

How to Cite:

Arifin, S., & Sudijandoko, A. (2022). Good beverage in relax activity for lowering blood sugar level (Cane Juice After Exposure by floated virgin coconut oils and dipped piezoelectric transducer). *International Journal of Health Sciences*, 6(S7), 5450-5462.
<https://doi.org/10.53730/ijhs.v6nS7.13256>

Good beverage in relax activity for lowering blood sugar level (Cane Juice After Exposure by floated virgin coconut oils and dipped piezoelectric transducer)

Syamsul Arifin*

Department of Medic Laboratory Technology, Health Polytechnique, Ministry of Health Republic Indonesia, Surabaya

*Corresponding Author email: syarifin61@gmail.com

Andun Sudijandoko

Doctoral Study Program, Sport Science, State University of Surabaya

Email: andunsudijandoko@unesa.ac.id

Abstract---The detecting blood glucose level with a peripheral flow sample (PBGL) is fast technique, easy and cheap, that can be detecting after Athlete aerobic activity, relax, after drinking 10 mL ordinary cane juice (OC), and after drinking 10 mL cane juice exposure ultrasonic (CC) by transducer of floated Virgin Coconut Oils and combine dipped Piezoelectric (Tr. FVCOP), where the CC was a new technic made beverage in test tube. This research can be compared with previous research using animal such as Mice, which was developed from the Mice aerobic activity that were force after drank (as sonde) 0,25 mL CC (Syamsul Arifin, et al, 2019), where the CC was the results of previous research of OC radiation by dipped transducer 12 Knobs (Tr. R12K) for 3 hours get a pH value of CC = 8.5 (Sriundy Made, et al, 2017) and according to the results of previous studies, activities like this,. The result of the aerobic activities Mice and sonde of CC was more active than the other groups. However, research the Mice in relax who sonde 0.25 mL CC (Syamsul Arifin, et al, 2019) had different and result from Badminton athletes who drank OC (Hermawati, 2018). This research phenomenon occurs in athletes with aerobic activity who drink between OC and CC, where the result of PBGL was no drinking OC were bigger than PBGL after drinking 10 mL OC, and then the biggest than PBGL after drinking 10 mL CC. So, actually the Mice and after drink 0.25 mL CC was more active because they are hungry, these same phenomena as PBGL after athletes in

aerobic activity and then 10 mL drinking CC was decrease and predictably will be hungry too.

Keywords---Aerobic activity, Peripheral Blood glucose levels, Ordinary Cane juice, Cane juice after Cavitation Dipped Piezoelectric and Floated Virgin Coconut Oils Transducer.

Introduction

1. The difference in two past research among the Athlete in long exercise of Badminton sport and drink OC (Hermawati, 2018) versus the Mice in aerobic activity and after drink (sonde) OC or CC (Syamsul Arifin, et al, 2019).

a). The beverage of CC what the mice drink was made from OC and ultrasonic exposure by Tr. R12K of ultrasonic cavitation until 3 hours, so water $[H_2O]$ breaks to become $[H_2O] \rightarrow [H_x] + [O_x] \dots$ (p1) in CC, then it was differenced than beverage of OC without cavitation ultrasonic. The purpose of this basic study was to determine the fitness of Badminton Athlete related to activeness of Mice, where groups of Badminton athletes were compared that no drink or drink OC (Hermawati, 2018), and groups of Mice that drink OC or drink CC¹⁾ and then will be to compare in group of aerobic Athlete activity between in drink OC or drink CC. The explanation i). After drinking OC can cause glucose reaction in body cell of Human and Mice in aerobic respiration has the react in cell as: $[C_6H_{12}O_6]$ (in blood - port - enter cell) + $[O_2]$ (from Hb4O2 - port - enter cell) $\rightarrow [CO_2]$ (out of cell - coupled with Hb4CO2) + $[H_2O]$ (out into Blood) + Energy (in cell) ... (p2), there is no leakage of O_2 and CO_2 in Blood, because that gases of CO_2 dangerous. ii). After drinking CC can cause glucose and fatty in Blood Mice moment of aerobic respiration, that reaction $[O_x]$ as: $[C_6H_{12}O_6]$ (in blood flow) + $[O_x]$ (in Blood with Hb) $\rightarrow [CO_2]$ (in Blood with Hb) + $[H_2O]$ (in Blood) + Heat Energy ((in Blood) ... (p3), and reaction with $[H_x]$ as: The Triglyceride $[CH_2COOR-CHCOOR^2-CH_2-COOR]$ was same as double chain fat (Christine FM, 2017) (in Blood flow) + $[H_x]$ (in Blood) \rightarrow saturated fat $[R(CH_2)_n-COOH]$ was same as single chain fat (in Blood) ... (p4) in adipose muscle.

