

1. A method for production of citron tea by using

By Qiao, Yu; Li, Zhihang; Cheng, Wei; Liao, Li; Gao, Hong; Shi, Defang; Xue, Shujing; Guo, Peng; Wu, Wenjin; Wang, Lan; et al

From [Faming Zhuanli Shenqing \(2015\)](#), CN 104642665 A 20150527, Language: Chinese, Database: CAPLUS

The present invention relates to a method for prodn. of citron tea by using mushroom foot of needle mushroom, it comprises grapefruit fruit sorting, washing, denucleating and cutting up grapefruit pulp, cutting grapefruit peel into shreds; disodium stannous citrate color protection treatment, after crisp-protection treatment of calcium lactate, irradiation reduces bitterness; high pressure treatment, adding xanthan gum and konjac gum for thickening, then adding raw apple cider, reduced pressure vacuum cooking with maltose, cooling, adding honey, loading into high barrier polyvinylidene chloride composite film package, pulsed light sterilization and obtaining. The present invention makes full use of discarded mushroom foot of needle mushroom, not only retains the unique flavor of grapefruit, also uses ultra-high pressure to accelerate the removal of bitterness; calcium lactate immersion improves brittleness and supplements calcium; maltose and reduced pressure vacuum cooking method **inhibit caramelization** reaction, protect color; wide spectral band with white light sterilization and plastic bag packaging better maintain the original color and flavor of the product, have advantages of nutrient-rich, unique taste, promoting digestion and easy to carry, etc..

~0 Citings

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2. Effects of Roasting on the Characteristics of Australian Wattle (*Acacia victoriae* Benth) Seed and Extracts

By Ee, Kah Yaw; Zhao, Jian; Rehman, Ata-Ur; Agboola, Samson

From [International Journal of Food Properties \(2013\)](#), 16(5), 1135-1147, Language: English, Database: CAPLUS, DOI:10.1080/10942912.2011.578271

The effects of roasting at 200°C for up to 30 min on the color, chem. compn., and trypsin **inhibitor** activity of wattle seed (*Acacia victoriae* Benth) and its exts. were studied. Results showed that roasting induced significant ($p < 0.05$) changes in color difference index (ΔE^*_{ab}) of flours compared to seeds. Furthermore, chem. anal. showed that protein soly. decreased as a result of roasting. Polyacrylamide gel electrophoresis and reverse phase high performance liq. chromatog. of sol. proteins showed that large mol. wt. polypeptides were rapidly broken down, with resultant formation of smaller, more hydrophilic fragments. Both total and sol. carbohydrates decreased during roasting, most likely due to Maillard-type reactions and **caramelization**, and polyacrylamide gel electrophoresis and spectrophotometric assays confirmed the essential elimination of trypsin **inhibitor** activity after 20 min of roasting.

~3 Citings

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3. Characteristics and antioxidant activity of hydrolyzed β -lactoglobulin-glucose Maillard reaction products

By Dong, Shiyuan; Panya, Atikorn; Zeng, Mingyong; Chen, Bingcan; McClements, D. Julian; Decker, Eric A.

From [Food Research International \(2012\)](#), 46(1), 55-61, Language: English, Database: CAPLUS, DOI:10.1016/j.foodres.2011.11.022

Maillard reaction products (MRPs) were prepd. by reacting hydrolyzed β -lactoglobulin (LH) with glucose (Glu) at 90 °C for up to 18 h of heating. Solns. of LH and glucose were also heated alone as controls. The chem. properties of MRPs (heated LH-glucose) and their antioxidant activity were investigated. Besides the Maillard reaction, the browning intensity and absorbance at 294 nm of heated LH-glucose was partially due to the **caramelisation** reaction of glucose. Fluorescence intensity of heated LH-glucose were mainly assocd. with the Maillard reaction. Heated LH-glucose increased DPPH radical scavenging activity, reducing power and iron chelating activity, which was partially related to the **caramelization** of glucose. Both the 2 h and 4 h heated LH-glucose showed the strongest antioxidative activity in fish oil-in-water emulsions, and longer heating times (> 4 h) decreased their ability to **inhibit** lipid oxidn., but it was not related to the **caramelization** of glucose. Therefore, Maillard reaction was a potential method to improve the antioxidant activity of hydrolyzed β -lactoglobulin.

