

## Quality Report: GZ23-02423.001

LONGYAN ZHUOYUE NEW ENERGY CO., LTD.  
CHINA

The results shown in this test report specifically refer to the sample(s) tested as received unless otherwise stated. All tests have been performed using the latest revision of the methods indicated, unless specifically marked otherwise on the report. Precision parameters apply in the determination of the below results. Users of analytical results, when establishing conformance with commercial or regulatory requirements should note the full provisions of ASTM D3244, IP 367 and ISO 4259 in that context, the default confidence level of petroleum testing having been set at the 95% confidence level. Your attention is specifically drawn to Sections 7.3.6., 7.3.7 and 7.3.8 of ASTM D3244. With respect to the UOP methods listed in the report below the user is referred to the method and the statement within it specifying that the precision statements were determined using UOP Method 999. This Test Report is issued under the Company's General Conditions of Service (copy available upon request or on the company website at www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. This report shall not be reproduced except in full, without the written approval of the laboratory.

JOB ORDER NO. :	COWOXM2300190-01MD	BOSS ORDER NO.:	--
CLIENT ID :	N/A	VESSEL :	STOLT ISLAND
LOCATION :	Haiao Terminal,Xiamen,China	PRODUCT DESCRIPTION :	Biodiesel - FAME
SAMPLE SOURCE :	Shore Tank	SOURCE ID :	T-303
SAMPLE TYPE :	Running Before Loading	SAMPLE BY :	SGS
SAMPLED :	13/08/2023	RECEIVED :	13/08/2023
ANALYSED :	13/08/2023 - 14/08/2023	COMPLETED :	14/08/2023
CONTAINER:	1×4L Can	SAMPLE STATE:	Liquid in Can
SAMPLE COMMENT :	THE PRODUCT MEETS EN14214 SPECIFICATIONS WITH CFPP AT MAX 5 DEGREE CELSIUS,WATER CONTENT AT MAX 350PPM, AND MONOGLYCERIDE AT MAX 0.25%.		
REPORT COMMENT :	1.The cetane number tested by Guangdong Huizhou Testing Center for Petroleum Products Quality(CNAS L0970). 2.The test report shall only be used for clients' scientific research, teaching, internal quality control, product research and development, etc... and just for internal reference.		

PROPERTY	METHOD	RESULT UNITS	MIN	MAX
<b>Total Ester Content (C6-C24) of FAME</b>	EN 14103:2020	98.1 % (m/m)	96.5	--
<b>Linolenic Acid Methyl Ester</b>	EN 14103:2020	2.4 % (m/m)	--	12.0
<b>Water Content by Coulometric KF</b>	EN ISO 12937:2000	210 mg/kg	--	350
<b>Iodine Value</b>	EN 14111:2022	81 g l <sup>2</sup> /100g	--	120
<b>Acid Value</b>	EN 14104:2021	0.33 mg KOH/g	--	0.5
<b>Methanol Content</b>	EN 14110:2019	<0.01 % (m/m)	--	0.2
<b>Free and Total Glycerol and Mono-, Di-, Triglyceride</b>	EN 14105:2020			
Monoglyceride		<0.10 % (m/m)	--	0.25
Diglyceride		<0.10 % (m/m)	--	0.2
Triglyceride		<0.10 % (m/m)	--	0.2
Free Glycerol		0.011 % (m/m)	--	0.02
Total Glycerol		0.015 % (m/m)	--	0.25
<b>Density at 15 °C</b>	ISO 12185:1996/Cor.1:2001	878.7 kg/m <sup>3</sup>	860	900
<b>Kinematic Viscosity at 40°C</b>	ISO 3104:2020	4.314 mm <sup>2</sup> /s	3.5	5.0
<b>Sulfated Ash</b>	ISO 3987:2010/Cor.1:2011	<0.005 % (m/m)	--	0.02
<b>Cold Filter Plugging Point (CFPP)</b>	EN 116:2015	5 °C	--	5
<b>Carbon Residue - Micro Method</b>	ISO 10370:2014	<0.05 % (m/m)	--	0.05
<b>Sulfur</b>	EN ISO 20846:2019	9.8 mg/kg	--	10
<b>Total Contamination</b>	EN 12662:2014	<12 mg/kg	--	24
<b>Copper Corrosion 3 h at 50°C</b>	ISO 2160:1998	1a --	--	1a
<b>Flash Point Pensky-Martens Closed Cup Automat</b>	EN ISO 2719:2016+Amd1-2021(Method C)			
Pensky-Martens Flash Point (Closed cup)		180.0 °C	101	--
<b>Phosphorus Content</b>	EN 14107:2003	<4.0 mg/kg	--	4.0
<b>Ca, K, Mg and Na in FAME by ICP-OES</b>	EN 14538:2006			

REPORTED BY

AUTHORISED SIGNATORY

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PROPERTY	METHOD	RESULT UNITS	MIN	MAX
Group I Metals Content (Potassium and Sodium)		<2.0 mg/kg	--	5.0
Group II Metals Content (Calcium and Magnesium)		<2.0 mg/kg	--	5.0
Oxidation Stability at 110°C	EN 14112:2020	>8.0 h	8	--
Cetane Number	ISO 5165:2020	56.1 Rating	51	--
Polyunsaturated Fatty Acid Methyl Esters Content	EN 15779:2009+A1:2013	<0.60 % (m/m)	--	1.00

----- End of Analytical Results -----

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