

**PRICE SCHEDULE,
TERMS and CONDITIONS
of SERVICES**

Effective January 1st, 2003

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A) FIELD INSPECTION SERVICES

Price Information

Effective January 1st, 2003

A) Field Inspection Services

1) INSPECTION SERVICES

Typically, the services include ship and shore quantity calculations, previous cargo information evaluation, custody transfer sampling, time logging, letters of protest/notices of apparent discrepancies and reporting.

1A) BARGES

	Price Per Long Ton	Minimum per Vessel 1 st Grade/Gauged Lot	Each Additional Grade/Gauged
Crude Oils	10.0c	\$650.00	\$450.00
Residual fuel Oils	14.0c	\$650.00	\$450.00
Gasoline, Naphtha, Diesel And Other Middle Distillates	17.0c	\$650.00	\$450.00
Aviation fuels, Carbon Black Feedstocks, and Lubricating Oils	17.0c	\$650.00	\$450.00
Petrochemicals and Inorganic Liquid Chemicals	20.0c	\$850.00	\$650.00
LP Gases, Chemical Gases, and Other Pressurized/Refrigerated Products	20.0c	\$850.00	\$650.00

•An additional charge of \$110.00 per man, per hour will be applied every hour after eight hours per barge.

1B) TANKERS, DEEP TANKS & OCEANGOING BARGES

Crude Oils	10.0c	\$1,500.00	\$800.00
Residual fuel Oils	14.0c	\$1,500.00	\$800.00
Gasoline, Naphtha, Diesel And Other Middle Distillates	17.0c	\$1,500.00	\$800.00
Aviation Fuels, Carbon Black Feedstocks, and Lubricating Oils	17.0c	\$1,500.00	\$800.00
Petrochemicals and Inorganic Liquid Chemicals	20.0c	\$1,500.00	\$800.00
LP Gases, Chemical Gases, and Other Pressurized/Refrigerated Products	20.0c	\$1,500.00	\$800.00

•An additional charge of \$110.00 per man, per hour will be applied for every hour after ten hours per vessel.

•A lighterage fee of \$550.00 per barge, per 24 hour day will be applied.

2) CLEANLINESS INSPECTIONS

Tank entry for visual inspection, where safely accessible and open to atmosphere.

Shore Tanks	\$500.00	per visit and tank
Barges, Tankers, Deep Tanks	\$95.00	each tank
Barges, Tankers, Deep Tanks	\$500.00	minimum, per visit and vessel
Trucks & Rail Cars	\$500.00	minimum, per visit
Trucks & Rail Cars	\$95.00	each car
Internal Inspections	\$1,000.00	minimum, per visit
Each additional tank	\$250.00	per visit and tank

For closed systems, hazardous atmospheres, OBQ compatibility and chemical residue testing, gas tank conditioning, wall wash sampling and quick tests, please discuss appropriate scope of service and prices with our specialists.

Also refer to our laboratory price schedule, sections B, 1-12.

3) SAMPLING

Pre or post-inspection and inventory sampling, multi-level, first foot and line sampling, beyond custody transfer requirements.

Ship or Barge Tanks	\$60.00	per quart
Ship or Barge Tanks	\$500.00	minimum, per visit and vessel
Shore Tanks, set of	\$325.00	first tank per visit
Upper/middle/lower	\$150.00	each additional tank per visit
Running	\$65.00	per additional quart
Tank Trucks & Rail Cars	\$500.00	first unit per visit
Tank Trucks & Rail Cars	\$120.00	each additional unit per visit
Pipeline Sampling	\$350.00	Minimum, \$60 per Qt.

For blending, compositing, splitting of samples, please refer to our laboratory price schedule, section B8.

4) GAUGING

Pre or post-inspection and inventory gauging, beyond custody transfer requirements.

Ship or Barge Tanks	\$125.00	per tank
Ship or Barge Tanks	\$650.00	minimum per visit and vessel
Shore Tanks	\$350.00	first tank per visit
Shore Tanks	\$150.00	each additional tank per visit
Tank Trucks & Rail Cars	\$250.00	first unit per visit
Tank Trucks & Rail Cars	\$100.00	each additional unit per visit

5) PIPELINE AND TANK-TO TANK TRANSFERS MISCELLANEOUS MANPOWER & CONSULTING SERVICES

Tank to Tank Transfers (Intra Terminal)	\$650	(First 2 tanks)
Each additional Tank	\$150	
Manpower Services:		
Inspector	\$200.00	per hour
Measurement Engineer	\$250.00	per hour
Field Supervisor/Marine Surveyor	\$250.00	per hour
Management Time	\$400.00	per hour

Manpower prices are subject to a four hour minimum.

These prices are indicated as guidelines. Please contact Amspec Services for your specific service needs and specifications.

6) INVENTORY CONTROL SERVICES

Amspec Services can custom tailor an inventory monitoring program that fits the client's need for leased storage and spot through-put tankage at any terminal in the United States. Following is a summary of services recommended:

- Initial on-lease inventory or tank inspection to establish heel volumes/tank suitability.
- Physical sealing of tank inlet/outlet valves to help ensure product is not inadvertently moved in or out of tankage without the client's instructions.
- Quantity inspection of inbound and outbound movements on marine vessels.
- Periodic inventory of on-hand product. This can be done at any frequency – i.e.: daily/weekly/monthly.
- Full documented product reconciliation based on purchases, sales and internal cargo transfers.
- Off-lease inventory to establish quantity and financial responsibility of tank heels.

In addition to the above, we will act as the client's independent inspector at the job-site advising of potential problem situations, inventory discrepancies. etc.

Our documented inventory control records can be made accessible to the client on a 24 hour basis via computer E-Mail.

Please contact any Amspec Service office for assistance or further information.