~11 Citings

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4. Method for manufacturing freezing non-retort type fermented rice beverage

By Seo, Jeong Ok

From [Repub. Korean Kongkae Taeho Kongbo \(2009\)](#), KR 2009022948 A 20090304, Language: Korean, Database: CAPLUS

The title method comprises adding malt extract to fermented rice, adding water, saccharifying, heating the saccharified liquid to 80°C and boiling for 1 min (repeating 3-7 times) to completely inactivate saccharification enzymes, cooling to 60°C, adjusting to pH 4.5 with acetic acid, injecting carbon dioxide till its content is 0.5% (v/v), filling in a non-retort container, and performing ultrahigh-temperature (121°C) intermittent instantaneous sterilization for 5-15 s per time and 3-5 times. Through killing bacteria causing spoilage, the obtained fermented rice beverage is suitable for refrigerated transport. Through **inhibiting caramelization**, browning does not occur, and the flavor and taste are improved.

~0 Citings

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5. Hydrolysis of lactose in whey permeate for subsequent fermentation to ethanol

By Cote, A.; Brown, W. A.; Cameron, D.; Van Walsum, G. P.

From *Journal of Dairy Science* (2004), 87(6), 1608-1620. Language: English, Database: CAPLUS, DOI:10.3168/jds.S0022-0302(04)73315-9

Fermn. of lactose in whey permeate directly into EtOH has had only limited com. success, as the yields and alc. tolerances of the organisms capable of directly fermenting lactose are low. This study proposes an alternative strategy: treat the permeate with acid to liberate monomeric sugars that are readily fermented into EtOH. We identified optimum hydrolysis conditions that yield mostly monomeric sugars and limit formation of fermn. **inhibitors** such as hydroxymethyl furfural by **caramelization** reactions. Both lactose solns. and com. whey permeates were hydrolyzed using inorg. acids and carbonic acid. In all cases, more glucose was consumed by secondary reactions than galactose. Galactose was recovered in approx. stoichiometric proportions. Whey permeate has substantial buffering capacity-even at high partial pressures (>5500 kPa[g]), carbon dioxide had little effect on the pH in whey permeate solns. The elevated temps. required for hydrolysis with CO₂-generated **inhibitory** compds. through **caramelization** reactions. For these reasons, CO₂ was not a feasible acidulant. With mineral acids reversion reactions dominated, resulting in a stable amt. of glucose released. However, the Maillard browning reactions also appeared to be involved. By applying Hammett's acidity function, kinetic data from all expts. were described by a single line. With concd. inorg. acids, low reaction temps. allowed lactose hydrolysis with minimal byproduct formation and generated a hexose-rich soln. amenable to fermn.

~22 Citings

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6. **Inhibitory** effect of unheated and heated D-glucose, D-fructose and L-cysteine solutions and Maillard reaction product model systems on polyphenoloxidase from apple. I. Enzymatic browning and enzyme activity **inhibition** using spectrophotometric and polarographic methods

By Billaud, Catherine; Roux, Emeline; Brun-Merimee, Sophie; Maraschin, Christelle; Nicolas, Jacques

From *Food Chemistry* (2003), 81(1), 35-50. Language: English, Database: CAPLUS, DOI:10.1016/S0308-8146(02)00376-X

To demonstrate whether **caramelization** products (CP) and Maillard reaction products (MRP) could **inhibit** enzymic browning and/or inactivate apple polyphenoloxidase (PPO), L-cysteine, D-glucose, D-fructose aq. solns. and equimolar mixts. (1 M) of hexose/cysteine were each tested on purified enzyme activity, using both spectrophotometric and polarog. methods. **Inhibition** was evaluated as a function of temp. (80-110°), time (0-48 h) of heating and concn. of reactants. High (1-2.7 M) concns. of hexoses were needed to develop a slight **inhibiting** effect on PPO activity. Heating at 90° for extended time periods, increased their **inhibitory** effect. Unheated or heated cysteine solns. exhibited an **inhibitory** effect in terms of browning intensity, without noticeably affecting PPO activity. Conversely, MRP showed a very strong **inhibitory** potency. **Inhibition** efficiency increased with heating time and temp. The extent of **inhibitory** effect was pos. correlated with absorbance measurements of MRP at 350 nm, used as an indicator of the Maillard reaction development.

