

## Analysis Report: KO20-01163.001

Date: Dec/30/2020  
TANDLIANWALA SUGAR MILLS LTD  
66 L GULBERG II  
LAHORE  
PAKISTAN

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This laboratory is accredited under ISO/IEC 17025. The results reported herein have been performed in accordance with the laboratory's term of accreditation except calibrations/tests marked with an asterisk (\*) in this report which are not within the scope of accreditation for our laboratory.

CLIENT ORDER NUMBER :	EMAIL DATED 24-12-2020	SGS ORDER NO.:	3009231
CLIENT ID :	TANDLIANWALA	VESSEL :	-
LOCATION :	Punjab Distrilleries	PRODUCT DESCRIPTION :	Ethanol - Ethanol
SAMPLE SOURCE :	TSML 02 online sample fiq550	SOURCE ID :	TSML 02 online sample fiq550
SAMPLE TYPE :	-	SAMPLE BY :	SGS
SAMPLED :	Dec/24/2020 12:27	RECEIVED :	Dec/24/2020 12:27
ANALYSED :	Dec/29/2020 16:01	COMPLETED :	Dec/30/2020 09:59
SUB-SAMPLE :	[1: 500mL Glass Bottle]		

PROPERTY	METHOD	RESULT UNITS	MIN	MAX
<b>Appearance *</b>	VIS 000	Clear Liquid, --- free from suspended matter	Clear liquid free	
<b>Odour</b>	ODOUR	Neutral ---	Neutral	--
<b>Platinum Cobalt Colour</b>	ASTM D1209	<5 Pt/Co Colour	Clear	--
<b>Alcoholic Strength - Ethanol</b>	ASTM D4052 + OIML	96.39 % (V/V)	96.2	--
<b>Pernmanganate Time of Alcohol at 20°C §</b>	ASTM D1363	33 min	32	--
<b>Pernmanganate Time of Ethanol at 15°C §</b>	ASTM D1363	49 min	35	--
<b>Acetaldehyde *</b>	OGC TG ETOH-02	<2.0 mg/L	--	05
<b>Crotonaldehyde *</b>	OGC TG ETOH-02	<2.0 mg/L	--	--
<b>Ethylacetate *</b>	OGC TG ETOH-02	<2.0 mg/L	--	05
<b>Furfural *</b>	OGC TG ETOH-02	ND mg/L	Not Detected	
<b>(LDL = 2.0 mg/l)</b>				
<b>Higher Alcohols (without IPA) *</b>	OGC TG ETOH-02	<2.0 mg/L	--	05
<b>Iso Propanol *</b>	OGC TG ETOH-02	4.47 mg/L	--	15
<b>n-Propanol *</b>	OGC TG ETOH-02	<2.0 mg/L	--	05
<b>Iso Butanol *</b>	OGC TG ETOH-02	<2.0 mg/L	--	05
<b>n-Butanol *</b>	OGC TG ETOH-02	<2.0 mg/L	--	05
<b>iso-Pentanol *</b>	OGC TG ETOH-02	<2.0 mg/L	--	05
<b>n-Pentanol *</b>	OGC TG ETOH-02	<2.0 mg/L	--	05
<b>Methanol *</b>	OGC TG ETOH-02	<2.0 mg/L	--	20
<b>Diacetyl *</b>	OGC TG ETOH-02	ND mg/L	NIL	--
<b>(LDL = 2.0 mg/l)</b>				

§ - Analyte not in published method scope

REPORTED BY



ZEESHAN AKBAR  
Chemist

AUTHORISED SIGNATORY



SYED IFTIKHAR AHMED  
Manager Lab



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PROPERTY	METHOD	RESULT UNITS	MIN	MAX
<b>Acetone *</b> (LDL = 2.0 mg/l)	OGC TG ETOH-02	ND mg/L	NIL	--
<b>1,4-Dioxane *</b>	OGC TG ETOH-02	<2.0 mg/L	--	--
<b>Acidity (as Acetic Acid)</b>	ASTM D1613	7.4 mg/L	--	20
<b>Nonvolatile Matter</b>	ASTM D1353	0.6 mg/100mL	--	15
<b>Total and Potential Inorganic Sulfate and Chloride by IC *</b>	ASTM D7328			
<b>Total Inorganic Chlorides Concentration *</b>		<0.75 mg/L	--	0.75
<b>Water Miscibility</b>	ASTM D1722	Passes Test ---	--	--
<b>Nitrogen</b> (LDL = 0.3 mg/kg)	ASTM D4629	ND mg/L	Not Dctected	
<b>Total Acidity (as Acetic acid) *</b>	CEE 625/03 Met. 6	3.73 mg/L	--	10
<b>Determination of Lead in Water by Direct AAS *</b>	ASTM D3559 (Method A)			
<b>Lead Content *</b> (LDL = 1.0 mg/l)		ND mg/L	NIL	--
<b>Absorbance at 220nm § *</b>	UV-SGS-CORP-13.001	0.1635 Abs.	--	0.250
<b>Absorbance at 230nm *</b>	UV-SGS-CORP-13.001	0.0815 Abs.	--	0.120
<b>Absorbance at 240nm *</b>	UV-SGS-CORP-13.001	0.0348 Abs.	--	0.060
<b>Absorbance at 270nm *</b>	UV-SGS-CORP-13.001	0.0008 Abs.	--	0.020
<b>Impurities in Ethanol - Qualitative *</b>	UV-SGS-CORP-13.001	Smooth ---	Smooth	--

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

§ - Analyte not in published method scope

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REPORTED BY

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