inhibition activity in vitro by some flavonoids and non-flavonoid polyphenols

Abu Torab M.A. Rahim^{*1,*2}, Yoko Takahashi^{*1}, Kohji Yamaki^{*1}

^{*1} National Food Research Institute, NARO

^{*2} University of Dhaka, Dhaka Bangladesh

Keywords : Lipase, IC50 value, Double-reciprocal plot, Inhibition mode, Ki
 キーワード : リパーゼ, 2重逆数プロット, 抑制モード, フラボノイド

International Journal of Food Engineering, 11 (2), 301-305 (2015)

Assessment and separation of angiotensin I-converting enzyme inhibitory peptides in chinese soypaste

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Keywords : angiotensin I-converting enzyme (ACE) inhibition, Chinese soypaste, peptide, separation
 キーワード : アンジオテンシン変換酵素阻害, 中国味噌, ペプチド, 分離

食品総合研究所報告, 80, 1-8 (2016)

ラットによる食品含有フラボノイドの肝臓、血清コレステロール、血清8-イソプロスタニンに及ぼす影響の検討

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Keywords : food safety, flavonoids, high intake
 キーワード : 安全摂取量, フラボノイド, 大量摂取

Food Science and Technology Research, 21 (3), 489-494 (2015)

Black tea polyphenols promotes GLUT4 translocation through both PI3K-and AMPK-dependent pathways in skeletal muscle cells

Tomoya Nagano^{*1}, Kaori Hayashibara^{*1}, Manabu Ueda-Wakagi^{*1,*2}, Yoko Yamashita^{*1}, Hitoshi Ashida^{*1}

^{*1} Kobe University

^{*2} National Food Research Institute, NARO

Keywords : black tea polyphenols, glucose transporter, AMP-activated protein kinase, skeletal muscle

International Journal of Molecular Sciences, 16 (7), 16288-16299 (2015)

3-O-Acyl-epicatechins increase glucose uptake activity and GLUT4 translocation through activation of PI3K signaling in skeletal muscle cells

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^{*4} Kobe Gakuin University

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Keywords : acyl catechin, glucose transporter 4, skeletal muscle, insulin signaling pathway

Food Science and Technology Research, 21 (5), 727-732 (2015)

β -Conglycinin peptides improve glucose uptake through the AMPK signaling pathway in L6 myotubes

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Keywords : β -conglycinin, GLUT4, AMPK

Immunobiology, 220 (6), 701-710 (2015)

Modulatory activity of Lactobacillus rhamnosus OLL2838 in a mouse model of intestinal immunopathology

Tasuku Ogita^{*1}, Paolo Bergamo^{*2}, Francesco Maurano^{*2}, Rossana D'Arienza^{*2}, Giuseppe Mazzarella^{*2}, Giuseppina Bozzella^{*2},
Diomira Luongo^{*2}, Toshihiro Sashihara^{*3}, Takuya Suzuki^{*4}, Soichi Tanabe^{*4}, Mauro Rossi^{*2}

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Keywords : Enteropathy, Gluten, Immunomodulation, Lactobacilli, Transgenic mice

Food Science and Technology Research, 21 (3), 473-477 (2015)

Evaluation of a Method to Quantify Isoflavones in Soybean by Single and Multi-laboratory Validation Studies

Tasuku Ogita^{*1}, Jun Watanabe^{*1}, Manabu Wakagi^{*1}, Kouji Nakamichi^{*2}, Seiichi Komiyama^{*2}, Jun Takebayashi^{*3}, Junichi Mano^{*1},
Kazumi Kitta^{*1}, Shigekazu Koyano^{*2}, Yuko Takano-Ishikawa^{*1}

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Keywords : soy isoflavone, multilaboratory validation study, AOAC guideline

Bioscience of Microbiota, Food and Health, 34 (3), 53-58 (2015)

In vivo dose response and in vitro mechanistic analysis of enhanced immunoglobulin A production by Lactobacillus plantarum AYA

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^{*3} Oriental Yeast Co., Ltd.

Keywords : Lactobacillus plantarum AYA, Peyer's patch, Toll-like receptor 2, Immunoglobulin A, Cell wall

molecules, 20 (10), 19014-19026 (2015)

Oligomeric procyanidins interfere with glycolysis of activated T cells. A novel mechanism for inhibition of T cell function

Masao Goto^{*1}, Manabu Wakagi^{*1}, Toshihiko Shoji^{*2}, Yuko Takano-Ishikawa^{*1}

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^{*2} Institute of Fruit Tree Science, NARO

Keywords : procyanidin, T cell, activation, interleukin-2, glycolysis

日本食品科学工学会誌, 62 (5), 235-241 (2015)

アントシアニン高含有アロニアおよびハスカップ果実抽出物は臭素酸カリウム誘導腎酸化障害を低減する

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Keywords : Aronia, Haskap, Free radical, Potassium bromate, Renal damage

Applied Microbiology and Biotechnology, 99 (10), 4287-4295 (2015)

Identification and distribution of cellobiose 2-epimerase genes by a PCR-based metagenomic approach

Jun Wasaki^{*1}, Hidenori Taguchi^{*2}, Takeshi Senoura^{*2}, Hiroshi Akasaka^{*2}, Jun Watanabe^{*3}, Kazuki Kawaguchi^{*4}, Yosuke Komata^{*4}, Kiyotoshi Hanashiro^{*4}, Susumu Ito^{*4}

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^{*4} Faculty of Agriculture, University of the Ryukyus

Keywords : Metagenome, Environmental DNA, Cellobiose 2-epimerase, Mannobiose 2-epimerase, Mannan catabolism

Food Science and Technology Research, 22 (2), 301-305 (2016)

Determination of the antioxidative activities of herbs harvested in Japan by oxygen radical absorbance capacity methods

Manabu Wakagi^{*1}, Yuuki Taguchi^{*2}, Jun Watanabe^{*1}, Tasuku Ogita^{*1}, Masao Goto^{*1}, Ryo Arai^{*2}, Katsuhito Ujihara^{*2}, Yuko Takano-Ishikawa^{*1}

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Keywords : herb, antioxidant, oxygen radical absorbance capacity (ORAC), quercetin glycosides

Analytical Sciences 32 (2), 171-175 (2016)

Improvement and interlaboratory validation of the lipophilic oxygen radical absorbance capacity: Determination of antioxidant capacities of lipophilic antioxidant solutions and food extracts

Jun Watanabe^{*1}, Tomoyuki Oki^{*2}, Jun Takebayashi^{*3}, Hiroshi Yada^{*1}, Manabu Wakagi^{*1}, Yuko Takano-Ishikawa^{*1}, Akemi Yasui^{*1}

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^{*3} National Institutes of Biomedical Innovation, Health and Nutrition, National Institute of Health and Nutrition

Keywords : Lipophilic oxygen radical absorbance capacity, Antioxidant capacity, Method validation

Journal of Functional Foods, 15, 551-560 (2015)

Chronic high intake of quercetin reduces oxidative stress and induces expression of the antioxidant enzymes in the liver and visceral adipose tissues in mice

Masuko Kobori^{*1}, Yumiko Takahashi^{*1}, Yukari Akimoto^{*1}, Mutsumi Sakurai^{*1}, Izumi Matsunaga^{*1}, Haruno Nishimuro^{*1,*2}, Katsunari Ippoushi^{*1}, Hideaki Oike^{*1}, Mayumi Ohnishi-Kameyama^{*1}

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Keywords : Quercetin, Antioxidant enzymes, Nuclear factor E2-related factor 2, Malondialdehyde, Oxidative stress

キーワード : ケルセチン, 酸化酵素, Nuclear factor E2-related factor 2, マロ b b ジアルデヒド, 酸化ストレス

Nutrientes, 7 (4), 2345-2358 (2015)

Estimated daily intake and seasonal food sources of quercetin in Japan

Haruno Nishimuro^{*1,*2}, Hirofumi Ohnishi^{*3}, Midori Sato^{*4}, Mayumi Ohnishi-Kameyama^{*1}, Izumi Matsunaga^{*1}, Shigehiro Naito^{*1}, Katsunari Ippoushi^{*1}, Hideaki Oike^{*1}, Tadahiro Nagata^{*2}, Hiroshi Akasaka^{*3}, Shigeyuki Saitoh^{*5}, Kazuaki Shimamoto^{*6}, Masuko Kobori^{*1}

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Keywords : quercetin, onion, green tea, daily intake, Japanese
 キーワード : ケルセチン, タマネギ, 緑茶, 一日摂取量, 日本人

Neurobiology of Aging, 36 (9), 2509-2518 (2015)

Quercetin reduces eIF2 α phosphorylation by GADD34 induction

Miki Hayakawa^{*1}, Masanori Itoh^{*1}, Kazunori Ohta^{*1}, Shimo Li^{*1}, Masashi Ueda^{*1}, Miao-xing Wang^{*1}, Emika Nishida^{*1}, Saiful Islam^{*1}, Chihiro Suzuki^{*1}, Kaori Ohzawa^{*1}, Masuko Kobori^{*2}, Takashi Inuzuka^{*3}, Toshiyuki Nakagawa^{*1}

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Keywords : GADD34, ATF4, Quercetin, Amyloid- β , Alzheimer's disease
 キーワード : GADD34, ATF4, ケルセチン, アミロイド β , アルツハイマー病

Biochemical and Biophysical Research Communications, 465 (3), 556-561 (2015)

Time-fixed feeding prevents obesity induced by chronic advances of light/dark cycles in mouse models of jet-lag/shift work

Oike H, Sakurai M, Ippoushi K, Kobori M

National Food Research Institute, NARO

Keywords : Circadian rhythm, Clock genes, Jet lag, Metabolic disorders, Obesity

Molecular Nutrition & Food Research, 60 (2), 300-312 (2016)

Quercetin suppresses immune cell accumulation and improves mitochondrial gene expression in adipose tissue of diet-induced obese mice

Masuko Kobori, Yumiko Takahashi, Mutsumi Sakurai, Yukari Akimoto, Hideaki Oike, Katsunari Ippoushi

National Food Research Institute, NARO

Keywords : Adipose tissue, Inflammation, Obesity, Oxidative stress, Quercetin
 キーワード : 脂肪組織, 炎症, 肥満, 酸化ストレス, ケルセチン

Endocrinology, 156 (3), 987-999 (2015)

Prevention and reversal of lipotoxicity-Induced hepatic insulin resistance and steatohepatitis in mice by an antioxidant carotenoid, β -cryptoxanthin

Yinhua Ni^{*1,*2}, Mayumi Nagashimada^{*1}, Lili Zhan^{*1}, Naoto Nagata^{*1}, Masuko Kobori^{*3}, Minoru Sugiura^{*4}, Kazunori Ogawa^{*4,*3}, Shuichi Kaneko^{*2}, Tsuguhito Ota^{*1,*2}

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Keywords : β -cryptoxanthin, carotenoid, steatohepatitis, insulin resistance, lipotoxicity
 キーワード : β -クリプトキサニン, カロテノイド, 脂肪肝炎, インスリン耐性, 脂肪毒性

International Journal of Food Properties, 19 (5), 993-999 (2016)

Easy method for the approximate quantitation of 4-methylthio-3-butenyl isothiocyanate of daikon (*Raphanus Sativus* L.)

Katsunari Ippoushi^{*1}, Nobuyuki Fukuoka^{*2}, Masahiko Ishida^{*1}, Atsuko Takeuchi^{*1}, Keiko Azuma^{*1}

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^{*2} University Farm, Ishikawa Prefectural University

Keywords : 4-Methylthio-3-butenyl isothiocyanate, Approximate quantitation, Daikon, *Raphanus sativus* L., Pungency

Journal of the Science of Food and Agriculture, 96 (9), 3126-3132 (2016)

Effects of an equol-producing bacterium isolated from human faeces on isoflavone and lignan metabolism in mice.

Motoi Tamura^{*1}, Sachiko Hori^{*1}, Hiroyuki Nakagawa^{*1}, Satoshi Yamauchi^{*2,*3}, Takuya Sugahara^{*2,*3}

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Keywords : equol, daidzein, secoisolariciresinol diglucoside, intestinal bacterium

Bioscience of Microbiota, Food and Health, 34 (3), 59-65 (2015)

Relationships among fecal daidzein metabolites, dietary habit and BMI in healthy volunteers: a preliminary study.

Motoi Tamura^{*1}, Sachiko Hori^{*1}, Hiroyuki Nakagawa^{*1}, Kazuhiro Katada^{*2}, Kazuhiro Kamada^{*2}, Kazuhiko Uchiyama^{*2}, Osamu Handa^{*2}, Tomohisa Takagi^{*2}, Yuji Naito^{*2}, Toshikazu Yoshikawa^{*2}

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^{*2} Kyoto Prefectural University of Medicine

Keywords : daidzein, dihydrodaidzein, equol, microbiota

Food Policy, 55, 33-40 (2015)

Effect of visual aids and individual differences of cognitive traits in judgments on food safety

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^{*6} Tokyo Denki University

Keywords : Judgment on safety of food contaminated by pesticide residue, Visual aid, Numeracy, Cognitive reflection test,

Individual differences in judgments on food safety

キーワード : 残留農薬に汚染された食品の安全性判断, 視覚教材, ニュメラシー, 認知傾向テスト, 食品安全判断の個人差

Food Quality and Preference, 46, 119-125 (2015)

Variation in risk judgment on radiation contamination of food: Thinking trait and profession

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Keywords : Risk judgment on radiation contamination of food, Variation in risk judgments, Cognitive Reflection Test,

Comparison of risk judgments among professions

キーワード : リスク判断のバリエーション, 認知傾向試験, 職業間のリスク判断の比較

Frontiers in Psychology 6, 1005, (2015)

Eleven-month-old infants infer differences in the hardness of object surfaces from observation of penetration events

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^{*3} University of Niigata

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Keywords : infant vision, material perception, motion perception, perceived hardness of solid objects, object manipulation

キーワード : 乳児の視覚, 質感知覚, 運動知覚, 物体の知覚された硬度, 物体操作

映像情報メディア学会誌, 69(9), 271-277 (2015)

高齢者の認知傾向とインターネットでの購買行動の関係

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Keywords : Senior citizens, Cognitive reflection test, Web shopping, User interface

キーワード : 高齢者, 認知傾向テスト, ウェブショッピング, ユーザーインターフェース

日本味と匂学会誌, 22, 321-324 (2015)

甘味・塩味における呈味増強香気の学習効果の検証

河合崇行, 日下部裕子

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Keywords : saltiness, flavor, ethological test, associative learning

キーワード : 塩味, 香り, 動物行動学実験, 連合学習効果

Food Hydrocolloids, 52, 243-252 (2016)

Natural eating behavior of two types of hydrocolloid gels as measured by electromyography: Quantitative analysis of mouthful size effects

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Keywords : texture, mouthful size, hydrocolloid gels, mastication effort, electromyography

キーワード : テクスチャー, 一口量, ハイドロコロイドゲル, 咀嚼エフォート, 筋電位測定

Journal of Food Engineering, 168, 113-118 (2016)

The influence of inhibit avoid water defect responses by heat pretreatment on hot air drying rate of spinach

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Keywords : Spinach, Hot air drying, Drying rate, Fv/Fm, Cell membrane stability

日本食品科学工学会誌, 62(8), 394-401 (2015)

コンジョイント分析を用いた乾燥パプリカの最適ブランチング処理条件の検討

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Keywords : Paprika, blanching, Hot air drying, Quality changes, Conjoint analysis

キーワード : パプリカ, ブランチング, 熱風乾燥, 品質変化, コンジョイント分析

Journal of Texture Studies, 47 (2), 152-160 (2016)

A pilot study on ultrasound elastography for evaluation of mechanical characteristics and oral strategy of gels

Zhihong Gao^{*1}, Satomi Nakao^{*2}, Sayaka Ishihara^{*2}, Takahiro Funami^{*2}, and Kaoru Kohyama^{*1}

^{*1} National Food Research Institute, NARO

^{*2} San-Ei Gen F. F. I., Inc.

Keywords : artificial tongue, gellan gels, mechanical characteristics, oral strategy, ultrasound elastography

キーワード : 人工舌, ジェランゲル, 力学特性, 食べ方, 超音波エラストグラフィ

食品総合研究所研究報告, 80, 37-42 (2015)

官能評価による加熱植物油の簡便な風味のプロファイリング

早川文代^{*1}, 風見由香利^{*1}, 神保聡子^{*2}, 浦田貴之^{*2}

^{*1} (国研) 農研機構食品総合研究所

^{*2} ボーソー油脂株式会社

Keywords : rice bran oil, sensory evaluation, flavor, correspondence analysis

キーワード : こめ油, 官能評価, 風味, コレスポンデンス分析

Journal of Texture Studies, 47 (3), 188-198 (2016)

Texture evaluation of cooked rice prepared from Japanese cultivars using two-bite instrumental test and electromyography

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^{*3} Present address: NARO Institute of Crop Science

Keywords : amylose content, electromyography, mastication, oral processing, rice cultivar

キーワード : アミロース含量, 筋電位測定, 咀嚼, 口内加工, 米品種

《食品安全研究領域》

Journal of Toxicologic Pathology, 28 (2), 99-107 (2015)

Modifications of azoxymethane-induced carcinogenesis and 90-day oral toxicities of 2-tetradecylcyclobutanone as a radiolytic product of stearic acid in F344 rat

Makoto Sato^{*1}, Setsuko Todoriki^{*2}, Tetsuyuki Takahashi^{*1}, Ezar Hafez^{*1}, Chie Takasu^{*1}, Hisanori Uehara^{*1}, Kohji Yamakage^{*3}, Takashi Kondo^{*4}, Kozo Matsumoto^{*5}, Masakazu Furuta^{*6}, Keisuke Izumi^{*1}^{*1} Department of Molecular and Environmental Pathology, Institute of Health Biosciences, The University of Tokushima Graduate School^{*2} Food Safety Division, National Food Research Institute^{*3} Division of Alternative Toxicology Test, Hatano Research Institute, Food and Drug Safety Center^{*4} Department of Radiological Sciences, Graduate School of Medicine and Pharmaceutical Science, University of Toyama^{*5} Department of Animal Medical Sciences, Faculty of Life Sciences, Kyoto Sangyo University^{*6} Laboratory of Quantum-beam Chemical Biology, Radiation Research Center, Osaka Prefecture University

Keywords : food irradiation, 2-tetradecylcyclobutanone, 90-day oral toxicity, colon carcinogenesis

The Journal of Research on the Lepidoptera, 48 (1), 39-44 (2015)

Effect of sperm ejection by females on male fertilization success in the swallowtail butterfly, *Papilio xuthus* L. (Lepidoptera: Papilionidae)Nayuta Sasaki^{*1}, Setsuko Todoriki^{*2}, Mamoru Watanabe^{*1}^{*1} Graduate School of Life and Environmental Sciences, University of Tsukuba^{*2} National Food Research Institute, NARO

Keywords : Cryptic female choice, P2 value, sexual selection, sperm usage, spermatophore

日本食品科学工学会誌, 62(8), 382-393(2015)

長期貯蔵した照射香辛料のESR, PSL, TL法による検知

亀谷宏美, 等々力節子, 萩原昌司, 齊藤希巳江

(国研) 農研機構食品総合研究所

Keywords : electron spin resonance spectroscopy, photo stimulated luminescence, thermoluminescence, spice, radiation detection method
キーワード : 電子スピン共鳴分光法, 光刺激ルミネッセンス法, 熱ルミネッセンス法, 香辛料, 照射検知法

食品照射, 50(1), 13-19(2015)

複数ピークからなるESRスペクトルのピーク分離解析

亀谷宏美^{*1}, 菊地正博^{*2}, 小林泰彦^{*2}, 永田夏樹^{*3}, 鵜飼光子^{*3}, 菰田聖一^{*3}^{*1} (国研) 農研機構食品総合研究所^{*2} (国研) 日本原子力研究開発機構 原子力科学研究部門 量子ビーム応用研究センター 放射線生物作用研究ディビジョン
マイクロビーム細胞照射研究グループ^{*3} 国立大学法人北海道教育大学函館校Keywords : electron spin resonance spectroscopy, multiple peak, Gaussian line shape, peak-fitting analysis, relaxation time
キーワード : 電子スピン共鳴, 多重ピーク, ガウス線形, ピーク分離, 緩和時間

