

## Certificate of Analysis

**Product Name:** 4-Nitrophenyl- $\beta$ -D- mannopyranoside  
**Cat #:** N-370  
**CAS #:** 35599-02-1  
**Lot #:** Lot Specific  
**Retest Date:** Lot Specific  
**Storage:<sup>†</sup>** Store at -20°C. Protect from light.

| Test   | Specs                             | Results            |
|--|-----------------------------------|--------------------|
| Color  | white to off-white                | slightly off-white |
| Form   | crystalline powder                | crystalline powder |
| Color of Solution<br>(0.4% in water)                           | colorless to almost colorless     | colorless          |
| Turbidity<br>(0.4% in water)                                   | max. 2.0 NTU                      | 0.2 NTU            |
| Water Content (K. Fischer)                                     | max. 1.0%                         | 0.1%               |
| Specific Optical Rotation [alpha]D<br>(c = 0.4 in water; 20°C) | -111.0 to -103.0                  | -109.4             |
| Purity (HPLC)  | min. 98.0 area-%                  | 98.5 area-%        |
| Impurity<br>(p-nitrophenol; HPLC)                              | max. 0.01%                        | <0.01%             |
| FT-IR Spectrum   | corresponds to reference spectrum | corresponds        |

\* Gold Biotechnology, Inc. provides this Certificate of Analysis in good faith and to the best of its knowledge. It should not be substituted for the user's own raw material quality control. This material is for laboratory use only.

<sup>†</sup> Storage at listed temperature applies to retest date (if shown) or two years from purchase date. Check label for long term storage conditions, which may extend the product beyond the retest date and/or greater than two years from purchase.

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