7) MEASUREMENT AND CALIBRATION SERVICES

- Shipboard Sampling (auto sampling/full attendance)
- Sampler/Receiver/System proving by water injection (API 8.2)
- Flow monitoring (metering/sampling/sample handling/testing)
- Factory acceptance & performance tests (3rd party witnessing)
- Measurement consulting, trouble shooting and audit services
- Waterdraw calibration of meter provers (pipe or tank)
- Meter proving services with pipe provers
- Meter proving services with master meters
- Natural gas measurement (orifice meter inspections etc.)
- Natural gas accounting (flow calc. & chart intergrations)
- Natural gas chromatography/shrink factors/dew points etc.
- Tank calibrations by OPTISTRAP (optical reference line, API 2.2B)
- Tank calibrations by conventional strapping (API 2550)
- Tank bottom calibrations with water/prover/meter

8) BLENDING EVALUATION AND TESTING

Our expert staff is available to advise in blending operations. Volumetric or weight composites can be prepared from components and tested in our laboratories. However, due to the inherent difficulty in achieving a homogeneous stable blend in tanks and samples, Amspec Services cannot accept any responsibility. For volumetric or weight blending, compositing and/or splitting samples, a fee of \$35.00 per component or \$300.00 minimum will be applied per invoiced job.

B) LABORATORY SERVICES

Price Information

Effective January 1st, 2003

**REFORMULATED AND CONVENTIONAL GASOLINE INSPECTION AND
LABORATORY SERVICES**

Amspec Services has established a state of the art RFG Technical Center having professional sampling and complete regulatory laboratory testing capabilities, at its Linden, New Jersey and Houston TX.

We have made a significant commitment to our customers by investing in the instrumentation and technology required for performing EPA compliance testing and reporting.

**For further information, please contact:
Jim Ford-Sr. Vice President
Phone:(800) 286-2208
Fax:(800) 997-2208
Email: jford@amspecllc.com
Or your local Amspec Services office**

B) LABORATORY SERVICES

1) PETROFUELS & DIESEL

<u>METHOD</u>	<u>TESTS</u>	PRICE PER TEST
D-2274	ACCELERATED STABILITY	165
D-974/3242	ACIDITY / ALKALINITY (COLORIMETRIC)	72
D-664/2896/4739	ACIDITY / ALKALINITY (POTENTIOMETRIC)	77
IP-377/D-5184	ALUMINUM (FUSED ASH)	149
D-611*	ANILINE POINT / MIXED*	83
VISUAL	APPEARANCE	38
D-5186	AROMATICS IN DIESEL BY SFC	303
D-1319	AROMATICS / OLEFINS BY FIA	145
D-287 / 1298	API GRAVITY / At Elevated Temp*	35/55
VISUAL/D-4176	APPEARANCE	38
D-482	ASH CONTENT	110
D-874	ASH, SULFATED	145
IP-143/D-3279	ASPHALTENES (N-HEPTANE INSOLUBLES)	250
MICRO-CULTURE	BACTERIAL CONTAMINATION IN FUEL OILS	350
D-1159	BROMINE NUMBER	125
D-240	CALORIFIC VALUE, BTU GROSS / NET(+SULPHUR)*	175/325
D-3238	CARBON	185
D-5291/CHN	CARBON, HYDROGEN, NITROGEN / + OXYGEN*	455
D-189	CARBON RESIDUE, CONRADSON 10% BOTTOM*	190
D-4530	CARBON RESIDUE, MCRT 10% BOTTOM	190
D-976/4737	CETANE INDEX, CALCULATED (PLUS API & DISTILLATION)	22
D-613	CETANE NUMBER, IGNITION QUALITY	485
D-2007	CHARACTERISTIC GROUPS, BY CLAY-GEL ABSORPTION	413
UOP 375	CHARACTERISTIC FACTOR ("K" FACTOR)	138
D-808/1317	CHLORIDE, BOMB METHOD	116
UOP 22/UOP 588	CHLORIDE, INORGANIC	160
MICROCOULOMETER	CHLORIDE, ORGANIC WATER WASHED	275
UOP 588/D-4929	CHLORIDE, TOTAL	165
D-2500	CLOUD POINT, BELOW 10 F*	95
IP-309	COLD FILTER PLUGGING POINT	220
D-1500	COLOR, ASTM	70
UOP 359	COLOR STABILITY	125
D-2781/4740	COMPATIBILITY / STABILITY (A OR B METHOD)	125
MOBIL 1292	COMPATABILITY	165

1) PETROFUELS & DIESEL (CONTD.)

<u>METHOD</u>	<u>TESTS</u>	PRICE PER TEST
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D-130	CORROSION, COPPER STRIP	75
WITCO	CRACKLING TEST (CREPITATION)	85
D-70/D-1217	DENSITY, BY PYCNOMETER	138
D-4052	DENSITY, BY DIGITAL DENSITOMETER	138
GC/MS	DICYCLOPENTADIENE (DCPD) AND STYRENE IN FUEL OIL	385
D-877	DIELECTRIC STRENGTH	187
D-86	DISTILLATION, ATMOSPHERIC (% RECOVERY, IBP, EP)	105
D-2887/5307	DISTILLATION, SIMULATED BY GAS CHROMATOGRAPHY	385
D-1160	DISTILLATION, VACUUM	385
IRS	DYE CONTENT OF DIESEL FUEL, UV METHOD	165
PETROSPEC	DYE CONTENT OF DIESEL FUEL, PORTABLE IR	90
FTMS 1151	EXPLOSIVENESS	165
D-92	FLASH POINT, CLEVELAND OPEN CUP	72
D-93	FLASH POINT, PENSKY MARTENS	72
SHELL/SMS 305.75	FLOCCULATION	165
D-892	FOAMING CHARACTERISTICS	165
D-287/1298	GRAVITY, API BY HYDROMETER	33
D-70	GRAVITY, SPECIFIC BY PYCNOMETER	138
D-5002	GRAVITY, SPECIFIC BY DIGITAL DENSITOMETER	138
COLONIAL PL/D-4176	HAZE RATING IN DIESEL OILS	38
IP PROPOSED	HYDROGEN SULFIDE (LIQUID PHASE)	275
DRAGER/EXXON/AST M	HYDROGEN SULFIDE (VAPOR SPACE)	220
UOP 5	INHIBITOR IN GAS OIL	303
D-893/4055	INSOLUBLES (PENTANE / TOLUENE)	138
UOP 375	"K" FACTOR, CALCULATED	138
AAS/ICAP	METALLIC ELEMENTS (PER ELEMENT)	105
EXXON 120.07	NAPHTHA INSOLUBLES MODIFIED	138
D-644/974/4739	NEUTRALIZATION NUMBER	83
IP 288/AAS	NICKEL	105
UOP 313/UOP 269	NITROGEN, BASIC	165
D-4629	NITROGEN, TOTAL BY CHEMILUMINESCENCE	248
D-3228	NITROGEN, TOTAL BY KJEDAHN METHOD	248
DUPONT F21	OXIDATION / COLOR STABILITY	138
D-2274	OXIDATION STABILITY, ACCELERATED	165
D-5304	OXYGEN OVERPRESSURE (STABILITY)	220
D-893	PENTANE OR TOLUENE INSOLUBLES	110
GC-ECD	POLYCHLORINATED BIPHENYLS (PCBS) IN FUEL OILS	275

1) PETROFUELS & DIESEL (CONTD.)

