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# NUTRITIONAL COMPOSITION OF SELECTED ENERGY DRINKS COMMONLY CONSUMED IN ABUJA METROPOLIS

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## ABSTRACT

This study was undertaken to determine the nutritional benefits of selected energy drinks commonly consumed in Abuja metropolis. Ten different energy drinks were bought and coded $E_1E_2E_3 \ldots\ldots E_{10}$. Proximate analysis was used to determine the total ash, crude protein, moisture, crude fiber, lipids, carbohydrate and energy value. The result of the moisture content of the different samples showed the moisture ranged from 89.10% to 91.19%. the highest value in $E_2$ of all the energy drinks sampled. The result also showed that $E_6$ has the highest ash content with 0.29% of all brands of energy drinks while the lowest ash content was 0.001% in $E_1$. The nutritional values showed that $E_5$ was found to be the highest on protein among the ten energy drinks. $E_4$ was the highest in carbohydrate but the least among for protein. $E_9$ was found to be the highest in fat content while $E_7$ was found to have the highest energy level but also happens to have the lowest moisture and fat present.

## INTRODUCTION

Nutrients are substances found in food that can give off energy, promote growth and development, and keep the body functioning normally. Even though the causes of these diseases are frequently complex, diet is regarded as one of the key contributors [1]

Throughout the entire life span, nutrition is a fundamental pillar of human survival, health, and development. Proper food and healthy nutrition are crucial for survival, physical development, mental development, performance and productivity, health, and overall well-being. This is true from the earliest stages of fetal development at birth through infancy, childhood, adolescence, and on into adulthood and old age. It is a crucial pillar for both national and human development. A scientific field called human nutrition studies how people obtain and use food and nutrients for their survival, well-being, growth, and development. Human nutrition covers a wide range of topics, including biological and metabolic nutrition, whole-body nutrition, clinical nutrition, and the enormous public health nutrition problems facing national programs as well as the worldwide prevention, control, and elimination of malnutrition and nutritional disorders.

As important as proper nutrition is to sustain healthy development and growth, good health is also essential to nutritional wellbeing. To achieve nutritional optimization, infectious diseases must be managed to reduce their infection rate, duration, and severity.



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The primacy of nutrition in human development has been demonstrated clearly. It influences not only health but also general improvement and living standards all through the life cycle. Total or partial nutritional deficiencies have an impact on how well-functioning organ systems like the respiratory, locomotor, muscular/skeletal, gastrointestinal, immune, and related inflammatory response function[1].

In the modern world, there is a steadily rising demand for nutritional and energy supplements. A type of beverage known as an energy drink makes the claim that it will increase both mental and physical energy. Energy drinks, which are currently the fastest-growing beverage category and are sold in about 140 countries worldwide, typically contain 80 to 505 mg of caffeine per can or bottle [2].

Energy drinks come in a wide variety of brands and flavors today. These carbonated or still drinks typically include a lot of sugar, sugar substitutes, artificial sweeteners, caffeine, taurine, and other stimulants. Energy drinks have become a part of adolescents' and adults' daily lives over the last few decades. These drinks are widely available on college campuses, in clubs, and in recreational facilities. They are thought to heighten mental vigor or give a quick energy boost.

To achieve a balanced diet and maintain good health, reading the nutrition label can help you make wise food decisions. Protein, total fat, carbohydrates, and sugars are among the nutrients and energy contents that must be disclosed on nutrition labels in accordance with the Nutrition Labeling Scheme. A good knowledge of the functions of these nutrients will help an individual to comprehend and utilize the nutritional label in any given processed food or drink.

A significant source of energy for the body is provided by carbohydrates. Sugars have no nutritional value beyond the fact that they give the body energy. Having too much sugar can result in consuming too much energy, which raises the risk of being overweight and obese. Sugar consumption that is disproportionate and frequent can also lead to dental caries. The brain needs sugars, specifically glucose, as a quick source of energy. Building muscle, bones, and teeth, repairing body tissues, and supplying energy all require protein.

