

CERTIFICATE OF ANALYSIS

PRODUCT NAME : Ethyl alcohol

GRADE : EP

LOT NO. : E0059ME

CATALOG NO. : 49.63.3018

CAS NO. : [64-17-5]

Molecular formula : C₂H₅OH

Store Temperature : 1~30°C

TEST ITEM	SPECIFICATION	TEST RESULT
Assay(as Sp. Gr.)	94.8 ~ 95.8 %	95.8 %
Solubility in water	passes test	passes test
Specific gravity(20/20°C)	0.810 ~ 0.813	0.810
Non-volatile matters	below 0.003 %	below 0.003 %
Acid	below 0.002 %	below 0.002 %
Alkali	below 0.0001 %	below 0.0001 %
Aldehyde & Ketone	below 0.001 %	below 0.001 %
Heavy metals(as Pb)	below 0.0002 %	below 0.0002 %
Fusel oil(as C ₅ H ₁₂ O)	below 0.004 %	below 0.004 %
Methyl alcohol	below 0.02 %	below 0.02 %
Substances darkened by H ₂ SO ₄	passes test	passes test
Benzene & other organic impurities	passes test	passes test
Appearance : clear colorless liquid		<u>PASSES TEST</u>
Identification : To 5ml of a solution(1 in 10) add 1ml of 1N sodium hydroxide, then slowly(over a period 3minutes)add 2ml of 0.1N iodine: the odor of iodoform develops, and a yellow precipitate is formed within 30 minutes.		<u>PASSES TEST</u>
Melting point : -114 °C	Boiling point : 78.15 °C	

Test Method : JIS K 8102

Test Date : May 03, 2012

Tested by : Kim Joong Tae



Conclusion : PASS

Delivery Date : Jun 05, 2012

Certified by : Lee Woo Young

