



Shahmurad Sugar Mills Ltd.

CERTIFICATE OF ANALYSIS

Goods: ANHYDROUS ETHANOL
Batch Number: 241 -2023 -2024
Manufacturing Date: JULY 2024
Expiry Date: JUNE 2026
Analysis Date: 02.07.2024
Certificate Nr: 1200322

Client:
KOUN SPECIALITY CHEMICALS CO
AMMAN - JORDAN

| TEST ITEM | Method | Specification | Unit | Result |
|----------------------------|----------------|--------------------------------|-----------|----------|
| Aspect | Visual | Clear free of suspended matter | | Clear |
| Oduor | Organoleptic | NORMAL | | NORMAL |
| Alcohol strength @ 20° C | ASTM D 4052-18 | Min 99.8 | vol % | 99.93% |
| Dry Matter Content | ASTM D 1353-09 | 0.2 Max | g/ml | 0.0355 |
| Water Content | Karl Fischer | Max 2500 | ppm | 530 |
| Total Higher Alcohol | ASTM D 5501-09 | 0.2 Max | g/ml | 0.05 |
| Aldehydes as Acetaldehydes | ASTM D 5501-09 | 0.1 Max | g/ml | 0.022 |
| Ester (Ethyl Acetate) | ASTM D 5501-09 | Max 1.3 | g/ml | N/D |
| Methanol | ASTM D 5501-09 | Max 2.0 | g/ml | N/D |
| IPA | ASTM D 5501-09 | Max 2 | g/ml | 0.71 |
| Furfural | ASTM D 5501-09 | Negative | | Negative |
| Acidity as Acetic Acid | ASTM D 5501-09 | Max 1.5 | g/ml | 0.81 |
| CONCLUSION | | | QUALIFIED | |

SHAHMURAD SUGAR MILLS LTD
KRATCHI - PAKISTAN

Vasudha

QC PASSED