The total fat is an abundant energy supplier (1 g of fat provides 9 kcal). Overeating fat has been linked to a higher risk of being overweight and obese. Fat is necessary for transporting and storing fat-soluble vitamins like vitamin A, D, E, and K as well as for preserving the functionality of cell membranes. In addition to energy and the nutrients specified for labeling, you will find nutrition information on those nutrients that are the subjects of nutrition claims, as well as other nutrients that may be voluntarily included in the nutrition label, under the Nutrition Labeling Scheme. If the carbohydrates are listed as "total carbohydrates," the amount of dietary fiber will also be listed.

Malnutrition has an impact on virtually every aspect of human and social development, in



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addition to mortality and morbidity statistics. It also affects school performance, educational effectiveness, labor productivity, and practically every aspect of physical growth and intellectual development. Energy drinks are being consumed more frequently worldwide as a result [3].

***Active ingredients of energy drinks***

Despite the market having hundreds of different energy drinks, many of them have very similar ingredient profiles. Caffeine and taurine, in varying amounts, make up most of these special energy combinations. Additionally, sugar is frequently added; however, many brands also offer sugar-free alternatives. Because it provides quick energy, sugar is frequently used in energy drinks. Ginseng, guarana, yerba mate, and green tea extracts are other ingredients that are frequently used in these products. The different ingredient combinations are important because they determine how much energy a beverage will contain, how long that energy will last, and whether it will have the claimed health benefits. The chemical makeup of the common components in energy drinks is compiled in Figure 1.

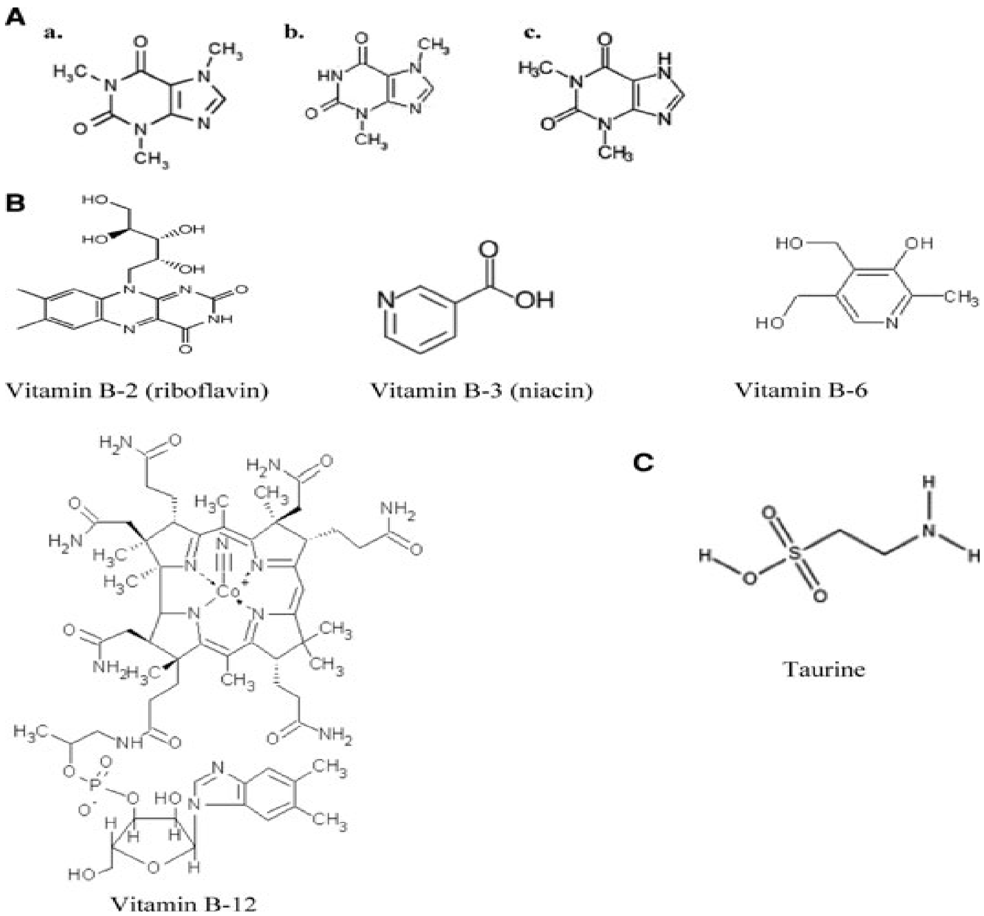


*Fig.1 chemical structures of active ingredients commonly found in energy drinks.*
*A. Major components of guarana: (a) caffeine, (b)theobromine and (c)theophylline*
*B. B-vitamins [4]. C. Taurine.*



