1. Comparative analysis of bottled and galvanised canned soft drinks in Nigeria

By Omuku, P. E.; Okoye, I. E.; Okeke, C. O.; Okafor, V. N.
From Journal of International Environmental Application & Science (2012), 7(1), 55-61. Language: English, Database: CAPLUS

Five samples (Fanta, Coke, Sprite, Fayrouz, Schweppes both bottled and galvanized canned drinks) each were bought from a major dealer in a supermarket, Apapa, Lagos. The pH, sp. gr., total solids, amt. of benzoic acid, acidity, and amt. of ascorbic acid of the samples were evaluated using std. procedures. The results of the total solids showed slightly higher percentage for the bottled drinks relative to the canned drinks, with sample E occurring with the highest percentage total solids (13.41%) and the least value of 9.8% assocd. with sample B (all bottled drinks). The highest percentage acidity was obsd. in the canned drink (sample E) with a value of 0.47%. The amt. of ascorbic acid contained in the sample B for both bottled and canned drink occurred at a non detectable level of the method. The pH of all the samples showed that they were all acidic with a range of 3.31-4.07. There were no significant difference in the sp. gr. of all the samples. The results of the content of benzoic acid in the samples showed elevated concns. of benzoic acid in all the samples which exceeded the SON std. for drinks (benzoic acid range 2.7-4.7g/l). The sugar anal. of the samples showed high level of sugar in samples A and E for the bottled drinks and Sample E for the canned drink (15.58% and 14.89% resp.). It was discovered that those drinks (sample E) with bitter taste contain high level of sugar.

~0 Citings

2. Surface roughness and color change of a composite: Influence of beverages and brushing

By Lepri, Cesar Penazzo; Palma-Dibb, Regina Guenka
From Dental Materials Journal (2012), 31(4), 689-696. Language: English, Database: CAPLUS, DOI:10.4012/dmj.2012-063

This study evaluated the influence of beverages and brushing on the surface roughness(SR) and color change(ΔE) of a composite resin. For this, 120-disks(10 mm×2 mm) of composite resin(Filtek-Z250) were prepd. and polished. Initials SR(Ra-μm) and color (CIELab-system) were measured with rugosimeter and spectrophotometer; specimens were divided into four groups(red wine, soft drink, sugar cane spirit, or artificial saliva=control) and three subgroups(without brushing; brushed with Colgate or with Close-Up). Specimens were immersed in the beverage 5×/day, for 5', over 30 day, being two subgroups brushed(120 strokes/day). Color was measured at 15th day, 30th day and after repolishment; SR at 30th day. ΔE-values were statistically different after immersion in the beverages($p<0.05$). Red wine promoted the highest alteration, followed by soft drink=sugar cane spirit and finally saliva. At 30th day, specimens exhibited ΔE higher than 15th day; after repolishing, ΔE was similar to 15th day. Beverages and brushing neg. influenced the SR. Therefore, ΔE and SR can be influenced by beverages and brushing.

~1 Citing

3. Spectrofluorimetric determination of quinine in Schweppes

By Escalle-Lewis, Aurelie; Piard, Jonathan
From BUP (2012), 106(944), 599-610. Language: French, Database: CAPLUS

A fluorescence spectroscopic method for the detn. of quinine in Schweppes carbonated beverages is described. A linear calibration curve was established using solns. with known concns. of quinine sulfate monohydrate acidified with H_2SO_4. The Schweppes beverage samples were acidified with H_2SO_4 and measured at 350/450 nm (excitation/emission) and the quinine concns. were detd. from the calibration chart. The method of quinine detn. can be used as a lab. expt. in anal. chem. courses.

~3 Citings

4. Synthesis, characterisation and detection of gamma-hydroxybutyrate salts

By Ferris, Trevor J.; Went, Michael J.
From Forensic Science International (2012), 216(1-3), 158-162. Language: English, Database: CAPLUS, DOI:10.1016/j.forsciint.2011.09.014

Sodium, potassium, magnesium and calcium salts of gamma-hydroxybutyrate have been synthesized from gamma-butyrolactone and the corresponding group 1 or 2 hydroxide. Although the group 2 salts are non-hygroscopic, FT-IR spectroscopy and elemental anal. revealed them to be hydrated. X-ray powder diffraction was found to be a quick, non-destructive method of discriminating between the four salts. The Smith and the chlorophenol red/modified Schweppes reagent presumptive color tests gave pos. results regardless of the salt tested. Microcryst. tests for NaGHB were in accordance with previous literature reports, but results for the other three salts were not reliable.