<u>METHOD</u>	<u>TESTS</u>	<u>PRICE PER TEST</u>
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GC-ECD	POLYCHLORINATED BIPHENYLS IN TRANSFORMER OILS	138
D-97 MODIFIED	POUR POINT, AMSTERDAM METHOD	125
D-97	POUR POINT BELOW 10F	95
D-1218	REFRACTIVE INDEX	145
D-665	RUST PREVENTING CHARACTERISTICS	83
UOP 22/D-3230	SALT CONTENT	83
D-94	SAPONIFICATION NUMBER	105
D-1796/2709	SEDIMENT & WATER (CENTRIFUGE)	94
D-473	SEDIMENT BY EXTRACTION	125
IP-375/SMS 2696	SEDIMENT BY HOT FILTRATION Existing / Potential*	200/400
IP 377/D-5184	SILICON (FUSED ASH)	149
AAS/D-3605	SODIUM	105
D-129	SULFUR, BOMB METHOD	138
D-5453	SULFUR, TOTAL BY UV FLUORESCENCE	138
D-1552	SULFUR, TOTAL, INDUCTION FURNANCE	105
D-4294/2622	SULFUR, TOTAL, X-RAY FLUORESCENCE	105
D-664/974	TOTAL ACID / BASE NUMBER	127
AAS/ICAP	TRACE METALS (THOSE NOT ITEMIZED/PER ELEMENT)	105
D-5291	ULTIMATE ANALYSIS (C,H,N,O,S,CL,ASH)	660
D-3605/AAS	VANADIUM	105
D-455	VISCOSITY, KINEMATIC @ 100F,122F,OR 210F	115
D-445	VISCOSITY, KINEMATIC @ TEMP. OTHER THAN LISTED	135
D-2270/475	VISCOSITY INDEX (INCLUDING TEST CHARGES)	245
NOACK	VOLATITLITY TEST	138
D-1744	WATER CONTENT, KARL FISCHER METHOD	125
D-95/4006	WATER BY DISTILLATION IN FUEL OILS	110
D-2709/1796	WATER & SEDIMENT (CENTRIFUGE)	110
UOP 46/HOLDE	WAX CONTENT IN OILS	209
WPL	WILLIAMS OXIDATION STABILITY, MODIFIED (16 HRS.)	455
XRF	X-RAY FLUORESCENCE, SEMI-QUANTITATIVE	385
N.I.P.E.R.	XYLENE OR TOLUENE EQUIVALENCY	165

2) CRUDE OILS

<u>METHOD</u>	<u>TESTS</u>	<u>PRICE PER TEST</u>
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D-287 / 1298	API GRAVITY / At Elevated Temp*	35/55
D-189	CARBON RESIDUE, CONRADSON / 10% BOTTOM*	190
D-4530	CARBON RESIDUE, MCRT / 10% BOTTOM	198
D-808/1317	CHLORIDE, BOMB METHOD	185
UOP 22/UOP 588	CHLORIDE, INORGANIC	175
MICROCOULOMETER	CHLORIDE, ORGANIC WATER WASHED	325
UOP 588/D-4929	CHLORIDE, TOTAL	205
D-130	CORROSION, COPPER STRIP	75
D-2892	CRUDE OIL ASSAY	quote
D-86	DISTILLATION, ATMOSPHERIC (% RECOVERY, IBP, EP)	135
D-2887/5307	DISTILLATION, SIMULATED BY GAS CHROMATOGRAPHY	415
D-1160	DISTILLATION, VACUUM	525
D-2892	DISTILLATION, True Boiling Point (T.B.P.)	quote
D-70/D-1217	DENSITY, BY PYCNOMETER	138
D-4052	DENSITY, BY DIGITAL DENSITOMETER	138
D-93	FLASH POINT, PENSKY MARTENS	90
D-287/1298	GRAVITY, API BY HYDROMETER* ELEVATED TEMP	35/55
IP PROPOSED DRAGER/EXXON/AST M	HYDROGEN SULFIDE (LIQUID PHASE)	275
	HYDROGEN SULFIDE (VAPOR SPACE)	220
D-3227/UOP 163	MERCAPTAN SULFUR	155
AAS/ICAP	METALLIC ELEMENTS (PER ELEMENT)	105
UOP 313/UOP 269	NITROGEN, BASIC	165
D-4629	NITROGEN, TOTAL BY CHEMILUMINESCENCE	248
D-3228	NITROGEN, TOTAL BY KJEDAHL METHOD	248
D-97	POUR POINT BELOW 10F	95
UOP 22/D-3230	SALT CONTENT	125
D-1796/2709	SEDIMENT & WATER (CENTRIFUGE)	94
D-473	SEDIMENT BY EXTRACTION	94
D-4294/2622	SULFUR, TOTAL, X-RAY FLUORESCENCE	105
D-323/5191	VAPOR PRESSURE, REID OR MICRO METHOD	105
D-455	VISCOSITY, KINEMATIC @ 100F,122F,OR 210F	115
D-445	VISCOSITY, KINEMATIC @ TEMP. OTHER THAN LISTED	138
D-1744	WATER CONTENT, KARL FISCHER METHOD	125
D-95/4006	WATER BY DISTILLATION	110
D-2709/1796	WATER & SEDIMENT (CENTRIFUGE)	94
API COMA 17-3	WATER SOURCE IDENTIFICATION	425
UOP 46/HOLDE	WAX CONTENT	187

