



RAYONG LABORATORY ADDRESS :
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CERTIFICATION OF ANALYSIS
(Food Grade Specifications)

| REPORT DESCRIPTION : | | | | | | |
|---|---------|-----------------------------|---------------------------------------|------------------------|-------|------------------------|
| REPORT No. : | | | REPORT DATE : | | | |
| ANALYSIS No. : | | | ANALYSIS DATE : | | | |
| SERVICE ORDER AGREEMENT No. : | | | SAMPLE RECEIVED DATE : | | | |
| EXPORT INVOICE No. or PO No. / DATE : | | | ANALYSIS BY : | | | |
| CUSTOMER DESCRIPTION : | | | | | | |
| CUSTOMER NAME : | | | | | | |
| CUSTOMER ADDRESS : | | | | | | |
| TEL. No. / FAX. No. : | | | | | | |
| Attn. to : | | | | | | |
| SAMPLE DESCRIPTION (By Customer) : | | | | | | |
| SAMPLE TYPE : | | | SAMPLING RECEIVED IN | | | |
| SAMPLE POINT / LOCATION : | | | - Cylinder No. : | | | |
| SAMPLING DATE : | | | - Sampling Kit : Small Cylinder no. : | | | |
| SAMPLING TIME : | | | Beaker no. : | | | |
| SAMPLING By : | | | Sampling Bags no. : | | | |
| ANALYSIS DESCRIPTION : | | | | | | |
| TEST PARAMETER | UNIT | TEST METHOD | ISBT Reference no. | TEST RESULT | DL | SPECIFICATION |
| CO2 Purity (Assay) | % V/V | Zahn & Nagel | ISBT 2.0 | 99.99 | 99.90 | Min. 99.90 |
| Moisture Content / Water (H ₂ O) | ppm V/V | Moisture Analyzer | ISBT 3.0 | 2.0 | 0.25 | Max. 20.0 |
| Non-Volatile Residue (NVR) | ppm W/W | Gravimetry | ISBT 8.0 | nd | 1.5 | Max. 10.0 |
| Volatile Hydrocarbon (THC) (as CH ₄) | ppm V/V | GC - FID | ISBT 10.0 | 1 | 0.4 | Max. 50.0 |
| Oxygen (O ₂) | ppm V/V | Inhouse method ² | ISBT 5.0 | 1 | 0.7 | Max. 50.0 |
| Carbon Monoxide (CO) | ppm V/V | Inhouse method ² | ISBT 5.0 | nd | 0.5 | Max. 10.0 |
| Acetaldehyde | ppm V/V | Inhouse method ⁵ | ISBT 11.0 | nd | 0.1 | Max. 0.5 |
| Nitric Oxide | ppm V/V | Detector Tube | ISBT 7.2 | nd | 0.25 | Max. 2.5 |
| Nitrogen Dioxide | ppm V/V | Detector Tube | ISBT 7.1 | nd | 0.1 | Max. 2.5 |
| Total Sulfur - (TS) | ppm V/V | GC - SCD | ISBT 13.0 | nd | 0.05 | Max. 0.5 |
| Carbonyl Sulfide | ppm V/V | Inhouse method ⁴ | - | nd | 0.05 | Max. 0.5 |
| Hydrogen Sulfide | ppm V/V | Inhouse method ⁴ | - | nd | 0.05 | Max. 0.5 |
| Sulfur Dioxide (SO ₂) | ppm V/V | GC - SCD | ISBT 14.0 | nd | 0.05 | Max. 5.0 |
| Phosphine, Hydrogen Sulfide and Other organic reducing substances | - | JECFA Test | ISBT 4.0 | Pass JECFA Test | na | Pass JECFA Test |
| Acidity | - | JECFA Test | - | Pass JECFA Test | na | Pass JECFA Test |
| Appearance in Water | - | Organoleptic | ISBT 16.0 | Colorless | na | Colorless |
| Odor in Water | - | Organoleptic | ISBT 16.0 | No characteristic Odor | na | No characteristic Odor |
| Taste in Water | - | Organoleptic | ISBT 16.0 | Tasteless | na | Tasteless |

Note :
 (1) Inhouse method WI-LAB08 based on International Society of Beverage Technologists (ISBT)- 3rd Revision, 09 Mar 2019, Procedure 10.0
 (2) Inhouse method WI-LAB06 based on ASTM D8098-17.
 (3) Inhouse method WI-LAB03 based on International Society of Beverage Technologists (ISBT)- 3rd Revision, 09 Mar 2019, Procedure 12.0
 (4) Inhouse method WI-LAB04 based on International Society of Beverage Technologists (ISBT)- 3rd Revision, 09 Mar 2019, Procedure 13.0
 (5) Inhouse method WI-LAB05 based on International Society of Beverage Technologists (ISBT)- 3rd Revision, 09 Mar 2019, Procedure 11.0
 (*) Test marked "Not TISI Accredited" in this certificate are not included in the TISI Accreditation Schedule for our laboratory.
 - The reported uncertainty is an expanded uncertainty calculated using a coverage factor of k=2 which gives a level of confidence of approximately 95%
 DL = Detection Limit. nd = less than the detection Limit. ppm = parts per million. ppb = parts per billion. na = not available.

Review by :

Approved by :

- Remark :
- Partial duplication of this certificate without documentary permission from Laboratory is prohibited.
 - This certificate is valid only for the test and mentioned sample(s).
 - The laboratory disclaims responsibility for The information is supplied by the customer and can affect the validity of results.
 - The certificate that the results apply to the sample as received.
 - The laboratory does not have a policy to reporting opinions , interpretations and statements of conformity.
 - The laboratory disclaims in the report indicating which results may be affected by the deviation.