食品照射, 50(1), 20-28 (2015)

照射香辛料検知のためのESR測定条件の検討

亀谷宏美

(国研) 農研機構食品総合研究所

Keywords : electron spin resonance (ESR), spices, progressive saturation behavior
キーワード : 電子スピン共鳴法, 香辛料, 逐次飽和挙動

JSM Mycotoxins, 65 (1), 19-23 (2015)

Historical review of researches on yellow rice and mycotoxigenic fungi adherent to rice in Japan

Masayo Kushiro

National Food Research Institute, NARO

Keywords : citreoviridin, citrinin, cyclochlorotine (islanditoxin), luteoskyrin, Penicillium
キーワード : シトレオピリジン, シトリニン, シクロクロロチン (イズランジトキシシン), ルテオスカイリン, ペニシリウム

JSM Mycotoxins, 65 (1), 1-6 (2015)

Mycotoxin contamination of Vietnamese coffee beans caused by *Aspergillus* sections *Nigri* and *Circumdati*

Ruiko Hashimoto^{*1}, Hiroyuki Nakagawa^{*2}, Yoshiki Onji^{*3}, Katsuyoshi Asano^{*3}, Koji Yokoyama^{*4}, Haruo Takahashi^{*4, *5}

^{*1} Chiba Prefectural Institute of Public Health

^{*2} National Food Research Institute, NARO

^{*3} Nara Prefectural Institute of Public Health

^{*4} Medical Mycology Research Center (MMRC), Chiba University

^{*5} National Institute of Health Science

Keywords : Vietnamese coffee, *Aspergillus* section *Nigri*, *Aspergillus* section *Circumdati*, ochratoxin, fumonisin

Toxins, 7 (9), 3700-3714 (2015)

Detection of N-(1-deoxy-d-fructos-1-yl) fumonisins B2 and B3 in corn by high-resolution LC-Orbitrap MS

Yousuke Matsuo^{*1}, Kentaro Takahara^{*2}, Yuki Sago^{*1}, Masayo Kushiro^{*1}, Hitoshi Nagashima^{*1}, Hiroyuki Nakagawa^{*1}

^{*1} National Food Research Institute, NARO

^{*2} Thermo Fisher Scientific

Keywords : LC-Orbitrap MS, fumonisin, *Fusarium*, corn, N-(1-deoxy-D-fructos-1-yl) fumonisin

Asia-Pacific Journal of Food Safety and Security, 1 (2), 25-37 (2015)

Limited surveillance of mycoflora and mycotoxins in Thai rice retailed in Japan

Masayo Kushiro^{*1}, Yazhi Zheng^{*1}, Hiroko Noriduki^{*2}, Yoshiko Sugita-Konishi^{*3}

^{*1} National Food Research Institute, NARO

^{*2} Tokyo Research Laboratory, Japan Grain Inspection Association

^{*3} The Graduate School of Life and Environmental Sciences, Azabu University

Keywords : aflatoxin, *Aspergillus flavus*, Thai rice, ergosterol
キーワード : アフラトキシシン, アスペルギルス フラバス, タイ米, エルゴステロール

JSM Mycotoxins, 66 (1), 21-26 (2016)

Research on mycotoxin glucosides (masked mycotoxins)

Hiroyuki Nakagawa

National Food Research Institute, NARO

Keywords : masked mycotoxin, glucoside, LC-MS, trichothecene, Fusarium

JSM Mycotoxins, 66 (1), 7-8 (2016)

Separation of aflatoxin M1 and aflatoxin G1 on reverse-phase HPLC

Yazhi Zheng, Yosuke Matsuo, Hiroyuki Nakagawa, Masayo Kushiro

National Food Research Institute, NARO

Keywords : Aspergillus, regulation, retention time
 キーワード : アスペルギルス, 規制, 保持時間

Biocontrol Science, 20 (4), 285-290 (2015)

Survival of Inoculated Escherichia coli O157:H7 in Japanese Sweet Dumplings during Storage

Yasuhiro Inatsu^{*1}, Yukiko Ohata^{*1}, Nobutaka Nakamura^{*1}, Chiraporn Ananchaipattana^{*2}, Latiful Bari^{*3}, Susumu Kawasaki^{*1}

^{*1} National Food Research Institute, NARO

^{*2} Rajamangala University of Technology Thanyaburi

^{*3} Dhaka University

Keywords : Enterohaemorrhagic E. coli, Confection, Food poisoning

食品総合研究所研究報告, 80, 9-16 (2016)

3M™ Molecular Detection System を用いた *Listeria monocytogenes* の簡易迅速遺伝子検査法の評価

川崎 晋^{*1}, 持田麻里^{*1}, 齋藤美枝^{*1}, 守山隆敏^{*2}

^{*1} (国研) 農研機構食品総合研究所

^{*2} スリーエムヘルスケア株式会社

Keywords : 3M Molecular detection system, *L. monocytogenes*, rapid detection, foodborne pathogens
 キーワード : 3M Molecular detection system, リステリアモノサイトゲネス, 迅速検出, 食中毒菌

食品総合研究所研究報告, 80, 17-22 (2016)

Two models of a farming environment: the fate of Escherichia coli contaminating either soil or water with soil

Yukie Hosotani^{*1}, Susumu Kawasaki^{*1}, Thongsavath Chanthasombath^{*2}, Borarin Buntong^{*3}, Md Latiful Bari^{*4}, and Yasuhiro Inatsu^{*1}

^{*1} National Food Research Institute, NARO

^{*2} Ministry of Agriculture and Forestry, Department of Agriculture, Clean Agriculture Development Centre

^{*3} Department of Postharvest Technology, Royal University of Agriculture

^{*4} Department of Microbiology, University of Dhaka

Keywords : Escherichia coli O157, soil, water, PCR-DGGE, good agricultural practices

ベストロジー, 30(2), 63-67(2015)

10, 11月に屋外のフェロモントラップに捕獲されたノシメマダラメイガおよびタバコシバンムシの個体数－関東地方8カ所における2014年の調査－

宮ノ下明大^{*1}, 佐野俊夫^{*2}

^{*1} (国研) 農研機構食品総合研究所

^{*2} 法政大学生命科学部

Keywords : *Plodia interpunctella*, *Lasioderma serricorne*, sex pheromone trap, outdoor, Kanto area

キーワード : ノシメマダラメイガ, タバコシバンムシ, 性フェロモントラップ, 野外, 関東地方

食品総合研究所研究報告, 80, 49-55(2016)

茨城県つくば市の屋外でトラップに捕獲された貯穀害虫の記録 (2014年11月～2015年10月) (2016)

古井 聡, 今村太郎, 宮ノ下明大

(国研) 農研機構食品総合研究所

キーワード : stored-product insect pest, trap, capture, outdoor, Tsukuba

《食品分析研究領域》

Biometals, 28 (2), 381-389 (2015)

Isolation and structure determination of new siderophore albachelin from *Amycolatopsis alba*

Shinya Kodani^{*1}, Hisayuki Komaki^{*2}, Masahiro Suzuki^{*1}, Hikaru Hemmi^{*3}, Mayumi Ohnishi-Kameyama^{*3}

^{*1} Graduate School of Agriculture, Shizuoka University

^{*2} Biological Resource Center, NBRC

^{*3} National Food Research Institute, NARO

Keywords : Siderophore, *Amycolatopsis alba*, Peptide, Biosynthesis

Chemistry Letters, 44 (8), 1107-1109 (2015)

NMR detection and characterization of I-quartets in parallel DNA quadruplexes

Masashi Kinoshita^{*1}, Shunsuke Takaya^{*1}, Tomokazu Shibata^{*1}, Hikaru Hemmi^{*2}, Yasuhiko Yamamoto^{*1}

^{*1} Department of Chemistry, University of Tsukuba

^{*2} National Food Research Institute, NARO

Keywords : NMR, I-quartets, parallel DNA, quadruplex

Biometals, 28 (5), 791-801 (2015)

Structure determination of a siderophore peucechelin from *Streptomyces peucetius*

Shinya Kodani^{*1}, Hisayuki Komaki^{*2}, Masahiro Suzuki^{*1}, Fumiya Kobayakawa^{*1}, Hikaru Hemmi^{*3}

^{*1} Graduate School of Agriculture, Shizuoka University

^{*2} Biological Resource Center, NBRC

^{*3} National Food Research Institute, NARO

Keywords : Siderophore, *Streptomyces peucetius*, Peptide, Biosynthesis, Foroxymithine

日本食品科学工学会誌, 62(10), 484-491 (2015)

わかめの加工による微量元素組成変動と産地判別の可能性

絵面智宏^{*1}, 國分敦子^{*1}, 阿部洋俊^{*1}, 濱田真子^{*1}, 加藤栄一^{*1}, 鈴木彌生子^{*2}

^{*1} 理研ビタミン(株)

^{*2} (国研) 農研機構食品総合研究所

Keywords : raw-wakame, wakame product, seaweed, trace element analysis, geographical origin

キーワード : 原藻わかめ, わかめ加工品, 海藻, 微量元素分析, 産地判別

分析化学, 64(12), 859-866 (2015)

炭素・窒素安定同位体比分析による原木栽培及び菌床栽培乾シイタケの産地間比較

鈴木彌生子^{*1}, 中下留美子^{*2}, Noemia Kazue Ishikawa^{*3}, 田淵諒子^{*4}, 作野えみ^{*4}, 時本景亮^{*4}

^{*1} (国研) 農研機構食品総合研究所

^{*2} (国研) 森林総合研究所

^{*3} National Institute for Research in the Amazon

^{*4} (財) 日本きのこセンター

Keywords : geographical origin, stable isotope ratio, Lentinula edodes, Mushroom

キーワード : 産地判別, 安定同位体比, シイタケ, きのこ

日本食品科学工学会誌, 62(5), 257-262 (2015)