b). The lactate acid (Hernawati, 2012) in blood (transport) can be go to liver cell, and react in liver with catalysator $\{[NADH] \rightarrow [NAD^+]\}$ to became glucose $[C_6H_{12}O_6]$ and then out from liver cell to blood flow, and then repeat reaction again $[C_6H_{12}O_6]$ (in Blood) with $[O_x]$ (in Blood) \rightarrow Heat + $[CO_2]$ + $[H_2O]$.

2. The past research result: a). The Athlete of Badminton in activity with respiration aerobic or anaerobic and then the result: The Badminton Athlete after drinking OC was more fit than no drinking OC (Hermawati, 2018). b). The result of Mice in relax: After drinking CC was more active than drinking OC (Syamsul Arifin, et al, 2019), and in this research will be answer the difference of activity between Mice during relaxation and Badminton athletes where each drinks OC? and why the Mice in relaxation then drink CC very active with human blood peripheral detection research. We know the chemical reactions of digestion and respiration are the movement of glucose and Oxygen in blood into the cells of the Human and Mice, just like: $[C_6H_{12}O_6]$ (in blood - port - Inside cell) + $[O_2]$ (from Hb - port - Inside cell) $\rightarrow [CO_2]$ (outside with Hb) + $[H_2O]$ (outside to Blood) + Energy (in cell) ... (p2). This respiration

by gas input from the air as $[O_x]_{gas}$, $[CO_x]_{gas}$, $[SO_x]_{gas}$, and $[NO_x]_{gas}$ besides Oxygen and then gas output from cell were dangerous gas, so no leakage to the Blood, because their gas are directly capture by Hemoglobin (Hb).

3. Chemical composition of: a). Sugarcane, (England), or *Saccharum officinarum* Linn (Latin) was Sucrose ($C_{12}H_{22}O_{11}$), Glucose ($C_6H_{12}O_6$), Fructose isomer Glucose, Starch/ Gums / polysaccharide / amilum / $[C_6H_{10}O_5]_n$, Salt ($[Na^+]$, $[K^+]$, $[Mg^+]$, $[Li^+]$, etc.), Organic acid ($[C]$, $[H]$, $[O]$, $[N]$, $[S]$, $[P]$), Wax / Paraffin / alkane $[C_nH_{4n}]$, and $[H_2O] = 60 - 70 \%$ (Pieter Honig, 1953). b). The VCO was Caprylic acid, Capric acid, Oleate acid, Palmitic acid, Linoleic acid, Stearic acid, Oleic acid, Lauric acid, Myristic acid and general chemical of hybrid coconut before fabrication was Energy (75,4 – 104,22%), $[H_2O] = 85,37-87,24\%$, Fatty (5,59–7,86%), Protein (1,33–1,7%), Carbohydrate (3,39–6,67%), Galactomannan (0,52–0,81%), Fiber (2,29–3,53%), Phospholipid (0,02–0,03%), Reduction Sugar (0,07–0,24%) (Rindengan Barilin, 1995).

