

July 20, 2007

Michael J Bower
Director of R&D
Plastic Suppliers
2450 Marilyn Lane
Columbus, OH 43219

Dear Mike,

NatureWorks® PLA 2002D, 4042D, 4032D is made from lactic acid, a naturally occurring compound found in food and the human body. Lactic acid is made from natural plant sugars (dextrose) by fermentation. Conversion of dextrose to lactic acid with subsequent conversion of lactic acid to PLA utilizes high temperatures (>150°C) and numerous processing steps.

To show the amount of biobased content in our PLA, NatureWorks LLC had radiocarbon dating conducted on our product by an independent third party (Beta Analytic Inc.) according to ASTM D6866-5 (Standard Test Method for Determining the Biobased Content of Natural range Materials Using Radiocarbon and Isotope Ratio mass Spectrometry Analysis)

Sample Identification	Mean Biobased Result	Apparent Biobased Content
NatureWorks® PLA	100%	97-100%

The application of radiocarbon dating to derive "biobased content" is built upon the same concepts as determining a radiocarbon age, but without use of the age equations. It is done by deriving a ratio of the amount of radiocarbon (C) in an unknown sample to that of a modern reference standard. If the material being analyzed is a mixture of present day radiocarbon and fossil carbon (containing no radiocarbon), then the values obtained correlates directly to the amount of biobased material present in the sample.

The apparent biobased content encompasses an absolute range of 6 % (plus and minus 3% on either side of the mean biobased result) to account for variations in end-component radiocarbon signatures (a conservative approximation).

This data is based on our current level of knowledge and covers NatureWorks® PLA in its raw resin form. Since conditions of use are outside of NatureWorks LLC control, NatureWorks LLC makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Again, for any application, should you need further clarification, please do not hesitate to contact me at (952) 742-0457. I will be happy to assist you in any way possible.

Best Regards,



Glenn Johnston
Director Regulatory Affairs
NatureWorks LLC

c.c. File