3) REFORMULATED AND CONVENTIONAL GASOLINE & NAPHTHA

<u>METHOD</u>	<u>TESTS</u>	<u>PRICE PER TEST</u>
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D-664/974/3242/4739	ACIDITY / ALKALINITY	77
D-1093	ACIDITY of DISTILLATION RESIDUE	77
G.C.-OFID/D-4815	ALCOHOLS, IN GASOLINES	347
D-4814	ANTIKNOCK INDEX (CALCULATED)	17
D-287 / 1298	API GRAVITY	33
VISUAL/D-4176	APPEARANCE AND COLOR	38
G.C./MS/EPA 40 CFR	AROMATICS BY G.C./MS	400
D-1319	AROMATICS / OLEFINS by FIA	145
GRAPHITE FURNACE	ARSENIC, TRACE (PPB)	138
G.C./D-3606/D-5580	BENZENE CONTENT IN GASOLINE	347
G.C.	BENEZENOID CONTENT IN NAPHTHA	347
D-1159/2710	BROMINE NUMBER	105
D-1159/1491/2710	BROMINE NUMBER/BROMINE INDEX	105
UOP 588/D-4929	CHLORIDE, TOTAL	165
MICROCOULOMETER	CHLORIDE, ORGANIC WATER WASHED	275
D-2392	COLOR (AVGAS)	70
D-156	COLOR, SAYBOLT	70
D-130	CORROSION, COPPER STRIP	75
NACE	CORROSION TEST, NACE	275
GC MS	DICYCLOPENTADIENE	400
UOP 326	DIENE VALUE	160
D-86	DISTILLATION, ATMOSPHERIC (% RECOVERY, IBP &EP)	105
IP 30/D-235/4952	DOCTOR TEST	72
D-4814	DRIVEABILITY INDEX (CALC.)	28
D-287/1298	GRAVITY, SPECIFIC / API	33
ACS	HEAVY METALS (AS LEAD)	105
D-381	GUM, EXISTENT	175
D-873	GUM, POTENTIAL	265
D-525	INDUCTION PERIOD	175
D-3237/3341	LEAD CONTENT IN GASOLINES	105
MOBIL	LEAD REACTIVITY	132
D-2699/2700	LEAD SUSCEPTABILITY (PLUS KNOCK TESTS)	200 each
D-3116/IP224	LEAD CONTENT TRACE IN NAPHTHAS (PPB)	155
D-3831 AAS	MAGANESE CONTENT	105
D-3227/UOP 163	MERCAPTAN SULFUR	155
D-4815/FTIR/GC/MS	MTBE, IN GASOLINE	347
G.C./MS	MTBE, TRACE (PPM)	451

3) REFORMULATED AND CONVENTIONAL GASOLINE & NAPHTHA(CONTD.)

<u>METHOD</u>	<u>TESTS</u>	<u>PRICE PER TEST</u>
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UOP 313/UOP 269	NITROGEN, BASIC	138
D-3431/4629	NITROGEN, TRACE BY CHEMILUMINESCENCE	275
D-2700	OCTANE NUMBER (KNOCK), MOTOR	209
D-2699	OCTANE NUMBER (KNOCK), RESEARCH	209
D-1319	OLEFINS BY FIA	145
D-525	OXIDATION STABILITY (INDUCTION PERIOD)	200
D-4815/G.C.-OFID	OXYGENATES	347
D-2789/1319/5134	PARAFINS, OLEFINS, NAPHTHENES AND AROMATICS,(PONA)	550
*	TOTAL COMPONENT DISTRIBUTION*	
	by MASS SPECTROSCOPY	550
	by GAS CHROMATOGRAPHY	550
D-5134	PARAFINS, ISOPARAFFINS, NAPHTHALENES, AROMATICS, AND OLEFINS	605
D-3231	PHOSPHORUS	193
UOP 660	SULFOLANE	385
D-3120/4045	SULFUR, TOTAL BY MICROCOULOMETRY	209
D-4294/2622	SULFUR, TOTAL BY X-RAY FLUORESCENCE	105
D-5188	VAPOR/LIQUID RATIO	72
Calc.	VAPOR LOCK INDEX (V/L RATIO)	33
D-5191/EPA 40 CFR	VAPOR PRESSURE MICRO METHOD	115
D-4953/323	VAPOR PRESSURE, REID	115
D-1744	WATER, BY KARL FISCHER	115
D-4814	WATER TOLERANCE	125

4) AVIATION FUELS, KEROSENE & AVGAS

<u>METHOD</u>	<u>TESTS</u>	<u>PRICE PER TEST</u>
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D-974/3242/IP 182	ACIDITY, COLOR TITRATION IN AVIATION FUELS	105
D-611/1298	ANILINE GRAVITY CONST., CALC. (+ANILINE POINT&API)	50
D-287 / 1298	API GRAVITY	33
VISUAL/D-4176	APPEARANCE AND COLOR	38
D-1319	AROMATICS, OLEFINS, & SATURATES (FIA)	145
D-1159/1491	BROMINE NUMBER / BROMINE INDEX	125
D-1491	BROMINE NUMBER	125
D-187	BURNING QUALITY	100 + o/t
D-240	CALORIC VALUE (BTU), GROSS	127
D-5291	CALORIC VALUE (BTU), NET	275
IP 10	CHAR VALUE	160
D-156	COLOR, SAYBOLT	70
D-2624/4308	CONDUCTIVITY, ELECTRICAL	95
IP 225	COPPER CONTENT BY U.V.	160
D-130	CORROSION, COPPER STRIP	75
IP 227	CORROSION, SILVER STRIP	175
D-86	DISTILLATION, ATMOSPHERIC (% RECOVERY, IBP &EP)	105
D-70/D-1217	DENSITY, BY PYCNOMETER	138
FTMS 1151	EXPLOSIVENESS	165
D-56	FLASH POINT, TAG CLOSED CUP	90
D-1319	FLUORESCENCE INDICATOR ABSORPTION (FIA)	145
D-4176	FREE WATER AND PARTICULATE CONTAMINATION	38
D-2386	FREEZING POINT	130
FTMS 5327	FUEL SYSTEM ANTI-ICING INHIBITOR (FSII) (JET FUEL)	165
D-287/1298	GRAVITY, SPECIFIC / API	33
D-381/873	GUM , EXISTENT	175
D-371/873	GUM, EXISTENT POTENTIAL	225
D-240	HEAT OF COMBUSTION (BTU)	138
D-1405/3338/4529	HEAT OF COMBUSTION,NET (CALCULATED)(+TEST CHARGES)	303
D-3343	HYDROGEN CONTENT, CALCULATED	50
D-3227/IP 104	MERCAPTAN SULFUR	155
D-3948	MICRO SEPAROMETER RATING (MSEP/WSIM)	248
D-5452/2276	MILLIPORE RATING (MEMBRANE COLOR)	148
NACE	NACE CORROSION TEST	275
D-1840	NAPHTHALENES BY U.V.	138
D-974/3242	NEUTRALIZATION NUMBER	77
D-875	OLEFINS BY BROMINE NUMBER (CALCULATED)INCL. DIST.	138