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***Caffeine***

Because caffeine and adenosine share a chemical structure, it can bind to adenosine receptors. In concentration levels generally attained after consuming a caffeinated drink, caffeine's primary mode of action is to block adenosine receptors in the brain [5]. Adenosine is blocked in the neurons, which prevents it from promoting sleep and causes the neurons to speed up instead of slow down [6]. Caffeine has also been shown to increase the release of epinephrine, which can result in a number of secondary metabolic changes that can enhance physical or mental performance [7].

***Sugar***

Sugar, encompassing forms like sucrose, glucose, and high fructose corn syrup, offers a temporary energy surge but inevitably leads to a sharp decline in energy and alertness. An 8.3-ounce bottle of Red Bull contains 27 grams of sugar, which equates to 108 non-nutritional calories [8]. Sugar also has 4 calories per gram.

***Taurine***

The most prevalent amino acid naturally occurring in our bodies is taurine (2-aminoethyl sulfonic acid), which is primarily found in the retina and skeletal and cardiac muscle tissues [9]. Methionine and cysteine are used in metabolism to produce taurine [10]. Additionally, it can be found in common foods like fish and meat. The average daily human intake of taurine is thought to range between 40 and 400 mg [11].

***Guarana***

The South American native Paulliniacupana plant is the source of guarana. It was created in the Brazilian Amazon basin, where it has a lengthy history of use [12]. The guarana plant's similar fruit, which contains one to three dark seeds, is the only part that can be consumed [13]. Caffeine is present in high concentrations in the seeds; 1 g of guarana is equivalent to about 40 mg of caffeine [14]

***Ginseng***

For more than 2000 years, residents of East Asian nations like China, Japan, and Korea have used the herb ginseng as a preventative measure for several illnesses and as a means of extending life [15]. The main commercial variety is called Panax ginseng and is also known as Asian or Korean ginseng. Eleutherosides, not ginsenosides, are Siberian ginseng's (Eleutherococcussenticosus) main active ingredient, making it not a true ginseng. The Araliacae family includes the perennial shrub Panax ginseng, a low-growing, shade-preferring plant reaching approximately 60 cm in height. While the entire plant has medicinal value, the root is the most prized and commercially sought-after part.

***Yerba mate***

The Ilex paraguariensis plant, which is native to South America, is the source of yerba mate, and it is used primarily to make yerba mate tea [16]. A popular alcoholic beverage in South American nations is yerba mate tea. But because it contains a number of bioactive ingredients, such as polyphenols, xanthines,



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flavonoids, saponins, amino acids, minerals, and vitamins, it is becoming more and more popular on a global scale [16]. Yerba mate contains a wide variety of phytochemicals that have been linked to a number of health advantages.

***B vitamins***

When grouped together, the eight different water-soluble B vitamins form the so-called "B complex," which all play crucial roles in cellular functions. Many of the popular energy drinks contain B vitamins. 360% of the recommended daily allowance (RDA) for B6 and 120% of the RDA for B12 and B3 may each be found in a typical 250 mL can (niacin). More extreme energy drinks like 5-Hour Energy, which contains 8333% of the RDA for vitamin B12 and 2000% of the RDA for vitamin B6, are also known to add excessive amounts of B vitamins.

***Ginkgo Biloba***

An ingredient called Ginkgo Biloba is named after the rare tree it comes from. It is thought to improve memory recall, focus, blood flow, act as an antidepressant, and even show signs of benefiting those with Alzheimer's. The German government acknowledges it as a remedy for depression, poor concentration, and memory loss. A typical supplementation dosage is 60 mg. The majority of energy drinks, however, do not have enough ginkgo to have any useful use.