多元素同時分析によるアカシアはちみつ原料原産地判別

一色摩耶^{*1}, 中村 哲^{*1}, 鈴木彌生子^{*2}

^{*1} (独) 農林水産消費安全技術センター

^{*2} (国研) 農研機構食品総合研究所

Keywords : simultaneous multielement analysis, acacia honey, geographical origin

キーワード : 多元素同時分析, アカシアはちみつ, 産地判別

Bulletin Shinshu University Alpine Field Center, 13, 89-98 (2015)

(信州大学農学部AFC報告)

長野県塩尻市における過去10年間のツキノワグマ捕獲状況と捕獲個体の人里依存度

中下留美子^{*1,*2}, 岸元良輔^{*2,*3}, 瀧井睦子^{*2,*4}, 橋本 操^{*2,*5}, 鈴木彌生子^{*2,*6}, 林 秀剛^{*2}, 泉山茂之^{*2,*4}

^{*1} (国研) 森林総合研究所

^{*2} 信州ツキノワグマ研究会

^{*3} 長野県環境保全研究所

^{*4} 信州大学山岳科学研究所

^{*5} 筑波大学大学院

^{*6} (国研) 農研機構食品総合研究所

Keywords : Asiatic black bear, conflict, stable isotope, feeding habit

キーワード : ツキノワグマ, 被害, 安定同位体比, 食性

Natural Product Communications, 10 (3), 441-444 (2015)

Novel C-Xylosylflavones from the Leaves and Flowers of *Iris gracilipes*

Takayuki Mizuno^{*1}, Tsunashi Kamo^{*2}, Nobuhiro Sasaki^{*3}, Hiroshi Yada^{*4}, Yoshinori Murai^{*1} and Tsukasa Iwashina^{*1}

^{*1} Department of Botany, National Museum of Nature and Science

^{*2} Biodiversity Division, National Institute for Agro-Environmental Sciences

^{*3} Iwate Biotechnology Research Center

^{*4} National Food Research Institute, NARO

Keywords : *Iris gracilipes*, Iridaceae, C-Glycosylflavones, Apigenin 7,4'-dimethyl ether 6-C-[(4''-acetylramnosyl)-(1→2)-xyloside], Apigenin 7,4'-dimethyl ether 6-C-rhamnosyl-(1→2)-xyloside

Tetrahedron Letters, 56 (41), 5557-5560 (2015)

Highly-selective recognition of tryptophan in water by a poorly water-soluble scandium compound

Nobuyuki Hayashi^{*1}, Shigeki Jin^{*2}, Tomomi Ujihara^{*3}

^{*1} National Food Research Institute, NARO

^{*2} Faculty of Health Science, Hokkaido University

^{*3} NARO

Keywords : Molecular recognition, Amino acid, Scandium, Intermolecular interaction

Journal of oleo science, 64 (10), 1057-1064 (2015)

Optimization of an Indirect Enzymatic Method for the Simultaneous Analysis of 3-MCPD, 2-MCPD, and Glycidyl Esters in Edible Oils

Kazuo Koyama^{*1}, Kinuko Miyazaki^{*1}, Kousuke Abe^{*2}, Keiichi Ikuta^{*3}, Yoshitsugu Egawa^{*4}, Tadashi Kitta^{*5}, Hirotsugu Kido^{*6}, Takashi Sano^{*7}, Yukinari Takahashi^{*8}, Toru Nezu^{*9}, Hidenori Nohara^{*10}, Takashi Miyashita^{*11}, Hiroshi Yada^{*12}, Kumiko Yamazaki^{*13} and Yomi Watanabe^{*14}

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^{*2} Analysis & Assessment, Central Research Laboratory, The Nisshin oilio Group, Ltd.

^{*3} Analytical Technical Laboratory, Japan Oilstuff Inspectors Corp.

^{*4} Analytical Center for Food Safety, Quality Assurance Department, Fuji Oil Co., Ltd.

^{*5} Japan Frozen Foods Inspection Corp.

^{*6} Japan Association for Inspection and Investigation of Foods Including Fat and Oil

^{*7} Oils and Fats R&D Laboratories, J-Oil Mills Inc.

^{*8} Analytical and Technological Solution Service, House Food Analytical Laboratory Inc.

^{*9} Food Development Laboratory, ADEKA Corp.

^{*10} Health Care Food Research Laboratories, Kao Corp.

^{*11} Quality Assurance Div., Kewpie Corp.

^{*12} National Food Research Institute, NARO

^{*13} Saito, Laboratory, Japan Food Research Laboratories

^{*14} Osaka Municipal Technical Research Institute

Keywords : Indirect enzymatic method, Lipase, 3-MCPD, 2-MCPD, Glycidol

Journal of Natural Products, 79 (1), 66-73 (2016)

Association of catechin molecules in water: quantitative binding study and complex structure analysis

Tomomi Ujihara^{*1}, Nobuyuki Hayashi^{*2}

^{*1} NARO

^{*2} National Food Research Institute, NARO

Keywords : Catechin, Complexation, Water, Binding study, Complex structure

食品総合研究所研究報告, 80, 43-47 (2016)

味噌汁の作り方の違いがフラン量低減に及ぼす影響

箭田浩士

(国研) 農研機構食品総合研究所

Keywords : furan, heating condition, miso, miso soup

The Horticulture Journal, 85 (2), 161-168, (2016)

2-Cyanoethyl-isoxazolin-5-one is a major low molecular weight nitrogenous compound in sweet pea (*Lathyrus odoratus* L.)

Kazuo Ichimura^{*1}, Hiroshi Ono^{*2}, Ayaka Soga^{*3}, Hiroko Shimizu-Yumoto^{*1}, Katsunori Kohata^{*4} and Masayoshi Nakayama^{*1}

^{*1} NARO Institute of Floricultural Science

^{*2} National Food Research Institute, NARO

^{*3} Kanagawa Agricultural Technology Center

^{*4} NARO Institute of Vegetables and Tea Science

Keywords : amino acid, flower opening, phloem sap, soluble carbohydrate, xylem sap

Molecules, 20 (7), 12880-12900 (2015)

Characteristic Conformation of Mosher's Amide Elucidated Using the Cambridge Structural Database

Akio Ichikawa^{*1}, Hiroshi Ono^{*2}, Yuji Mikata^{*3}

^{*1} National Institute of Agrobiological Sciences

^{*2} National Food Research Institute, NARO

^{*3} Faculty of Science, Nara Women's University

Keywords : chiral recognition, chirality, crystal engineering, Mosher's method, MTPA

Applied Microbiology and Biotechnology, 99 (24), 10681-10694 (2015)

Development of the dichlorvos-ammonia (DV-AM) method for the revised detection of aflatoxigenic fungi

Kimiko Yabe^{*1,*2}, Hidemi Hatabayashi^{*1}, Akifumi Ikehata^{*1}, Yazhi Zheng^{*1}, Masayo Kushiro^{*1}

^{*1} National Food Research Institute, NARO

^{*2} Department of Environmental and Food Sciences, Fukui University of Technology

Keywords : visual detection, dichlorvos, ammonia vapor, fungi, aflatoxin

キーワード : 可視検出, ジクロロボス, アンモニア蒸気, かび, アフラトキシン

The Journal of Physical Chemistry Letters, 6, 1022-1026 (2015)

Surface Effect of Alumina on the First Electronic Transition of Liquid Water Studied by Far-Ultraviolet Spectroscopy

Takeyoshi Goto^{*1}, Akifumi Ikehata^{*2}, Yusuke Morisawa^{*3}, Yukihiro Ozaki^{*1}

^{*1} Department of Chemistry, School of Science and Technology, Kwansei Gakuin University

^{*2} National Food Research Institute, NARO

^{*3} Department of Chemistry, School of Science and Engineering, Kinki University

Keywords : attenuated total reflection (ATR), far-ultraviolet (FUV), hydrogen bond, interfacial water, isotope effect

キーワード : 減衰全反射 (ATR), 遠紫外 (FUV), 水素結合, 表面水, 同位体効果

Chemometrics and Intelligent Laboratory Systems, 148, 128-133 (2015)

Logistic regression analysis for identifying the factors affecting development of non-invasive blood glucose calibration model by near-infrared spectroscopy

Yasuhiro Uwadaira^{*1}, Ayaka Shimotori^{*2}, Akifumi Ikehata^{*1}, Keiko Fujie^{*3}, Yoshio Nakata^{*3}, Hiroaki Suzuki^{*4}, Hitoshi Shimano^{*4}, Koichi Hashimoto^{*3}

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^{*2} Graduate School of Comprehensive Human Sciences, University of Tsukuba

^{*3} Faculty of Medicine, University of Tsukuba

^{*4} Metabolism and Endocrinology, Division of Clinical Medicine, Faculty of Medicine, University of Tsukuba

Keywords : In vivo, Non-invasive blood glucose measurement, Disturbance factors, Partial least square regression, Logistic regression, Near-infrared spectroscopy

キーワード : 非侵襲血糖値測定, 妨害因子, 部分最小二乗法, ロジスティック回帰, 近赤外分光法

分析化学, 64(3), 173-184 (2015)

遠紫外分光法による水溶液の電子遷移の解析と反応解析への展開

後藤剛喜^{*1}, 池羽田晶文^{*2}, 森澤勇介^{*3}, 東 昇^{*4}, 尾崎幸洋^{*1}

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^{*2} (国研) 農研機構食品総合研究所

^{*3} 近畿大学 理工学部

^{*4} クラボウ

Keywords : 遠紫外分光法, 電子遷移, 電解質溶液, アミノ酸, オゾン水

Trends in Analytical Chemistry, 76, 216-226 (2016)

Assessment of technical problems in the analysis of inorganic elements in squid through proficiency testing

Tomohiro Narukawa^{*1}, Kazumi Inagaki^{*1}, Shigehiro Naito^{*2}, Yanbei Zhu^{*1}, Shin-ichi Miyashita^{*1}, Takayoshi Kuroiwa^{*1}, Akiharu Hioki^{*1}, Toshiyuki Fujimoto^{*1}, Koichi Chiba^{*1}

^{*1} National Metrology Institute of Japan (NMIJ)

^{*2} National Food Research Institute, NARO

Keywords : Proficiency testing, Inorganic elements, Squid powder

キーワード : 技能試験, 無機元素, イカ粉末

食品総合研究所研究報告, 80, 95-104 (2016)

2009年度及び2010年度精米粉末中無機元素, 並びに2009年度ひじき粉末中無機元素の技能試験結果

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キーワード : 技能試験, 精米, ひじき, カドミウム, 総ヒ素, 鉛, 必須無機元素

食品総合研究所研究報告, 80, 57-68 (2016)

Improvement of the group testing method to evaluate GM maize content

Junichi Mano^{*1}, Kaori Takashima^{*1}, Satoshi Futo^{*2}, Yasutaka Minegishi^{*3}, Kenji Ninomiya^{*4}, Akio Noguchi^{*5}, Kazunari Kondo^{*5}, Reiko Teshima^{*5}, Reona Takabatake^{*1}, Kazumi Kitta^{*1}

^{*1} National Food Research Institute, NARO

^{*2} Fasmac Co., Ltd.