3. The Tr. of cavitation ultrasonic in concept Physics in this research was: a). The Tr. Piezoelectric has two coppers (Cu) flats called negative pole condensers in vibrating and in there have ring wire surrounding condenser in positive pole, where between two plates and the pole has been isolated by paper and paper glue as barrier for two condenser and Cu wire. When exposure ultrasonic in OC and then the Cu condenser has: a). Some static point in circle line area (dimensions of long as X and dimensions of width as Y) called composed some Grating circles lines of Contraction area. Then direction of sound vibration (as dimensions of Z) from diameter surface of Piezoelectric to liquid surface, this sound direction was vibrated OC and made water molecule break down into $[O_x]$ and $[H_x]$, b). The velocity of sound in $[H_2O]$ at room temperature has 1 481 m/s⁹⁾, but it will be different if Tr. DP was in VCO or in OC, because in that each liquid has Bulk coefficient (B) and has a relative particle mass (m_r), so they have different intensity equations among in the air (Rachel Daniel R., 2006) and in the liquid⁹⁾ (p6). The formula of intensity in small time (Z), as:

$$Z = A \sin 2 \cdot \pi \cdot f \cdot t \dots\dots\dots (p5)$$

$$Z = A \sin \left(\sqrt{\frac{B}{m}} \right) t \dots\dots\dots (p6)$$

Note: A = amplitude = $\frac{1}{2}$ in maxi of intensity = $\frac{1}{2}$ Vpp, t = time, $\pi = 3.14$, Y = deviation intensity at that time. And then the mechanic of frequency (f), m = dynamic mass of particle liquid, and B = coefficient of Bulk. c). Collison among [Cu] (static) in flat surface (layer-0) and $[H_2O]$ (static) of OC (layer-1) to layer-2 surface of $[H_2O]$ (static) or particles of OC (static) or microbe in OC (dynamic), and then Z-dimensions as line of static collision made line from some point of contraction to radiated dilation area and made deployed area as particle static (without moved = vibration particles), and limited time from layer-2 of OC to layer-3 of OC, etc. this was dimensions of time (T-dimensions). Their point will keep vibrating continuously, uniform and cavitation reaction at 48 kilo Hertz (kHz), 5 voltages pick to pick (Vpp), 5 voltages direct current (Vdc)¹⁾ and after the ultrasonic stop working there will become particles in continue vibration and the garbage that settles down in the test tube. The result of Tr. DP only in OC after

cavitation exposure until 3 hours made pH of OC increase 8,5 from 5 (Sriundy Made, et al, 2017), this Tr. DP in tube was chosen in this development research. The Physic theorems for Tr. DP in OC as Huygens Law (<http://www.researchgate.net/figure/Huygens-principle>), especially [H₂O] in OC can be high broken into H_x and O_x ions by cavitation ultrasonic phenomenon (Rachel Daniel R., 2006) and then will be change to radically of radiation phenomenon in cylindric test tube and half boll in bottom. d). The cavitation concept of Tr. FVCOP was dipped Tr. Piezoelectric (DP) and floated VCO (FVCO) in upper of OC surface when Tr. FVCO as same as FCPO on OC (see Culture media in Bacteria and Fungi (Picture A_{Fungi}, B_{Fungi}, C_{Bacteria}, D_{Bacteria}, E_{Bacteria}, F_{Bacteria}, G_{Fungi}, H_{Bacteria}, I_{Fungi}), e). When Tr. DP exposure ultrasonic to OC until 30 minutes, the OC microbes cannot turn off 100%, because there is a lot of O_x in OC, and then DP exposure is off, and the Tr. FVCO exposure is taken over there will be mechanical friction force between stationer particles and moving microbes until 3 hours, in here can made all Fungi in statis didn't grow because them have friction from dynamic liquid, but all Bacteria in dynamic didn't grow, because the big colony of bacteria can get broken to a little colony and next will be dead (Picture A_{Fungi}, B_{Fungi}, C_{Bacteria}, D_{Bacteria}, E_{Bacteria}, F_{Bacteria}, G_{Fungi}, H_{Bacteria}, I_{Fungi}),

4. The concept of CC beverage as good liquid to drink in Colon, because: a). It has chemical contained H_x and O_x, b). It has no microbial, and c). It has good for cleaning digestive (pass through mouth, esophagus, stomach, colon, and then it will be absorbed into blood), in blood will be cleaning waste metabolic and cleaning Blood flow, as like:

[anaerobic Bacteria] + [O₂] → dead] (in blood flow) (p7),

[Mechanic friction force between Simple fat_{dynamic} or Triglyceride_{particle static} and Bacteria_{dynamic} or Fungi_{static} → cell walls damaged](in CC, in Colon or in Blood) ... (p8).

d). The material in Colon can be reaction with [H_x] and [O_x], like as: Carbohydrate, Alkaline, Alkaline earth, Electrolyte salt, Fatty, Polysaccharide, Anaerobic microbes, Fungi and Virus. f). The Blood flow reaction among molecule essence in arterial flow or peripheral blood and metabolic waste in venous flow like as: Blood transport [Hb-4(O₂)], Erythrozes, Leukosis, Thromboses, Glucose, Fatty, Electrolyte, Water, Toxins, or [Hb-4(CO₂)], waste electrolyte, Lactate acid, etc. How is the result of PBGL before and after drink OC or CC in relax Athlete?

Research Methods

1. The trademark of function generation was Protek type VOM VFG 3020 DDS and the selected criteria can follow: a). Signal type {Sinusoidal (√), Square, Triangle}. b). Frequency type: {Ultrasonic (√, 48 kHz), sonic, infrasonic}. c). Intensity range 0 – 20 Vpp (√, 5 Vpp), d). Voltage range: 0 – 10 Vdc (√, 5 Vdc), and e). Phase range: 0 – 90° (√, 0°), the probe has magnification factor (√, 1x) or 10x (Sriundy Made, et al, 2017).

2. Piezoelectric procedure working theory. Piezoelectric process works was in two poles electricity (positive / negative) of the probe power cable by signal direct current (5 Vdc), in frequency (48 kHz as 48000 vibration per seconds), at maxi

intensity (5 Vpp as 5 mountain pick to 5 valley pick signal in voltage or as two times Amplitude), that the cable of Cu in positive pole was connected to two Cu condenser plates and the negative pole was connected to the Cu wire around the two Cu condenser plates, and the probe was connected to Function Generation, so frequency and plate of condenser was making some grating in two circles plates {phenomena as: dilatation as circles area, contraction as circles line point (X-Y) and expanse direction of vibration in VCO and OC (Z)}.

3. The Piezoelectric manufacturing procedure as imitate of Piezoelectric made in Taiwan type 40 T – 16B: The procedure was to made two condensers with a diameter of 1.0 centimeter (cm), if with the addition of a circular wire has total diameter was 1.1 – 1.2 cm, and the helping material Cu plates thickness was 0.05 cm, White paper, Cu wire, and to hook by glue.

4. The paper of potential Hydrogen (pH) is merk *Macherey-Nagel* (MN) since 1911, REF 921 10, level detect of pH-FIX was 0 – 14, in 100 color-fixed indicator strips, and for trial test pH of VCO has 5 as same as pH of OC has 5 (Syamsul Arifin, et al., 2021).

5. The material of test tube is Borosilicate, it has inside diameter 1.2 cm, height 9 cm, as a reservoir for OC and FVCO to be ultrasonicated with Tr. DP only 3 hours exposure, after than the FVCO can became the liquid transducer [Tr. FVCOP], and then it can exposure continue in OC more 10 days.

6. The procedure PBGL by, detector was to prepares the Easy Touch GCU or the On Call EZ II, insert the glucose test strip, turn on the tool, and the finger form which the blood will be taken is wiped with alcohol, prick the finger with a lancet. When the blood comes out, and point the finger at the test strip on the device, and lastly read the display screen.

7. The techniques maintenance of Easy Touch GCU or On Call EZ II: a). Storage in safe place from the sunlight dry and flat, b). Cleaned regularly, c). Check battery (if it's been used for a long time, remove the battery) and d). Serviced at an authorized place.

