

Léman Bio Energie SA  
Route de Pallatex 1  
1163 Etoy  
SWITZERLAND

Your reference : -  
Your order no. : QM Biodiesel CH 2020-1  
Date of order : 05.02.2020  
Sample Receipt : 06.02.2020  
Sampling : Customer  
Start of test period : 06.02.2020  
End of test period : 11.02.2020  
Report date : 11.02.2020  
Page : 1 of 1

## Report No. : 2800953-1

Sample : V A 27.01.2020 Léman Bio Energie SA, Route de Pallatex 1, CH1163 Etoy  
Proof number : 255'014  
Appearance : Color yellowish, clear, no visible impurities and water  
Container : PE/PP bottle 1000 ml  
ASG-ID : 2800953\_001

Seal No. : -

Parameter	Method	Result	DIN EN 14214 :2014		Unit
			min.	max.	
Ester content	DIN EN 14103 :2015	94,3	96,5	-	% (m/m)
Density (15 °C)	DIN EN ISO 12185 :1997	884,4	860	900	kg/m <sup>3</sup>
Kin. viscosity (40 °C)	DIN EN ISO 3104 :1999	4,947	3,50	5,00	mm <sup>2</sup> /s
Flash point	DIN EN ISO 2719 :2016	165,5	101	-	°C
CFPP	DIN EN 116 :2018	+1	-	*	°C
Sulfur content	DIN EN ISO 20884 :2011	<5 (1,5)	-	10	mg/kg
Cetane Number (ICN)	DIN EN 17155 :2018 (a)	54,1	51,0	-	-
Sulfated ash (775 °C)	ISO 3987 :2010	<0,01	-	0,02	% (m/m)
Water content	DIN EN ISO 12937 :2002	474	-	500	mg/kg
Total contamination	DIN EN 12662 :1998	2	-	24	mg/kg
Copper strip corrosion	DIN EN ISO 2160 :1999	1	-	1	Corr.°
Oxidation stability	DIN EN 14112 :2016	2,8	8,0	-	h
Acid value	DIN EN 14104 :2003	0,068	-	0,50	mg KOH/g
Iodine value	DIN EN 16300 :2012	88,4	-	120	g Iodine/100g
Linolenic acid ME content	DIN EN 14103 :2015	1,2	-	12,0	% (m/m)
Polyunsaturated Methyl Esters	DIN EN 15779 :2013	<0,60	-	1,00	% (m/m)
Methanol content	DIN EN 14110 :2019	0,06	-	0,20	% (m/m)
Free glycerol content	DIN EN 14105 :2011	0,001	-	0,02	% (m/m)
Monoglyceride content		0,05	-	0,70	% (m/m)
Diglyceride content		0,11	-	0,20	% (m/m)
Triglyceride content		0,02	-	0,20	% (m/m)
Total glycerol content		0,032	-	0,25	% (m/m)
Phosphorous content	DIN EN 14107 :2003	<4 (1,0)	-	4,0	mg/kg
Alkali content (Na+K)	DIN EN 14538 :2006	<1	-	5,0	mg/kg
Metal Content II (Ca+Mg)		1,4	-	5,0	mg/kg
Cloud point	DIN EN 23015 :1994	+7	-	*	°C

\*acc. national specifications



Jürgen Bernath (Technical manager)

(a) This method is not part of the accreditation.

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