

Biofuel Testing, Inspection and R&D: From Feedstocks to Advanced Bioheating



Biofuel Laboratory capabilities include:

Chromatography:

- Gas Chromatography
- Liquid Chromatography
- Ion Chromatography
- HPLC/UPLC
- Mass Spectrometry
- GC/MS
- GC/ICP/MS
- LC/MS/, LC-MS/MS

Immunochemistry:

- Immunoassays (ELISA, ECL)
- Cell-based Immunogenicity

Assays:

- Vibrational Spectroscopy
- FTIR, NIR
- ATR-FTIR
- Raman
- XRF, XRD

Thermal Analysis:

- TGA, DSC, TMA, DTG

Elemental Analysis:

- ICP (MS & OES), AA

Surface Microscopy:

- SEM, AFM
- TEM
- XPS
- EDXA
- SSIMS
- Optical

Structural Analysis:

- NMR

Physical Properties Testing:

- ASTM, other

Confidence
through
expertise



Intertek supports clients working with a wide range of Biofuels:

Biofuel Products:

- Biodiesel, Ester
- Biogas
- Biomass
- Butanol
- Ethanol
- Ether ETBE
- MTBE
- Renewable Crude Oil
- Renewable Diesel, Hydrocracker
- Renewable Gasoline
- Renewable Jet

Biofuel Feedstocks:

- Algae
- Animal Fats
- Corn
- Grasses
- Municipal Solid Waste
- Sugars
- Vegetable Oil
- Wood
- Other feedstocks

Biofuel Technology Support:

- Catalysis
- Cellulosic
- Fermentation
- Gasification
- Hydrolysis
- Hydroprocessing
- Synthetic Biology
- Additional Technologies

Biofuel Sustainability:

- Sustainability Auditing
- Verification
- Certification to 2BSvs, ISCC, RSPO and other standards

Biofuel Testing, Inspection and Auditing Standards

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|-------------------------------|--|
| Biodiesel | ASTM D 6751, EN 14214, BQ 9000, ASTM D 7467 |
| Ethanol | ASTM D 4806, ASTM D 5798, EN 15376 |
| Bioheating | ASTM D 396, EN 14213 |
| Biomass | AOCS, AAOC, FOSFA, GAFTA |
| Aviation | ASTM D 1655, ASTM D 7566, DEF STAN 91-91, JIG, MIL-DTL-83122 (JP8), MIL-DTL-5624 (JP5) |
| Transportation Sustainability | Colonial, Explorer, Magellan, MARPOL, ISO 2BSvs, ISCC, RSPO, other standards |

Intertek's extensive analytical testing capabilities and R&D expertise are available on a global basis to the biofuels industry.



Intertek provides a wide range of services to support the world's biofuels industries, with 24/7 capabilities offered on a global basis.

Biofuel related services include:

- **Quality Control during production, release and custody transfer**
- **Troubleshooting and contamination support**
- **Blending and fuel specification additive treatments**
- **Bulk Cargo sampling and inspection**
- **Feedstock and raw materials evaluation**
- **Quality oversight programs**
- **Microbial infestation control**
- **And more**

Intertek

Valued Quality. Delivered.

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