4) AVIATION FUELS, KEROSENE & AVGAS (CONTD.)

<u>METHOD</u>	<u>TESTS</u>	<u>PRICE PER</u>
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		TEST
D-1319	OLEFINS BY FIA	145
D-3703	PEROXIDE NUMBER	116
D-1322	SMOKE POINT	130
D-3120	SULFUR, TOTAL BY MICROCOULOMETRY_	209
D-3241	THERMAL OXIDATION STABILITY (JFTOT)	315
D-323/5191	VAPOR PRESSURE, REID OR MICRO METHOD	115
D-445	VISCOSITY, KINEMATIC @ 100F	115
D-445	VISCOSITY @ -4F (-20C)	115
D-86	VOLATILITY INDEX (PLUS TEST CHARGES)	55
D-1094	WATER REACTION	75
D-2550/3948	WATER SEPARATION INDEX, MODIFIED-(MSEP/WSIM)	248

5) ASPHALT / BITUMINOUS MATERIAL

<u>METHOD</u>	<u>TESTS</u>	PRICE PER
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		TEST
-----	BMCI (BUREAU OF MINES CORRELATION INDEX) (+API&VISC)	156
D-1370	CONTACT COMPATIBILITY (OLIENSIS TEST)	313
D-402/T-78	DISTILLATION	313
D113/T-51	DUCTITLITY @ 77F	313
D113/T-51	DUCTILITY @ 60F	438
D-92/T-48	FLASH POINT, CLEVELAND OPEN CUP	156
D-70/T-228	GRAVITY, SPECIFIC BY PYCNOMETER @ 77F/75F	156
D-3142	GRAVITY, API BY HYDROMETER @ 60F	156
D-4072	INSOLUBILITY, IN TOLUENE	219
D-5/T-49	PENETRATION @ 77F/60F	219
D-2318	QUINOLINE INSOLUBLES	219
D-5/T-49	RETAINED PENETRATION @ 77F	281
D36/T-53	SOFTENING POINT, RING & BALL	313
D-2042/T-44	SOLUBILITY, IN TRICHLOROETHYLENE	313
AASHTO T-102	SPOT TEST (OLIENSIS TEST)	438
D-6/1754/T-179	THIN FILM OVEN TEST, LOSS ON HEAT & AIR	438
D-2171/T-202	VISCOSITY, ABSOLUTE (POISE) @ 140F	156
D-2170/T-101	VISCOSITY, KINEMATIC @ 275F	156
D-95	WATER CONTENT BY DISTILLATION	115

6) PETROCHEMICALS

<u>METHOD</u>	<u>TESTS</u>	PRICE PER TEST
D-2008	ABSORBANCE BY ULTRAVIOLET	154
---	ACETALDEHYDE CONTENT	83
SMA 19	ACETIC ANHYDRIDE CONTENT	83
D-1612	ACETONE CONTENT OF METHANOL	83
D-2106/2942	ACID ACCEPTANCE	110
D-664/847/1613/2989	ACID NUMBER	105
D-848	ACID WASH COLOR	83
D-847/1613/286/2989	ACIDITY	77
USP	ACROLEIN	55
D-2119	ALDEHYDE CONTENT IN STYRENE MONOMER	110
D-2191	ALDEHYDE CONTENT IN VINYL ACETATE	110
D-1613/2989	ALKALINITY	77
D-611/287 (CALC)	ANILINE GRAVITY CONSTANT (+ANILINE POINT & API)	61
D-611	ANILINE POINT	72
GC	ANTIOXIDANT (NONENE)	330
VISUAL/D-2108	APPEARANCE	28
D-1492/2710	BROMINE INDEX	99
D-1159/E-234	BROMINE NUMBER	83
D-2424	CARBON DISTRIBUTION OF PROPYLENE POLYMERS	385
D-2324	CARBON DISULFIDE	55
EPA 415.1	CARBON, TOTAL ORGANIC	110
D-565/E-346	CARBONIZABLE SUBSTANCES	105
D-4423/E-411	CARBONYL CONTENT IN C4 HYDROCARBONS	193
DOW	CHLORATES	83
SMA 68-62	CHLORIDE, INORGANIC	72
MICROCOULOMETER	CHLORIDE, ORGANIC WATER WASHED	275
UOP 779/D-4929	CHLORIDE, MICRO	160
MICROCOULOMETER	CHLORIDE, TOTAL	160
-----	CHLORINE, FREE	72
E-450	COLOR, HUNTER LAB	83
D-1209/156	COLOR, PT-CO, APHA, HAZEN/SAYBOLT	105
A.A.S./D-1688 MOD.	COPPER	105
D-1298/891	DENSITY BY HYDROMETER	33
D-1298/891/3505	DENSITY BY HYDROMETER/BY PYCNOMETER	127
D-849/130	CORROSION, COPPER	66
D-4052	DENSITY, BY DIGITAL DENSITOMETER	83
D-1720	DILUTION RATIO IN CELLULOSE NITRATE SOLUTIONS	72

6) PETROCHEMICALS (CONTD.)