***L-Carnitine***

L-carnitine is an amino acid that is typically produced by the liver and kidneys; it supports energy levels and metabolism. It may act as a thermogenic and aid in boosting weight loss and exercise endurance because of how it interacts with the body. It's still unclear whether this amino acid needs to be supplemented [17].

***Glucuronolactone***

As the liver breaks down glucose, Glucuronolactone (DGL) naturally develops inside the human body. This substance can be found in each and every connective tissue. DGL is thought to support vitamin C biosynthesis, hormone and chemical release, and detoxification. Because it stops other substances from depleting the muscles' glycogen stores, it is added to energy drinks in the hopes that it will help with glycogen depletion [17].

***Creatine***

Consuming meat will naturally provide you with creatine. Energy drinks and other products targeted at bodybuilders typically contain creatine, which aids in providing energy to the muscles [17].

***Acai Berry***

Acai berries are an ingredient that is appearing in an increasing number of energy drinks. The South American Acai Palm tree is the source of acai berries. The berries contain a lot of antioxidants, but not as many as blueberries or Concord grapes. Most of the claimed benefits of acai berries are unfounded in science and are instead the result of marketing blitz.



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***Milk Thistle***

The herb milk thistle is mainly found in a few energy drinks and is used to detoxify the liver. Studies demonstrate that the quantity added to energy drinks, however, would hardly provide any benefits to consumers [17].

***L-theanine***

L-theanine appears to be the newest component in a lot of fresh drinks. Recent research has indicated that this amino acid helps to calm the brain and improve concentration. The only source of this amino acid is tea leaves [17].

**Table 1: Levels of food components in Energy Drinks (USDA, 2007).**

| Food component | Experimental levels | Standard levels |
|---|---|---|
| **Carbohydrate** | 9.01g | 12g |
| **Protein** | 0.79g | >0.3g |
| **Fat** | 0.01g | 0g |
| **Fibre** | 0g | 0g |
| **Ash** | 0.999g | >1g |

## MATERIALS AND METHODS

***Survey of the numerous energy enhancing drinks in the market***

The survey was carried out within Abuja metropolis. Major markets, supermarkets and some shops were surveyed to see if they stock energy drinks, the brands that were more prevalent and the most sought-after products in various parts of Abuja. Red bull, Power horse, Monster, Fearless and Predator energy drinks are the most popular products in the metropolis. Since most energy drinks sold in the country are imported, their costs are constantly subject to changes in foreign exchange rates. Early energy drinks in the Nigerian market include the likes of ribena and lucozade. In contrast to the recent energy drinks that have gained popularity, these brands are classified as soft drinks because they do not contain stimulants like caffeine. Some of the most popular ones are Red bull, Cintron, Monster, Power horse, Rockstar, Full Throttle, Fearless, Climax, Maca energy drink, Bullet, Predator and Amber energy drink. The imported energy drinks like Red bull and Power horse are more expensive compared to locally manufactured ones like fearless and predator which are more affordable and accessible to all.

The consumption of energy drinks is particularly more amongst the low-income earners residing in the metropolis where they need to rejuvenate themselves from heat and the day’s work. Therefore, the most sought out among them all are fearless and predator energy drinks.

The consumption of energy drinks in the highbrow areas of the city is less and the market consists mainly of imported energy drinks and others at a higher price. Therefore, energy drinks like Red Bull and Power Horse are most sought after.



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***Collection and coding of energy drink samples***

The different energy drink samples were purchased in supermarkets across Abuja metropolis for this study and the ten (10) samples were coded; E1, E2, E3, E4, E5, E6, E7, E8, E9 and E10. All the samples were properly checked for date of expiration and were purchased fresh from the shelves.

Cold chain was maintained for all the samples from collection to analysis and no further preparation was done. Strict care was taken to avoid contamination or spoilage of samples from external sources.

***Reagents***

All reagents used were of Analytical grade manufactured by BDH Chemicals, Poole, England. They were sourced from the Chemistry Advanced Research Centre (CARC), Sheda Science and Technology Complex, Kwali Abuja. All glassware used was washed with detergent, rinsed and left to dry before use. There was no further purification before using the chemicals.

