### **RESEARCH ARTICLE**

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# Various Mixtures of Carbon Negative Replacements of Gasoline and Diesel Fuel

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#### ABSTRACT

The author manufactures different carbon negative fuels at their manufacturing facilities. The author manufacture fuel Butanol, fuel Isobutanol, fuel diacetyl alcohol, and fuel Mesityl oxide. All said fuels are manufactured from the air  $CO_2$ . Mixtures of the carbon negative fuels are great to fuel both gasoline and diesel fuel cars and trucks. The fuel mileage that was gathered using said mixtures exceeds both the gasoline mileage and the diesel fuel mileage using respective cars/trucks. The author publishes herein the fuel mileage which always exceeds the gas and diesel fuel mileages for said fuels manufactured by the international petroleum corporations

#### **ARTICLE HISTORY**

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#### KEYWORDS

Carbon negative fuels; Mixtures of carbon negative fuels; Fuel mileage; New type of gas stations; Death of international petroleum corporations

### Introduction

The authors had published their articles on the carbon negative fuel mixture of the following composition: 30% fuel Isobutanol, 20% fuel Butanol; 30% fuel DAA and 20% fuel Mesityl oxide. Now the time has come to express their experience in the other combinations of the listed carbon negative fuels. The authors have tested them using their corporate cars 2024 Porsche Cayenne Turbo GT, 2024 Toyota Camry and Diesel truck 2024 Ram 1500. The results of testing are expressed herein. The percentages are given as the volume per cents. The authors would like to remind their readers that the fuel Isobutanol and fuel Butanol are the replacements of gasoline and are made solely from the air CO<sub>2</sub> using their proprietary technology recently developed [1]. Simultaneously, DAA and Mesityl oxide also made solely from the air CO<sub>2</sub> are the replacement of the diesel fuel.

The authors trust that the variety of the combinations of said carbon negative fuels could support their original idea that said combinations, and each of them in particular, can still replace the originated from petroleum gasoline and diesel fuel efficiency and provide the superior gas mileage exceeding the original constructors/manufacturers gas mileage. This was what they had expected to achieve through the exploration of said combinations, as detailed in this particular article. The testing procedure included the results of the certified mechanics from the respective car/truck dealerships observation and their driving experiences along with the tested cars/ trucks exhaust analysis for the unusual/toxic exhaust components, evaluation of the gas mileage for each tested combination of the carbon negative fuels, etc.

They are hereby comparing the results of testing of their mixed carbon negative fuels and offer the recommendations per the purchase of their carbon negative fuels at their new type of gas stations they describe herein in this original article.

### **Materials and Methods**

They do manufacture the gasoline replacements fuel Isobutanol and fuel Butanol at their corporate facilities [2-8]. Fuel acetone serving as the source for the fuel DAA and the fuel Mesityl oxide were manufactured at their corporate manufacturing facility as well [9-15]. Nowadyas they had at their corporate facility the set up completed for the mixing area where they efficiently and safely mix the manufactured replacements of Gasoline and Diesel fuel to provide them to their valuable customers. These are the fuel mixes suitable for efficient use in their Gasoline and Diesel fuel powered cars and trucks. This area goes alone with the area where they manufacture the fuel DAA and the fuel Mesityl oxide from the fuel acetone [16,17]. Herein, They have described the manufacture and the use of the mixes composed of various combinations of fuel Isobutanol, fuel Butanol, fuel DAA and fuel Mesityl oxide. The fuel mixture M1 composition was 30% fuel Isobutanol, 30% fuel Butanol; 30% DAA and 10% Mesityl oxide. The fuel mixture M2 was 45% fuel Isobutanol; 15% fuel DAA; 10% of fuel Mesityl oxide

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and 20% fuel Butanol. The fuel mixture M3 was 40% fuel Isobutanol; 10% fuel DAA; 5 fuel Mesityl oxide and 45% fuel Butanol. The fuel mixture M4 was 36% fuel Isobutanol; 30% fuel DAA; 30% fuel Mesityl oxide and 4% fuel Mesityl oxide. The fuel mixture M5 was 30% fuel Isobutanol, 20% fuel Butanol; 30% fuel DAA and 20% fuel Mesityl oxide. This mixture was already described [18].