<u>METHOD</u>	<u>TESTS</u>	PRICE PER TEST
D-850/1078/1120	DISTILLATION	121
--	DMA CONTENT	55
D-235/4952/IP-30	DOCTOR TEST	72
D-1617	ESTER VALUE	105
D-56	FLASH POINT, TCC	72
D-56	FLASH POINT, TCC / BELOW 65F	105
ELECTRODE	FLUORIDE / FLUORINE	105
-- --	FLUORINE, IN GASES	132
D-847/E-346	FREE ACID	77
D-1015/1177	FREEZING POINT (CRYSTALLIZATION)	127
D-891/1298/2111	GRAVITY, SPECIFIC	33
US FDA	HEXANE OR XYLENE INSOLUBLES IN POLYOLEFINS	413
MICRO./POTEN.	HALOGENS, TOTAL	176
SMA 42	HYDROCARBONS	55
- - -	HYDROGEN CYANIDE	99
D-853	HYDROGEN SULFIDE & SULFUR DIOXIDE(+DIST. D-850)	55
D-1957/4274	HYDROXYL VALUE	132
I.R./FTIR	INFARED SCAN, QUALITATIVE	182
D-2120/2193	INHIBITOR CONTENT IN VARIOUS PRODUCTS	quote
D-4590	INHIBITOR IN STYRENE	110
US FDA	INSOLUBLES IN HEXANE/XYLENE	347
D-1959	IODINE VALUE	138
E-291/202/359	IRON CONTENT IN CAUSTIC SODAS	105
SMA 5	IRON CONTENT	105
E-394	IRON, SOLUBLE	83
D-1133	KAURI BUTANOL VALUE	132
UOP 212/163	MERCAPTAN SULFUR	155
PILOT	MOLECULAR WEIGHT OF DODECYL BENZENE	110
GC/MS	MTBE, TRACE (PPM)	451
- - - -	NITRATE	72
D-3228	NITROGEN, KJELDAHL METHOD	193
D-2360	NON-AROMATICS BY GAS CHROMATOGRAPHY	330
D-1353/2109	NON-VOLATILE MATTER (RESIDUE ON EVAPORATION)	110
D-1296	ODOR, RESIDUAL	55
METER	OXYGEN IN VAPOR	110
D-1363	PERMANGANATE TIME / NUMBER	110
- - -	PERMANGANATE / TITRATION NUMBER	110

6) PETROCHEMICALS (CONTD.)

<u>METHOD</u>	<u>TESTS</u>	PRICE PER TEST
E299/E440/E298	PEROXIDE (ACTIVE OXYGEN)	132
D-2340/3703	PEROXIDES IN STYRENE	149
E-70/D-1287	PH, AQUEOUS SOLUTION	50
D-2110	PH, WATER EXTRACTION	72
SMA 595 UOP 262	PHENOL	110
UOP464/D-3160	PHENOL, PHENOLICS	83
HPLC	PHENOTHIOZINE CONTENT	303
--	PHOSPHORUS PENTOXIDE	105
D-2121	POLYMER CONTENT OF STYRENE MONOMER	105
HYDROMETER	PROOF, ALCOHOL	105
D-1016/3799	PURITY BY FREEZING POINT	138
G.C.	PURITY BY GAS CHROMATOGRAPHY	415
D-1218	REFRACTIVE INDEX	125
D-2109	RESIDUE ON IGNITION	125
D-94	SAPONIFICATION NUMBER	125
D-852	SOLIDIFICATION POINT, BENZENE	125
---	SOLUBILITY	125
TITRATION	STRENGTH (PURITY)	125
D-5135	STYRENE IMPURITIES	325
E-291	SULFATES	125
D-3120/2961/4045	SULFUR, TOTAL (PPM LEVEL)	225
EASTMAN	SULFURIC ACID TEST COLOR	125
VISUAL	SUSPENDED MATTER	45
D-2120	TBC IN STYRENE	105
D-1685	THIOPHENE IN BENZENE	127
SMA 42	TINDALL TEST	75
- - -	TITANIUM OXIDE (PIGMENT)	75
--- ---	TITRATION VALUE	75
ICAP/AAS	TRACE METALS (EACH ELEMENT)	105
GRAPHITE FURNACE	TRACE METALS (EACH ELEMENT)	182
HYDRIDE METHOD**	**EXCEPT ARSENIC, SELENIUM, TELLURIUM, MERCURY	182
USP	ULTRA VIOLET ABSORPTION	204
D-445	VISCOSITY, KINEMATIC	115
D-1744/1364/3401	WATER CONTENT, KARL FISCHER METHOD	125
--- ---	WATER EXTRACTION	125
D-1722	WATER MISCIBILITY OF WATER-SOLUBLE SOLVENTS	145
US FDA	XYLENE OR HEXANE INSOLUBLES IN POLYOLEFINS	385

7) GASES & GAS CHROMATOGRAPHY

7A) GENERAL

<u>METHOD</u>	<u>TESTS</u>	
	PURITY	415
	NATURAL GAS	415
	DISTILLATION, SIMULATED	415
	COMPONENT DISTRIBUTION BY QUOTATION	485
	PETROLEUM HYDROCARBON COMPONENT	485
	POLYCHLORINATED BIPHENYLS IN TRANSFORMER OIL	255
	POLYCHLORINATED BIPHENYLS IN BLACK OIL	255
	COMPOSITION, SINGLE COMPONENT	255
	COMPOSITION, EACH ADDITIONAL COMPONENT	125
	COMPOSITING OF GAS SAMPLES	200
	XYLENE ISOMERS	350
	FLUORINE, IN GASES	135

7B) AMMONIA

OXY A-99	CHLORIDE	125
OXY A-101	CHLORINE (IF CHLORIDE TESTED)	125
OXY A-101	CHLORINE (IF NOT TESTED)	150
OXY A-97	INERT GAS	163
OXY GOST-75	IRON	150
OXY A-79/OXY AA	IRON	150
OXY A-77/GOST-75	MOISTURE	150
OXY GOST-75 IR	OIL	181
XOY A-84/AUX IR	OIL	181
OXY A-102/GOST-75	PURITY	313
G.C.	VOLATILE HYDROCARBONS	313

7C) BUTADIENE

D-4423	CARBONYL CONTENT	219
G.C./D-2426	DIMER AND STYRENE	438
D-1157	INHIBITOR (TBC) CONTENT	156
D-1025	NON-VOLATILE RESIDUE	156
MICROCOULOMETER	TOTAL SULFUR	206
D-4468	TOTAL SULFUR	206
D-1364/E-203	WATER BY KARL FISCHER, MODIFIED	169
D-2593	PURITY BY GAS CHROMATOGRAPHY	438

