

# Bio Tech Oils UK Ltd

## Technical Details & Standards

There are three existing specification standards for diesel & Biodiesel fuels (**EN590, DIN 51606 & EN14214**).

**EN590** (actually EN590:2000) describes the physical properties that all diesel fuel must meet if it is to be sold in the EU, Czech Republic, Iceland, Norway or Switzerland. It allows the blending of up to 5% Biodiesel with 'normal' DERV - a 95/5 mix. In some countries such as France, all diesel sold routinely contains this 95/5 mix.

**DIN 51606** is a German standard for Biodiesel, is considered to be the highest standard currently existing, and is regarded by almost all vehicle manufacturers as evidence of compliance with the strictest standards for diesel fuels. The vast majority of Biodiesel produced commercially meets or exceeds this standard.

**EN14214** EN14214 is the standard for biodiesel now having recently been finalized by the European Standards organisation. It is broadly based on DIN 51606.

### Specifications:

Criteria	Derv (EN590)	Biodiesel (DIN51606)	Biodiesel (EN14214)
Density @ 15°C (g/cm <sup>3</sup> )	0.82-0.86	0.875-0.9	0.86-0.9
Viscosity @ 40°C (mm <sup>2</sup> /s)	2.0-4.5	3.5-5.0	3.5-5.0
Flashpoint(°C)	>55	>110	>101
Sulphur (% mass)	0.20	<0.01	<0.01
Sulphated Ash (% mass)	0.01	<0.03	0.02
Water (mg/kg)	200	<300	<500
Carbon Residue (% weight)	0.30	<0.03	<0.03
Total Contamination (mg/kg)	Unknown	<20	<24
Copper Corrosion 3h/50°C	Class 1	Class 1	Class 1
Cetane Number	>45	>49	>51
Methanol (% mass)	Unknown	<0.3	<0.2
Ester Content (% mass)	Unknown	>96.5	>96.5
Monoglycides (% mass)	Unknown	<0.8	<0.8
Diglyceride (% mass)	Unknown	<0.4	<0.2
Tridlycende (% mass)	Unknown	<0.4	<0.4
Free Glycerol (% mass)	Unknown	<0.02	<0.02
Total Glycerol (% mass)	Unknown	<0.25	<0.25
Lodine Number	Unknown	<115	120
Phosphor (mg/kg)	Unknown	<10	<10
Alcaline Metals Na. K (mg/kg)	Unknown	<5	<5