The 2024 Porsche Cayenne Coupe features a 3.0L 6-cylinder engine paired with an automatic transmission. They have two of them at their corporate site. The manufacturer reports the gas mileage for this car as 19 mpg [19]. We also have 20 2024 Toyota Camry (FWD) as their corporate property. The gas mileage is 28 mpg in the city and 39 mpg while driving on highway [20]. They do own 5 diesel fuel trucks 2024 ram 1500 pickup Lone Star. For the diesel tucks 2024 ram 1500 Pickup Lone Star EPA-estimated fuel economy is stated at 20 miles per gallon city, 25 mpg highway and 22 mpg combined with RWD (which is better than chevy's base turbo-four-cylinder engine) [21].

They had the corporate carbon negative fuel mixing facility where the carbon negative fuels manufactured selectively from the air  $CO_2$  from different manufacturing processes (as it was already observed above they have Carbon Negative fuels fuel Butanol fuel Isobutanol Mesityl oxide and Diacetyl alcohol [5,10,11,15,20]. Said facility allowed them to prepare the mixtures M1, M2, M3 and M4 from the Carbon Negative fuels they were manufacturing from the air  $CO_2$  using our proprietary technology [1].

It is important that the fuel mileage they report herein is obtained from the driving said cars noted above for 10,000 miles on the highway and the city of Brownsville. They also provide the combined fuel mileage using the fuel mileages for the highway use and for the use in the city.

To support their manufactured set of the carbon negative fuels they have tested them in the form of mixtures suitable to power both the Gasoline and Diesel fuel cars and trucks. Certified mechanics from the respective car dealerships were invited to test their corporate cars driven to reveal any signs of the unusual cars/trucks behaviour, they have brought the analysers of the engines exhaust to detect the levels of produced by their corporate cars/trucks CO, to detect any unusual components of the exhaust gases etc.

The testing of their corporate cars/trucks has been performed for the distance of driving 10,000 miles combining the highway driving and the city of Brownsville driving, they also provide the combined fuel mileage and the results and discussion section of this article provides the combined fuel mileage data from their corporate cars/trucks.

They have the following corporate cars/trucks at this moment: The CEO is transported by his driver using the 2024 Porsche Cayenne Coupe. They have two of such SUVs at their corporate garage. In addition to that, they do have twenty 2024 Toyota Camry LE. In addition to said cars, they do own 5 Diesel fuel trucks 2024 Ram 1500 Pickup Lone Star. The results of the fuel mileage are reported herein from these cars/trucks.

## **Results**

They are going to keep it brief here. The general notice is that the mixtures of their carbon negative fuels they have manufactured from the air  $CO_2$  provided us with substantial economy of the carbon negative fuels compared to the gas or diesel fuel mileages for their corporate cars/trucks as the fuel mileage was always greater than that they could get from the same cars when they used gasoline or diesel fuel manufactured by the international petroleum corporations from petroleum.

For the carbon negative fuel mixture 2 (45% fuel Isobutanol; 15% fuel DAA; 10% of fuel Mesityl oxide and 20% fuel Butanol) the 2024 Porsche Cayenne Coupe had the fuel mileage 26 mpg in the city of Brownsville and 36 mpg in a highway. The combined fuel mileage was recorded as 30.9 mpg. The 2024 Toyota Camry LE had the city of Brownsville fuel mileage 34 mpg and the highway gas mileage 46 mpg. The combined fuel mileage consisted of 40.2 mpg. The Diesel trucks Ram 1500 Lone Star was recorded as the highway fuel mileage 28.8 mpg driving on a highway and 23.8 mpg driving in city of Brownsville. The combined fuel mileage was 26.8 mpg.

