

List of Tests and the Standard Test Methods Used.

Property	Standard Test Method/Instrument	Sample Amount Needed	Cost Per Test
Operability Properties			
Kinematic Viscosity (at -20 to 100°C)	ASTM D445	30 mL	\$40
Flash Point	ASTM D93	160 mL	\$60
Water and Sediment	ASTM D2709	200 mL	\$30
Specific gravity, API	----	300 mL	\$30
Cloud Point	ASTM D2500	150 mL	\$50
Pour Point	ASTM D97	150 mL	\$50
Cold Soak Filtration	ASTM D7501	700 mL	\$50
Cold Filter Plugging Point	ASTM D6371	150 mL	\$50
Chemical Properties/Composition			
Sulfur Content	ASTM D5453	5 mL	\$70
Acid Number	ASTM D664	100 mL	\$60
Bound Water	Karl Fischer	20 mL	\$60
Total and Free Glycerin	ASTM D6584	5 mL ^a	\$150
Monoglyceride Content	ASTM D6584	5 mL ^a	incl.
Iodine Number	Wijs Titration	20 mL	\$70
Fatty acid profile (GC/MS)	----	10 mL	\$150
Metal Content			
Sulfated Ash Test	ASTM D874	100 mL	\$70
Phosphorus Content	ICP – OES	40 mL ^b	\$70
Calcium & Magnesium Content	EN 14538	40 mL ^b	\$70
Sodium/Potassium Content	EN 14538	40 mL ^b	incl.
Combustion Properties/Other Properties			
Carbon Residue (100% sample)	ASTM D4530	15 mL	\$60
Oxidative Stability of Biodiesels (Rancimat)	EN 14112 or EN 15751	40 mL	\$100
Oxidative Stability of Fuels (RSSOT)	ASTM D7545	15 mL	\$70
Distillation Temperature, T90 (fuels)	ASTM D86	200 mL	\$70
Distillation Temperature, AET (biodiesel)	ASTM D1160	400 mL	\$100
Copper Strip Corrosion	ASTM D130	100 mL	\$30
Cetane Number (diesel, calculated)	FTIR (IROX)	60 mL ^c	\$60
Other Tests			
Oil Content (oilseeds)	Soxhlet Extraction	20 mL	\$100
FTIR/ATR analysis	----	5 mL	\$100
Aromatic Content (diesel)	FTIR (IROX)	60 mL ^c	incl.

Note: Amounts with the same letter means that the properties are determined by one instrument and at the same time. The abbreviation “incl.” means the test is part of another test.