

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-06-30 11:04:55  
Date of Next Testing: 2026-06-29 11:04:55  
Product Name: **Piperitone (mixture of enantiomers, predominantly (R)-(-)-form)**  
CAS Number: 89-81-6  
Specifications & Purity: >94.0%(GC)  
Lot #: F2228523  
SKU #: **P160623**  
**Analysis: 094297**  
Storage Temperature: Store at 2-8°C

| Parameter                             | Limit Values                    | Result                          |
|---------------------------------------|---------------------------------|---------------------------------|
| Specific Rotation [α] <sub>20/D</sub> | -60--45 (°)                     | -50.10°                         |
| Purity(GC)                            | 94-100 (%)                      | 95.50%                          |
| Refractive index n <sub>20/D</sub>    | 1.483-1.487                     | 1.48                            |
| Appearance (P160623)                  | colorless to dark yellow liquid | colorless to dark yellow liquid |
| Proton NMR spectrum                   | Conforms to Structure           | Conforms to Structure           |



John Su  
QA & QC Manager