V1155 KOPTEC , 55 Gallon

CERTIFICATE OF ANALYSIS

ETHYL ALCOHOL USP/Multicompendial 190 PROOF

Lot # **293010** Manufactured **October 2020**

Recommended Retest date is three years from the date of manufacture

Parameter	Monograph	UofM	Specifications	Result
Assay – ethyl alcohol	USP/BP/EP/JP	v/v%	94.9-96.0	95.0
Specific gravity @ 15.56°C	USP	N/A	0.8120-0.8160	0.8160
Specific gravity @15.0 °C	JP	N/A	0.8140-0.8160	0.8160
Relative Density@ 20.0 °C	BP/EP	N/A	0.8051-0.8124	0.8120
Identification Test A	USP Test	N/A	Specific Gravity	Pass
Identification Test A	BP/EP	N/A	Relative Density	Pass
Identification Test B	USP/BP/EP	N/A	Conforms to IR Spectra	Pass
Identification Test B (1)	JP	N/A	Conforms to IR Spectra	Pass
Identification Test C	BP/EP	N/A	Colorimetric Test	Pass
Identification Test D	BP/EP	N/A	Precipitation Test	Pass
Color	USP/JP	N/A	Color of water	Pass
Clarity	USP	N/A	Clear	Pass
Clarity	JP	N/A	Clear	Pass
Water	USP	v/v%	4.0-5.1	5.0
Appearance	BP/EP	N/A	Clear, Colorless	Pass
Non volatile residue	USP/BP/EP/JP	ppm	≤ 25	0.0

Volatile Impurities

Sum of Acetal & Acetaldehyde	USP/BP/EP	ppm	≤ 10	0.0
Benzene	USP/BP/EP	ppm	≤ 2	0.0
Methanol	USP/BP/EP	ppm	≤ 100	1
Summary of secondary peaks	USP/BP/EP	ppm	≤ 300	0.0
For Volatile impurities	JP	Meets the requirement of test		Pass
Acidity (or alkalinity)	USP/BP/EP	ppm	< 30 as acetic acid	Pass
Acidity or alkali	JP	N/A	Colorimetric Test	Pass
UV absorbance @ 240 nm	USP/BP/EP/JP	A	≤0.40	<0.40
UV absorbance @ 250-260 nm	USP/BP/EP/JP	A	≤0.30	<0.30
UV absorbance @ 270-340 nm	USP/BP/EP/JP	A	≤0.10	<0.10
UV absorbance @ 235-340 nm	USP/BP/EP/JP	N/A	The Spectrum shows a steadily descending curve with no observable Peaks or shoulders	Pass

Reviewed By

Date: October 2020

Karen Wend
Manager, Quality and Technical Services
COA Template revised 12/01/2015

BSE/TSE Statement: There are no materials of animal origin in the raw materials or in the process aides used to manufacture any DLI products.