Result and Discussion

1. The Compared Study in 1st Group Drinking OC and in 2nd Group Drinking CC at Indoor Sport.

Where these two drinks have different of data in blood glucose level, as:

Data-1: Healthy Athlete: 1st Group, In Relax (PBGL-A), In Relax and Drink OC then Detect after 30 mpp (PBGL-B), versus The 2nd Group, In Relax (PBGL-C), In Relax and Drink CC then Detect after 30 mpp (PBGL-D), Then (PBGL-E) Detect after 60 mpp.

| PBGL Detection (mg/dL) in Relax (Aerobic Activity) | | | | | | |
|--|--|--|------------------|---|---|---|
| Athlete Code | The 1 st Group: Drink OC | | Athlete Code | The 2 nd Group: Drink CC | | |
| | PBGL-A, in relax (aerobic) activity and without drink. | PBGL-B, in relax activity and drinks OC in 30 MPP (first detect) | | PBGL-C, in relax activity and without drink | PBGL-D, in relax and drinks CC in 30 MPP (first detect) | PBGL-E, Detected After 60 MPP (second detect) |
| NM | 101 ^{*)} | 97 | - | - | - | - |
| AA | 84 ^{*)} | 71 | - | - | - | - |
| LL ^{*)} | 90 ^{*)} | 80 | LL ^{*)} | 89 ^{*)} | 83 | - |
| EE | 86 ^{*)} | 80 | GG | 83 ^{*)} | 80 | - |
| DD | 88 ^{*)} | 74 | FF | 79 ^{*)} | 76 | 66 |

Note: ^{*)} The same person in the two activities and after recovery, ^{**)} Random blood sampling of PBGL.

2. Additional some photos as:

a. The Photo of Code Name in relax: (PBGL)A without drink, (PBGL)B after drink OC versus (PBGL) C without drink, (PBGL) D after drink CC, then detect 30 mpp, and (PBGL) D its detect again at 60 mpp:

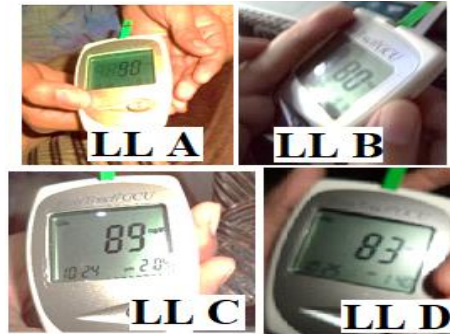
i). NM photos in Healthy Athelete



ii). AA photos in Healthy Athelete



iii). LL photos in Healthy Athelete



iv). GG photos in Healthy Athelete

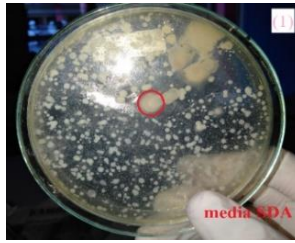


Note of photo code

NM-A (PBGL-A) in the 1st group in relax (aerobic) without drink OC = 101 mg/dL, **NM-B** (PBGL-B) in relax and drink 10 mL OC (after 30 mpp) = 97 mg/dL. **AA-A** (PBGL-A) in the 1st relax without drink OC = 84 mg/dL, **AA-B** (PBGL-B) in relax and drink 10 mL OC (after 30 mpp) = 71 mg/dL. **LL-A** (PBGL-A) in the 1st group in relax without drink OC = 90 mg/dL, **LL-B** (PBGL-B) in relax and drink 10 mL OC (after 30 mpp) = 80 mg/dL. And then after recovery **LL-C** (PBGL-C) in 2nd group in relax without drink OC = 89 mg/dL, **LL-D** (PBGL-D) in relax and drink 10 mL CC (after 30 mpp) = 83 mg/dL. 4). **GG-C** (PBGL-C) in the 2nd group in relax without drink OC = 83 mg/dL, and **GG-D** (PBGLD) in relax and drink 10 mL CC (after 30 mpp) = 80 mg/dL.