^{*3} Nippon Gene Co., Ltd.

^{*4} Shimadzu Corporation

^{*5} National Institute of Health Sciences

Keywords : GMO, group testing, validation

Food Hygiene and Safety Science, 57 (1), 1-6 (2016)

Selection of suitable DNA extraction methods for genetically modified maize 3272, and development and evaluation of an event-specific quantitative PCR method for 3272

Reona Takabatake^{*1}, Tomoko Masubuchi^{*1}, Satoshi Futo^{*2}, Yasutaka Minegishi^{*3}, Akio Noguchi^{*4}, Kazunari Kondo^{*4}, Reiko Teshima^{*4}, Takeyo Kurashima^{*1}, Junichi Mano^{*1}, Kazumi Kitta^{*1}

^{*1} National Food Research Institute, NARO

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^{*4} National Institute of Health Sciences

Keywords : 3272, event-specific, genetically modified (GM), real-time PCR, DNA extraction method, maize
キーワード : 3272, 系統特異的, 遺伝子組換え, リアルタイムPCR, DNA抽出法, トウモロコシ

《食品素材科学研究領域》

Cereal Chemistry, 92 (5), 487-490 (2015)

Development of a simple method for evaluation of water absorption rate and capacity of rice flour samples

Junko Matsuki^{*1}, Tomoya Okunishi^{*1}, Hiroshi Okadome^{*1}, Keitaro Suzuki^{*2}, Koichi Yoza^{*1}, Ken Tokuyasu^{*1}

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^{*2} Institute of Crop Science, NARO

Keywords : Rice flour, water absorption, absorption rate

International Journal of Food Science and Technology, 51 (1), 150-155 (2016)

Development of a rapid and highly sensitive determination of triacylglycerol in lipids fraction of foodstuffs

Wakako Tsuzuki

National Food Research Institute, NARO

Keywords : Lipids, microanalysis quantitative determination, triacylglycerol

AMB Express Dec, 5 (1), 81-87 (2015)

Molecular breeding of lignin degrading brown rot fungus *Gloeophyllum trabeum* by homologous expression of laccase gene

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^{*6} Faculty of Agriculture, Kyushu University

^{*7} Graduate School of Science and Technology, Shizuoka University

Keywords : *Gloeophyllum trabeum* KU-41, Laccase gene, Homologous expression, Lignin degradation

キーワード : キチリメンタケKU-41株, ラッカーゼ, 同種遺伝子発現, リグニン分解

日本畜産環境学会, 14 (1), 33-39 (2015)

稲わら、エリアンサス茎葉のCaCCO法前処理・酵素糖化プロセスから発生するカルシウム含有残渣の灰化物による畜産排水水質の改善

田中康男^{*1}, 趙 鋭^{*2}, 池 正和^{*2}, 榊原祥清^{*2}, 進藤久美子^{*2}, 我有 満^{*3}, 徳安 健^{*2}

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^{*2} (国研) 農研機構食品総合研究所

^{*3} (国研) 農研機構九州沖縄農業研究センター

Keywords : CaCCO process, calcium, chromaticity, phosphoric acid, piggery sewage treatment

キーワード : CaCCO法, カルシウム, 色度, リン酸, 養豚排水処理

食品総合研究所研究報告, 80, 23-28 (2016)

Glutathione changes physical properties of rice batter without increasing its allergenicity

Hiroyuki Yano, Akiko Fukui

National Food Research Institute, NARO

Keywords : Bread, Glutathione, Gluten-free, Rice, Sorghum

Lipids, 50 (9), 847-860 (2015)

Glyceroglycolipids Affect Uptake of Carotenoids Solubilized in Mixed Micelles by Human Intestinal Caco-2 Cells

Eiichi Kotake-Nara, Lina Yonekura, Akihiko Nagao

National Food Research Institute, NARO

Keywords : Caco-2, caroteneoid, glyceroglycolipid, mixed micelle, uptake

Journal of Oleo Science, 64 (11), 1207-1211 (2015)

Lysoglyceroglycolipids Improve the Intestinal Absorption of Micellar Fucoxanthin by Caco-2 Cells

Eiichi Kotake-Nara, Lina Yonekura, Akihiko Nagao

National Food Research Institute, NARO

Keywords : Caco-2, fucoxanthin, glyceroglycolipid, intestinal absorption, mixed micelle

Bioscience Biotechnology Biochemistry, 80 (3), 518-523 (2016)

3'-Hydroxy- ϵ , ϵ -caroten-3-one inhibits the differentiation of 3T3-L1 cells to adipocytes

Eiichi Kotake-Nara, Megumi Hase, Miyuki Kobayashi, Akihiko Nagao

National Food Research Institute, NARO

Keywords : adipocyte, caroteneoid, lutein, metabolite, 3T3-L1

《食品工学研究領域》

食品総合研究所研究報告, 80, 105-116(2016)

画像認識技術による食品害虫の自動判別

曲山幸生^{*1}, 七里与子^{*1}, 塚田佳苗^{*1}, 宮ノ下明大^{*1}, 今村太郎^{*1}, 古井 聡^{*1}, 和田有史^{*1}, 石山 塁^{*2}

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^{*2} 日本電気 (株) 情報・メディアプロセッシング研究所

Keywords : Insect pest of foods, Image recognition, Similarity, Discrimination

キーワード : 食品害虫, 画像認識, 類似度, 判別

Cereal Chemistry, 93 (1), 53-57 (2016)

Functional properties of submicron sized rice flour produced by wet media grinding

Md. Sharif Hossen, Itaru Sotome, Kazuko Nanayama, Tomoko Sasaki, Hiroshi Okadome

National Food Research Institute, NARO

Keywords : submicron-scale rice flour, pulverization, starch damage, water absorption, digestibility

Cereal Chemistry, 93 (3), 242-247 (2016)

Effects of milling and cooking conditions of rice on in vitro starch digestibility and blood glucose response

Tomoko Sasaki, Tomoya Okunishi, Itaru Sotome, Hiroshi Okadome

National Food Research Institute, NARO

Keywords : Brown rice, Starch digestibility, Glucose response

Journal of Food Engineering, 169, 114-121 (2016)

Effect of air-dehydration pretreatment before freezing on the electrical impedance characteristics and texture of carrots

Yasumasa Ando^{*1}, Yuka Maeda^{*2}, Koichi Mizutani^{*2}, Naoto Wakatsuki^{*2}, Shoji Hagiwara^{*1}, Hiroshi Nabetani^{*1}

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^{*2} Faculty of Engineering, Information and Systems, University of Tsukuba

Keywords : Dehydrofreezing, Electrical impedance spectroscopy, Electrical equivalent circuit, Texture, Carrots

Journal of Physics: Conference Series, 596, doi:10.1088/1742-6596/596/1/012017 (2015)

Non-catalytic alcoholysis process for production of biodiesel fuel by using bubble column reactor

S Hagiwara^{*1}, H Nabetani^{*1} and M Nakajima^{*2}

^{*1} National Food Research Institute, NARO

^{*2} Alliance for Research on North Africa (ARENA), University of Tsukuba

Keywords : Biodiesel, FAME, bubble column reactor, non-catalytic method

キーワード : バイオディーゼル, 脂肪酸メチルエステル, 気泡塔反応槽, 無触媒法

Energy Procedia, 65, 83-89 (2015)

Modification of Biodiesel Reactor by Using of Triple Obstacle within the Bubble Column Reactor

Dyah Wulandani^{*1}, Fajri Ilham^{*1}, Yayan Fitriyan^{*1}, Ahmad Indra Siswantara^{*2}, Hiroshi Nabetani^{*3, *4} and Shoji Hagiwara^{*4}

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^{*4} National Food Research Institute, NARO

Keywords : Biodiesel, bubble column reactor, non-catalytic method, obstacle

キーワード : バイオディーゼル, 気泡塔反応槽, 無触媒法, 邪魔板

Journal of the Science of Food and Agriculture, 96 (4), 1167-1174 (2015)

Fluorescence fingerprint as an instrumental assessment of the sensory quality of tomato juices

Vipavee Trivittayasil^{*1}, Mizuki Tsuta^{*1}, Yoshinori Imamura^{*2}, Tsuneo Sato^{*3}, Yuji Otagiri^{*3}, Akio Obata^{*3}, Hiroe Otomo^{*3}, Mito Kokawa^{*1}, Junichi Sugiyama^{*1}, Kaori Fujita^{*1}, Masatoshi Yoshimura^{*1}

^{*1} National Food Research Institute, NARO

^{*2} University of Tokyo

^{*3} Kikkoman Corporation

Keywords : Fluorescence fingerprint, Quantitative descriptive analysis, Partial least squares regression, Excitation-emission matrix, Variable of importance projection

Food Science and Technology Research, 21(4), 549-555 (2015)

Measuring cheese maturation with the fluorescence fingerprint

Mito Kokawa^{*1, *2}, Shoma Ikegami^{*3}, Akira Chiba^{*3}, Hiroshi Koishihara^{*3}, Vipavee Trivittayasil^{*2}, Mizuki Tsuta^{*2}, Kaori Fujita^{*2}, Junichi Sugiyama^{*2}

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^{*2} National Food Research Institute, NARO

^{*3} Morinaga Milk Industry

Keywords : Proteolysis index, Free amino acids, PLS regression, Maillard products, Oxidized lipid

Talanta, 143, 145-156 (2015)

Freshness estimation of intact frozen fish using fluorescence spectroscopy and chemometrics of excitation-emission matrix