Other carbon negative fuel mixtures provided a little lower fuel mileage. The carbon negative fuel mixture M1 (30% fuel Isobutanol, 30% fuel Butanol; 30% DAA and 10% Mesityl oxide) offered for 2024 Porsche Cayenne Coupe the city of Brownsville fuel mileage 23 mpg, the highway fuel mileage was 33 mpg, the combined fuel mileage was 27 mpg. The 2024 Toyota Camry LE had the fuel mileage in the city of Brownsville 33 mpg, the highway fuel mileage was recorded as 45 mpg, the combined fuel mileage was 39 mpg. The Diesel fuel trucks 2024 Ram 1500 Lone Star had the fuel mileage in the city of Brownsville 22.8 mpg, the highway fuel mileage was recorded as 27 mpg, the combined fuel mileage was 25.3 mpg.

For the fuel mixture M3 (40% fuel Isobutanol; 10% fuel DAA; 5 fuel Mesityl oxide and 45% fuel Butanol) the 2024 Porshe Cayenne Coupe the fuel mileage was 22.8 mpg, the highway fuel mileage was recorded as 32.8 mpg, the combined fuel mileage was recorded as

26 mpg. The combined fuel mileage for the mixture M3 was recorded as 26.8 mpg. The 2024 Toyota Camry LE had the fuel mileage in the city of Brownsville 23 mpg, the highway fuel mileage was recorded as 44.7 mpg, the combined fuel mileage was recorded as 39 mpg. For the Diesel trucks Ram 1500 Lone Star had the fuel mileage in the city of Brownsville 22.8 mpg, the highway fuel mileage was recorded as 26.8 mpg, the combined fuel mileage was recorded as 25.5 mpg.

The fuel mixture M4 (36% fuel Isobutanol; 30% fuel DAA; 30% fuel Mesityl oxide and 4% fuel Mesityl oxide) offered us for the 2024 Porsche Cayenne Coupe the city of Brownsville fuel mileage 23.6 mpg, the highway fuel mileage was recorded as 33.6 mpg, the combined fuel mileage was 26.8 mpg. For the cars 2024 Toyota Camry LE said mixture M4 provided the city of Brownsville fuel mileage 23 mpg, the highway fuel mileage was recorded as 45 mpg, the combined fuel mileage was recorded as high as 45 mpg, the combined fuel mileage was recorded as high as 40 mpg. For the diesel fuel trucks ram 1500 long star the city of Brownsville fuel mileage was recorded as 23 mpg, the highway fuel mileage was recorded as 23 mpg, the highway fuel mileage was as high as 27 mpg, the combined fuel mileage was as high as 25 mpg.

The fuel mixture M5 used had the composition of 30% fuel Isobutanol, 20% fuel Butanol; 30% fuel DAA and 20% fuel Mesityl oxide. For the 2024 Porsche Cayenne Coupe the city of Brownsville fuel mileage was 23 mpg, the highway fuel mileage was as high as 33 mpg, the combined fuel mileage was as high as 28 mpg. For the 2024 Toyota Camry LE the city of Brownsville fuel mileage was as high as 22 mpg, the highway fuel mileage was as high as 36 mpg. For the Diesel trucks Ram 1500 Long Star the city of Brownsville fuel mileage was

recorded as high as 22 mpg, the highway fuel mileage was recorded as high as 26.8 mpg, the combined fuel mileage was as high as 24 mpg.

## Discussion

The Table 1, summarises all the data provided above to make the conclusions which fuel mixture provided the best fuel mileage on the highway, in the city of Brownsville and the combined fuel mileage (Table 1).

The carbon negative fuel mixtures M1-M5 were different between each other by the contents of their carbon negative fuels. The fuel mixture M2 deserves the special attention of the readers of this article. This mixture of the carbon negative fuels contains 45% of fuel Isobutanol and 20% of fuel Butanol. DAA and Mesityl oxide are added to provide the suitability of this mixture for the engines of the diesel fuel consuming trucks. Based on date of Table 1, this mixture of our carbon negative fuels provided the best highway fuel mileage, the best city of Brownsville and the combined fuel mileages. Based on their very m=limited study, we might recommend this mixture M2 of the carbon negative fuels manufactured from the air CO<sub>2</sub> for the nationwide distribution using their special stations selling not only the carbon negative fuels but also their carbon negative foods. They have developed to help the humankind to survive the coming soon shortage of the fresh water evaporated at the increasing amount of the air CO<sub>2</sub> to the outer Space vacuum. The losses of the fresh water vapors to the outer Space vacuum comprise as of today ~25,920 liters per day, or 9,467 M3 per year. That would correspond to a total loss over earth's history of 42,000 km<sup>3</sup> of water, equivalent to about 12 cm of sea level decrease [1].

