ECROS
group of companies

MADE IS RUSSIA

ECROS GROUP
Certified and non-certified reference materials for analysis of oil and petroleum products. Gas chromatography standards. Paper filters and indicator paper.
Product overview 2017

Catalog 2017

WWW.ECOHIM.RU

I Certified Reference Materials for analysis of oil and petroleum products

We produce a wide range of certified and non-certified reference material for analysis of oil and petroleum products. Every set has technical passport with metrological characteristics, application instruction where operation principles are described. If you cannot find standards with necessary range of values, we are ready to produce standards on request.

ASTM D445

Kinematic and Dynamic Viscosity Oil Standard

CRM №	Temperature, C°	Kinematic Viscosity, cSt, Nominal quantity	Dynamic Viscosity, nominal quantity
9498-2009	20.00±0.02	1.5 – 2.5	1.2 – 2.0
9499-2009	20.00±0.02	3.5 – 6.5	2.8 – 5.2
9500-2009	20.00±0.02	8.0 – 13.0	6.5 – 11.0
9501-2009	20.00±0.02	15.0 – 25.0	13.5 – 22.5
	40.00±0.02	7.0 – 12.0	–
	50.00±0.02	5.0 – 9.0	–
	100.00±0.02	1.5 – 2.5	–
9502-2009	20.00±0.02	25.0 – 36.0	21.5 – 31.5
	50.00±0.02	6.5 – 11.0	–
9503-2009	20.00±0.02	50.0 – 70.0	44.0 – 62.0
	40.00±0.02	14.5 – 22.0	–
9504-2009	40.00±0.02	30.0 – 43.0	–
9505-2009	20.00±0.02	80.0 – 120.0	71.0 – 107.0
	50.00±0.02	18.0 – 28.0	–
9506-2009	20.00±0.02	160.0 – 240.0	128.0 – 192.0
	40.00±0.02	50.0 – 75.0	–
9507-2009	20.00±0.02	250.0 – 350.0	220.0 – 308.0
	50.00±0.02	50.0 – 75.0	–
	100.00±0.02	8.5 – 14.0	–
9508-2009	20.00±0.02	800.0 – 1350.0	710.0 – 1200.0
	100.00±0.02	14.0 – 30.0	–

ASTM D1298, ASTM D 70, ASTM D 941, ASTM D 148, ASTM E100, ASTM 4052

Liquid Density Standard

CRM №	Nominal quantity, kg/m³
8614-2004	682.0 – 694.0
8615-2004	716.0 – 732.0
8616-2004	740.0 – 751.0
8617-2004	777.0 – 789.0
8618-2004	808.0 – 812.0
8619-2004	842.0 – 850.0
8620-2004	865.0 – 870.0
8621-2004	877.0 – 881.0
8622-2004	898.0 – 902.0
8623-2004	997.0 – 1000.0
8624-2004	1320.0 – 1330.0

ASTM D4929

Organic Chlorides in Crude Oil

CRM №	Nominal quantity, µg /g
8852-2007	1.5 – 2.5

ASTM D3230
Chloride Salt in Crude Oil

CRM №	Nominal quantity, mg/dm³
7897-2001	4.5 – 5.5
7898-2001	9.5 – 10.5
7899-2001	47.5 – 52.5
7900-2001	95 – 105
7901-2001	291 – 309
7902-2001	891 – 909

ASTM D95, ASTM D1744
Water Standard Oil

CRM №	Nominal quantity, %
7928-2001	0.095 – 0.105
7929-2001	0.450 – 0.550
7930-2001	0.90 – 1.10
7931-2001	1.35 – 1.65
7932-2001	1.80 – 2.20
7933-2001	4.50 – 5.50

ASTM 1266, ASTM D4294, ASTM D2622
Sulfur in Isoctane/Decane Standard

CRM №	Nominal quantity, %
7992-2002	0
7993-2002	0.020 – 0.025
7994-2002	0.05 – 0.06
7995-2002	0.09 – 0.11
7996-2002	0.18 – 0.22
7997-2002	0.50 – 0.55

ASTM D4294, ASTM D 2622
Sulfur in Oil and Diesel Fuel Standard

CRM №	Nominal quantity, %
8170-2002	0.00001 – 0.00005
8171-2002	0.004 – 0.006
8172-2002	0.009 – 0.001
8173-2002	0.027 – 0.033
8174-2002	0.054 – 0.066
8175-2002	0.090 – 0.110
8494-2003	0.180 – 0.220
8176-2002	0.450 – 0.550
8177-2002	0.900 – 1.100
8495-2003	1.350 – 1.650
8496-2003	1.800 – 2.200
8178-2002	2.250 – 2.750
8497-2003	2.700 – 3.300
8498-2003	3.600 – 4.400
8179-2002	4.500 – 5.500

ASTM D323
Saturated Vapour Pressure Standard

CRM №	Nominal quantity, kPa
8523-2004	10 – 14
8524-2004	20 – 25
8525-2004	32 – 38
8526-2004	42 – 49
8527-2004	49 – 55
8528-2004	60 – 65

NON-CERTIFIED REFERENCE MATERIALS FOR ANALYSIS OF OIL AND PETROLEUM PRODUCTS

ASTM D92
Open Cup Flash Point Standard

CRM №	Nominal quantity, C°
8150-2002	78 – 95
8151-2002	110 – 125
8152-2002	145 – 165
8153-2002	185 – 215
8154-2002	225 – 250
8155-2002	255 – 290

ASTM D 93
Closed Cup Flash Point Standard

CRM №	Nominal quantity, C°
8133-2002	29 – 40
8134-2002	45 – 60
8135-2002	75 – 90
8136-2002	105 – 120
8137-2002	135 – 150
8138-2002	165 – 205

