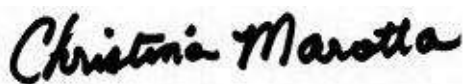


MP Biomedicals, LLC29525 Fountain Parkway
Solon, Ohio 44139Telephone: 440/337-1200
Toll Free: 800/854-0530

Certificate of Analysis

Product Description: 2-Keto-D-gluconic Acid Hemicalcium Salt
Catalog Number: 100365
Lot: M5273**Formula:** $C_6H_{10}O_7 \cdot \frac{1}{2}Ca$
CAS #: 3470-37-9
Physical Description: White Powder**Formula Weight:** 213.2
Storage: +4°C

Test	Specification	Result
Identity Test	Passes	Passes
Purity	$\geq 98\%$	99.28%
FTIR	Conforms to Standard	Conforms to Standard
Optical Rotation	$-66^\circ \pm 5^\circ$ (c=2, water)	-70.2°

Solubility (5% aq soln): Clear, Colorless Solution
Water (KF): <14%10/31/2012 - Christina Marotta
MP Biomedicals, LLC.
Technical DirectorThis is an electronically generated document
<mailto:biotech@mpbio.com>
<http://www.mpbio.com>Online Ordering, MSDSs, certificates of analysis and data sheets now available on our web site
Technical Service: 1-800-279-5490 (440-337-1200) Customer Service: 1-800-854-0530 (440-337-1200)