

**National Organic Standards Board
Handling Committee
2013 Sunset Proposal
Glucono Delta-Lactone on § 205.605(a)**

March 20, 2012

Current National List Citation

List: 205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”

(a) Nonsynthetics allowed

Glucono delta-lactone—production by the oxidation of D-glucose with bromine water is prohibited.

Committee Summary

Glucono delta-lactone (GDL) is used as a coagulant in tofu production, and also as an acidulant, leavening agent and sequestrant in food. It is produced by the oxidization of gluconic acid by a number of methods. The petition focused on the use of the substance as a tofu coagulant, and delineated a number of key advantages which make the use of this substance necessary relative to other coagulants. Because of the slow speed at which hydrolyzes back to gluconic acid, it results in tofu products with preferable texture and consistency. It also imparts a far less sour taste than other available coagulants.

The substance was reviewed by a Technical Advisory Panel (TAP) in 2002 at the request of the NOSB. The TAP found that the substance can be either synthetic or non-synthetic depending on the production method, and the current annotation prohibits its production using bromine water, which would render it synthetic. The other methods of GDL production – oxidation of gluconic acid with microorganisms, or oxidation with enzymes derived from those microorganisms – result in a non-synthetic form of GDL.

Review of the original recommendation, the 2002 TAP review, historical documents, the 2007 sunset recommendation, and public comments does not reveal unacceptable risks to the environment, human, or animal health as a result of the use or manufacture of this material. There is no new information contradicting the original recommendation which was the basis for the previous NOSB decisions to list and again re-list this material.

Committee Recommendation

The handling committee recommends the renewal of the following substance in this use category as published in the final rule:

Glucono delta-lactone—production by the oxidation of D-glucose with bromine water is prohibited.

Committee Vote

Motion: John Foster

Second: Tracy Favre

Yes: 5 No: 0

Abstain: 0 Recuse: 0 Absent: 1