8) LIQUEFIED PETROLEUM GASES (LPG / LNG)

<u>METHOD</u>	<u>TESTS</u>	
UOP 430	AMMONIA	438
UOP 212	CARBONYL SULFUR	281
G.C./D-2163	COMPONENT ANALYSES BY GAS CHROMATOGRAPHY	563
D-1838	COPPER CORROSION	169
VISUAL	DRYNESS	56
D-2713	DRYNESS (FREEZE VALUE)	194
G.C.	FEEDSTOCKS, HIGH PURITY	563
D-2420	HYDROGEN SULFIDE	156
UOP 569	METHANOL	169
G.C.	NATURAL GAS	438
G.C	PROPANE/BUTANE	438
D-1657	SPECIFIC GRAVITY/RELATIVE DENSITY	156
MICROCULOMETER	TOTAL SULFUR	219
D-1267	VAPOR PRESSURE, REID	156
D-1837	VOLATILITY	188
D-2158	RESIDUAL MATTER, WEATHERING	188
- - -	DRAGER TUBE ANALYSIS (EACH COMPONENT)	94

9) SAMPLE PICK-UP AND DELIVERY

For sample pick-up and delivery, please inquire with the local offices for scheduled service (see complete office listing, section F). When scheduled service is unavailable, special delivery arrangements will be based upon published manpower rates and mileage. Minimum charge: \$350.00 per trip.

10) SAMPLE PACKAGING AND SHIPPING

Amspec Services have the facilities and experience to ship most samples anywhere in the world at the client's request. The following fees will apply for service to complete the required documentation preparation (manifests, bills of lading, etc.):

	Non-Restricted Articles	Restricted Articles
One gallon or Less:	\$200.00 per Container	\$350.00 per Container
Larger than One Gallon:	\$300.00 per Container	\$400.00 per Container
Minimum Fee per Shipment:	\$500.00	\$750.00

The client will also be billed for necessary packaging materials, labor, freight and insurance, customs clearance and other forwarding related charges at cost plus 25%.

11) NON-AMSPEC LABORATORY ATTENDANCE

When requested by the client, Amspec Services personnel will attend and observe testing performed in a non-Amspec laboratory. In such cases, Amspec Services' responsibility will be limited to the following:

- An opinion that the tests were performed on the correct sample.
- A report to the client covering those quality assurance protocols that were available.
- All apparatus, instrumentation and measuring devices are assumed to be in calibration and good working order.
- Reagents and standards are accepted as utilized.
- The Laboratory's technicians are assumed qualified.
- Amspec makes no other warranty and Amspec attendance does not imply acceptance of results even when reported on official Amspec documentation.

11) NON-AMSPEC LABORATORY ATTENDANCE (CONTD.)

- Test results are reported for information and guidance only to the client for their potential evaluation and decision to accept or reject them for custody transfer, “referee”, arbitration or similar purposes.
- Amspec is free of any liability for tests carried out by the performing laboratory, which is solely responsible for the results.
- When Amspec is contracted to provide Non-Amspec Laboratory Attendance, the following rates will apply, exclusive of travel and sojourn expense:
 - Technical Staff \$350.00 per hour
 - Management Consultation \$500.00 per hour
 - Minimum 4 hours

12) ON-SITE FIELD TESTING AND MONITORING

Our technical professionals are available to perform on-site sampling and field testing to the client’s specifications. These services may be either dedicated to a specific project and /or in conjunction with Trade Inspection or other field services. Some examples are:

- Oxygenates / Benzene in Reformulated Gasoline by NIR
- Oxygen measurement / Atmosphere of tank
- Water content by Karl Fischer method
- Tindall Testing
- Wall Wash Testing, Petrochemicals
- H2S Monitoring of tank atmosphere
- RVP Gasoline or Naphthas
- Water and Sediment in crude oils

On-site sampling and testing services will be customized to each client’s individual requirements and prices will be quoted for each specific job. As a general guideline, fees will be quoted on the following terms:

Manpower Rate (Technician or Chemist) \$350.00 to \$500.00 per hour.
 plus
 Individual testing charges

When testing services are provided in conjunction with field inspection services, inspection rates and fees will be invoiced in accordance with our Field Inspection Services price schedule.

D) NOTES & PROVISIONS TO PRICE LIST

- 1) Additional fees will be charged as follows for work performed on the following recognized public Holidays:

NEW YEAR'S DAY, MARTIN LUTHER KING DAY, PRESIDENTS DAY, GOOD FRIDAY, EASTER SUNDAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING DAY, CHRISTMAS DAY.

For inspection services \$350.00 per person; for analytical services \$400.00 per analyst in addition to normal analytical and overtime charges.

- 2) At our client's request laboratory work will be performed outside of normal business hours (Monday to Friday, 8:00 am through 5:00 pm). An additional charge of \$ 85.00 per hour analyst will be charged in these cases with a \$350.00 minimum per occasion.
- 3) Travel and subsistence expenses will be billed extra. Automobile mileage is 55 cents per mile with a minimum of \$50.00 (New York Metropolitan Area - \$65.00 minimum). Travel time will be billed in accordance with hourly rates for the appropriate manpower as per section A5.
- 4) When fees are split with other parties, each share will be invoiced on the basis of the price agreement in effect with each party at the time that the service was rendered. Amspec Services will split fees for services rendered to a maximum of four parties.
- 5) Additional job site visits for cleanliness inspection, sampling, gauging before the start and after completion of custody transfer, will be invoiced as per Section A2, A3, or A4.
- 6) Full attendance, stand-by and waiting time will be billed as per Section A5.
- 7) Loss investigation, data analysis, claim preparation and research, litigation and arbitration participation, testimony, deposition, and witnessing will be charged at respective manpower rates as per Section A5, or A11 plus travel and subsistence expenses.
- 8) We observe Federal, State and local laws with respect to worker safety and exposure. If, during the course of our activities, we are required to utilize special equipment and supplies in order to comply with these laws, the client's instructions, or to meet our own safety requirements, charges in addition to those outlined in Sections A1 to A5 apply. Self-contained Breathing Apparatus (SCBA) \$350.00, Cartridge type Respirator \$150.00, full protective suit and boots \$350.00, per visit and unit, each.

A \$700.00 surcharge will be applied to the following products:

- a) Benzene
- b) Phenol
- c) Vinyl Chloride
- d) Acrylonitrile
- e) Products containing more than 300 PPM (IDLH) of Hydrogen Sulfide-H₂S

D) NOTES & PROVISIONS TO PRICE (CONTD.)

On-site tests or monitoring of atmosphere for flammability, oxygen, or toxicity: \$350.00 per confined space, substance and/or inspection in addition to fees per Section A1 to A5.

For our full range on-site testing and monitoring services refer to our separate laboratory price schedule.

- 9) For tank entry and extra sampling beyond custody transfer requirements, see Sections A2 and A3.
- 10) Samples of liquids, at ambient temperature, are retained for 30 days at no charge. Clients requiring samples to be retained for longer periods will be charged \$15.00 per container, per 30 day period. A minimum of \$60.00 per invoiced job will apply. All samples are retained and disposed in accordance with applicable local, State and Federal regulations. Certain chemicals and materials may require specialized disposal, which will be billed additionally, please contact your Amspec Services representative for details.
- 11) Unless otherwise agreed, samples requiring cooling and pressurized sample cylinders will not be retained. For cylinder retention, a rental fee of \$40.00 per day, per unit will be charged. Refrigerated storage, when required, will be invoiced at \$40.00 per day, per sample.
- 12) We calculate and check on Stop Gauge measurements when required by our clients; however, vessel and terminal employees are solely responsible for observation of stop gauges, valve settings, and pumping into, and out of, designated tanks.
- 13) Unless otherwise agreed, our inspectors will attend at start-up and completion of transfers. Every effort will be made to contribute to reduce qualitative risks and quantitative losses to the cargo. However, Amspec Services will accept no responsibility for personal opinions unless these services are expressly contracted by our client.
- 14) Job files will be kept for a maximum of one year unless otherwise agreed with client. On imported cargoes, files will be retained for five years as per US Custom's requirements.
- 15) Split invoicing and documentation beyond two parties will be charged at \$150.00 per additional invoice and report. This charge will be prorated to each client. Crediting and re-invoicing due to change in billing instructions will be charged at a rate of \$150.00.

D) NOTES & PROVISIONS TO PRICE (CONTD.)

- 16) Bunker survey for quantity in conjunction with Trade Inspection Service will be invoiced at \$850.00. A stand-alone bunker survey, depending upon requirements, will be invoiced as per Section A1, A3 or A4.
- 17) Fax reports transmission: \$15.00 per page, Electronic Mail, direct data base access and PC to PC Communication installation available upon request.
- 18) Long distance telephone, sample packing, postal, freight, or courier services including an administrative cost of 25% will be invoiced additionally.
- 19) Offshore transportation charges may be invoiced at a later date upon receipt of transportation invoice, plus associated administration costs of 25%.
- 20) Payment: Net Due upon Receipt of Invoice. Delayed payment subject to finance charge.

E) TERMS AND CONDITIONS

IMPORTANT: No person should accept, use or rely upon Amspec Services documents or the information contained in them without understanding all of the details of the engagement under which they were issued.

Amspec Services conducts inspection, testing and quantity and quality control services pursuant to agreements with and instructions from its clients (“Services”). In the course of performing such services, Amspec develops information (“Information”) and generates documents such as reports and certificates (“Documents”). By accepting, using or relying upon such Information or Documents, the client for whom the Services are performed, and any person who relies upon the Information or the Documents, agree to the following terms and conditions.

- 1) Any use of, or reliance upon, the Information or the Documents by the client is conditioned upon the timely payment of all fees. Client will pay late charges of 1.5% per month on all invoices not paid within 30 days, plus collection costs including attorney’s fees.
- 2) Amspec does not, by performing Services or by Documents, assume, abridge, abrogate or undertake to discharge any duty or responsibility of the client to any person or entity.
- 3) Amspec undertakes to perform only the Services agreed upon between Amspec and the client. Neither the title of a Document or the nature of a commodity implies that any particular procedures have been followed or tests performed other than as specified in the Document(s).
- 4) Amspec warrants that it will perform the Services agreed upon with its client in a workmanlike manner. Amspec makes no further warranty of any kind, expressed or implied.
- 5) Any person accepting, using, or relying upon Information or Documents agrees in consideration for Amspec performing the services at the fee charged that the professional liability of Amspec Services is limited to the amount of the fee paid for the services.
- 6) Amspec Services expressly disclaims liability as an insurer or guarantor. Any client or other person seeking greater protection from loss or damage than is provided for herein should obtain appropriate insurance.
- 7) The laws of the State where the Services were performed shall govern acceptance, use or reliance upon Information or Documents from Amspec Services.
- 8) No person is authorized to waive or modify any of the foregoing terms and conditions orally. Any written waiver or modification must be signed by an officer of Amspec Services, LLC.

F) LIST OF OFFICES AND ADDRESSES

Corporate Headquarters and New York Harbor Operations

Amspec Services LLC
360 East Elizabeth Avenue
Linden NJ 07036

Phone #: **908 862 7272 or 800 286 2208 24 hr contact numbers**
Fax #: 908 862 7297 or 800 977 2208

For all nominations and generalized communications we have set up the following email account <mailto:operations@amspecllc.com>. This is automatically copied to everyone in the operations group and constantly monitored.

Corporate

	Home	Cell	email
James Ford	908-351-2678	908-482-0258	jford@amspecllc.com

Houston Tx.

Amspec Services LLC
1818A Federal Road
Galena Park TX 77015

Phone #: **713 330 1000 24 hr contact number**
Fax #: 713 330 4000

For all nominations and generalized communications we have set up the following email account houstonoperations@amspecllc.com. This is automatically copied to everyone in the operations group and constantly monitored.

Houston

	Home	Cell	email
Ruben Hernandez	281-997-3876	832-473-1618	rhernandez@amspec.cc

Or Call Nationwide 24 hours a day:

800 286 2208 Phone
800 997 2208 Fax