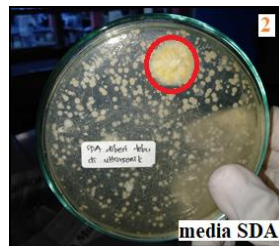
b. The Media of Microbe Photo in OC or CC after Incubation take from test Tube to Petri-disk:

i). Picture-A. Fungi detect in Sabouraud Dextrose Agar (SDA) media (pour plate) and mixed with 1 mL OC (without antibiotic):



Picture-A. The result Fungi detect with incubation (24 hours) of OC in SDA (without antibiotic) at that was small fungi (in red circle). (own photo)

ii). Picture-B. Fungi detect in SDA media (without antibiotic) and mixed with CC (after Tr. R12K 30-minutes) and take 1 mL from test tube to petri-disk:



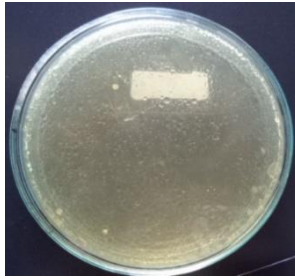
Picture-B. Result Fungi detect with CC incubation in SDA (without antibiotic) in 24 hours that was big fungi (in red circle), that CC after dipped Tr. R12K exposure at 30-minute in test tube (own photo).

iii). Picture-C. Bacteria detect in Nutrient Agar (NA) media and mixed with OC (without ultrasonic) was taken 1 mL from test tube and incubated in petri-disk 24 hours:



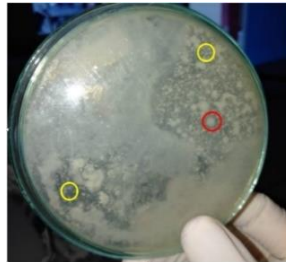
Picture-C. The result detection from OC (without ultrasonic) after 24 hours incubation in NA that Bacteria in red circle was big diameter (= 5 mm) and yellow circle was small diameter (= 1 mm). (Own photo)

iv). Picture-D. Bacteria detect in NA media and mixed 1 mL CC (after dipped Tr. R12K) from tube was taken to Petri-disk and incubated 24 hours:



Picture-D. The result detection CC after dipped Tr. R12K and exposure until 30-minutes in test tube, that after incubation 24 hours by pour plate method was made Bacteria as look spreader and small colony (Own photo).

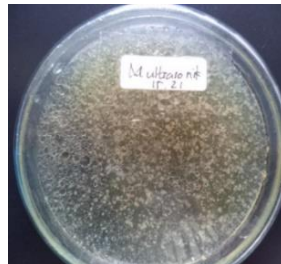
v). Picture-E. Bacteria detect in Glucose monohydrate (GMH) media and mixed with 1 mL OC (without ultrasonic) from test tube was taken to Petri-disk:



Picture-E. The result detection OC (without

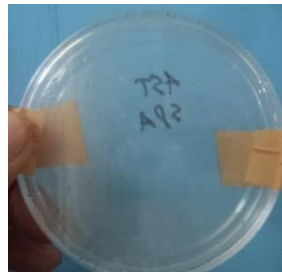
ultrasonic) after 24 hours incubation in GMH media, that Bacteria media from OC was still small and spreader (Own photo)

vi). Picture-F. Bacteria detect in GMH media and mixed 1 mL CC after dipped Tr. R12K and exposure until 30-minutes from test tube was taken to Petri-disk and incubation:



Picture-F, the result detection of CC after dipped Tr. R12K and exposure until 30-minutes and from test tube was taken 1 mL CC to Petri-disk, then mixed with GMH media and incubation 24 hours. It looks in bacterial was spreader, small and same diameter colonies (Own photo).

vii). Picture-G. Fungi incubation detect in SDA (without antibiotic) media and mixed with 1 mL CC after FCPO 30-minutes, and that CPO after exposure by Tr R12K 3 hours and after incubation not be Fungi grow, as:



Picture-G. The result detect in SDA (without antibiotic) and mixed 1 ml CC after exposure by Tr. FCPO in 30-minutes and that CPO after Tr. R12K in 3 hours and incubation 1 day and became Fungi as 0 colony (Own photo).

viii). Picture-H. Bacteria incubation detect in NA media and mixed with 1 mL CC after FCPO 30-minute, and that CPO after exposed 3 hours by Tr R12K and it will be bacteria dead, as view:



Picture-H. The result detection of CC after FCPO 30-minutes, that CPO after exposure 3 hours by Tr. R12K and 24 hours incubation in NA was 7 colony Bacteria (Own photo).

ix). Picture-I. Fungi detect in GMH media



Picture-I, the result detection of CC after Tr. FCPO and exposure until 30-minutes and from test tube was taken 1 mL CC to Petri-disk, then mixed SDA

combined GMH media and then incubation 1 day. It looks was 3 colony spots and spreader (Own photo)

Discussion-1. What happened between Mice drinking CC very active, while Badminton athletes after drinking OC became fitter? because the CC beverage had made Mice thirsty and hungry, that reaction of H_x and O_x with glucose and fatty in blood flow.

Discussion-2. Are there any similarities in relax activity between not drinking OC, drinking OC and versus drinking CC? Yes, it is, because they are aerobic respiration and then they can be different because in digestion make the blood flow a lot of glucose, metabolic waste, or H_x and O_x .

Discussion-3. The same concept in relax, in healthy athlete, and in the random sampling of data-1, that was among the 1st group drink 10 mL OC and the 2nd group drink 10 mL CC, and then comparing in the 1st group among the PBGL-A and PBGL-B, and in the 2nd group among the PBGL-C, PBGL-D and PBGL-E, that was not difference of slope. The problem of discussion analysis, how is reaction of the healthy athlete drink more of 10 mL OC or CC? that were the same in negative slope or in the blood glucose decreased.

Discussion-4. The athlete metabolism in aerobic (relax) activity with O_2 intake from lung to cell and then made energy (p2) in cell and after that the process of taking CO_2 from the cell carried out to the alveolus, this is the closed phenomenon of the two-process uses Hemoglobin (Hb) transportation. How is reaction of microbes in the colon and the Blood flow after drink CC?

Discussion-5. Before and after drank beverage of OC and CC, and after 30 mpp then detection of PBGL, that has a decreased value. The reason for the drop in blood sugar values is because this beverage reacts with the food juice in the intestines, in colon, and in the blood. So H_x can reacted with metabolic waste, fatty, triglyceride or cholesterol in blood and O_x can react with glucose in blood, and what each related by the heat, the energy, or waste particles in blood flow?. The reaction of glucose in blood, as: $[C_6H_{12}O_6]_{(in\ blood)} + [O_2]_{(from\ CC)} \rightarrow [CO_2]_{(in\ blood)} + [H_2O]_{(Blood)} + Heat\ Energy_{(in\ Blood)}$... (p3), so what the $[CO_2]$ in blood is Poison?.

Discussion-6. The metabolic waste in the Blood was end result of several some chemical processes in the cell of human body to obtain bulk energy, which must be reprocessed and excreted from the body. The molecular waste material, such as: Carbon groups, Sulfur groups, Nitrogen groups, Phosphor groups. The vital organs that reprocess the body's liquid waste ware the kidneys or liver, and those that emit toxic gases ware the lungs, and the urethra to collect and excrete urine. What're the molecules result of the reaction between the waste material with H_x or O_x in blood flow?

Discussion-7, Aerobic activity breathes with O_2 intake, this makes all cells work normally, the heart beats relaxed. The cause in the athlete after drinking 10 mL CC, this is part of the solution to lowering blood glucose (Data-1). These athletes will be relaxed with: a). A weakening of heart rate? b). A weakening of Cholesterol? c). A weakening of Triglyceride? d). A weakening of Lactate acid

Conclusion

The PBGL-A was higher value than PBGL-B in the 1st group and in the 2nd group the PBGL-C was higher than PBGL-D or PBGL-E

2. The microbes in OC after exposure this ultrasonic by Tr. FCPO until 30-minutes in test tube was sterile and compared without exposure ultrasonic