Carbon negative fuel mixture	The city of Brownsville fuel mileage	MPG	The highway fuel mileage	MPG	The combined fuel mileage	MPG
M1	2024 Porsche Cayenne Coupe	23	2024 Porsche Cayenne Coupe	33	2024 Porsche Cayenne Coupe	27
	2024 Toyota Camry LE	33	2024 Toyota Camry LE	45	2024 Toyota Camry LE	39
	2024 Ram 1500	22.8	2024 Ram 1500	27	2024 Ram 1500	25.3
M2	2024 Porsche Cayenne Coupe	26	2024 Porsche Cayenne Coupe	36	2024 Porsche Cayenne Coupe	30.9
	2024 Toyota Camry LE	23	2024 Toyota Camry LE	44.7	2024 Toyota Camry LE	39
	2024 Ram 1500	23.8	2024 Ram 1500	28.8	2024 Ram 1500	26.8

 Table 1. The fuel mileages provided by the Carbon Negative fuels mixtures.

М3	2024 Porsche Cayenne Coupe	22.8	2024 Porsche Cayenne Coupe	27	2024 Porsche Cayenne Coupe	26
	2024 Toyota Camry LE	23	2024 Toyota Camry LE	44.7	2024 Toyota Camry LE	39
	2024 Ram 1500	22.8	2024 Ram 1500	26.8	2024 Ram 1500	25.6
M4	2024 Porsche Cayenne Coupe	23.6	2024 Porsche Cayenne Coupe	33.6	2024 Porsche Cayenne Coupe	26.8
	2024 Toyota Camry LE	23	2024 Toyota Camry LE	45	2024 Toyota Camry LE	40
	2024 Ram 1500	23	2024 Ram 1500	27	2024 Ram 1500	25
M5	2024 Porsche Cayenne Coupe	23	2024 Porsche Cayenne Coupe	33	2024 Porsche Cayenne Coupe	28
	2024 Toyota Camry LE	22	2024 Toyota Camry LE	43	2024 Toyota Camry LE	36
	2024 Ram 1500	22	2024 Ram 1500	26.8	2024 Ram 1500	24

Said fresh water losses mean the inevitable approach of the global starvation on earth [1]. Without fresh water, crop and livestock production on their planet will be impossible. They have already prepared for this. They already have developed carbon Negative foods grown on the biomass of the used biocatalysts to manufacture the Carbon Negative fuels. Said carbon negative genetically engineered foods are based on the mushroom of the family Borovik (white tu bulr mushroom, delicatessen by itself, will contain the genes of goat or beef muscles, vegetables, eggplant genes, potato genes, tomato genes, wheat bread [22-24]. They are prepared to the global starvation on earth during the time of the decay of the international petroleum corporations. They will manufacture enough genetically engineered food to feed all the starving great and with the potential to have the international petroleum corporations completely replaced by their carbon negative fuel and their carbon negative genetically engineered foods manufactured and sold at their new type of the gas stations discussed in a separate independent article [25].

# Conclusion

In conclusion, the carbon-negative fuel mixtures, derived from atmospheric  $CO_2$ , present a viable and efficient alternative to traditional gasoline and diesel fuels. Through extensive testing with a diverse range of vehicles, it was demonstrated that these mixtures not only match but surpass conventional fuel mileages, highlighting their potential to reduce dependence on petroleum-based fuels. Mixture M2, in particular, exhibited superior fuel economy across multiple driving conditions. The findings underscore the environmental and economic benefits of adopting carbon-negative fuels at scale, fostering reduced  $CO_2$  emissions and lessening the global environmental footprint. With newly proposed gas station model,

which will also distribute carbon-negative foods, It was aimed to lay the foundation for sustainable energy and food solutions amid mounting global challenges related to fresh water scarcity and food security.