***Determination of Physicochemical Parameters***

***Determination of Total Ash:***

A sensitive balance was used to weigh 10 ml of the sample after an empty crucible had been precisely weighed (wo). The sample in the crucible was heated at 550°C for over 3 hours to produce white to grey ash. The crucible was then removed from the furnace and placed in a desiccator to cool before being weighed (w2) [18].

$$\text{Ash (\%)} = \frac{W2-Wo}{W1-Wo} \times 100$$

where:

Wo= weight of empty crucible

W2= weight of crucible with ash.

W1 = weight of sample

***Determination of Crude Protein:***

Using the Kjeldahl method, the amount of nitrogen was multiplied by 6.25 to calculate the crude protein content. A Kjeldahl flask containing 10 ml of sample, half a tablet of catalyst mixture (10 parts $K_2SO_4$ to 1-part $CuSO_4$), and 25 ml of concentrated $H_2SO_4$ was filled. The ash content of the flask was digested by boiling at maximum heat for two to three hours until clear, after which the flask was distilled using NaOH 40%, the ammonia received in a 100ml conical flask containing 10ml of 0.1NHCl, and the crude protein percentage was calculated as follows [18].

Crude Protein % = N x T x.10ml x14x100 x6.2 /1000

$$\text{Crude Protein (\%)} = \frac{Vs - VbxNacidx\ 14\ x\ 100\ x\ 6.25}{1000}$$

Where: N= Normality of HCl for sample titration.

Vs = titration figure of the sample.

Vb = titration figure of blank

10 ml is the weight of the sample.

1000: Number of milligrams in one gram



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14: Equivalent weight of nitrogen

6.25: Protein conversion factor

***Moisture determination:***

A clean crucible(w1) was used to measure 10ml of the sample using a sensitive balance. The sample-containing crucible was weighed (w2), then left overnight in an air-dry oven set at 105°C. After another two hours, the crucible was put back in the oven, and the process was repeated until a constant weight was reached (w3). Calculation:

Moisture (%) = $\frac{W3-W1}{W2-W1}$ x 100

Where: W1= weight of empty crucible

W2= weight of crucible + sample

W3= weight of crucible +dry sample

***Determination of crude fiber content***

The percentage of crude fiber was calculated, which involved pouring 10 ml of sample into a conical flask with a capacity of 250 ml. The mixture of water (100cm3) and 20% H2SO4 (20cm3) was gently boiled for 30 minutes [19]. Whatman No. 1 filter paper was used to weed out unwanted information. With a spatula, the leftover material was scraped back into the flask. After adding 20 cm3 of 10% NaOH to 100 cm3 of water, the mixture was gently boiled for 30 minutes. The material was filtered, and the residue was thoroughly rinsed with hot distilled water, 10% HCl, twice as much ethanol, and three times as much petroleum ether. After letting it dry, it was scraped into the crucible and dried in an air oven at 105oC overnight. After that, it was taken out and cooled in a desiccator. In a Lenton muffle furnace, the sample was weighed (W1) and washed for 90 minutes at 550oC. Finally, it was cooled in desiccators and weighed once more (W2). The following equation was used to calculate the crude fiber percentage: It was allowed to dry and scrapped into the crucible and dried overnight at 105oC in an air oven. It was then removed and cooled in a desiccator. The sample was weighed(W1) and dashed at 550oC for 90min in a lenton muffle furnace. It was finally cooled in a desiccator and weighed again(W2). The percentage crude fibre was calculated using equation:

Crude fibre(%)=$\frac{W1-W2}{Wo}$ x 100

Where:

Wo= weight of sample(g) W1=weight of dried sample(g) W2=weight of ash sample(g)

***Determination of crude lipids***

Solvent separation was used to extract the sample's crude lipid content. 100ml of the sample and 100ml of petroleum ether were combined into one 100ml volume and placed into a separating funnel. About two minutes were spent vigorously shaking the mixture in the separating funnel before allowing the mixture to separate into layers. In a pre-weighed beaker, the petroleum ether layer was collected (Wo). The petroleum ether was first evaporated from the beaker in a water bath, and