Reference

- Syamsul Arifin, Toho Cholikh Mutohir, Nining Widyah Kusnanik (2019). Penelitian Kesurvivalan Dan Reaksi Mencit-mencit Putih (Mus Musculus) Setelah Diberi Air Tebu (Saccharum Officinarum) Dikavitasi Ultrasonik Minyak Palmae (Diradiasi Ultrasonik 12 Kawat Bola) (Kontrol Air Tebu Dibasikan 5 Hari), Buku Abstrak Prosiding, "Tantangan Industri Kesehatan Menghadapi Revolusi Industri 4.0", Seminar Nasional Kesehatan 2019. Dies Natalis POLTEKKES KEMENKES Surabaya, 9 November 2019, ^{a)}Dosen Instrumentasi Laboratorium, Jurusan Analisis Kesehatan, Politeknik Kesehatan Kementerian Kesehatan Surabaya (s_arifin61@yahoo.com), h.67, Prosiding Seminar Nasional Kesehatan Poltekkes Kemenkes Surabaya, Current issue, vol 1, Np 1 (2019), Published December 1, 2019, h.98-104, <http://scholar.google.com/citations?user=4hFU4VkAAAAJ&hl=en>, <http://semnas.poltekkesdepkes-sby.ac.id/indeex.php/2019>.
- Sriundy Made, Syamsul Arifin, Toho C. Mutohir, Nining W Kusnanik (2017). The Use Of Knob And Plat Transducers For Developing Healthy Drink, IJSTR, Received: 7 December 2016. Accepted: 16 December 2016, Publish: February 2017.
- Hermawati (2018). Pengaruh Pemberian Air Tebu Sebelum Latihan Terhadap Kebugaran Atlet BKMF Bulutangkis BEM FIK, Fakultas Ilmu Keolahragaan, Universitas Negeri Makasar. <https://fdokumen.com>documen>hermapdf->
- Christine F Mamuja (2017). Lipida, Universitas Sam Ratulangi Manado, Unsrat Press, cet 1, 2017. ISBN: 978-979-3660-81-3, Email: percetakanunsrat@gmail.com <http://repo.unsrat.ac.id>LIPIDA.pdf>, download 13 Juli 2022.
- Hernawati (2012). Produksi Asam Laktat Pada Exercise Aerobik Dan Anaerobik Jurusan Pendidikan Biologi, FPMIPA Universitas Pendidikan Indonesia, 12 Maret 2012. <https://docplayer.info/31080571-Produksi-asam-laktat-pada-exercise-aerobik-anaerobik>
- Pieter Honig (1953). Principles of Sugar Technology, 1st Edition, Elsevier, January 1953, eBook, <http://www.perlego.com>
- Rindengan Barilin (1995), Tanaman Kelapa dan Palma, Balai Penelitian Tanaman Kelapa dan Palma lain, Manado, code pos 1004, Indonesia, <http://media.neliti.com>media...PDF>.
- Anonimus, -. Huygens Principle for the Case of A Grating Elementary Waves Originate http://www.researchgate.net/figure/Huygens-principle-for-the-case-of-a-grating-Elementary-waves-originate-from-points_fig2_275769654, download: 24/04/2022
- Rachel Daniel R. (2006). The Science and Applications of Acoustics, 2ND Ed, CUNY Graduate Center and School of Architecture, Urban Design and

Landscape Design The City College of the City University of New York (E-Book), download 2/9/2019.

Syamsul Arifin, Toho Cholik Mutohir, NiningWidyah Kusnanik, EdyMintarto, Soetanto Hartanto, Bambang Purwanto, Endang Sriwahyuni, Andun Sudijanto (2021). Differences the Estimation of Ultrasonic Cavitation Concepts in Cane Juice (Dipped Transducer of Piezoelectric versus Floated Transducer of Crude Palmae Oils versus Floated Transducer of Virgin Coconut Oils and Dipped Transducer of Piezoelectric versus Without Ultrasonic will to Detect Potential Hydrogen), IEEE-SEM, Impact Factor: 3.5, Volume 9, Issue 6, Jine 2021, ISSN 2320-9151), http://www.google.com/url?sa=1&source=web&rct=j&url=http://ieeesem.com/journal_volume9_issue6_june_2021_edition.html

ooOOoo