GOVVI BOOST FUEL TABLETS STUDY

GOVVI.COM

GOVVI BOOST FUEL TABLETS

México

The following fuel analysis project was conducted in Mexico by Jose Alberto Araujo and supervised directly and in person by Robert D Celaya under authorization of GOVVI Inc, a company based in the State of Utah in the United States of America. These analyses and investigations were conducted between the months of July to September 2022.

Jose Alberto Araujo Osornio has an extensive and recognized background in the oil industry. His professional credentials denote that Mr. Araujo has a professional registration card number (ID # 1112546) and possesses a bachelor's degree in Petroleum Chemical Engineering from the National Polytechnic Institute of Mexico.

In addition, and as part of his professional career, he has a master's degree in Petroleum Chemical Engineering and an additional master's degree in Business Administration. It is imperative to underline that he has extensive experience due to his great career at PEMEX (Petróleos Mexicanos).

Mr. Araujo has developed multiple projects working as an advisor and technical director for important companies in the hydrocarbons industry in Mexico and the United States.

The purpose of this project is to determine the feasibility of the GOVVI Boost Fuel Tablets when mixed with Mexican Gasoline Magna (87 octane) in the country of Mexico.

Additional
INFORMATION

WHAT IS THE FUNCTION OF GOVVI BOOST FUEL TABLETS IN GASOLINE?

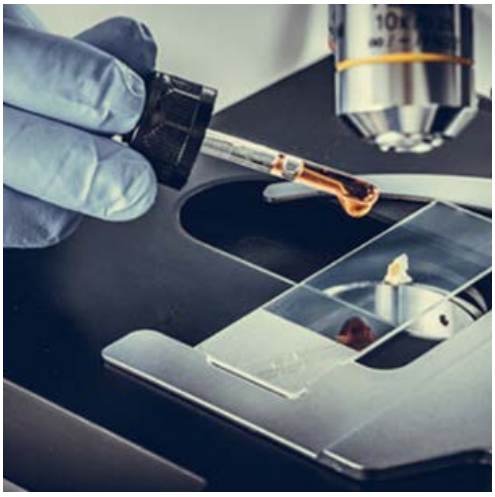
The function of GOVVI Boost Fuel Tablets in gasoline in a concrete way is to
A) Protect the engine by providing greater longevity to its components
B) Reduce the environmental impact by neutralizing the emission of polluting gases on a great scale
C) Obtain more miles per gallon
D) Save fuel

HOW DO GOVVI BOOST FUEL TABLETS PROTECT THE ENGINE?

Because the temperature inside the combustion chamber is reduced, pre-detonation does not occur. An engine will rattle more commonly in areas of intense heat. The GOVVI Boost Fuel Tablet reduces the peak temperature at the time of combustion increasing the life of the engine.

WHO IS PROIL?

We are a laboratory that specializes in the sampling, testing, and analysis of hydrocarbons attached to the NOM-016-CRE-2016. We have the trained staff and necessary infrastructure to provide you with reliable results and high-quality standards.



All studies were conducted by PROIL Laboratories in Guadalajara, Jalisco, Mexico. PROIL is a certified laboratory in Hydrocarbons. https://www.proil.mx/

¿QUIÉN ES PROIL?

Somos un laboratorio especializado en el muestreo, ensayo y análisis de hidrocarburos apegados a la NOM-016-CRE-2016.
Contamos con el personal capacitado y con la infraestructura necesaria para brindarte resultados confiables y con altos estándares de calidad.

PROIL

IS A CERTIFIED LABORATORY THAT SPECIALIZES IN HYDROBARONS.
NOM-016-CRE-2016

PROIL

LABORATORIO ESPECIALIZADO EN HUDROCARBUROS.
NOM-016-CRE-2016

The following parameters were provided by PROIL laboratory. The purpose is to obtain distillation curves for gasoline fuel “with and without” GOVVI Boost Fuel Tablets.
For this analysis, PROIL laboratory used Gasoline/Pemex - Magna (87 octane).