~23 Citings

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7. **Inhibition** effects of **caramelization** products from sugar solutions subjected to different temperature on polyphenol oxidase

By Lee, Gui-Chu; Ahn, Sun Choung

From *Han'guk Sik'um Yongyang Kwahak Hoechi* (2001), 30(6), 1041-1046. Language: Korean, Database: CAPLUS

Solns. of fructose, glucose, and sucrose were heated without catalyst at various temp. for different length of time. Changes in the formation of early **caramelization** product and browning intensity as well as pH of heated sugar solns. were detd. Reducing power of **caramelization** products (CP) and their **inhibitory** effects on polyphenol oxidase (PPO) were also detd. and their correlations were discussed. The early CP and browning intensity increased with temp. and time, in the order of heated fructose>sucrose>glucose solns. ($p<0.005$), while pH decreased. PHs of sugar solns. heated at 200° showed in the range of 3.32-3.50. Reducing power of CP as well as their **inhibitory** effect on PPO also increased with temp. and time, resp. Among sugar solns., reducing power showed the same trends as above at both 150° and 170° ($p<0.001$). However, those of heated fructose solns. were the highest in the early stage, while those of heated sucrose solns. were the highest in the final stage at 200°. This is due to the difference in CP formed. Sucrose solns. heated at 200° showed the highest **inhibitory** effect, reducing PPO activity by 34.6%. From these results, it is considered that the **inhibitory** effect of CP on PPO is partly related to their reducing power.

~2 Citings

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8. Urea as **caramelization** inhibitor in wood chip hydrolysis

By Davydov, V. D.; Koryakovtsev, V. P.; Erin, Yu. A.; Kuchin, A. V.

From [Russ. \(1998\)](#), [RU 2110402 C1 19980510](#), Language: Russian, Database: CAPLUS

Title only translated.

~0 Citings

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9. **Inhibitory** effect of **caramelization** products on enzymic browning

By Lee, G. C.; Lee, C. Y.

From [Food Chemistry \(1997\)](#), [60\(2\)](#), 231-235. Language: English, Database: CAPLUS, DOI:10.1016/S0308-8146(96)00325-1

Caramelization products (CP) were prepd. by heating a sucrose soln. (1.47 M) at 200°C under various conditions to study the **inhibitory** activity of CP on enzymic browning. **Inhibition** by fractionated CP was measured by enzymic kinetic anal. of polyphenol oxidase (PPO) and o-dihydroxyphenols, such as 4-methylcatechol (4-MC), catechol, caffeic acid and DL-3,4-dihydroxyphenylalanine (DL-DOPA). Color intensity of CP produced at pH 4 was higher than that produced at pH 6 and pH 8, and increased with heating time. The reducing power of CP and their **inhibitory** effect on enzymic browning increased with prolonged heating and with increased amts. of CP. CP heated at pH 4 and pH 6 for 90 min gave a relative **inhibitory** activity on enzymic browning of 85.8% and 72.2%, resp. One of two CP fractions obtained by Biogel P6 column chromatog. had an **inhibitory** effect on enzymic browning, with the fraction having a mol. wt. of 1000-3000 showing the highest activity. Based on the double reciprocal plot of the PPO and 4-MC system, the active fraction of CP appeared to be a competitive **inhibitor** and was most effective on **inhibition** of catechol browning, followed by caffeic acid and DL-DOPA.

~33 Citings

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10. Nonenzymic nonoxidative browning in hydrolyzed shelf-stable concentrated cheese whey

By Buera, Maria del Pilar; Chirife, Jorge; Resnik, Silvia L.

From [Journal of Food Science \(1990\)](#), [55\(3\)](#), 697-700. Language: English, Database: CAPLUS

The rate of brown color development in hydrolyzed concd. cheese whey (HCCW), and in model systems of related compn., was studied. The degree of lactose hydrolysis was a relevant parameter controlling rate of color changes, both in modified whey and in related model systems. Added CaCl_2 had a strong **inhibitory** effect on **caramelization** browning in model systems in which no amino compds. were added. This **inhibitory** effect was less important in model systems contg. whey proteins and in HCCW, in which Maillard browning is the main mechanism of darkening. Effects of pH and temp. were similar to that previously reported for nonhydrolyzed concd. cheese whey, as for many model systems contg. sugars and amino acids.