Gamal Elmasry^{*1, *2}, Hiroto Nagai^{*1}, Keisuke Moria^{*3}, Naho Nakazawa^{*3}, Mizuki Tsuta^{*4}, Junichi Sugiyama^{*4}, Emiko Okazaki^{*3}, Shigeki Nakauchi^{*1}

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^{*3} Tokyo University of Marine Science and Technology

^{*4} National Food Research Institute, NARO

Keywords : K-value, Horse mackerel, Fluorescence spectroscopy, Excitation-emission matrix, Partial least square (PLS)

Food Science and Technology, 68, 14-20 (2015)

Fiber optics fluorescence fingerprint measurement for aerobic plate count prediction on sliced beef surface

Dheni Mita Mala^{*1,*2}, Masatoshi Yoshimura^{*3}, Susumu Kawasaki^{*3}, Mizuki Tsuta^{*3}, Mito Kokawa^{*4}, Vipavee Trivittayasil^{*4}, Junichi Sugiyama^{*3}, Yutaka Ktamura^{*1}

^{*1} University of Tsukuba

^{*2} Center for Agro-based Industry, Ministry of Industry of Indonesia

^{*3} National Food Research Institute, NARO

^{*4} Research Fellow of Japan Society for the Promotion of Science

Keywords : Excitation emission matrix, Partial least square regression, Multivariate analysis, Meat

Food Microbiology, 49, 226-230 (2015)

A gaseous acetic acid treatment to disinfect fenugreek seeds and black pepper inoculated with pathogenic and spoilage bacteria

Daisuke Nei^{*1}, Enomoto Katsuyoshi^{*2}, Nobutaka Nakamura^{*1}

^{*1} Food Research Institute, NARO

^{*2} Daisey Co. Ltd.

Keywords : Escherichia coli O157: H7, Salmonella, Bacillus subtilis, fenugreek

日本食品保蔵科学会誌, 40(6), 213-218(2015)

保蔵温度の異なる緑熟トマトの追熟における果皮色,積算エチレン生成量および果実品質の変化

菅 理哉^{*1}, 小出章二^{*1}, 折笠貴寛^{*1}, 中村宣貴^{*2}, 椎名武夫^{*3}

^{*1} 岩手大学農学部

^{*2} (国研) 農研機構食品総合研究所

^{*3} 千葉大学大学院園芸学研究所

Keywords : tomato, a*/b* value, cumulative ethylene production, quality, lycopene contents

Engineering in Agriculture, Environment and Food, 8 (3), 161-168 (2015)

Evaluation of the life cycle of bioethanol produced from soft carbohydrate-rich and common rice straw in Japan with land-use change

Takahiro Orikasa^{*1}, Poritosh Roy^{*2}, Ken Tokuyasu^{*3}, Jeung-yil Park^{*3}, Masakazu Ike^{*3}, Motohiko Kondo^{*4}, Yumiko Arai-Sanoh^{*4}, Nobutaka Nakamura^{*3}, Shoji Koide^{*1}, Takeo Shiina^{*5}

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^{*2} National Food Research Institute, NARO

^{*3} School of Engineering, University of Guelph

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^{*5} Graduate School of Horticulture, Chiba University

Keywords : Rice straw, Soft carbohydrate, Bioethanol, Land-use change, CO2 emission

Biosystems Engineering, 133, 95-101 (2015)

Effect of bioethanol conversion efficiency and ratio of rice paddy area to flatland on energy consumption and CO2 emission of rice straw transport process in Japan

Takahiro Orikasa^{*1}, Poritosh Roy^{*2}, Ken Tokuyasu^{*3}, Nobutaka Nakamura^{*3}, Shoji Koide^{*1}, Takeo Shiina^{*4}

^{*1} Faculty of Agriculture, Iwate University

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^{*4} Graduate School of Horticulture, Chiba University

Keywords : Rice straw, Biomass transport, Ethanol conversion efficiency, Ratio of the rice paddy area to flatland

フードシステム研究, 22(3), 213-218(2015)

多変量解析を用いた消費者視点のメロンのおいしさ指標の作成

鈴木美穂子^{*1}, 坂本真理^{*1}, 吉田 誠^{*1}, 中村宣貴^{*2}, 椎名武夫^{*3}

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^{*2} (国研) 農研機構食品総合研究所

^{*3} 千葉大学大学院園芸学研究科

Keywords : consumer evaluation, melon, multivariate analysis, ripeness, texture

Journal of Packaging Science and Technology, Japan, 24 (2), 69-78 (2015)

Method for controlling damage to products subjected to cumulative fatigue considering damage degree at each layer in stacked packaging

Hiroaki Kitazawa ^{*1,*2}, Katsuhiko Saito ^{*2}, Yutaka Ishikawa ^{*1}

^{*1} National Food Research Institute, NARO

^{*2} Transport Packaging Laboratory, Kobe University

Keywords : cumulative fatigue, multiple regression analysis, peak acceleration, repetitive shock, velocity change

キーワード : 蓄積疲労, 重回帰分析, ピーク加速度, 繰り返し衝撃, 速度変化

Tropical Agriculture and Development, 59 (3), 112-117 (2015)

Evaluation and estimation of damage to tree-ripened 'Irwin' mangos from repetitive shock during transportation

Yoshihiro Nakanishi^{*1,*2}, Nobutaka Nakamura^{*2}, Naoko Hasegawa^{*2}, Hiroyuki Inamori^{*3}, Yoshihiro Ogawa^{*3}, Hiroaki Kitazawa^{*2}

^{*1} Kagoshima Prefectural Institute for Agricultural Development

^{*2} National Food Research Institute, NARO

^{*3} Oshima Branch of Kagoshima Prefectural Institute for Agricultural Development

Keywords : cumulative fatigue, peak acceleration, shock analysis, S-N curve

キーワード : 蓄積疲労, ピーク加速度, 衝撃解析, S-N曲線

園芸学研究, 14(4), 391-396(2015)

収穫したカラーピーマン果実に対する光照射に伴うカロテノイド生合成関連遺伝子の発現変化

永田雅靖^{*1}, 吉田千恵^{*2}, 松永 啓^{*3}

^{*1} (国研) 農研機構食品総合研究所

^{*2} 宮城県農業・園芸総合研究所

^{*3} (国研) 農研機構野菜茶業研究所

Keywords : sweet pepper, light irradiation, coloring, paprika, qPCR

キーワード : カラーピーマン, 光照射, 着色, パプリカ, 定量的PCR

Turkish Journal of Agriculture and Forestry, 40 (3), 450-455 (2016)

Combination of low oxygen and high carbon dioxide treatments alters sprouting of white asparagus

Hiroaki Kitazawa^{*1}, Naoko Hasegawa^{*1}, Masayasu Nagata^{*1}, Machiko Fukuda^{*2}, Shin-ichi Watanabe^{*3}, Atsushi Yamasaki^{*4}, Atsuko Uragami^{*2}

^{*1} National Food Research Institute, NARO

^{*2} Vegetable Production Technology Division, NARO Institute of Vegetable and Tea Science

^{*3} Horticulture Research Division, NARO Kyushu Okinawa Agricultural Research Center

^{*4} Field Crop and Horticulture Research Division, NARO Tohoku Agricultural Research Center

Keywords : Asparagus officinalis, controlled atmosphere, forcing culture, single cropping system

キーワード : アスパラガス (Asparagus officinalis L.), CA貯蔵, 促成栽培, 一期どり栽培

野菜茶業研究所研究報告, 15, 29-33 (2015)

種子を用いたダイコン青変症リスク評価法

永田雅靖^{*1}, 寺西克倫^{*2}

^{*1} (国研) 農研機構食品総合研究所

^{*2} 三重大学大学院生物資源学研究所

Keywords : daikon, blue internal discoloration, testing method

キーワード : ダイコン, 青変症, 評価法

日本食品科学工学会誌, 62(11), 541-546 (2015)

プラスチック包装された豆腐の短波帯加熱殺菌

植村邦彦, 高橋千栄子, 小林 功

(国研) 農研機構食品総合研究所

Keywords : radio frequency heating, Escherichia coli, Tofu, packaging

キーワード : 短波帯加熱, 大腸菌, 豆腐, プラスチック包装

Bioscience, Biotechnology, and Biochemistry, 79 (11), 1852-1859 (2015)

Monodisperse aqueous microspheres encapsulating high concentration of L-ascorbic acid: insights of preparation and stability evaluation from straight-through microchannel emulsification

Nauman Khalid^{*1,*2}, Isao Kobayashi^{*1}, Marcos A. Neves^{*1,*3}, Kunihiko Uemura^{*1}, Mitsutoshi Nakajima^{*1,*3}, Hiroshi Nabetani^{*1,*2}

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^{*2} Graduate School of Agricultural and Life Sciences, The University of Tokyo

^{*3} Faculty of Life and Environmental Sciences, University of Tsukuba

Keywords : Monodisperse microspheres, L-ascorbic acid, high concentration, stability, sodium alginate

キーワード : 単分散マイクロソフィア, L-アスコルビン酸, 高濃度, アルギン酸ナトリウム

International Journal of Food Science and Technology, 50 (8), 1807-1814 (2015)

Formulation of monodisperse oil-in-water emulsions loaded with ergocalciferol and cholecalciferol by microchannel emulsification: insights of production characteristics and stability

Nauman Khalid^{*1,*2}, Isao Kobayashi^{*1}, Zheng Wang^{*1,*3}, Marcos A. Neves^{*1,*3}, Kunihiko Uemura^{*1}, Mitsutoshi Nakajima^{*1,*3}, Hiroshi Nabetani^{*1,*2}

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^{*3} Faculty of Life and Environmental Sciences, University of Tsukuba

Keywords : Cholecalciferol, ergocalciferol, microchannel emulsification, monodispersity, oil-in-water emulsion, stability

キーワード : コレカルシフェロール, エルゴカルシフェロール, マイクロチャネル乳化, 単分散水中油滴エマルション, 安定性

Journal of Microencapsulation, 32 (6), 570-577 (2015)

Preparation of monodisperse aqueous microspheres containing high concentration of L-ascorbic acid by microchannel emulsification

