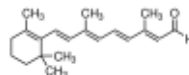


Certificate of Analysis

Product Name:

all trans-Retinal - powder, ≥98%

Product Number: R2500
Batch Number: SLCJ4760
Brand: SIGMA
CAS Number: 116-31-4
MDL Number: MFCD00001550
Formula: C₂₀H₂₈O
Formula Weight: 284.44 g/mol
Storage Temperature: Store at -20 °C
Quality Release Date: 24 MAR 2021



| Test | Specification | Result |
|------------------------|--|----------|
| Appearance (Color) | Yellow to Dark Yellow and Orange to Dark Yellow-Orange | |
| Appearance (Form) | Powder | Powder |
| Solubility (Color) | Yellow to Dark Yellow | Yellow |
| Solubility (Turbidity) | Clear | Clear |
| 5 mg/mL, Acetonitrile | | |
| Carbon | 82.0 - 86.1 % | 84.1 % |
| Purity (HPLC) | ≥ 98 % | 99 % |
| Proton NMR Spectrum | Conforms to Structure | Conforms |



Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

