


**Quality Assurance Department**  
**CERTIFICATE OF ANALYSIS**

| ISOPROPYL ALCOHOL<br>I.P.A. 99% USP              |       |  |  |   |
|--|-------|--|--|---|
| Lot #:   |       | 1219                                   |  |   |
| Item #:  |       | P210IP99                               |  |   |
| Test   | Units | Method                                 | Specification  | Result  |
| Isopropyl alcohol, Assay %                       |       | Gas Chromatography                     | Not less than 99.85  | 99.95   |
| Volatile impurities, each individual impurity, % |       |  | Not more than 0.1  | NMT 0.1   |
| Specific gravity in air, at 25 / 25 C            |       | USP Monograph Physical Test Method 841 | 0.783 to 0.787   | 0.786   |
| IDENTIFICATION - Infrared absorption             |       | Current USP                            | Conforms to standard   | Conforms  |
| Acidity as Acetic Acid, mg / 100mL               |       | ASTM D 1613-96                         | 1.68 max.  | 0.60  |
| Acidity, mL                                      |       | Current USP                            | Not more than 0.7 mL of 0.02 N sodium hydroxide to neutralize 50 mL sample | 0.25  |
| Water content, v/v%                              |       | Karl Fisher Titration                  | 0.32 max.  | 0.007   |
| Nonvolatile residue, % w/v                       |       | Current USP                            | Not more than 2.5 mg / 50 mL sample (0.005%)                               | 0.0000  |
| Refractive index, at 20 C                        |       | Current USP                            | 1.376 to 1.378   | 1.378   |
| <b>Remarks:</b>                                  |       | <b>Type of Packaging</b>               |  | <b>Expiration Date (MMM/YYYY)</b>   |
|  |       | Glass                                  |  |   |
|  |       | HDPE                                   |  |   |
|  |       | X Unlined carbon steel                 |  | Apr/2026  |
| Workbook Reference:                              |       | 03041411                               |  |   |
| Analyst(s):                                      |       | DV/KS                                  |  |   |
| Approved by: J.O.                                |       |  |  |   |
| Effective Date: Feb. 10, 2023                    |       | Supersedes: Oct. 21, 2018              |  |   |
| Revision #: 7                                    |       |  |  |   |
|  |       | <b>Disposition:</b>                    |  | <b>Released</b> X   |
|  |       |  |  | <b>Rejected</b> _____   |
|  |       | <b>Release Date:</b> 08-Apr-2023       |  |   |
|  |       |  |  |  |
|  |       | <b>Q.A.</b>                            |  | <b>D. Peele</b>   |