

Zhengzhou Yuanli Biological Technology Co., Ltd.

郑州原理生物科技有限公司

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Certificate of Analysis

| Product Name: Ursodeoxycholic Acid | | Batch No.: 20191203 | |
|------------------------------------|--|-------------------------|---------------------------|
| CAS No. : 128-13-2 | | Quantity : 100kg | |
| Manufacturing Date: 12/14/2019 | | Retest Date: 12/13/2021 | |
| Sampling Date: 12/23/2019 | | Report Date :12/28/2019 | |
| Test Items | Requirements | | Results |
| Appearance | White or almost white powder | | White powder |
| Solubility | Practically insoluble in water, freely soluble in ethanol(96%), slightly soluble in acetone, practically insoluble in methylene chloride. | | Complies |
| Melting Point | 200 °C ~ 204°C | | 200.0 °C ~ 202.5 °C |
| Identification | IR: The infrared absorption spectrum of sample is completely in conformity with the spectrum of ursodeoxycholic acid CRS. | | Complies |
| | B. TLC: The principal spot in the chromatogram obtained with test solution is similar in position, color and size to the principal spot in the chromatogram obtained with reference solution. | | Complies |
| | C: Colorimetric Detection: The suspension obtained is greenish-blue. | | Complies |
| Loss on drying | ≤1.0% | | 0.13% |
| Specific Optical Rotation | [α]D ²⁰ : +58.0°~ +62.0° | | 59.4° |
| Heavy Metals | ≤ 20PPM | | Complies |
| Sulphated Ash | ≤ 0.1% | | Complies |
| Impurity C (by TLC) | Lithocholic acid : | ≤0.1% | Complies |
| Related Substance (by HPLC) | Chenodeoxycho | lic acid≤1.0% | ND |
| | Any unspecified single impurity ≤0.1% | | 0.07% |
| | Total impurities : | ≤1.5% | 0.29% |
| Assay | 99.0% ~ 101.0% | a to the state | 100.4% |
| Conclusion | The product complies with enterprise standard. | | |
| Checker: Jin Jin | Rechecker: Jing | | Supervisor: Xuezhe Han |