Gasoline Fuel - Parameters			
	Sample without GOVVI	Sample with GOVVI	
	9416-GM	9417-GM	
%VOLUME	TEMPERATURE °C		Difference
1.0			
IBP	35.7	36.3	0.6
10	47.3	47.5	0.2
50	92.0	93.1	1.1
90	169.8	165.0	-4.8
T Final	209.7	214.3	4.6
Sulphur Total	22.34	22.60	0.26
RON	94.1	94.4	0.3
MON	84.9	85.1	0.2
AKI	89.4	89.7	0.3
Specific Gravity 20/4°C	0.7211	0.7205	-0.0006

Distillation Curve
ANALYSIS

The nomenclature used in fuels is defined below:

RON - The research octane number (RON) is defined as the percentage by volume of iso-octane in a mixture of iso-octane and n-heptane that knocks with some intensity as the fuel is being tested.
AKI (Anti-Knock Index)
IBP is defined as the boiling range that covers a temperature interval from the initial boiling point IBP (Initial Boiling Point).

In a distillation curve, the first points from the Initial Boiling Point (IBP) up to 20% "**are related to the presence of very volatile hydrocarbons**". It is important to underline the following. A low IBP "**Low Initial Boiling Point**" parameter is **CONVENIENT** to favor the starting of an engine in a cold environment; however, in some cases, it can be a **DISADVANTAGE** because it facilitates the loss of fuel by evaporation. In some cases, it can create a vapor plug in the fuel lines, which may prevent fuel from entering the combustion chamber. In addition, the evaporation of gasoline results in a drop in temperature, which can lead to the formation of ice by the solidification of water vapor in the air.

The last parameters of the distillation curve indicate the presence of **high molecular weight hydrocarbons**; for example, if the 90% point is high, this means that part of the gasoline can remain in a liquid state in the engine cylinders.

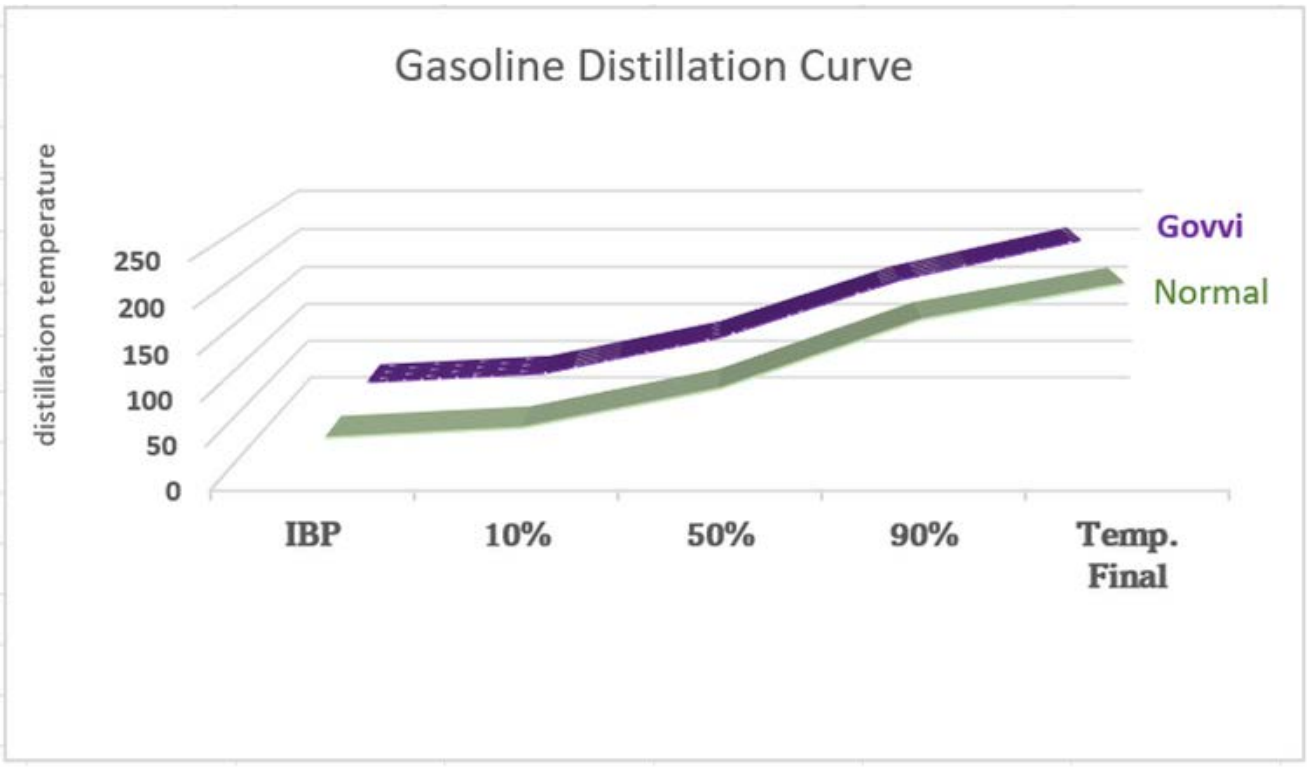
In addition, if the temperature is very low, crystals of these hydrocarbons could also form. Further, if the difference between the initial boiling point (IBP) and the endpoint of the curve is very large, then the fuel will be more heterogeneous, which could make it difficult to distribute it in the engine cylinders. The main objective is to evaluate the reaction of GOVVI Boost Fuel Tablets with these types of hydrocarbons.

