

## Certificate Of Analysis

**Product Name:** Citicoline  
**Batch No.:** CC20220621  
**Non GMO**                      **BSE/TSE Free**                      **Non Irradiation**                      **Allergen Free**

| ITEMS                                | SPECIFICATION   | RESULTS          | METHODS       |
|--------------------------------------|---|------------------|---------------|
| <b>Assay Data</b>                    |   |                  |               |
| Assay                                | ≥98%  | 99.80%           | HPLC          |
| <b>Quality Data</b>                  |   |                  |               |
| <b>Appearance</b>                    | White crystalline powder                                | Conforms         | Visual        |
| <b>Odour</b>                         | Characteristic  | Characteristic   | Organoleptics |
| <b>Identification</b>                | Chemical reaction                                       | Positiv reaction | CP 2020       |
|                                      | The retention time of major peak meets the requirements | Complied         | CP 2020       |
|                                      | IR:consistent with the spectrum obtained with reference | Complied         | CP 2020       |
| <b>Free phosphoric acids</b>         | ≤0.1%   | Conforms         | CP 2020       |
| <b>5'-CMP</b>                        | ≤1%   | 0.10%            | CP 2020       |
| <b>Loss on Drying</b>                | ≤5%   | 3.30%            | CP 2020       |
| <b>PH</b>                            | 2.5-3.5   | 3.1              | CP 2020       |
| <b>Clarity and color of solution</b> | Should be clear and colorless                           | Complied         | CP 2020       |
| <b>Heavy Metals</b>                  | < 10ppm   | Conforms         | ICP-MS        |
| <b>Lead(Pb)</b>                      | < 3ppm  | Conforms         | ICP-MS        |
| <b>Arsenic(As)</b>                   | < 2ppm  | Conforms         | ICP-MS        |
| <b>Cadmium(Cd)</b>                   | < 1 ppm   | Conforms         | ICP-MS        |
| <b>Mercury(Hg)</b>                   | < 0.1 ppm   | Conforms         | ICP-MS        |
| <b>Microbiological Data</b>          |   |                  |               |
| <b>Total Plate Count</b>             | < 1000 cfu/g  | Conforms         | CP 2020       |
| <b>Moulds and Yeast</b>              | < 100 cfu/g   | Conforms         | CP 2020       |
| <b>E.Coli</b>                        | Negative  | Conforms         | CP 2020       |
| <b>Salmonella</b>                    | Negative  | Conforms         | CP 2020       |
| <b>Staphylococcus aureus</b>         | Negative  | Conforms         | CP 2020       |
| <b>Addition Data</b>                 |   |                  |               |
| <b>Packing</b>                       | 25kg/drum   |                  |               |
| <b>Storage</b>                       | Store in a cool dry place, avoiding sunlight directly   |                  |               |
| <b>Shelf Life</b>                    | Two Years   |                  |               |