~1 Citing

5. Flow-Through Assay of Quinine Using Solid Contact Potentiometric Sensors Based on Molecularly Imprinted Polymers

By Kamel, Ayman H.; Sayour, Hossam E. M.
From Electroanalysis (2009), 21(24), 2701-2708. Language: English, Database: CAPLUS,
DOI:10.1002/elan.200904699

Miniaturized potentiometric membrane sensors for quinine incorporated with mol. imprinted polymer (MIP) were synthesized and implemented. Planar PVC based polymeric membrane sensors contg. quinine-methacrylic and/or acrylic acid-ethylene glycol methacrylate were dispensed into anisotropically etched wells on polyimide wafers. The detn. of quinine was carried out in acidic soln. at pH 6, where pos. charged species predominated prevalently. The suggested miniaturized planner sensors exhibited marked selectivity, sensitivity, long-term stability and reproducibility. At their optimum conditions, the sensors displayed wide concn. ranges of 4.0×10^{-6}-1.0×10^{-2}mol L^{-1} and 1.0×10^{-5}-1.0×10^{-2} mol L^{-1} with slopes of about 61.3-55.7 mV $decade^{-1}$; resp. Sensors exhibit detection limits of 1.2×10^{-6} and 8.2×10^{-6} mol L^{-1} upon the use of methacrylic and acrylic acid monomers in the imprinted polymer, resp. Validation of the assay method according to the quality assurance stds. (range, within-day repeatability, between-day variability, std. deviation, accuracy, and good performance characteristics) which could assure good reliable novel sensors for quinine estn. was justified. Application of the proposed flow-through assay method for routine detn. of quinine in soft drinks was assayed and the results compared favorably with data obtained by the std. fluorimetric method.

~11 Citings

6. Quinine: extraction, characterization, utilization

By Laibe-Darbour, Florence; Aronica, Christophe
From BUP (2009), 103(912), 311-320. Language: French, Database: CAPLUS

Natural resources produce compds. used by humans for their properties. In order to take advantage of the properties of natural products it is necessary to ext. and purify the compds. from nature. We offer an introduction to extn. of natural products following a protocol of extn. and characterization of quinine from cinchona bark. This protocol was performed in Nov. 2008 by high school students participating in the National Chem. Olympiad.

~3 Citings

7. Small chemical experiments. Fluorescence

By Jensen, Bo
From Dansk Kemi (2000), 81(8), 32-33. Language: Danish, Database: CAPLUS

Lab. demonstrations are outlined for study of fluorescent substances. Quinine, the bitter essence added to Schweppes Tonic Water, fluorescein, 4-methylumbelliferone, and other substances are discussed.

~0 Citings

8. A study of the release of carbon dioxide gas from carbonated beverages

By Talbot, A.; MacDonald, H. S.
From Microscope (1998), 46(3), 161-167. Language: English, Database: CAPLUS

Carbon dioxide is stored in the form of carbonic acid, $H_2CO_{3(aq)}$, and dissolved carbon dioxide, $CO_{2(aq)}$ in carbonated beverages. Filling of containers takes place at room temp. and as a result the CO_2/water systems are on the verge of instability. Small imperfections in can or bottle linings combined with pits in solid flavorings cause the CO_2 to be released during the filing process. From experimentation, it is shown that ground and unground salt promote roughly the same high rate of gas evolution. Unground sugar produces a low rate of gas evolution and ground sugar produces a rate which is approx. half that of salt's. With the use of SEM, it is shown that the rate of gas release is proportional to the no. of pits of cross-sectional area 50 μm^2. This matches the area preferable for gas release on can linings as found by the MacDonald Research Group, Inc. It is shown that in a simple system such as 'Soda Stream' carbonated water, pH increases as carbon dioxide is blown off, as H_2CO_3 is converted to CO_2 and H_2O. In a complex system such as Schweppes Tonic Water, the opposite occurs as citric acid dissocs. according to Le Chatelier's Principal due to the shift in acid equil. From detg. the ratio of the decrease in the moles of carbonic acid to the increase in moles of carbon dioxide in its gaseous form as approx. 600:1, it is clear that carbon dioxide is principally stored in the form of $CO_{2(aq)}$ and not $H_2CO_{3(aq)}$.

~4 Citings

9. Preference and aversion for deterrent chemicals in two species of Peromyscus mouse

By Glendinning, John I.
From Physiology & Behavior (1993), 54(1), 141-50. Language: English, Database: CAPLUS, DOI:10.1016/0031-9384(93)90056-L