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then the solvent and moisture were completely removed by drying the beaker at 105°C in an oven. It was preweighed and desiccated to cool (W1). The following equation was used to determine the crude lipid percentage:

$$\text{Crude lipid (\%)} = \frac{W1-W2}{Wo} \times 100$$

Where:

Wo= weight of sample(g) W1= weight of flask + oil (g) W2= weight of flask (g)

### *Determination of carbohydrates*

The sample's total proportion of carbohydrates was determined through calculation using the percentage dry method [19]. That is done by deducting from 100 percent the total amount of the following food nutrients: protein, crude lipids, crude fiber, moisture, and ash. The following equation is used to accomplish this:

CHO (%) = 100% - (%crude protein + %crude lipid + %crude fiber + %ash + %moisture).

### *Determination of energy value*

The energy value was obtained in kJ/100g of sample using factors for protein, carbohydrate and fat respectively [20].

kJ = 4 x Carbohydrate + 4 x Protein + 9 x Crude Lipid

## RESULTS AND DISCUSSION

### *Proximate Analysis*

The proximate analysis and the mean nutritional values of the energy drinks are summarized in Tables 2 and 3 respectively. The percentage ash and moisture content of the studied energy drink samples are summarized in Table 2

**Table 2: Proximate analysis of energy drinks**

| Brand | %Moisture | %Ash |
|---|---|---|
| E1 | 89.91 | 0.001 |
| E2 | 91.19 | 0.076 |
| E3 | 89.91 | 0.073 |
| E4 | 89.48 | 0.17 |
| E5 | 89.46 | 0.078 |
| E6 | 89.91 | 0.29 |
| E7 | 89.10 | 0.049 |
| E8 | 90.01 | 0.11 |
| E9 | 90.69 | 0.091 |
| E10 | 91.01 | 0.06 |
| *Mean±SD* | 90.06± 0.68 | 0.099± 0.07 |



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The moisture content of the studied energy drinks varied from 89.10 – 91.19%. The mean level obtained in the studied sample was 90.06 ± 0.89%. The highest level of moisture was recorded in brand E2 with a level of 91.19% whereas brand E7 recorded the least value of 89.10% (Table 2).

The ash content of the studied energy drinks varied from 0.29 – 0.001%. The highest level of ash was recorded in brand E6 whereas brand E1 recorded the least value (Table 2).

**Table 3: Nutritional values of Energy Drinks**

| Brand | Protein% | Carbohydrate % | Fat% | Energy KJ | Crude Fibre% |
|---|---|---|---|---|---|
| E1 | 0.37 | 9.8 | 0.01 | 37.69 | ND |
| E2 | 0.80 | 8.0 | 0.0042 | 35.24 | ND |
| E3 | 0.49 | 9.5 | 0.02 | 40.62 | ND |
| E4 | 0.34 | 10 | 0.007 | 41.42 | ND |
| E5 | 1.95 | 8.5 | 0.013 | 41.92 | ND |
| E6 | 0.40 | 9.4 | 0.01 | 39.29 | ND |
| E7 | 0.91 | 9.9 | 0.003 | 43.92 | ND |
| E8 | 1.00 | 8.9 | 0.004 | 39.63 | ND |
| E9 | 1.07 | 7.82 | 0.03 | 35.95 | ND |
| E10 | 0.60 | 8.3 | 0.0033 | 35.63 | ND |
| *Mean± SD* | 0.79±0.49 | 9.01± 0.8 | 0.0104± 0.0087 | 39.13± 2.94 | |

The protein content of the studied energy drinks varied from 1.95 – 0.34%. The highest level of protein was recorded in brand E5 with a level of 1.95% whereas brand E4 recorded the least value of 0.34%. Carbohydrate values varied from 10% being the highest in E4 to 7.8% being the lowest in E9. The fat content was recorded at very low values <0.1% whereas crude fibre was non-detectable. The energy content varied from 43.92% - 35.24% with brand E7 recording the highest value and brand E2 recording the lowest value (Table 3).

***Moisture Content***

Table 2 shows the result of the moisture content of the different energy drink samples. The result of the moisture content ranged from 89.10% to 91.19%. The highest level of moisture was found in the sample labelled E2. The moisture content of any food is an index of its water activity [21]. All the energy drinks sampled were in the accepted 89% and above mainly because they are mostly water by weight and will not contribute to dehydration [22]. Even though energy drinks can be counted toward hydration, they should not be an alternative to water.