Nauman Khalid^{*1,*2}, Isao Kobayashi^{*1}, Marcos A. Neves^{*1,*3}, Kunihiko Uemura^{*1}, Mitsutoshi Nakajima^{*1,*3}, Hiroshi Nabetani^{*1,*2}

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^{*3} Faculty of Life and Environmental Sciences, University of Tsukuba

Keywords : L-Ascorbic acid, magnesium sulfate, microencapsulation, microchannel emulsification, monodispersity, sodium alginate

キーワード : L-アスコルビン酸, マイクロカプセル化, マイクロチャネル乳化, 単分散, アルギン酸ナトリウム

Journal of Food Engineering, 167, 106-113 (2015)

Effects of surface treatment and storage conditions of silicon microchannel emulsification plates on their surface hydrophilicity and preparation of soybean oil-in-water emulsion droplets

Yanru Zhang^{*1,*2}, Isao Kobayashi^{*1}, Marcos A. Neves^{*1,*3}, Kunihiro Uemura^{*1}, Mitsutoshi Nakajima^{*1,*3}

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^{*3} Faculty of Life and Environmental Sciences, University of Tsukuba

Keywords : Hydrophilicity, contact angle, surface properties, microchannel emulsification, oil-in-water emulsion

キーワード : 親水性, 接触角, 表面特性, マイクロチャンネル乳化, 水中油滴エマルジョン

日本食品工学会誌, 16(2), 161-166 (2015)

Analysis of disintegration of agar gel particles with different textures using gastric digestion simulator

Hiroyuki Kozu^{*1,*2}, Tomoki Nakata^{*1}, Mitsutoshi Nakajima^{*1,*2}, Marcos A. Neves^{*1,*2}, Kunihiro Uemura^{*2}, Seigo Sato^{*1}, Isao Kobayashi^{*2}, Sosaku Ichikawa^{*1,*2}

^{*1} Faculty of Life and Environmental Sciences, University of Tsukuba

^{*2} National Food Research Institute, NARO

Keywords : Gastric digestion, peristalsis, agar gel, food texture

キーワード : 胃消化, ぜん動運動, 寒天ゲル, 食品テクスチャー

RSC Advances, 5, 97151-97162 (2015)

Formulation characteristics of triacylglycerol oil-in-water emulsions loaded with ergocalciferol using microchannel emulsification

Nauman Khalid^{*1,*2}, Isao Kobayashi^{*1}, Zheng Wang^{*1,*3}, Marcos A. Neves^{*1,*3}, Kunihiro Uemura^{*1}, Mitsutoshi Nakajima^{*1,*3}, Hiroshi Nabetani^{*1,*2}

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^{*2} Graduate School of Agricultural and Life Sciences, The University of Tokyo

^{*3} Faculty of Life and Environmental Sciences, University of Tsukuba

Keywords : Ergocalciferol, oil-in-water emulsion, microchannel emulsification, triglyceride oil, stability

キーワード : エルゴカルシフェロール, 水中油滴エマルジョン, マイクロチャンネル乳化, トリグリセリド油, 安定性

Journal of Food Process Engineering, doi: 10.1111/jfpe. 12316, (2015)

Assessment of oxidative stability in fish oil-in-water emulsions: effect of emulsification process, droplet size and storage temperature

Marcos A. Neves^{*1,*2,*3}, Zheng Wang^{*1,*2,*3}, Isao Kobayashi^{*2,*3}, Mitsutoshi Nakajima^{*1,*2,*3}

^{*1} Faculty of Life and Environmental Sciences, University of Tsukuba

^{*2} Alliance for Research on North Africa, University of Tsukuba

^{*3} National Food Research Institute, NARO

Keywords : Oxidation, fish oil, emulsification process, droplet size, storage stability

キーワード : 酸化, 魚油, 乳化プロセス, 液滴径, 保存安定性

Journal of Bioscience and Bioengineering, 121 (4), 471-476 (2016)

Handmade microfluidic device for biochemical applications in emulsion

Marsel Murzabaev^{*1}, Takaaki Kojima^{*1}, Takuro Mizoguchi^{*1}, Isao Kobayashi^{*2}, Brandon J. DeKosky^{*3}, George Georgiou^{*3}, Hideo Nakano^{*1}

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^{*2} National Food Research Institute, NARO

^{*3} Department of Chemical Engineering, University of Texas at Austin

Keywords : Microfluidics, flow-focusing, in vitro transcription/translation, in vitro compartmentalization, monodisperse emulsion

キーワード : マイクロフルイディクス, フローフォーカシング, In vitro転写・翻訳, In vitro分画, 単分散エマルジョン

日本食品工学会誌, 93(3), 421-430(2016)

Efficient encapsulation of a water-soluble molecule into lipid vesicles using W/O/W multiple emulsions via solvent evaporation

Takashi Kuroiwa^{*1,*2,*3}, Kaname Horikoshi^{*2}, Akihiko Suzuki^{*2}, Marcos A. Neves^{*1}, Isao Kobayashi^{*3}, Kunihiko Uemura^{*3}, Mitsutoshi Nakajima^{*1}, Akihiko Kanazawa^{*2}, Sosaku Ichikawa^{*1}

^{*1} Faculty of Life and Environmental Sciences, University of Tsukuba

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Keywords : Phospholipids, processing technology, lipids, emulsions, colloids
キーワード : リン脂質, プロセス技術, 脂質, エマルション, コロイド

食品総合研究所研究報告, 80, 69-74(2016)

Production of monodisperse oil-in-water emulsions using asymmetric micro through-holes compactly arranged on a metallic chip

Isao Kobayashi^{*1}, Yanru Zhang^{*1,*2}, Ran Li^{*1,*3}, Kunihiko Uemura^{*1}, Mitsutoshi Nakajima^{*1,*2}

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Keywords : Microchannel emulsification, oil-in-water emulsion, metallic chip
キーワード : マイクロチャンネル乳化, 水中油滴エマルション, 金属製チップ

Japan Journal of Food Engineering, 17 (1), 11-19 (2016)

Formulation of uniform-sized agar gel microbeads from water-in-oil emulsion prepared using microchannel emulsification under controlled temperature

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Keywords : microchannel emulsification, agar gel, water-in-oil emulsion, size control, gel point

Carbohydrate Polymers, 143, 44-50 (2016)

Effect of esterified oligosaccharides on the formation and stability of oil-in-water emulsions

Sunsanee Udomrati^{*1,*2}, Nauman Khalid^{*1,*3,*4}, Shoji Gohtani^{*5}, Mitsutoshi Nakajima^{*1,*3,*4}, Marcos A. Neves^{*1,*3,*4}, Kunihiko Uemura^{*1,*4}, Isao Kobayashi^{*1,*4}

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Keywords : Emulsion, esterification, maltodextrin, palmitic acid, xylo-oligosaccharide
キーワード : エマルション, エステル化, マルトデキストリン, パルミチン酸, キシロオリゴ糖

《応用微生物研究領域》

Food Biotechnology, 29, 156-165 (2015)

Difructose dianhydride III producing inulin fructotransferase from *Microbacterium* sp. S48-1

Kazutomo Haraguchi

Food Research Institute, NARO

Keywords : inulin, DFA III, enzyme, *Microbacterium*

Microbiology, 162 (2), 420-432 (2016)

Characterization of the transcriptional regulation of the tarIJKL locus involved in ribitol-containing wall teichoic acid biosynthesis in *Lactobacillus plantarum*Satoru Tomita^{*1,*2,*5}, I-Chiao Lee^{*1,*2,*3}, Iris I. van Swam^{*1,*2}, Sjeef Boeren^{*4}, Jacques Vervoort^{*4}, Peter A. Bron^{*1,*2}, Michiel Kleerebezem^{*1,*2,*3}^{*1} TI Food and Nutrition^{*2} NIZO Food Research^{*3} Host Microbe Interactomics Group, Wageningen University^{*4} Laboratory of Biochemistry, Wageningen University^{*5} National Food Research Institute, NAROKeywords : Lactic acid bacteria, *Lactobacillus plantarum* WCFS1, Wall teichoic acid, Poly(glycerol phosphate), Poly(ribitol phosphate)

食品総合研究所研究報告, 80, 75-80 (2016)

Lactobacillus brevis の凝集を引き起こす物質の探索

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keywords : Lactic acid bacteria, *Lactobacillus brevis*, aggregation, adhesion, polysaccharide

PLoS ONE 10 (10): e0141369. doi: 10.1371/journal.pone.0141369 (2015)

Whole-Genome Sequencing and Comparative Genome Analysis of *Bacillus subtilis* Strains Isolated from Non-Salted Fermented Soybean FoodsKamada Mayumi^{*1}, Hase Sumitaka^{*1}, Fujii Kazuya^{*1}, Miyake Masato^{*1}, Sato Kengo^{*1}, Kimura Keitarou^{*2}, Sakakibara Yasubumi^{*1}^{*1} Department of Biosciences and Informatics, Keio University^{*2} National Food Research Institute, NAROKeywords : *Bacillus subtilis*, natto, whole genome, non-salted fermentation, soybean, southeast Asia

キーワード : バチルスサブチリス, 納豆, 全ゲノム, 無塩発酵, 大豆 東南アジア

The Japanese Society of Applied Glycoscience, 63 (1), 23-26 (2016)

Identification of Turbid Compounds Generated in Sugarcane Vinegar

Kazuhiko Matsunaga^{*1}, Shinji Setoguchi^{*1}, Kaori Shimono^{*1}, Hiroyuki Kamesawa^{*1}, Toshikazu Nakamura^{*1}, Kazumi Funane^{*2}^{*1} Kagoshima Prefectural Institute of Industrial Technology^{*2} National Food Research Institute, National Agriculture and Food Research Organization (NARO)Keywords : sugarcane vinegar, glucan, dextran, *Lactobacillus nagelii*

キーワード : サトウキビ酢, グルカン, デキストラン, ラクトバチルス・ナジェリイ

Food Science and Technology Research, 21 (4), 631-635 (2015)

Effect of light on the growth and acid protease production of *Aspergillus oryzae*.