# Declarations

## Ethics approval and consent to participate

The author has received all the proper documents granting the Ethical Approval and the Consent to participate from the State of Texas officials. The Author has made sure that the ethical approval and his consent to participate in preparation and submission for publication of this article were properly approved by the respective authorities of the State of Texas.

# **Consent for publication**

The author has expressed his complete consent to participate in work with this article and its publication in this Journal.

# **Originality-significance statement**

The author has written this original article based on his originality of the business approach and the existing resistance of the International Petroleum Corporation to the technology of manufacturing carbon negative fuels to replace their production of fuels originating from petroleum. The reduction of the air CO<sub>2</sub> levels towards the pre-petroleum era of the year 1900 is paramount, since our planet loses fresh water to the outer Space vacuum. NASA has confirmed that in 2010 sating that the Earth has reached the "Point of No Return" to the healthy environmental conditions suitable for life on our planet. The new family of the gas stations selling not only Carbon Negative fuels but also foods for cooking at home and commodity chemicals for the households will save a lot of time for the customers of said new gas stations.

## Availability of data and materials

The Author makes all this data and materials herein available for any third party. The data and materials might be obtained from the Author at PO Box 300230, Houston, TX, 77340 or by reaching through this email: drmtyurin76@outlook.com. If any third party needs any materials used to publish this article, please, do contact the Author.

## **Authors' contributions**

The Author has conducted all the experiments himself. The Author has planned, wrote this original article and edited the written text, including proper placement of the illustrations mentioned which the Author owns. The Author read, edited and approved the final manuscript. The Author is the only owner of all materials disclosed in this original article. The Author has plans to distribute his proprietary products after their approval as needed. The Author might be contacted for the data and materials at PO Box 300230, Houston, TX, 77230 Or can be contacted through the email: drmtyurin76@ outlook.com. The Author contributed to the study conception and design. Material preparation, data collection and analysis were performed by the Author. The first draft of the manuscript was written by the Author. The Author read and approved the final manuscript.

The Author has designed the ideology of this article by himself. The Author intends to develop the detailed structure and location of his Carbon Negative corporations to be in charge for the establishing and running testing trials of his inventions and he plans to commercialize additionally to his major business of manufacture of Carbon Negative fuels and Carbon Negative genetically engineered foods for the Nationwide distribution.

The Author conceived of the presented idea. The Author developed the theory and performed the computations. The Author verified the analytical methods. The Author investigated therapeutic effects of "Mixture" and supervised the findings of this work. The Author discussed the results and contributed to the final manuscript. The Author carried out the experiment. The Author wrote the manuscript. The Author supervised the project. The Author conceived the original idea. The Author supervised the project. The Author developed the theoretical formalism, performed the analytic calculations and performed the numerical simulations. The Author contributed to the final version of the manuscript. The Author conceived and planned the experiments. The Author planned and carried out the simulations. The Author contributed to sample preparation. The Author contributed to the interpretation of the results. The Author took the lead

in charge of overall direction and planning. The Author designed and performed the experiments, derived the models and analyzed the data. The Author wrote the manuscript in consultation with other corporate employees, devised the project, the main conceptual ideas and proof outline. The Author worked out almost all of the technical details, and performed the numerical calculations for the suggested experiment. The Author worked out the bound for quantum mechanics. The Author analyzed the data. The Author wrote the paper. The Author designed and directed the project; the Author performed the experiments; the Author analyzed spectra; The author made the simulations; the author developed the theoretical framework; the author wrote the article. The author performed the measurements. The author was involved in planning and supervised the work, the author processed the experimental data, performed the analysis, drafted the manuscript and designed and made the figures. Funding The Author has received no funding. The investors of the Author have read this article draft to his investors and they have decided not to include no funding information as they have stated to the Author. They stated the Author should write "No Funding" per this original

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in writing the manuscript. The Author provided critical

feedback and helped shape the research, analysis and

manuscript. The Author designed the model and the

computational framework and analyzed the data. The

Author carried out the implementation. The Author

performed the calculations. The Author wrote the

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### References

- [1] Buying Guide. Auto Blog. 2024.
- [2] Tyurin MV. Carbon negative gasoline and diesel fuel replacements. Clin Med Insights 2023;4(03):396-414.
- [3] Tyurin MV. Carbon negative replacements of gasoline and diesel fuel.2023.
- [4] Tyurin MV. Carbon negative gasoline and diesel fuel replacements: Mesityl oxide, diacetyl alcohol, fuel Isobutanol and their mixtures as the carbon negative fuels. Clin Med Insights 2024;5(2).
- [5] Tyurin MV. Gasoline replacements carbon negative diacetyl aclohol and isobutanol. Space Sci J. 2023;1(1):1-7.
- [6] Tyurin MV. Air CO<sub>2</sub> for the manufacture of the fuels: Diesel fuel diacetyl alcohol. Irish Int J Eng Appl Sci 2022;6(2):12-24.
- [7] Tyurin M. Carbon-negative gasoline replacement. Adv J Sci Eng Technol 2022;7(3).
- [8] Tyurin MV. Diesel fuel or gasoline replacement diacetyl alcohol. Gasoline replacement fuel isobutanol or diacetyl alcohol. Air CO<sub>2</sub> for the manufacture of the fuels. Oil Gas Res 2022;96:234-248.
- [9] Tyurin MV. Air CO<sub>2</sub> for the manufacture of the commodity fuels; diesel fuel replacement and gasoline replacement carbon negative diacetyl alcohol-breakdown of gasoline and diesel Fuel prices at the gas stations. Fuel 2022;82:388-392.
- [10] Tyurin MV. Gasoline replacement fuel diacetyl alcohol. Int J Automot Technol 2021;23(1):23-46.
- [11] Tyurin MV. Air  $CO_2$  for the manufacture of the commodity fuels. Atmos Pollut Res 2021;13(4):77-94.
- [12] Tyurin MV. Diacetone Alcohol as the Diesel. Energy Efficiency. Energy Efficiency. Ed.: Dr. Muhammad Wakil Shahzad. IntechOpen. Rijeka: Janeza Trdine. 2021;9:51000.

- [13] Tyurin MV, Padda RS. Nitrogen gas reducing commercial acetogen biocatalyst suitable for direct and selective reduction of  $CO_2$  inorganic carbon to organic carbon and atmospheric nitrogen to fuel isobutanol during continuous fermentation of  $CO_2$ +  $H_2$ +  $N_2$  gas blend. Int Res J Appl Sci Eng Technol 2019;3(4):1-10.
- [14] Production of diacetone alcohol. 1925;
- [15] Production of Mesityl oxide. Google Patents. 1968.
- [16] Tyurin MV. Method of extraction of biofuels from fermentation fluids used for their manufacture. Int J Develop Res. 2024;14(5):784-796.
- [17] Production of Mesityl oxide. 1968 patent, US3385896A.
- [18] 2024 Porsche Cayenne. Fuel Economy. 2024.
- [19] 2024 Toyota Camry MPG Ratings. Toyota. 2024.
- [20] Berzin V, Tyurin M, Kiriukhin M. Selective n-butanol production by clostridium sp. mtbutoh1365 during continuous synthesis gas fermentation due to expression of synthetic thiolase, 3-hydroxy butyryl-coa dehydrogenase, crotonase, butyryl-coa dehydrogenase, butyraldehyde dehydrogenase, and nad-dependent butanol dehydrogenase. Appl Biochem Biotechnol. 2013;169:950-959.
- [21] Tyurin MV. Electrotransformation of Boletus edulis. J Diab Res Rev Rep. 2024;2(1):1-7.
- [22] Tyurin MV. Carbon Negative genetically engineered foods with potato, tomato, pepper and eggplant genes. 2024;2(1):22-36.
- [23] Tyurin MV. Carbon negative genetically engineered foods for humankind. Am J Med Public Health. 2024;5(1):1058.
- [24] Tyurin MV. Wheat recombinant genes expressed in Boletus edulis. J Diab Res Rev Rep. 2024;2(1):51-64.
- [25] 2024 RAM 1500. Mac Haik. 2024.