Deterrent chems. such as quinine hydrochloride (QHCl) are generally considered to be aversive to mammals at all detectable concns. However, several species contain individuals that drink solns. contg. low concns. of deterrents in preference to plain water. The present study examines this paradoxical preference in two species of mouse, Peromyscus melanotis and P. aztecus. Preliminary findings had suggested that whereas some P. aztecus prefer low concns. of QHCl, no P. melanotis prefer any concn. of QHCl. Expt. 1 tested the hypothesis that individual mice that prefer low concns. of QHCl would respond similarly to four other deterrents described by humans as bitter and/or astringent (ouabain, hop ext., sucrose octaacetate, and tannic acid) in 48-h, two-bottle choice tests. Peromyscus aztecus displayed a large amt. of intraspecific variation in response to all five deterrents. Those P. aztecus that drank low concns. of QHCl in preference to plain water were significantly more likely to respond similarly to low concns. of the other deterrents. No P. melanotis displayed a preference for any concn. of either deterrent. Expt. 2 examd. the temporal stability of the response to 0.1 mM QHCl in P. aztecus over six consecutive choice tests. Mice were divided into three groups based on their initial response to the QHCl soln. (preference, no response, or rejection) and then subjected to the 12-day test. The response of mice within each of the groups did not change significantly over time. Because the preference for low concns. of the deterrent chems. is reminiscent of the preference many humans show for the taste of QHCl in Schweppes Tonic Water, this phenomenon is referred to as the Schweppes effect. Based on the results of this study and others, it appears that the Schweppes effect is: (1) widespread in the animal kingdom, (2) species specific, (3) polymorphic within a species, (4) apparent during the first night of exposure, (5) gender nonspecific, and (6) elicited by chem. unrelated deterrents. While the physiol. mechanism(s) underlying the Schweppes effect and its ecol. relevance remain obscure, several possibilities are discussed.

~11 Citings

10. Effect of turbidity-causing substances and liquid-layer thickness on soft drink turbidity

By Mustafa, I.; Vladimirov, C.; Hristozov, D.
From Nauchni Trudove - Vissh Institut po Khranitelna i Vkusova Promishlenost, Plovdiv (1991), 38(2), 67-75. Language: Bulgarian, Database: CAPLUS

Four types of turbidity-causing pectins and their products, used in the prodn. of soft drinks, were evaluated for their limiting turbidity value in water solns. by detg. the graphical dependence between the liq. thickness layer and the additive concn. The strongest turbidity-causing properties were obsd. in the com. pectic products produced by Naarden, followed by those of Perlarom, Schweppes, and finally pectin itself. The ratio of the limiting optical thickness to the additive concn. required to reach the limit is a suitable index for characterization of the water turbidity-causing ability. The greater the ratio, the better the turbidity-causing ability, and the lower the amt. of additive required to achieve a set degree of turbidity.

~0 Citings

11. Aroma addition to foods and beverages by α-isohumulone

By Kluesters, Paul; Paul, Herbert
From Ger. Offen. (1987), DE 3531130 A1 19870312, Language: German, Database: CAPLUS

The aroma and flavor of foods and beverages, except beer and ale, are improved by addn. of α-isohumulone, preferably in EtOH soln., with or without solubilizing agents. α-Isohumulone in 10% EtOH soln., added at 3 ppm isohumulone to juices, intensified the fruit aroma of cherry juice and the characteristic aroma of orange juice and in the latter these was also a decrease in sweetness and acidity perception.

~2 Citings

12. Fixed eruption due to quinine in tonic water: a case report with high-performance liquid chromatography and ultraviolet A analyses

By Ohira Aoi; Yamaguchi Sayaka; Miyagi Takuya; Yamamoto Yu-Ichi; Yamada Satoshi; Shiohira Hideo; Hagiwara Keisuke; Uno Tsukasa; Uezato Hiroshi; Takahashi Kenzo
From The Journal of dermatology (2013), 40(8), 629-31, Language: English, Database: MEDLINE

Fixed drug eruption is a common cutaneous adverse reaction in young patients with a characteristic clinical appearance. However, the diagnosis and identification of the substance may be difficult if food or food additives provoke the fixed eruption. A 26-year-old man had a history of two episodes of cutaneous erythema with residual pigmentation. Close examination of the history including his diet in addition to an oral challenge test and patch testing led to the diagnosis of fixed eruption secondary to quinine in tonic water. We examined for the presence of quinine in commercially available brands of tonic water using ultraviolet A and irradiation and high-performance liquid chromatography. Both Schweppes and CANADA DRY brands of tonic water emitted fluorescent light upon ultraviolet A irradiation, and contained quinine at concentrations of 67.9 and 61.3 mg/L, respectively. Quinine contained in some tonic waters may trigger fixed eruption.

