



Green Biofuels Ireland

CREATING POSITIVE ENERGY

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CERTIFICATE OF QUALITY

GBI REFERENCE	TYPICAL	SAMPLE ID	GBI TYPICAL RESULTS
DATE		SAMPLE LOCATION	201100, 201200
GRADE	EN 14214 FAME	BIODIESEL	

TEST	METHOD	UNITS	SPECS		GBI RESULTS TYPICAL	
			MIN	MAX		
Fame content	EN 14103	%m/m	96.5		99	
Linolenic content	EN 14103	%m/m		12.0	1.1	
Iodine value	EN 14111	%m/m		120	50.3	*
Free Glycerol	EN 14105	%m/m		0.02	0.02	
Monoglyceride	EN 14105	%m/m		0.70	<0.01	
Diglyceride	EN 14105	%m/m		0.20	<0.01	
Triglyceride	EN 14105	%m/m		0.20	<0.01	
Total Glycerol	EN 14105	%m/m		0.25	0.02	
Methanol content	EN 14110	%m/m		0.20	<0.01	
Water content	EN ISO 12937	mg/kg		500	48	
Sulphated Ash content	ISO 3987	%m/m		0.02	0.001	*
Acid Value	EN 14104	mg KOH/g		0.50	0.14	
Viscosity @ 40 Deg C	EN ISO 3104	cSt	3.50	5.00	4.6	*
Oxidation Stability	EN 14112	hours	8.0		9.2	
Density @ 15 C	EN ISO 3675	kg/m ³	860	900	880	
CFPP	EN 116	°C				
Total contamination	EN 12662			24	1	*
Flash Point	EN ISO 2719	°C	101		185	*
Sulphur content	EN ISO 20846	mg/kg		10.0	6.4	*
Cloud Point	DIN EN 23015	°C			17	*
Cetane Number	EN ISO 5165		51.0		65	*
Copper corrosion 3hr @ 50	EN ISO 2160	rating	class 1		1	*
Methylester ≥ 4 double bonds	EN 15779	%m/m		1	<0.6	*
Phosphorous content	EN 14107	mg/kg		4.0	<0.5	*
Group 1 metals(Na+K)	EN 14108+9	mg/kg		5.0	<1	*
Group 2 metals(Ca+Mg)	EN 14538	mg/kg		5.0	<1	*

All tests marked with a * denotes typical values, these tests carried out at the 3rd Party Laboratory, ASG Analytik-Service accreditation according to DIN EN ISO/IEC 17025.

I certify that above product meets prescribed requirements stated in EN 14214 specification.

Signed

Joe Jewison, Quality control Supervisor.

