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15.2 List of Approved Methods

Petroleum Analysis Methodology Reference Table

<u>Method</u>	<u>Description</u>
ASTM 977	Stabilization of Lime
ASTM C25	Calcium Hydroxide
ASTM C39	Strength Test/Concrete
ASTM D129	Sulfur, oxygen bomb
ASTM D1298	Specific Gravity
ASTM D156	Color
ASTM D1744	Water Content, Karl Fisher
ASTM D189	Carbon, Conradson
ASTM D2159	PONA
ASTM D2270	Viscosity @ 40 degrees C
ASTM D2276	Particulate Contaminant
ASTM D2382	BTU
ASTM D2500	Pour Point
ASTM D2709	B S & W
ASTM D2717	Resistivity
ASTM D287	Gravity A.P.I.
ASTM D 3227	Mercaptan Sulfur
ASTM D 3228	Nitrogen, Kjeldahl (TKN-N)
ASTM D 323	Reid Vapor Pressure (RVP)
ASTM D 4055	Pentane (Insoluble)
ASTM D 4178	Moisture
ASTM D 445	Viscosity, Kinematic
ASTM D 473	Sediment by Extraction
ASTM D 482	Ash
ASTM D 524	Carbon, Ramsbottom
ASTM D 664	Neutralization Number
ASTM D 665	Rust Prevention Test
ASTM D 808	Chlorides, Halides, Halogens
ASTM D 811	Silicon
ASTM D 86	Distillation, Gasoline
ASTM D 92	Flash Point Open Cup
ASTM D 93	Flash, PM Closed Cup
ASTM D 95	Water by Distillation
ASTM D 974	Acid Number
ASTM D 976	Cetane-calculated
GC	LPG, Butane

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Environmental Analysis Methodology Reference Table

EPA 120.1	Conductivity
EPA 130.1	Hardness, Total as CaCO ₃
EPA 140.1	Odor
EPA 150.1	pH (Water)
EPA 160.1	Total Dissolved Solids
EPA 160.2	Total Suspended Solids
EPA 160.3	Total Solids
EPA 160.4	Volatile Suspended Solids
EPA 160.5	Residue, settable
EPA 166.4	N-Hexane Ext. Mat'l
EPA 170.1	Temperature
EPA 180.1	Turbidity
EPA 305.1	Acidity, as CaCO ₂
EPA 305.2	Acidity (Titrimetic)
EPA 310.1	Alkalinity (CaCO ₃)/Bicarbonate
EPA 330.5	Chlorine, Total Residual (potable)
EPA 335.1	Cyanide, Amendable
EPA 335.2	Cyanide, Total
EPA 340.2	Fluoride, Electrode
EPA 350.3	Ammonia-N
EPA 351.3	Nitrogen, Kjeldahl, Total
EPA 352.1	Nitrate, Colorimetric
EPA 353.3	Nitrate-Nitrogen
EPA 354.1	Nitrite-Nitrogen
EPA 360.1	Dissolved Oxygen
EPA 365.3	Total Phosphorous
EPA 370.1	Silica, Dissolved
EPA 375.3	Sulfate (as SO ₄)
EPA 376.2	Sulfide (S)
EPA 377.1	Sulfite
EPA 405.1/SM5210	BOD
EPA 410.2	COD
EPA 413.2	Oil & Grease (IR)
EPA 415.1	TOC/DOC (Filtered)
EPA 415.2	TOC
Hach Method	Silica, Soluble
Hach Method 8139	Cyanuric Acid
Ion Chromatograph	Formate
Potentiometric	Sulfide as Sulfur

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EPA 200.7-ICP	Metals by ICP
EPA 202.2-Furnace	Aluminum, AA Furnace
EPA 204.2-Furnace	Antimony, AA Furnace
EPA 206.2-Furnace	Arsenic, AA Furnace
EPA 208.2-Furnace	Barium, AA Furnace
EPA 210.2-Furnace	Beryllium, AA Furnace
EPA 213.2-Furnace	Cadmium, AA Furnace
EPA 218.2-Furnace	Chromium, AA Furnace
EPA 218.4-Hexavalent	Hexa-Chromium
EPA 219.2-Furnace	Cobalt, AA Furnace
EPA 220.2-Furnace	Copper, AA Furnace
EPA 236.2-Furnace	Iron, AA Furnace
EPA 239.2-Furnace	Lead, AA Furnace
EPA 243.2-Furnace	Manganese, AA Furnace
EPA 245.1-Cold Vapor	Mercury
EPA 246.2-Furnace	Molybdenum, AA Furnace
EPA 249.2-Furnace	Nickel, AA Furnace
EPA 255.2-Furnace	Platinum, AA Furnace
EPA 270.2-Furnace	Selenium, AA Furnace
EPA 272.2-Furnace	Silver, AA Furnace
EPA 273.2-Furnace	Sodium, AA Furnace
EPA 279.2-Furnace	Thallium, AA Furnace
EPA 282.2-Furnace	Tin, AA Furnace
EPA 283.2-Furnace	Titanium, AA Furnace
EPA 286.2-Furnace	Vanadium, AA Furnace
EPA 289.2-Furnace	Zinc, AA Furnace
EPA 602	BTEX
EPA 604	Phenolics
EPA 608	Total Pesticides/PCB's
EPA 610	Semi-Volatile
EPA 624	Purgeables
EPA 625	Base/Neutrals & Acids
EPA-Trans. Oil, 1980	PCB
EPA 1664	Oil and Grease
GC/FID	Fingerprinting
GC/MS	Identity of Unknown

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Environmental Analysis Methodology Reference Table