~0 Citings

13. Effects of club soda and ginger brew on linguapalatal pressures in healthy swallowing

By Krival Kate; Bates Crystal
From Dysphagia (2012), 27(2), 228-39, Language: English, Database: MEDLINE

Oral chemesthesis is the detection of chemicals that activate temperature and pain receptors in the oral mucosa. Presentation of orally chemesthetic input has been theorized to stimulate a faster, stronger swallow. We measured differences in peak linguapalatal swallowing pressures, pressure durations, and pressure adjustments in response to two volumes of water and carbonation (in Schweppes® Club Soda) and carbonation + gingerol (in Reed's Extra Ginger Brew) in 20 young adult women. There was a main effect of stimulus on linguapalatal swallowing pressure, F(6,74) = 6.247, p = 0.000, hp(2) = 0.536 (Reed's Extra Ginger Brew > Schweppes Club Soda > water). Rising and releasing linguapalatal pressure durations were greater for carbonation + gingerol and carbonation than for water. Our results add to the evidence that orally chemesthetic beverages influence greater neuromotor activity compared to water during the oral stage of swallowing. Our findings also suggest that there may be some benefit to the cumulative addition of chemosensory agents in a beverage. Clinically, this provides a theoretical basis for considering the use of these or chemically similar beverages as facilitating stimuli in patients who aspirate thin liquids.

~2 Citings

14. Synthesis, characterisation and detection of γ-hydroxybutyrate salts

By Ferris Trevor J; Went Michael J
From Forensic science international (2012), 216(1-3), 158-62, Language: English, Database: MEDLINE

Sodium, potassium, magnesium and calcium salts of gamma-hydroxybutyrate have been synthesised from gamma-butyrolactone and the corresponding group 1 or 2 hydroxide. Although the group 2 salts are non-hygroscopic, FT-IR spectroscopy and elemental analysis revealed them to be hydrated. X-ray powder diffraction was found to be a quick, non-destructive method of discriminating between the four salts. The Smith and the chlorophenol red/modified Schweppes reagent presumptive colour tests gave positive results regardless of the salt tested. Microcrystalline tests for NaGHB were in accordance with previous literature reports, but results for the other three salts were not reliable.

~0 Citings

15. The effects of two soft drinks on bond strength, bracket microleakage, and adhesive remnant on intact and sealed enamel

By Navarro Raul; Vicente Ascension; Ortiz Antonio J; Bravo Luis A
From European journal of orthodontics (2011), 33(1), 60-5, Language: English, Database: MEDLINE

The purpose of this study was to evaluate the effects of Coca-Cola and Schweppes Limon on bond strength, adhesive remnant, and microleakage beneath brackets. One hundred and twenty upper central incisor brackets were bonded to bovine incisors and divided into three groups: (1) Control, (2) Coca-Cola, and (3) Schweppes Limon. The teeth were submerged in the drinks three times a day for 15 minutes over a 15 day period. Shear bond strength (SBS) was measured with a universal testing machine, and adhesive remnant evaluated using image analysis equipment. Microleakage at the enamel-adhesive and adhesive-bracket interfaces was determined using methylene blue. One hundred and eight teeth were used for scanning electron microscopy to determine the effect of the drinks on intact and sealed enamel. SBS and adhesive remnant data were analysed using the Kruskal-Wallis test ($P < 0.05$) and microleakage using the Kruskal-Wallis and Mann-Whitney tests applying Bonferroni correction ($P < 0.017$). No significant differences were found in SBS and adhesive remnant between the groups ($P > 0.05$). Microleakage at the enamel-adhesive interface for groups 2 and 3 was significantly greater than for group 1 ($P < 0.017$). At the adhesive-bracket interface, microleakage was significantly greater in group 2 than in group 1 ($P < 0.017$) while microleakage in group 3 did not differ significantly from either group 1 or 2 ($P < 0.017$). The drinks produced enamel erosion, loss of adhesive and microleakage. Coca-Cola and Schweppes Limon did not affect the SBS of brackets or the adhesive remnant.

~2 Citings

16. Prediction of the erosive potential of some beverages

By Lussi A; Jaeggi T; Jaeggi-Scharer S
From Caries research (1995), 29(5), 349-54, Language: English, Database: MEDLINE

The aim of this study was to investigate whether the erosive potential of a beverage on human enamel can be predicted by examining the composition of the beverage. The buccal surfaces of 84 caries-free premolars were embedded in resin and polished flat. Two hundred micrometers of the enamel surface were removed. Then the slabs were divided into 14 groups and immersed for 20 min in commercially available beverages. Surface microhardness was measured before and after immersion. Further, the phosphate concentration, the fluoride concentration, the baseline pH as well as the titrated amount of base to raise the pH to 7.0 of each beverage were determined. Surface microhardness values after immersion were calculated with an equation derived in a recent study and compared with the values measured in this investigation. Apple juice showed the greatest significant decrease ($p < 0.05$) in surface microhardness, followed by Schweppes, Orangina and Grapefruit soft drink. The smallest decrease in surface microhardness that was significant resulted from Fendant and Isostar orange. The mean absolute deviation of the calculated to the effective erosion was 7.1%, it ranged between 14.6% (apple juice) and 1.6% (Fendant). The data suggest the possibility of predicting erosion caused by a beverage with an accuracy of 7%. This information can be of value in the prevention of dental erosion.

~3 Citings