~3 Citings

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11. Nuclear magnetic resonance spectra of α -D-glucans in the presence of 1,1,3,3-tetramethylurea

By Narui, Takao; Takahashi, Kunio; Shibata, Shoji

From [Chemical & Pharmaceutical Bulletin](#) (1988), 36(4), 1540-4. Language: English, Database: CAPLUS,

DOI:10.1248/cpb.36.1540

The interaction between (Me₂N)₂CO (I) and hydroxyls of glucans was demonstrated by means of ¹H- and ¹³C-NMR. The ¹H- and ¹³C-NMR of carbohydrates remain unchanged even after heating for 30 min at 160° in the presence of d₁₂-I in d₆-DMSO without d₁₂-I in the medium, heating the soln. causes remarkable changes.

~0 Citings

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12. Nonenzymic browning in liquid model systems of high water activity: kinetics of color changes due to caramelization of various single sugars

By Del Pilar Buera, M.; Chirife, Jorge; Resnik, Silvia L.; Lozano, Roberto D.

From [Journal of Food Science](#) (1987), 52(4), 1059-62, 1073. Language: English, Database: CAPLUS

The kinetics of color changes due to caramelization of various single sugar solns. (fructose, xylose, glucose, maltose, lactose, and sucrose) of water activity adjusted to 0.90 (by adding NaCl) and heated at various temps. (45-65°) was studied. A zero-order and a mixed-order kinetic model were satisfactorily used to describe the rate of color formation. Fructose and xylose solns. browned much more rapidly than did those of maltose, glucose, lactose or sucrose. Activation energies for color development of fructose and xylose were in the range 25-30 kcal/mol, while for lactose and maltose they were 35-48 kcal/mol. Lowering of pH inhibited caramelization browning of sugar solns. The role of hydrolysis in the browning of heated sucrose solns. was studied.

~2 Citings

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13. Latent heat store

By Dinter, Wolfgang

From [Eur. Pat. Appl.](#) (1987), EP 210954 A1 19870204, Language: English, Database: CAPLUS

The store comprises a crystallizable heat-storage material contg. a crystn. inhibitor, which stabilizes the storage material in the molten state without heat insulation and energy loss at a temp. below the m.p. or transition temp. of the material. When below the m.p. or transition temp., the molten heat-storage material may be crystd. at a predetd. temp. and time. Several crystn. inhibitors (aq. emulsions of natural or synthetic rose oil or mustard, aq. soln. of caramelized sugar) were prepd. and their efficiencies in stabilizing the supercooling of NaOAc.3H₂O and Na₂S₂O₃.5H₂O were demonstrated.

~1 Citing

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14. Thermal degradation products of sugars in alkaline pH. II. Effect of mono and disaccharide phosphate solutions on Escherichia coli

By Costa de Oliveira, Regina L.; De Sa, Patricia N.; Alcantara Gomes, Roberto

From [Revista de Microbiologia](#) (1981), 12(4), 144-9. Language: English, Database: CAPLUS

The heat sterilization of reducing sugars promotes caramelization reactions in the presence of phosphates and in alk. pH, yielding many degradn. products. Among them, aldehyde-like compds. seem to be responsible for the decrease in viability of UV-irradiated DNA repair-proficient E. coli cells. A pos. interaction between toxic solns. and UV-irradn. effects was obsd. in these cells. All tested reducing sugars, when exptl. conditions remained const., showed similar inactivation kinetics. Toxic effects were equally inhibited by catalase activity during incubation. The effect of nonreducing sugars on cellular viability was negligible, suggesting that the generation of toxic substances is assocd. with the presence of a free carbonyl group in the sugar structure.

~0 Citings

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15. Recovery of mixed plastics materials

By Emery, Guy

From [Brit.](#) (1977), GB 1478259 A 19770629, Language: English, Database: CAPLUS

Mixed plastics were recovered from domestic plastic waste contg. PVC [9002-86-2] and polyethylene [9002-88-4] by grinding into particles, mixing the particles with a sep. prepd. plastic compn. contg. nonlacrymatory Na formaldehyde sulfoxylate [149-44-0] and a chlorinated polyethylene, and extruding or gelating the mixt. formed. Thus, after magnetic removal of metals and grinding in a ballistic mill the particles obtained were batched into compns. contg. 75% plastics of sp. gr. ≥ 1 . For 100 parts ground charge ~ 0.1 -5 parts Na formaldehyde sulfoxylate was used as a **caramelization inhibitor** of milk casein. Shock-resistance agents, stabilizers, plasticizers, fillers, foaming agents, and gelling agents were added to improve the mech. and insulating properties and the plasticity of the finished product. The material obtained after extrusion was either granulated or molded ready for use.

~0 Citings

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16. Effect of products of reactions of melanoidin formation and **caramelization** of sugars on *Saccharomyces cerevisiae* yeasts

By Shvets, V. N.; Slyusarenko, T. P.

From *Prikladnaya Biokhimiya i Mikrobiologiya* (1976), 12(1), 73-8. Language: Russian, Database: CAPLUS

Melanoidins and products of sugar **caramelization** produced an adverse effect on *S. cerevisiae*. The pigments **inhibited** the activity of yeast invertase [9001-57-4] and catalase [9001-05-2]. Melanoidins that had a pos. electrokinetic potential were adsorbed onto the surface of yeast cells.

~0 Citings

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17. Effect of sugars on the pigmentation of blue chrome leathers by *Penicillium rubrum* Stoll

By Krishnamurthi, Vangipuram S.; Jayaraman, Kangayam S.

From *Leather Science (Madras)* (1970), 17(2), 37-43. Language: English, Database: CAPLUS

A study was made of the chrome-liquor residual-sugar effect on fungus growth and pigmentation on tanned leathers. Chrome liquors were prepd. by using molasses, sugar sirup, and SO₂ as reducing agents in various amts. (20-50%). The chrome was pptd. with NH₄OH, the filtrate was hydrolyzed with HCl after boiling, and the pH was brought to 7.0. Details are given on crude enzyme prepn. (for detn. of enzyme activity), sterilization in a Barnstead autoclave, the recording of max. pigment absorbency (500 m μ) with a Zeiss spectrophotometer, and prepn. of the inoculum (1% peptone and 4% glucose). Pickled pelts were tanned sep. with chrome liquors reduced with SO₂, molasses (25, 30, 40, and 50%) and sucrose sirup (20, 30, 40, and 50%). The pH on completion of tannage was 3.8. The leathers were then inoculated with a spore suspension of *P. rubrum* and were incubated at 30 \pm 1° sep. in polyethylene bags at 95-100% relative humidity. The leathers were examd. daily for mold growth and pigmentation. The leathers tanned with chrome liquors reduced with molasses up to a 50% concn. (on di-chromate weight) were not subject to pigmentation, but to mold growth; the brownish color observed in leathers tanned with liquors reduced with >25% was due to the coloring matter assocd. with molasses (which originated from **caramelization** and chem. or thermal degradation of nonsugar constituents); hydrolyzable sugars promoted mold growth (there was none present at 20 and 25% levels in the case of sugar and molasses, resp.); Cr in vitro **inhibited** pigmentation and mold growth, but, as the free Cr concn. in the leathers was very low, it did not check mold growth; enzymic studies disclosed that an optimum definite amt. of glucose is necessary for development of pigmentation.

~0 Citings

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18. A process for manufacture of Khandsari sugar without sulfur

By Gupta, Suresh Chandra; Ramaiah, Nanduri A.; Agarwal, Shri K. D.

From *Proceedings of the Annual Convention of the Sugar Technologists' Association of India* (1966), 34(2), 237-42. Language: English, Database: CAPLUS

Preliminary studies showed that the addn. of 0.04 part superphosphate to 100 parts clarified cane juice **inhibited** **caramelization** in the open pan evapn. process and permitted the production of white sugar crystals. The destruction of reducing sugars was **inhibited**.

~0 Citings

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19. Preserving fruits and vegetables from oxidative deterioration, discoloration and loss of vitamins

By Musher, Sidney

From [No Corporate Source data available \(1942\)](#), [US 2282801 19420512](#), Language: Unavailable, Database: CAPLUS

A small amt. of **caramelized** milk-solids-not-fat is added as a stabilizing agent (suitably with heating to above 220° F.). U. S. 2,282,802 relates to coating roasted coffee with **caramelized** whey or the like, to **inhibit** oxidative deterioration causing staleness. U. S. 2,282,803 relates to details of heat-treatment, etc., for the incorporation of **caramelized** milk-solids-not-fat in flaked oats or other dried flaked cereal products, to effect stabilization against oxidative deterioration. U. S. 2,282,804 relates to the like stabilization of flaked cereal-germ preps. such as those of wheat germs. U. S. 2,282,805 relates to the like stabilization of cereal-polish preps. such as rice polish.