SW 846, 1010	Flash Point, Ignitibility
SW 846, 1110	Corrosivity – Steel
SW 846, 1311	TCLP Extraction
SW 846, 1311/200.7	TCLP Metals
SW 846, 1311/8081	TCLP Pesticides
SW 846, 1311/8150	TCLP Herbicides
SW 846, 1311/8260	TCLP Volatiles
SW 846, 1311/8270	TCLP Semi-Volatiles
SW 846, 3510	Separatory Funnel Liquid-Liquid Ext.
SW 846, 3510/8081	Total Pesticides – manual
SW 846, 3510/8151	Total Herbicides – manual
SW 846, 3510/8270	Total Semi-Volatiles – manual
SW 846, 3520	Continuous Liquid-Liquid Ext.
SW 846, 3520/8081	Total Pesticides – continuous
SW 846, 3520/8270	Total Semi-Volatiles – continuous
SW 846, 3550	Sonication Extraction
SW 846, 3550/8081	Total Pesticides – sonication
SW 846, 3550/8151	Total Herbicides – sonication
SW 846, 3550/8270	Total Semi-Volatiles – soil
SW 846, 3610	Alumina Column Clean up
SW 846, 3611	Alumina Column Clean up & Sep.
SW 846, 3620	Florisil Column Clean up
SW 846, 3630	Silica Gel Clean up
SW 846, 3640	Gel Permeation Clean up
SW 846, 3650	Acid-Base Partition Clean up
SW 846, 3660	Sulfur Clean up
SW 846, 5030	Purge & Trap
SW 846, 5050	Chlorine plus Chloride
SW 846, 6010A	ICP Metals
SW 846, 6010A/1311	ICP Metals
SW 846, 7040A/1311	Mercury – Cold Vapor
SW 846, 7041	Antimony-Furnace
SW 846, 7060A	Arsenic-Furnace
SW 846, 7131A	Cadmium-Furnace
SW 846,7191	Chromium-Furnace
SW 846, 7196A	Chromium-Hexa/Colorimetric
SW 846, 7197	Chromium-Hexa/Chelation/Extr.
SW 846, 7211	Copper-Furnace
SW 846, 7421	Lead-Furnace
SW 846, 7461	Manganese-Furnace
SW 846, 7471	Mercury-Cold Vapor
SW 846, 7481	Molybdenum-Furnace
SW 846, 7521	Nickel-Furnace
SW 846, 7740	Selenium-Furnace

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SW 846, 7761	Silver-Furnace
SW 846, 7841	Thallium-Furnace
SW 846, 7911	Vanadium-Furnace
SW 846, 8015	Nonhalogenated Volatile Organics
SW 846, 8020	Aromatic Volatile Organics
SW 846, 8021	Halogenated & Aromatic Volatiles
SW 846, 8041	Phenols
SW 846, 8041/8015B	Phenolics/Nonhalogenated Compounds
SW 846, 8041/8100	Phenols/PNA
SW 846, 8060	PHTHALATE ESTERS
SW 846, 8082	PCB Total
SW 846, 8100	PAH
SW 846, 8260B	GC/MS-Total Volatiles
SW 846, 8270/1311	TCLP tot/liq: Semi-Volatile
SW 846, 8310	PAH – HPLC
SW 846, 9013	Reactive Cyanide
SW 846, 9020	Total Halogens
SW 846, 9030A Sec. 7	Acid Sprung Sulfide (Solid/Water)
SW 846, 9045C	pH (Soil)
SW 846, 9095	Paint Filter Test

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Environmental Analysis Methodology Reference Table

Std Method 102001	Algal
Std Method 210-C	Salinity
Std Method 2120-B	Color, platinum cobalt
Std Method 2540F	Settleable Solids
Std Method 3500-CR D	Hexa-Chromium, Colorimetric
Std Method 3500-FED	Iron II
STD Method 4110B (IC)	Cl, SO4, Br, NO#-N, o-PO4
Std Method 4500	Carbon Dioxide (Free)
Std Method 4500 C02C	Carbon Dioxide (Total)
Std Method 4500-1B	Iodine
Std Method 4500-C1-B	Chloride (Water)
Std Method 4500-C1-G	Chlorine, Free
Std Method 4500-N02B	Nitrite, Colorimetric
Std Method 4500-P D	Orthophosphate
Std Method 4500-PB.4	Total Phosphorus
Std Method 4500-S2-D	Sulfide
Std Method 4500-SiE	Silica, Total
Std Method 4500B	Hydroxyl Ion
Std Method 5210B	BOD
Std Method 5530C	Phenol 4AAP, Total/Colorimetric
Std Method 5540C	Anionic Surfactants
Std Method 9213F	Pseudomonas
Std Method 9215-A	Heterotrophic Plate Count
Std Method 9221D	Coliform, Total
Std Method 9221E	Coliform, Fecal – Mult/tube
Std Method 9222D	Coliform, Fecal – Membrane
Std Method 9223B	Coliform (Colilert Method)
Std Method 9230B	Fecal Streptococci
Std Method 4500-C1G.DPD	Total Residual Chlorine (Colorimetric)
Std Method 9215B	Heterotrophic – Pour Plate
Std Method 4500 CN-I	Cyanide, Weak Acid

Industrial Hygiene Analysis Methodology Reference Table

XRF	Lead by XRF
NIOSH #0600	Nuisance Dust
NIOSH #1501	Styrene
NIOSH #3500	Formaldehyde
NIOSH #5512	Pentachlorophenol
NIOSH #7082	Lead in air
NIOSH #7400	PCM
NIOSH #7601	Silica in air
NIOSH #S274/S283	Pesticides/Air
NIOSH #3502	Phenol
NIOSH #5023	Gravimetric Determination
OSHA #1501	Charcoal Tubes
OSHA Method #39	Pentachlorophenol