

## Certificate of Analysis

|                 |         |                           |              |
|-----------------|---------|---------------------------|--------------|
| <b>Product</b>  | Acetone | <b>Batch No.</b>          | : 21 06 0131 |
| <b>Grade</b>    | VLSI    | <b>Manufacturing date</b> | : 13/06/2021 |
| <b>Code No.</b> | VL1003  | <b>Best before</b>        | : 06/2025    |

| Items | Descriptions                            | Specifications             |          | Test Results |     |
|-------|-----------------------------------------|----------------------------|----------|--------------|-----|
| 1     | Assay (by GC.)                          | 99.8%                      | min.     | 99.9%        |     |
| 2     | Identity                                | Corresponds to IR spectrum |          | Passes test  |     |
| 3     | Water (by Coulometry)                   | 0.2%                       | max.     | 0.16%        |     |
| 4     | Acidity (μEq./g.)                       | 0.3                        | max.     | < 0.3        |     |
| 5     | Alkalinity (μEq./g.)                    | 0.5                        | max.     | < 0.5        |     |
| 6     | Specific resistance (MΩ.cm)             | 5                          | min.     | > 5          |     |
| 7     | Residue on Evaporation                  | 3                          | ppm max. | < 3          | ppm |
| 8     | Ethanol (GC.)                           | 50                         | ppm max. | < 50         | ppm |
| 9     | Methanol (GC.)                          | 500                        | ppm max. | < 500        | ppm |
| 10    | Aldehydes (as HCHO)                     | 10                         | ppm max. | < 10         | ppm |
| 11    | Substances reducing permanganate (as O) | 2.5                        | ppm max. | < 2.5        | ppm |
| 12    | Heavy metals (as Pb)                    | 0.1                        | ppm max. | < 0.1        | ppm |
| 13    | Aluminium (Al)                          | 50                         | ppb max. | < 50         | ppb |
| 14    | Antimony (Sb)                           | 10                         | ppb max. | < 10         | ppb |
| 15    | Arsenic (As)                            | 10                         | ppb max. | < 10         | ppb |
| 16    | Barium (Ba)                             | 20                         | ppb max. | < 20         | ppb |
| 17    | Beryllium (Be)                          | 10                         | ppb max. | < 10         | ppb |
| 18    | Bismuth (Bi)                            | 20                         | ppb max. | < 20         | ppb |
| 19    | Boron (B)                               | 10                         | ppb max. | < 10         | ppb |
| 20    | Cadmium (Cd)                            | 10                         | ppb max. | < 10         | ppb |
| 21    | Calcium (Ca)                            | 100                        | ppb max. | < 100        | ppb |
| 22    | Chromium (Cr)                           | 10                         | ppb max. | < 10         | ppb |
| 23    | Cobalt (Co)                             | 10                         | ppb max. | < 10         | ppb |
| 24    | Copper (Cu)                             | 10                         | ppb max. | < 10         | ppb |
| 25    | Gallium (Ga)                            | 10                         | ppb max. | < 10         | ppb |
| 26    | Gold (Au)                               | 20                         | ppb max. | < 20         | ppb |
| 27    | Indium (In)                             | 10                         | ppb max. | < 10         | ppb |
| 28    | Iron (Fe)                               | 10                         | ppb max. | < 10         | ppb |
| 29    | Lead (Pb)                               | 10                         | ppb max. | < 10         | ppb |
| 30    | Lithium (Li)                            | 10                         | ppb max. | < 10         | ppb |
| 31    | Magnesium (Mg)                          | 20                         | ppb max. | < 20         | ppb |
| 32    | Manganese (Mn)                          | 10                         | ppb max. | < 10         | ppb |
| 33    | Molybdenum (Mo)                         | 10                         | ppb max. | < 10         | ppb |
| 34    | Nickel (Ni)                             | 10                         | ppb max. | < 10         | ppb |
| 35    | Platinum (Pt)                           | 50                         | ppb max. | < 50         | ppb |
| 36    | Potassium (K)                           | 20                         | ppb max. | < 20         | ppb |

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|-------|--------------------|----------------|----------|--------------|-----|
| 37    | Silver (Ag)        | 10             | ppb max. | < 10         | ppb |
| 38    | Sodium (Na)        | 100            | ppb max. | < 100        | ppb |
| 39    | Strontium (Sr)     | 10             | ppb max. | < 10         | ppb |
| 40    | Thallium (Tl)      | 10             | ppb max. | < 10         | ppb |
| 41    | Tin (Sn)           | 20             | ppb max. | < 20         | ppb |
| 42    | Titanium (Ti)      | 20             | ppb max. | < 20         | ppb |
| 43    | Vanadium (V)       | 10             | ppb max. | < 10         | ppb |
| 44    | Zinc (Zn)          | 20             | ppb max. | < 20         | ppb |
| 45    | Zirconium (Zr)     | 20             | ppb max. | < 20         | ppb |
| 46    | Particle/ml :      |                |          |              |     |
|       | 0.5 µm and greater | 30             | max.     | 10           |     |
|       | 1.0 µm and greater | 8              | max.     | 4            |     |

Product passed through 1 micron final filter.

This is to certify the above batch has been tested and complies with this specification.

Ladaphan.

Chemist

Achan.

Technical Manager