Basically, GOVVI Boost Fuel Tablets work as a retarding agent in the combustion process by increasing the "initial boiling point" (IBP) temperature of gasoline, as well as by volume percentages of 10% and 20%, and in turn, give an antiknock index in gasoline greater than the initial value which rises from an AKI value of 89.4 to 89.7 giving a positive difference of 0.3.

On the other hand, with regards to the RON index. Its initial value was changed from 94.1 to 94.4, giving a difference of 0.3 with respect to the distillation process with or without the use of the GOVVI Boost Fuel Tablet, respectively. **It is interesting to see how GOVVI Boost Fuel Tablets act when the combustion process is carried out.**

It can be concluded that the differential value of 0.3 becomes 3 additional points for the AKI; therefore, during the timing of the combustion reaction, it will present a new AKI index of 92.4.

Distillation Curve
ANALYSIS



The above chart represents how using GOVVI Boost Fuel Tablets can improve the quality of the gasoline in relation to the different percentages in distillate volume from the beginning of the boiling point (IBP) to the final temperature.

CONCLUSION

Magna gasoline (87 octane) catalyzed with GOVVI Boost Fuel Tablets has a RON index of 94.4 and an AKI index of 92.4 (+3 points). Chart 2 shows that the gasoline has changed from being a regular gasoline to a higher quality gasoline.

STUDIES AND ANALYSIS OF

RESULTS

Gasoline Fuel Without GOVVI Boost Fuel Tablets

Proil
Laboratorio Especializado en Hidrocarburos

INFORME DE ENSAYO

ID Folio	9416-GM-10002
Fecha de emisión	12/07/2022

DATOS DEL CLIENTE	
Razón social	-
Permiso CRE	NA
Dirección	Molino de Harlen No. 172 A, El Molino, Irapuato, Guanajuato, 36554
Teléfono	662 508 4485
Contacto	Roberto D Celaya / Angel Rodriguez

DATOS DE LA MUESTRA	
ID Muestra	9416-GM
Identificación tanque	Directo
Combustible	Gasolina Magna
Cadena de custodia	3635-971-22
Fecha de muestreo	NA
Fecha de recepción	11/07/2022

TABLA DE RESULTADOS

ENSAYO		MÉTODO	UNIDADES	RESULTADO	INCERTIDUMBRE (±)	FECHA DE ANALISIS
Temperatura de destilación al	% Residuo	*ASTM D86-19	% Vol.	1.00	NA	12/07/2022
	IBP	*ASTM D86-19	°C	35.7	0.78	12/07/2022
	10%	*ASTM D86-19	°C	47.3	0.78	12/07/2022
	50%	*ASTM D86-19	°C	92.0	1.8	12/07/2022
	90%	*ASTM D86-19	°C	169.8	1.8	12/07/2022
	T Final	*ASTM D86-19	°C	209.7	1.8	12/07/2022
Azufre total		*ASTM D7039-15a	mg/kg	22.34	0.62	12/07/2022
RON		FTIR	Adimensional	94.1	0.68	12/07/2022
MON		FTIR	Adimensional	84.8	0.66	12/07/2022
AKI		FTIR	Adimensional	89.4	NA	12/07/2022
Gravedad especifica a 20/4°C		*ASTM D4052-18	Adimensional	0.7211	0.00016	12/07/2022

**Los métodos marcados con un asterisco (*) cuentan con acreditación vigente Q-0959-130/18 desde 2018/05/17 y alcance completo ver www.ema.org.mx
** La incertidumbre de los resultados esta expresada con un factor de cobertura k=2 que corresponde a un nivel de confianza del 95%.
** Los resultados de este informe amparan a la muestra citada.
** Se prohibe la reproducción parcial o total de este documento, solo se permiten copias fotostáticas simples completas.
** El presente informe sirve para darle cumplimiento al anexo 4 de la NOM-016-CRE-2016 pruebas de control de calidad.
** El plan de muestreo es establecido por el cliente y en cumplimiento de sus intereses.
** El laboratorio no emite una declaración de conformidad de los resultados. Se anexa tabla normativa de especificación normativa.
** El método interno RON/MON a Índice de octano no se encuentran dentro del alcance de la acreditación.
** La muestra fue proporcionada por el cliente. Los resultados se aplican a la muestra como se recibió.
**José Alberto Araujo Osornio Cédula Profesional No. 1112546. (Información anexada a petición del cliente)

Analizado por:
Martha Priscila González Vidrio

Emitido por:
Jade Margarita Samaniego Plascencia

contacto@proil.mx www.proil.mx
Periférico Sur, No. 7215, Int. 5, Col. Santa María Tequepexpan,
Tlaquepaque, Jal. México. C.P. 45601.

STUDIES AND ANALYSIS OF

RESULTS

Gasoline Fuel With GOVVI Boost Fuel Tablets

Proil
Laboratorio Especializado en Hidrocarburos

INFORME DE ENSAYO

ID Folio	9417-GM-10003
Fecha de emisión	12/07/2022

DATOS DEL CLIENTE	
Razón social	-
Permiso CRE	NA
Dirección	Molino de Harlen No. 172 A, El Molino, Irapuato, Guanajuato, 36554
Teléfono	662 508 4485
Contacto	Roberto D Celaya / Angel Rodriguez

DATOS DE LA MUESTRA	
ID Muestra	9417-GM
Identificación tanque	c/Pastilla
Combustible	Gasolina Magna
Cadena de custodia	3635-971-22
Fecha de muestreo	NA
Fecha de recepción	11/07/2022

TABLA DE RESULTADOS

ENSAYO		MÉTODO	UNIDADES	RESULTADO	INCERTIDUMBRE (±)	FECHA DE ANALISIS
Temperatura de destilación al	% Residuo	*ASTM D86-19	% Vol.	1.00	NA	12/07/2022
	IBP	*ASTM D86-19	°C	36.3	0.79	12/07/2022
	10%	*ASTM D86-19	°C	47.5	0.78	12/07/2022
	50%	*ASTM D86-19	°C	93.1	1.8	12/07/2022
	90%	*ASTM D86-19	°C	165.0	1.8	12/07/2022
	T Final	*ASTM D86-19	°C	214.3	1.8	12/07/2022
Azufre total		*ASTM D7039-15a	mg/kg	22.60	0.62	12/07/2022
RON		FTIR	Adimensional	94.4	0.68	12/07/2022
MON		FTIR	Adimensional	85.1	0.66	12/07/2022
AKI		FTIR	Adimensional	89.7	NA	12/07/2022
Gravedad especifica a 20/4°C		*ASTM D4052-18	Adimensional	0.7205	0.00016	12/07/2022