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***Ash content***

From Table 1 E6 had the highest ash content of 0.29 while the lowest sample is E1 with a value of 0.001. This therefore indicates that all the energy drink samples are very low in mineral content. The ash value is an index of mineral content which is needed for good bone development, strong teeth formation and other body functions. This therefore indicates that E4 energy drink has a better source of minerals overall which is less than the 1% value based on the daily values by the USDA. The amount of ash present can be translated to the quantity of minerals present in the samples [23].

***Protein***

Table 2 summarizes the protein content of the energy drink samples. Sample E5 has the highest amount of protein with 1.95% which is considerably higher than expected values, the protein percentage of the daily value of an energy drink should be less than 1%22. E4 had the least concentration of protein with 0.34% which is okay.

E1, E2, E3, E4, E6, E7, E8, and E10 are all in the acceptable range.

***Carbohydrate***

Table 2 summarizes the carbohydrate content of the energy drink samples with E4 having the highest value at 10g and E9 having a significantly low value at 7.8g. The American College of sports Medicine [24] and the International Society of Sports Nutrition [25] recommend ingesting carbohydrate in a 6-8g per 100ml of fluid. A typical Energy drink provides carbohydrate at a greater concentration typically around 11-12% solution22. Ingesting higher percentages (>10%) of carbohydrate in fluid has been reported to delay gastric emptying and increase gastrointestinal distress [26]. All the energy drinks sampled were in the >10% range expect E4 which was found to be exactly 10%. High carbohydrates containing energy drinks causes obesity in consumers [27].

***Fat***

The fat content of the energy drink samples as summarized in Table 2 is very negligible (<0.1%) as required and in line with nutrition information of all the samples used in the survey[ 22].

***Energy***

The energy content of the samples studied varied from 43.92 – 35.24 kCal (Table 2), which is less than the values on the sample nutrient labels and less than the specification which requires that Ready-to-drink energy drinks with or without the addition of the optional ingredients provided shall have a minimum energy of 45Kcal and a maximum of 78kCal.

***Crude Fiber***

The results from the analysis in Table 2 show that the percentage of crude fiber in the energy drink samples is non-detectable (<0%) which agrees with all the sample labelling due to high filtration methods used in the production. This is because most differences in fluid quality are



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as a result of differences in production processes [28].

## CONCLUSION

The physico-chemical properties revealed that the moisture content of the different samples showed the moisture contents ranged from 89.10% in the least in $E_7$ to 91.19% the highest value in $E_2$ of all energy drinks sampled.

The result also showed that $E_6$ energy drink has the highest ash content with 0.29% of all the brands of energy drinks while the lowest ash content was 0.001% in $E_1$.

The nutritional value of the samples showed marked differences among themselves. $E_5$ energy drink was found to be the highest in protein among the 10 energy drinks analyzed. $E_4$ energy drink was found to be the highest in carbohydrate content. It was also found to have the least amount of protein.

$E_9$ was found to be the highest fat content and $E_7$ was found to have the highest energy level but also happens to have the lowest moisture and fat present.

None of the 10 energy drinks sampled had up to the required energy standard (45Kcal – 78Kcal). The concentration of carbohydrate analyzed in the samples also showed that only $E_4$ fell within the standard value. All the other 9 samples fell below the standard value.

From this study, most of the samples pose no threat to humans when consumed in the right doses since their contents were below the maximum permissible levels of most countries. However, taking them in high doses can lead to a number of health-related issues due to the high amount of sugar and caffeine which are unhealthy.

Energy drinks are beneficial when it comes to keeping you awake and stimulating your senses, improving performance, but they are not nutritious. According to the Cambridge dictionary, nutritious is to 'contain plenty of the substances needed for life and growth. Therefore, energy drinks aren't nourishing and shouldn't be a part of your staple diet. Energy drinks shouldn't be consumed as regularly as you would vegetables and fruits, even though energy drinks contain certain natural ingredients, these ingredients are typically present in trace amounts that are not enough to provide any benefits.

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