

# Special Notice

## True Glucose Results with Glucose Oxidase Test Methods

Glucose dehydrogenase methods of measuring glucose concentrations can result in falsely high values<sup>1</sup>. Maltose, a component of OCTAGAM<sup>®</sup> (purified immunoglobulin indicated for the treatment of primary immune deficient diseases)<sup>2</sup> and a metabolite of Extraneal<sup>™</sup> (icodextrin) peritoneal dialysis solution, is reactive with glucose dehydrogenase PQQ (GDH PQQ) and can interfere with glucose measurements<sup>2,3</sup> resulting in elevated readings that are not indicative of true blood glucose levels<sup>1</sup>.

Safety alerts from around the world have noted the [dangerous implications](#) for patients, the need for [increased training](#) of hospital staff, and **additional verification** of glucose results by alternative test methods<sup>1,4,5,6,8</sup> in conjunction with the use of [GDH PQQ](#) testing methods. Use of glucose specific testing methods, such as those that utilize glucose oxidase, are recommended for use in patients who receive treatment with maltose or maltose metabolite producing substances<sup>1,3</sup>.

***"GDH PQQ based methods must NOT be used."***<sup>3</sup>

"Blood glucose measurement in patients receiving Extraneal must be done with a glucose specific method (monitor and strip) to avoid interference from maltose, released from Extraneal. **GDH PQQ** based methods must **NOT** be used."<sup>3</sup>

"Under these circumstances," treatment of patients with maltose or maltose producing substances, "**consider** the need for laboratory testing of glucose levels, or the use of glucose meters that employ **the glucose oxidase method** of determining glucose levels."<sup>1</sup>

[LifeScan, Inc.'s](#) entire line of point-of-care blood glucose monitoring systems utilizes only glucose oxidase testing methods. An independent investigation into the interference of the icodextrin metabolites maltose, maltotriose, and maltotetraose on enzymatic glucose methods concluded that LifeScan's SureStep<sup>®</sup> Meter showed no interference with any of these metabolites<sup>7</sup>. When it comes to unlocking the full potential of your Diabetes Management Program, you need a system that gives you the **performance** and **intelligence** to make key decisions with **confidence**. To that end, LifeScan's full line of point-of-care blood glucose testing systems set the standard for accuracy and simplified operation.

## References:

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- <sup>1</sup> Institute for Safe Medication Practices, Be aware of false glucose results with point-of-care testing. ISMP Medication Safety Alert!, vol. 10 issue 18: 8 September 2005
- <sup>2</sup> FDA: <http://www.fda.gov/cber/products/igivocto52104.htm>
- <sup>3</sup> Extraneal (icodextrin) Peritoneal Dialysis Solution, package insert, Baxter Healthcare Corporation®
- <sup>4</sup> Medicines and Healthcare products Regulatory Agency (MHRA) Medical device alert. Ref. MDA/2003/011; April 16, 2003
- <sup>5</sup> Therapeutic Goods Administration (TGA). Interference between Extraneal peritoneal dialysis solution and Advantage II Blood Glucose test strips for Accu-Chek and Accu-Trend blood glucose monitors. TGA News Issue 46: April 2005 (<http://www.tga.gov.au/docs/html/tganews/news46/iris.htm#glucose>)
- <sup>6</sup> Ministry of Health, Labor, and Welfare, Health Policy General Notice No. 0207001, Pharmaceutical and Food Safety Notice No. 0207005: 7 February 2005
- <sup>7</sup> Janssen W., et al. Positive Interference of Icodextrin metabolites in some enzymatic glucose methods. Clinical Chemistry 1998; Vol 44, No. 11: 2379-2380
- <sup>8</sup> FDA: <http://www.fda.gov/cdrh/oivd/news/glucosefalse.html>