REPUBLIC OF BULGARIA
Executive agency
Bulgarian accreditation service

Signatory to the EA Multilateral Agreement in this field

ORDER

№ А 445

Sofia, 29.11.2024

Pursuant to Art. 10, para. 1, item 4, Art. 28, para. 1 of the Law on National Accreditation of Conformity Assessment Bodies, item 6 of the BAS QR 2 Accreditation Procedure, in connection with an open procedure reg № 134/53 ЛИ/ПА/03.04.2024 (application for re-accreditation inc. № 09-23/П/29.02.2024), report BAS QF 2.9.5.4, G2 Section reg. № 134/53 ЛИ/ПА/17/В/09.09.2024 and statement of the Accreditation Commission reg. № 134/53 ЛИ/ПА/20/В/12.11.2024, I hereby

RE-ACCREDIT

BULGARIAN PETROLEUM REFINERY LTD.

TESTING LABORATORY OF CRUDE OIL, SOLVENTS, FUELS AND PETROLEUM PRODUCTS

Management address: 1080 Sofia, 2 Stefan Karadzha Str.
Laboratory address: 5800 Pleven, West Industrial Zone, p.o. Box 81

To perform testing of:

Type of the scope: *flexible for a part of the scope*			
№	**Tested products**	**Type of test / characteristic**	**Testing methods (standard / validated method)**
1	2	3	4
1.	Crude oil	1. Distillation characteristics	БДС EN ISO 3405 Manual procedure
		2. Density	БДС EN ISO 3675
		3. Water content Distillation method	БДС ISO 3733
		4. Water and sediments	БДС ISO 3734
		5. Chlorides	БДС 5502
		6. Mechanical impurities	БДС 17411
		7. Ash	БДС EN ISO 6245

Type of the scope: *flexible for a part of the scope*			
№	**Tested products**	**Type of test / characteristic**	**Testing methods (standard / validated method)**
1	2	3	4
		8. Conradson carbon residue	БДС ISO 6615
		9. Sulphur content	БДС EN ISO 8754 ASTM D 4294
		10. Water-soluble acids and bases	БДС 5252
		11. Freezing point	БДС 1751
		12. Kinematic viscosity	БДС EN ISO 3104 Range A
		13. Engler specific viscosity	БДС 1766
2.	Liquid fuels: Automotive gasoline (1), Diesel fuels (2), Gasoil for industrial and public utility services (3), Heating oils (4), Gasoil (5), Heavy fuel oils (6)	1. Appearance	БДС ISO 1998-2, cl. 2.10.090 (1,2,3,5)
		2. Density	БДС EN ISO 3675 (1-6)
		3. Distillation characteristics	БДС EN ISO 3405 Manual procedure (1,2,3,5,6)
		4. Oxygen content	БДС EN 13132 (1)
		5. Oxygen compounds content	БДС EN 13132 (1)
		6. Benzene content	БДС EN 12177 (1)
		7. Polycyclic aromatic hydrocarbons	БДС EN 12916 Range A (2, 3, 5)
		8. Sulphur content	БДС EN ISO 8754 (3,4,5,6) ASTM D 4294 (3, 4, 5, 6)
		9. Flash point - Pensky-Martens closed cup	БДС EN ISO 2719 (2, 3, 5,6)
		10. Flash point - Cleveland open cup	БДС EN ISO 2592 (4, 6)
		11. Kinematic viscosity	БДС EN ISO 3104 Range A (2, 3, 4, 5, 6)
		12. Engler specific viscosity	БДС 1766 (4, 6)
		13. Gum content (solvent washed)	БДС EN ISO 6246 (1)
		14. Cetane index	БДС EN ISO 4264 (2,3,5)
		15. Copper strip corrosion	БДС EN ISO 2160 (1,2)
		16. Induction period	БДС EN ISO 7536 (1)
		17. Oxidation stability	БДС EN ISO 12205 (2,3, 5)
		18. Heat of combustion	БДС 17413 (2, 3, 4, 5,6)
		19. Conradson carbon residue	БДС ISO 6615 (2, 3, 4,5)
		20. Ash	БДС EN ISO 6245 (2, 3, 4, 5, 6)
		21. Sulphated ash	БДС ISO 3987 (6)
		22. Total contamination	БДС EN 12662-1 (2, 3,5,6)

Type of the scope: *flexible for a part of the scope*			
№	**Tested products**	**Type of test / characteristic**	**Testing methods (standard / validated method)**
1	2	3	4
		23. Mechanical impurities	БДС 17411 (3,5,6)
		24. Water content. Coulometric titration	БДС EN ISO 12937 (2,3,5)
		25. Water content. Distillation method	БДС ISO 3733 (3,5,6)
		26. Water and sediments by centrifuge	БДС ISO 3734 (2,3,4,5,6)
		27. Cold filter plugging point	БДС EN 116 (2, 5)
		28. Freezing point	БДС 1751 (3,4,5,6)
		29. Cloud point	БДС EN ISO 3015 (2, 3, 5)
		30. Pour point	БДС EN ISO 3016 (2,3,5,6)
		31. Water-soluble acids and bases	БДС 5252 (2, 3, 4, 5, 6)
3.	Solvents: Solvent BAS-L (1), Solvent NG (2), Mineral turpentine (3)	1. Density	БДС EN ISO 3675 (1-3)
		2. Distillation characteristics	БДС EN ISO 3405 Manual procedure (1-3)
		3. Flash point - Pensky-Martens closed cup	БДС EN ISO 2719 (2,3)
		4. Sulphur content	БДС EN ISO 8754 (1-3) ASTM D 4294 (1-3)
		5. Copper strip corrosion	БДС EN ISO 2160 (2,3)
		6. Aromatic hydrocarbons	БДС EN 12177 (1) БДС EN 12916 Range A (2, 3)
		7. Water-soluble acids and bases	БДС 5252 (2, 3)
		8. Appearance	БДС ISO 1998-2, cl. 2.10.090 (1-3)
		9. Volatility compared to diethyl ether	ILMT-01/2017 (1)
		10. Volatility compared to o-xylene	ILMT-01/2017 (2, 3)
4.	Lubricants: Engine oils, Lubricating oils	1. Density	БДС EN ISO 3675
		2. Kinematic viscosity	БДС EN ISO 3104 Range A
		3. Viscosity index	БДС ISO 2909
		4. Flash point - Pensky-Martens closed cup	БДС EN ISO 2719
		5. Flash point - Cleveland open cup	БДС EN ISO 2592
		6. Pour point	БДС EN ISO 3016
		7. Cloud point	БДС EN ISO 3015
		8. Freezing point	БДС 1751

Type of the scope: *flexible for a part of the scope*			
№	**Tested products**	**Type of test / characteristic**	**Testing methods (standard / validated method)**
1	2	3	4
		9. Acid and base number	БДС ISO 6618
		10. Sulphur content	БДС EN ISO 8754 ASTM D 4294
		11. Conradson carbon residue	БДС ISO 6615
		12. Ash	БДС EN ISO 6245
		13. Sulphated ash	БДС ISO 3987
		14. Mechanical impurities	БДС 17411
		15. Water content Distillation method	БДС ISO 3733
		16. Water-soluble acids and bases	БДС 5252
5.	Fatty acid methyl esters (FAME) for diesel engines. Biodiesel	1. Density	БДС EN ISO 3675
		2. Kinematic viscosity	БДС EN ISO 3104 Range A
		3. Water content. Coulometric titration	БДС EN ISO 12937
		4. Flash point - Pensky-Martens closed cup	БДС EN ISO 2719
		5. Sulphated ash	БДС ISO 3987
		6. Total contamination	БДС EN 12662-2
		7. Copper strip corrosion	БДС EN ISO 2160
		8. Acid number	БДС EN 14104
6.	Water: underground (1), waste (2)	1. pH	БДС 17.1.4.27 (1,2)
		2. Nitrates	ILMT-02/2022 (1,2)
		3. Total and constituent alkalinity	БДС EN ISO 9963-1 (1,2)
		4. Nitrites	ILMT-02/2022 (1,2)
		5. Contamination with petroleum hydrocarbons	ILMT-03/2016(I,2)
		6. Ammonium	ILMT-02/2022 (1.2)
		7. Aluminium	ILMT-02/2022 (1,2)
		8. Iron	ILMT-02/2022 (1,2)
		9. Orthophosphates	ILMT-02/2022 (1,2)
		10. Chromium (total), chromium (VI), chromium (III)	ILMT-02/2022 (1,2)
		11. Boron	ILMT-02/2022 (1,2)
		12. Manganese	ILMT-02/2022 (1,2)
		13. Total hardness	БДС 3775 (1)
		14. Chlorides	ILMT-02/2022 (1,2)
		15. Fluorine	ILMT-02/2022 (1,2)

Type of the scope: *flexible for a part of the scope*			
№	**Tested products**	**Type of test / characteristic**	**Testing methods (standard / validated method)**
1	2	3	4
		16. Total dry residue, undissolved and dissolved substances	БДС 17.1.4.04 (1,2)
		17. Lead	ILMT-02/2022 (1,2)
		18. Nickel	ILMT-02/2022 (1,2)
		19. Copper	ILMT-02/2022 (1,2)
		20. Zinc	ILMT-02/2022 (1,2)
		21. Sulphates	ILMT-02/2022 (1,2)
		22. Sodium	ILMT-02/2022 (1,2)
		23. Calcium	ILMT-02/2022 (1,2)
		24. Magnesium	ILMT-02/2022 (1,2)
		25. Cadmium	ILMT-02/2022 (1,2)
		26. Arsenic	ILMT-02/2022 (1,2)
		27. Sulphides	ILMT-02/2022 (1,2)
		28. Phenol	ILMT-02/2022 (1,2)
		29. Anion surfactants	ILMT-02/2022 (1,2)

To perform sampling of:

Type of the scope: *flexible*		
№	**Product**	**Sampling method (standard/validated)**
1	**2**	**3**
1.	Liquid petroleum products	БДС EN ISO 3170
2.	Waste water	БДС ISO 5667-10

Flexible scope: *Implementing a new version of standards/documents or standards / documents replacing them is allowed. An updated list of standards/documents and their dated versions is provided by laboratory.*

Fixed scope references:

1. ILMT-01/2017 Intra-laboratory methods of testing of solvents. Determination of the relative volatility of organic solvents, compared to reference standard substances (diethyl ether or o-xylene);

2. ILMT-02/2022 Intra-laboratory methods of testing of water by means of photometric test sets with Spectroquant® system;

3. ILMT-03/2016 Intra-laboratory methods of testing of water. Contamination with petroleum hydrocarbons. Determination of the content of extractable (by means of organic solvent) substances. Determination of petroleum hydrocarbon content (non-polar and slightly polar). A method, using a selective extraction, column chromatography and gravimetry.

I ORDER

To issue the certificate of accreditation reg. № 53 ЛИ/29.11.2024, valid until 29.11.2028, and this order as an integral part of it.

The certificate of accreditation with the enclosure to be received by the manager of the Bulgarian Petroleum Refinery Ltd, the head of the Testing laboratory of Crude oil, Solvents, Fuels and Petroleum Products, at Bulgarian Petroleum Refinery Ltd, or other authorized person in the office of EA BAS.

Upon receipt of the certificate and the enclosure issued, the the accredited person is obliged to return to EA BAS the originals of accreditation certificate № 53 ЛИ/01.11.2023, valid until 30.11.2024 and an enclosure – EA BAS order reg. № А 467/01.11.2023.

This order shall be notified to the Bulgarian Petroleum Refinery Ltd, within 3 (three) days from its issuance.

Eng. Irena Borislavova

Executive Director of EA BAS