



ANALYSIS OF FUELS AND LUBRICANTS


Many of the work associated with petrochemicals (refiners, producers, mixers, distributors, as well as research institutes, QC laboratories) give a crucial importance to the quality control of fuels and products upstream. They must be able to provide assurance that the end consumer will use products that meet all the industry standards. In addition, these fuels must be adapted to the performance of increasingly technical engines and to reduced consumption.

Through its extensive offer, CARLO ERBA Reagents is not only able to provide the suitable chemicals for these particular analysis but also the appropriate equipment.

CARLO ERBA Reagents, thanks to its know-how as a manufacturer, has developed, among other things, a specific range of solvents for the analysis of fuels.

Fuels are flammable products that need to be handled with suitable equipment. CARLO ERBA Reagents offers a selection of sampling, packaging and storage equipment, guaranteeing product integrity and user safety.

MON AND RON ANALYSIS

 Gasoline is a complex mixture of hundreds of volatile and combustible petroleum-based compounds, with short carbon chains and boiling points below 220° C. The Octane rating measures the fuel's ability to resist "knocking" during combustion. It is therefore one of the main parameters measured in the quality of gasoline. It is mainly affected by the presence of aromatic hydrocarbons, isoparaffins, olefins and additives in the form of ethanol and esters.

By simulating the specific requirements of an engine, different methods are used to determine the octane rating. Among the most used methods are :

- Motor Octane Number (MON)
- Research Octane Number (RON)

CARLO ERBA Reagents offers you PRF (Primary Reference Fuels) to determine the MON value, according to ASTM D2700, and RON, according to ASTM D2699, of your gasolines in a CFR type engine.

Product	Quality	Pkg	Code
n-Heptane	RE - ASTM	5 l	524263
		25 l	524265
		200 l	524267
Isooctane	RE - ASTM	2,5 l	528963
		5 l	528960
		25 l	528961
		200 l	528962
Octane 80	RE - ASTM	5 l	525992
		25 l	525993
		200 l	525994
Toluene	RE - ASTM	5 l	386102
		25 l	386104
		200 l	386106



ANALYSIS BY GC-MS & HEADSPACE



Automotive lubricants allow engines to increase their performance. Controlling their quality and their change over time is therefore essential for proper operation and a longer engine life.

GC-MS allows to isolate and qualitatively identify the key components of lubricants, and thus to define their "signature". It is then possible to analyze the new oils and assess the quality of the ones that have already traveled several kilometers.

Headspace allows you to analyze the head space of engine oils. New lubricants are rich in volatile antioxidants. Waste oils contain several components of oxidative degradation such as acetaldehyde, acetone, butanal, 2-propanol, acetic acid, 2-hexanol, benzoic acid, benzaldehyde and 1-pentanol.

The analysis of the oil makes it possible to know its quality and its condition. Predicting the shelf life makes it possible to carry out maintenance or oil change of an engine at the right time based on the information collected.

By diluting your oils the results of the analyzes are often more accurate.

CARLO ERBA Reagents offers its specific GC-MS and Headspace ranges to guarantee reliable results.

These solvents guarantee excellent performance, even for the analysis of the most complex mixtures and are characterized by :

- very high purity
- an extremely low non volatile residue content
- functionalities tested in GC-MS and Headspace respectively.



Product	Quality	Pkg	Code
Acetone	GC-MS	1 l	400952
Chloroform stabilized with ethanol	GC-MS	1 l	438732
Dichloromethan stabilized with amylene	GC-MS	1 l	463342
Dichloromethan stabilized with ethanol	GC-MS	1 l	463332
n,n-Dimethylacetamide	Headspace	1 l	444311
n,n-Dimethylformamide	Headspace	1 l	444991
Dimethylsulphoxide	Headspace	1 l	445121
Ethyle acétate	GC-MS	1 l	448342
n-Hexane 99 %	GC-MS	1 l	447212
Methanol	GC-MS	1 l	414952
n-Methylpyrrolidone-2	Headspace	1 l	462881
n-Pentane 99%	GC-MS	1 l	468172
n-Pentane	GC-MS	1 l	468182
Water	Headspace	1 l	412011

CARLO ERBA Reagents also offers analytical quality solvents meeting ISO and ACS standards, and cleaning solvents.

Find our complete offer in our online catalog
www.carloerbareagents.com

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