## Certificate of Analysis

| MedKoo Cat\#: | Product Name: | Lot\# |
| :---: | :---: | :---: |
| 510262A | Phosphatidyl choline (from soybrean) | BBC40306 |
| Chemical name |  |  |
| This product is a mixtures, general chemical structures are described as the following section. (Z)-3-(oleoyloxy)-2-(palmitoyloxy)propyl (2-(trimethylammonio)ethyl) phosphate |  |  |
| Synonyms |  |  |
| Phosphatidylcholine; 1,2-Diacyl-sn-glycero-3-phosphocholine, 3-sn-Phosphatidylcholine, L- $\alpha$ Lecithin, Azolectin, PC. |  |  |
| Chemical structure | CAS\# an | information |
| $\mathbf{R}, \mathrm{R}^{\prime}=\mathbf{f} \mathbf{a}$ | MedKoo <br> Name: Ph <br> Resource <br> CAS\#: 80 <br> Lot\#BBC |  |


| Testing items | Specificiations | Result |
| :--- | :--- | :--- |
| Appearance | Yellow to brown semi-solid or <br> lump | Yellow lump |
| Solubility | Soluble in ether, ethanol and <br> insoluble in actone | conforms |
| Acid value | $<30.00$ | 1.0 |
| Iodine value | $>75.0$ | 116 |
| Peroxide value | $<5.0$ | 0 |
| Identification test | Positive reaction | conforms |
| Method (I) |  |  |

## MedKoo MedKoo Biosciences

| Method (II) | Positive reaction | conforms |
| :--- | :--- | :--- |
| Analytical test |  | Abs <0.8 in 350 nm |
| Solution color | $>90.0 \%$ | 0.03 |
| Mass not soluble in acetone | $<0.3$ | $95.04 \%$ |
| Mass not soluble in toluene | $<1.5 \%$ | $0.15 \%$ |
| Mass soluble in water | $<20 \mathrm{ppm}$ | $0.21 \%$ |
| Heavy metals | $<0.0002 \%$ | conforms |
| Arsenic salt | $<0.5 \%$ | conforms |
| Ethanol | $<0.5 \%$ | $0.06 \%$ |
| Acetone | $<0.06^{\wedge}$ | $0.0001 \%$ |
| dichloromethane | $<0.5 \%$ | Not detected |
| Lysophosphatidylethanolamine <br> (LPE) | $<3.5 \%$ | Not detected |
| Lysophosphatidylcholine (LPC) | $>2.7 \%$ | $3.4 \%$ |
| Phosphorus (P) | $1.5 \% \sim 2.0 \%$ | $1.78 \%$ |
| Nitogen (N) | $>45 \%$ | $98.31 \%$ |
| Phosphatidyl choline (PC) | $<30.0 \%$ | Not detected |
| Phosphatidylethanolamine (PE) | $<5.0 \%$ | Not detected |
| Phosphatidylinositol (PI) | Conclusion: |  |
| This batch product complys with MedKoo quality standard. |  |  |