Pushpa S. Murthy^{*1}, Satoshi Suzuki^{*2}, Ken-Ichi Kusumoto^{*2}

^{*1} CSIR-Central Food Technological Research Institute, India

^{*2} National Food Research Institute, NARO

Keywords : *Aspergillus oryzae*, acid protease production, effect of light

Food and Bioproducts Processing, 96, 180-188 (2015)

Acid protease production by *Aspergillus oryzae* on potato pulp powder with emphasis on glycine releasing activity: a benefit to the food industry

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^{*1} CSIR-Central Food Technological Research Institute, India

^{*2} National Food Research Institute, NARO

Keywords : *Aspergillus oryzae*, acid protease production, Food by-product

Bioscience of Microbiota, Food and Health, 34 (2), 45-52 (2015)

Culture-independent bacterial community analysis of the salty-fermented fish paste products of Thailand and Laos.

Junichiro Marui^{*1}, Sayvisene Boulom^{*2}, Wanchai Panthavee^{*3}, Mari Momma^{*1}, Ken-Ichi Kusumoto^{*4}, Kazuhiko Nakahara^{*1}, Masayoshi Saito^{*1}

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Keywords : bacterial community, salty-fermented fish paste, Thailand, Laos

食品総合研究所研究報告, 80, 29-35 (2016)

麹菌 *Aspergillus oryzae* の形態関連遺伝子の解析

服部領太^{*1}, 楠本憲一^{*1}, 柏木 豊^{*2}, 鈴木 聡^{*1}

^{*1} (国研) 農研機構食品総合研究所

^{*2} 東京農業大学

keywords : *Aspergillus oryzae*

キーワード : 分生子

食品総合研究所研究報告, 80, 117-123 (2016)

食品総合研究所微生物バンクの現状と菌株の省エネルギー保存方法およびデータ管理方法の検討

岩橋由美子, 鈴木忠宏, 北村義明

(国研) 農研機構食品総合研究所

keywords : microorganism bank, energy-saving management

Toxins- Open Access Toxinology Journal, 8 (2), 42 (2016)

Acetylated Deoxynivalenol Generates Differences of Gene Expression that Discriminate Trichothecene Toxicity

Tadahiro Suzuki, Yumiko Iwahashi

National Food Research Institute, NARO

Keywords : DON, acetylated derivative, toxicity, gene expression

《食品バイオテクノロジー研究領域》

Environmental Toxicology and Pharmacology, 40 (3), 997-1000 (2015)

Rubratxin-B-induced secretion of chemokine ligands of cysteine-cysteine motif chemokine receptor 5 (CCR5) and its dependence on heat shock protein 90 in HL60 cells

Hitoshi Nagashima

National Food Research Institute, NARO

Keywords : Rubratxin B, CCL3, CCL4, CCL5, Heat shock protein 90

キーワード : ルブラトキシシンB, CCL3, CCL4, CCL5, 熱ショックタンパク質90

Bioscience, Biotechnology and Biochemistry, 79 (6), 969-977 (2015)

Functional reassignment of *Cellvibrio vulgaris* EpiA to cellobiose 2-epimerase and an evaluation of the biochemical functions of the 4-O- β -D-mannosyl-D-glucose phosphorylase-like protein, UnkA

Wataru Saburi^{*1}, Yuka Tanaka^{*1}, Hirohiko Muto^{*1}, Sota Inoue^{*1}, Rei Odaka^{*1}, Mamoru Nishimoto^{*2}, Motomitsu Kitaoka^{*2}, Haruhide Mori^{*1}

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Keywords : *Cellvibrio vulgaris*, cellobiose 2-epimerase, 4-O- β -D-mannosyl-D-glucose phosphorylase, β -mannan, substrate specificity

Carbohydrate Research, 408, 18-24 (2015)

Novel substrate specificities of two lacto-N-biosidases for β -linked galacto-N-biose-containing oligosaccharides of globo H, Gb5, and GA1

Aina Gotoh^{*1}, Toshihiko Katoh^{*1}, Yuta Sugiyama^{*1}, Shin Kurihara^{*1}, Yuji Honda^{*1}, Haruko Sakurama^{*1}, Taiho Kambe^{*2}, Hisashi Ashida^{*3}, Motomitsu Kitaoka^{*4}, Kenji Yamamoto^{*1}, Takane Katayama^{*1,*2}

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Keywords : lacto-N-biosidase, β -linked galacto-N-biose, GA1, Gb5, Globo H

The Journal of Biological Chemistry, 290 (30), 18281-18291 (2015)

Crystal structure and substrate recognition of cellobionic acid phosphorylase, which plays a key role in oxidative cellulose degradation by microbes

Young-Woo Nam^{*1}, Takanori Nihira^{*2}, Takatoshi Arakawa^{*1}, Yuka Saito^{*2}, Motomitsu Kitaoka^{*3}, Hiroyuki Nakai^{*2}, Shinya Fushinobu^{*1}

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Keywords : cellobionic acid phosphorylase, structure, cellobionic acid, GH94, Saccharophagus degradans

Plant and Cell Physiology, 56 (6), 1097-1106 (2015)

Apple SVP family MADS-Box proteins and the tomato pedicel abscission zone regulator JOINTLESS have similar molecular activities

T. Nakano^{*1}, Hiroki Kato^{*2}, Yoko Shima^{*1}, Yasuhiro Ito^{*1}

^{*1} National Food Research Institute, NARO

^{*2} Tokyo University of Science

Keywords : Abscission, Apple, JOINTLESS, MADS-box, Tomato

Biochemical and Biophysical Research Communications, 467 (1), 76-82 (2015)

CRISPR/Cas9-mediated mutagenesis of the RIN locus that regulates tomato fruit ripening

Yasuhiro Ito^{*1}, Ayako N-Yokoi^{*2}, Masaki Endo^{*2}, M. Mikami^{*2}, Seiichi Toki^{*2}

^{*1} National Food Research Institute, NARO

^{*2} National Institute of Agrobiological Sciences, NIAS

Keywords : CRISPR/cas9, Fruit ripening, Ripening inhibitor (RIN), Tomato

FEBS Letters, 589 (23), 3604-3610 (2015)

An inverting β -1,2-mannosidase belonging to glycoside hydrolase family 130 from *Dyadobacter fermentans*

Takanori Nihira^{*1}, Kazuhiro Chiku^{*1}, Erika Suzuki^{*1}, Mamoru Nishimoto^{*2}, Shinya Fushinobu^{*3}, Motomitsu Kitaoka^{*2}, Ken'ichi Ohtsubo^{*1}, Hiroyuki Nakai^{*1}

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Keywords : glycoside hydrolase family 130, β -1,2-mannooligosaccharide, β -1,2-mannosidase

FEBS Letters, 589 (24B), 3816-3821 (2015)

Characterization and crystal structure determination of β -1,2-mannobiose phosphorylase from *Listeria innocua*

Tomohiro Tsuda^{*1}, Takanori Nihira^{*2}, Kazuhiro Chiku^{*2}, Erika Suzuki^{*2}, Takatoshi Arakawa^{*1}, Mamoru Nishimoto^{*3}, Motomitsu Kitaoka^{*3}, Hiroyuki Nakai^{*2}, Shinya Fushinobu^{*1}

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^{*3} National Food Research Institute, NARO

Keywords : β -1,2-mannobiose phosphorylase, glycoside hydrolase family 130, oligosaccharide synthesis, substrate specificity, structure-function relationship

Biochemical Journal, 473 (4), 463-472 (2016)

Design of glycosynthase based on the crystal structure of an inverting glycoside hydrolase family 9 exo- β -D-glucosaminidase

Yuji Honda^{*1}, Sachiko Arai^{*1}, Kentaro Suzuki^{*2}, Motomitsu Kitaoka^{*3}, Shinya Fushinobu^{*1}

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Keywords : exo- β -D-glucosaminidase, D-glucosamine, glycoside hydrolase family 9, glycosynthase, inverting glycoside hydrolase

Journal of Bioscience and Bioengineering, 121 (6), 619-624 (2015)

NP24 induces apoptosis dependent on caspase-like activity in *Saccharomyces cerevisiae*

Naoki Higuchi^{*2}, Yasuhiro Ito^{*1}, Jun Kato^{*2}, Jun Ogihara^{*2}, Takafumi Kasumi^{*2}

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^{*2} Nihon University

Keywords : Adiponectin, Apoptosis, Caspase, NP24, Osmotin, PHO36

Journal of Oleo Science, 64 (9), 1009-1018 (2015)

Fucoxanthin derivatives: synthesis and their chemical properties

Shiro Komba, Eiichi Kotake-Nara, Sachiko Machida

National Food Research Institute, NARO

Keywords : Fucoxanthin, synthesis

キーワード : フコキサンチン, 合成

Biochemistry, 55, 435-446 (2016)

Identification of C1q as a binding protein for advanced glycation end products

Miho Chikazawa^{*1}, Takahiro Shibata^{*1}, Yukinori Hatasa^{*1}, Sayumi Hirose^{*1}, Natsuki Otaki^{*1}, Fumie Nakashima^{*1}, Mika Ito^{*1}, Sachiko Machida^{*2}, Shoichi Maruyama^{*3}, and Koji Uchida^{*1}

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Keywords : AGEs, C1q, RAGE

Microbiology, 162, 35-45 (2016)

Growth and sporulation defects in *Bacillus subtilis* mutants with a single *rrn* operon can be suppressed by amplification of the *rrn* operon

Koichi Yano^{*1}, Kenta Masuda^{*1}, Genki Akanuma^{*1}, Tetsuya Wada^{*1}, Takashi Matsumoto^{*2}, Yuh Shiwa^{*2}, Taichiro Ishige^{*2}, Hirofumi Yoshikawa^{*2,*3}, Hironori Niki^{*4,*5}, Takashi Inaoka^{*6}, Fujio Kawamura^{*1}

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^{*6} Food Research Institute, NARO

Keywords : gene amplification, *rrn*, *Bacillus subtilis*

食品総合研究所研究報告, 80, 87-93 (2016)

大腸菌におけるゲノム重複を介した多剤耐性化

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Keywords : gene amplification, multidrug resistance, *acrAB*

食品総合研究所研究報告, 80, 81-86(2016)

界面活性剤で可溶化された生体膜タンパク質の熱処理特性の評価

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Keywords : membrane protein, sodium dodecyl sulfate, circular dichroism, protein solution property