

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-06-06 14:34:18  
 Date of Next Testing: 2027-06-05 14:34:18  
 Product Name: **(1R)-(+)- $\alpha$ -Pinene**  
 CAS Number: 7785-70-8  
 Specifications & Purity:  $\geq 98\%$   
 Lot #: E2327081  
 SKU #: **P397755**  
 Version: **2**  
 Analysis #: **223032**  
 Storage Temperature: Room temperature

| Parameter                                               | Limit Values                     | Result                           |
|---------------------------------------------------------|----------------------------------|----------------------------------|
| Purity(GC)                                              | 98-100 (%)                       | 98.72400 %                       |
| Refractive index n <sub>20</sub> /D                     | 1.4635-1.468                     | 1.46590                          |
| specific rotation [ $\alpha$ ] <sub>20</sub> /D(c=Neat) | 41.5-46.5 (°)                    | 44.03000 °                       |
| Appearance(P397755)                                     | clear colorless to yellow liquid | Clear colorless to yellow Liquid |
| Infrared spectrum                                       | Conforms to Structure            | Conforms to Structure            |



John Su  
 QA & QC Manager