ASTM D86
Fractional Distillation of Petroleum Products

CRM №	Certified characteristics of Petroleum and Oil Standards temperature	Nominal quantity, C°
8785-2006	– initial boiling point	35.0 – 45.0
	10% distilling	60.0 – 65.0
	50% distilling	112.0 – 117.0
	90% distilling	187.0 – 193.0
	– end-boiling point	194.0 – 200.0
8787-2006	– initial boiling point	135.0 – 150.0
	10% distilling	155.0 – 165.0v
	50% distilling	180.0 – 185.0
	90% distilling	237.0 – 245.0
	– end-boiling point	243.0 – 261.0
8786-2006	– initial boiling point	180.0 – 185.0
	10% distilling	195.0 – 205.0
	50% distilling	245.0 – 255.0
	90% distilling	295.0 – 315.0
	96% distilling	340.0 – 360.0

II Non-Certified Gas Chromatography Standards

Gas Chromatography Standards are chemically pure organic substances for high-quality chromatographic analysis and calibration of chromatograph. Metrological characteristics of standards is purity of base substance, which is set chromatographically. Weight fraction of water is defined by the method of coulometric titration.
There are two chromatograms in specification attached to the standard which are made in different sensitivities of chromatography.
The standards are delivered in 3ml. sealed glass bulb. Shelf life of samples is 3 years.

Substance	Mass fraction of base substance, not less than, %	Mass fraction of water, not more than, %
Benzene	99.5	0.10
Acetonitrile	99.9	0.05
n-Butanol	99.3	0.15
2-Butanol	99.3	0.15
Butyl acetate	99.3	0.15
Hexane	99.3	0.15
Heptane	99.3	0.15
Decane	99.3	0.15
1,2-Dichloroethane	99.5	0.10
Diethylamine	99.5	0.10
Dodecane	99.3	0.15
2,2,4-Trimethylpentane (isooctane)	99.5	0.10
Cumene (isopropylbenzene)	99.5	0.10
o-Xylene	99.3	0,15
m-Xylene	99.5	0.10
p-Xylene	99.5	0.10
Methanol	99.8	0.10
Dichloromethane (methylene chloride)	99.7	0.10
Butanone	99.5	0.10
Methyl tert-butyl ether	99.5	0.10
Isobutanol	99.5	0.10
Nonane	99.3	0.15
Octane	99.3	0.15
Pentane	99.3	0.15
1-Propanol	99.5	0.10
2-Propanol	99.5	0.10
Tetradecane	99.0	0.20
Tetrachloromethane	98.0	0.05
1,2,3-trimethylbenzene	99.0	0.20
1,2,4-trimethylbenzene (pseudocumene)	99.0	0.20
Trichloroethylene	99.5	0.10
Undecane	99.0	0.20
Chlorobenzene	98.0	0.05
Chloroform	99.5	0.10
Cyclohexane	98.0	0.05
Cyclohexanol	99.0	0.20
Cyclohexanone	99.5	0.10
Ethanol	99.5	0.10
Ethyl acetate	99.5	0.10
Ethylbenzene	99.5	0.10

III Paper filters

Paper filters are used in qualitative and quantitative analytical techniques to determine and identify materials. Paper filters are produced from high-grade stock (viscose sulphite bleached chemical pulp) and strengthening polymeric additives.

100 pieces/package (∅ from 9 to 18 cm)
1000 pieces/package (∅ from 5.5 to 7 cm)

Filter marking	Possible diameter, cm	Paper density g/ sq. cm.	Filtration speed, no more than, sec.	Purpose
Red tape	5.5; 7.0; 9.0; 11.0; 12.5; 15.0; 18.0	75±3	26.0	Separation of curdy and macro crystalline precipitates from solutions
White tape	5.5; 7.0; 9.0; 11.0; 12.5; 15.0; 18.0	75±3	45.0	Separation of medium grain sediment from solutions
Blue tape	5.5; 7.0; 9.0; 11.0; 12.5; 15.0; 18.0	85±3	100.0	Separation of fine- crystalline precipitates from solutions
Yellow tape	5.5; 7.0; 9.0; 11.0; 12.5; 15.0; 18.0	75±3	16.0	Analysis of oil and fat products
Black tape (ashen)	5.5; 7.0; 9.0; 11.0; 12.5; 15.0; 18.0	75±3	45.0	Tasks which are not attached to the following gravimetric analysis

IV Indicator paper

Indicator paper of different marks which is used for pH determination of water solutions, presence of hydrogen sulphide in solutions and oxidants are used widespread in chemical and agrochemical laboratories.
Ecroskhim Ltd. (ECROS Group) produces 9 types of indicator paper (100 strips in one package).

Type of indicator paper	PH range	Color range	Use
Universal	0 – 12.0	from yellow to red in acid medium or from yellow to blue in alkaline medium	PH determination in water solutions
Phenolphtalein	8.2 – 10.0	from white to magenta-red	Indications of alkalinity of solution
Lacmoid (blue)	6.5 – 4.5	from blue to red	Indications of acidic properties of solution
Congo (red)	5.2 – 3.0	from red to blue	It is the analogue of indicator paper litmus blue; but the color is more intense
Litmus (blue)	<5.0	from blue to red	Indications of acidic properties of solution
Litmus (neutral)	5.0 – 8.0	from pale purple to red in acid medium, from pale purple to blue in alkaline medium	Indications of main acidic properties of solution
Litmus (red)	>8.0	from red to blue	Indications of alkalinity of solution
Potassium iodide starch	–	from white to blue	Identification of oxidants in solution
Lead acetate	–	from white to black	Identification of sulphide in solution and hydrogen sulphide in air

Notes

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