

## Certificate of Analysis

Date of Testing: 2023-01-09 13:39:40  
Date of Next Testing: 2027-01-08 13:39:40  
Product Name: **D(+)-Raffinose pentahydrate**  
CAS Number: 17629-30-0  
Specifications & Purity: 99%  
Lot #: A2305823  
SKU #: **R111688**  
**Analysis:** **133377**  
Storage Temperature: Argon charged

Parameter	Limit Values	Result
Water by Karl Fischer	14-16 (%)	15.46 %
Specific Rotation [α] <sub>20</sub> /D(c=10 in H <sub>2</sub> O)	100-110 (°)	100.56 °
Melting point	78-82 (°C)	79.22000 °C
Purity(HPLC)	99-100 (%)	99.67600 %
Solubility,50mg/ml water	Clear colorless	Clear Colorless
Appearance (R111688)	white powder	White powder
Infrared spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager