



## CERTIFICATE OF ANALYSIS

Date: 24/04/13

PRODUCT NAME : D(-)MANNITOL EXTRA PURE

CAS No : 69-65-8  
Mol. Formula :  $C_6H_{14}O_6$   
Mol. WT : 182.17

Product code : 15640  
Batch No : MCR-6640  
Mfd. : April 2013

| S. R | Test                                                                                   | Specification                        | Observation          |
|------|----------------------------------------------------------------------------------------|--------------------------------------|----------------------|
| 1    | Assay                                                                                  | 99.5 % w/w min                       | 99.53% w/w           |
| 2    | Melting point                                                                          | 166-169 <sup>0</sup> c               | 168.1 <sup>0</sup> c |
| 3    | Specific rotation $[\alpha]^{20}_D$<br>(C=8 in aq. Soln 10.4%<br>disodium tetraborate) | +23 <sup>0</sup> to +24 <sup>0</sup> | +23 <sup>0</sup>     |
| 4    | Loss on drying at 110 <sup>0</sup> c                                                   | 0.1% max                             | 0.08%                |
| 5    | Sulphated ash                                                                          | 0.05 % max                           | 0.035 %              |
| 6    | Reducing sugars (ml)                                                                   | 16 max                               | <16                  |
| 7    | Pyrogen                                                                                | Free                                 | Free                 |
| 8    | Alkalinity (ml)                                                                        | 0.3 max                              | < 0.3                |
| 9    | Acidity (ml)                                                                           | 0.2 max                              | < 0.2                |
| 10   | Chloride                                                                               | 0.005 % max                          | < 0.005 %            |
| 11   | Sulphate                                                                               | 0.01% max                            | < 0.01%              |
| 12   | Sorbitol                                                                               | Negative                             | Negative             |
| 13   | Nickel (mg/kg)                                                                         | 0.2 max                              | < 0.2                |

REMARK: THE PRODUCT COMPLIES WITH THE ABOVE SPECIFICATIONS

[Tested By]

[QC Incharge]

HEAD-QUALITY ASSUARANCE  
(G.G.Salian)

Note: Computer generated image requires no sign.

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