**Los métodos marcados con un asterisco (*) cuentan con acreditación vigente Q-0959-130/18 desde 2018/05/17 y alcance completo ver www.ema.org.mx
** La incertidumbre de los resultados esta expresada con un factor de cobertura k=2 que corresponde a un nivel de confianza del 95%.
** Los resultados de este informe amparan a la muestra citada.
** Se prohibe la reproducción parcial o total de este documento, solo se permiten copias fotostáticas simples completas.
** El presente informe sirve para darle cumplimiento al anexo 4 de la NOM-016-CRE-2016 pruebas de control de calidad.
** El plan de muestreo es establecido por el cliente y en cumplimiento de sus intereses.
** El laboratorio no emite una declaración de conformidad de los resultados. Se anexa tabla normativa de especificación normativa.
** El método interno RON/MON e Índice de octano no se encuentran dentro del alcance de la acreditación.
** La muestra fue proporcionada por el cliente. Los resultados se aplican a la muestra como se recibió.
**José Alberto Araujo Osornio Cédula Profesional No. 1112546. (Información anexada a petición del cliente)

Analizado por:

Martha Priscila González Vidrio

Emitido por:

Jade Margarita Samaniego Plascencia

contacto@proil.mx www.proil.mx

Periférico Sur, No. 7215, Int. 5, Col. Santa María Tequepexpan, Tlaquepaque, Jal. México. C.P. 45601.

 Página 1 de 1

RECOMMENDATIONS

These tests were conducted directly and under the supervision of Jose Alberto Araujo Osornio. Under no circumstances should these tests be replicated because they may present degrees of risk to people without adequate protection and supervision in laboratories created for this purpose.

TEST 1

Dilution of the GOVVI Boost Fuel Tablet in Magna Gasoline (87)

Equipment Used: Laboratory magnetic stirrer
Brand: INTLLAB, with whisk
Stirring Speed: 100-1600 RPM
Maximum Stirring Volume: 2000 ml
Power: 180w
Voltage: 110v 60hz

CONCLUSION

The dilution time of the GOVVI Boost Fuel Tablet in gasoline fuel was 11:20 [11 minutes 20 seconds]. The final result is 100% positive. The dilution process was succesfully conducted. No failures presented during the dilution process.

TEST 2

GOVVI Boost Fuel Tablets Quality Exposed with Direct Fire
The objective of this test is to analyze the quality of the GOVVI Boost Fuel Tablets. For this study, a ceramic crucible was used to place a GOVVI Boost Fuel Tablet on the surface; additionally, fire was placed directly on the tablet. If the GOVVI Boost Fuel Tablet burns, catches fire, and/or leaves residue, it means that the product is of poor quality. On the other hand, if the product in the fire test presents liquid during the burning process, it means that the product is of excellent quality.

CONCLUSION

When fire was applied directly to the GOVVI Boost Fuel Tablet, it did not start on fire, burn, or leave residue. Therefore, it is concluded that the tablet hashigh quality standards.

TEST 3

Residues or Particles Test:
The purppose of this test is to analyze the presence of residues, crystals or particles of the GOVVI Boost Fuel Tablet once the tablet has been completely diluted with the fuel. This was done through a manual process. A special “filter paper” was used to detect the presence of residue, particles or crystals of the GOVVI Boost Fuel Tablet.

CONCLUSION

The liquid filtering process of the GOVVI Boost Fuel Tablet with gasoline fuel was 100% positive. The filter paper leaves no residue, particles, and/or crystals. This means that the GOVVI Boost Fuel Tablet, when diluted with the fuel, does not represent any type of risk for the engine elements such as filters, the exhaust catalyst, or other engine components exposed to tablets.

GOVVI Inc. IS NOT RESPONSIBLE for tests performed without written consent and authorization.

FINAL CONCLUSIONS:

After analyzing and witnessing each of the segments of the studies conducted, it is ruled that GOVVI Boost Fuel Tablet product is feasible and 100% safe to be used in any type of internal combustion engine, whether static or dynamic, that is operated with gasoline, thus fulfilling the company's promise of value in terms of effectiveness and results in this area.

Robert D Celaya

B.S. Mechanical Engineer
B.S. Industrial Engineer
MBA Global Management


GOVVI
THE NEW MPG IS HERE.
GOVVI.COM