~2 Citings

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20. The effect of boric acid on the **caramelization of the sugars**

By Niculescu, M.

From [Zeitschrift fuer Analytische Chemie \(1941\)](#), [122](#), 335-44. Language: Unavailable, Database: CAPLUS

Boric acid **inhibits** the **caramelization** of the sugars by the formation of boron-sugar compds. The 3 sugars glucose, lactose and sucrose were studied. When a 10% soln. of glucose, to which 1-2 cc. of 10% NaOH soln. has been added, is heated to 126° it **caramelizes**. But if 0.2-0.3 g. boric acid is previously added there is less **caramelization**, and in the absence of NaOH none at all. Lactose is also more difficult to **caramelize** in the presence of boric acid; even in milk **caramelization** is **inhibited**. Sucrose is not **caramelized** at all, even in the presence of NaOH.

~2 Citings

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21. The corrosion of tin

By Bryan, J. M.

From [Dept. Sci. Ind. Research, Rept. Food Investigation Board \(1935\)](#), [177-9](#). Language: Unavailable, Database: CAPLUS

Expts. were carried out to ascertain the effects of NaCl and sucrose, resp., on the rates of corrosion of Sn by solns. of citric acid at 25° and 75° in presence of a limited amt. of air. Addn. of 2% NaCl had a slight **inhibiting** effect in corrosion, which was more pronounced on untreated specimens than on those in which the surfaces of the metal had been abraded with fine emery. Addn. of 1% NaCl to a 0.5% citric acid soln. of p_H 2.4 at 25° had no effect; but as the p_H increased to 5.5 (by addn. of Na citrate buffer) there was a slightly increasing **inhibiting** effect. Addn. of 25% sucrose at 25° produced an appreciable **inhibition** over the whole p_H range studied, the rate of corrosion being reduced to 1/3 at p_H 2.4 and to 1/2 at p_H 5.5. At 25°, addn. of varying amts. of sucrose to 0.5% citric acid soln. progressively retarded the rate of corrosion as the concn. increased. This **inhibition** seems to be due mainly to the effect of sugar in reducing the soly. of air in the solns., since the corrosion (like that in plain citric acid solns.) was entirely of the oxidative type. At 75°, concns. of less than 15% sucrose **inhibited** corrosion, while greater concns. stimulated it; the latter effect, however, may have been due to the action of one or more of the decompn. products formed by **caramelization**. Addn. of Sb to the Sn produced a small reduction in corrosion, amounting to 8% with 0.25% Sb and to 11% with 0.5%; larger addns. did not give further reduction.

~0 Citings

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22. Hydrolysis of lactose in whey permeate for subsequent fermentation to ethanol

By Cote A; Brown W A; Cameron D; van Walsum G P

From [Journal of dairy science \(2004\)](#), [87\(6\)](#), 1608-20, Language: English, Database: MEDLINE

Fermentation of lactose in whey permeate directly into ethanol has had only limited commercial success, as the yields and alcohol tolerances of the organisms capable of directly fermenting lactose are low. This study proposes an alternative strategy: treat the permeate with acid to liberate monomeric sugars that are readily fermented into ethanol. We identified optimum hydrolysis conditions that yield mostly monomeric sugars and limit formation of fermentation inhibitors such as hydroxymethyl furfural by caramelization reactions. Both lactose solutions and commercial whey permeates were hydrolyzed using inorganic acids and carbonic acid. In all cases, more glucose was consumed by secondary reactions than galactose. Galactose was recovered in approximately stoichiometric proportions. Whey permeate has substantial buffering capacity-even at high partial pressures (>5500 kPa[g]), carbon dioxide had little effect on the pH in whey permeate solutions. The elevated temperatures required for hydrolysis with CO₂-generated inhibitory compounds through caramelization reactions. For these reasons, carbon dioxide was not a feasible acidulant. With mineral acids reversion reactions dominated, resulting in a stable amount of glucose released. However, the Maillard browning reactions also appeared to be involved. By applying Hammett's acidity function, kinetic data from all experiments were described by a single line. With concentrated inorganic acids, low reaction temperatures allowed lactose hydrolysis with minimal by-product formation and generated a hexose-rich solution amenable to fermentation.

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