

# Case Study: Compostable Cutlery

NaturWare®

Made from Natur-Tec® Biopolymers

## Natur-Ware® Biobased and Compostable Cutlery Stands Up to Competition The convenience of traditional plastic, with the benefit of complete biodegradability

Natur-Ware® cutlery recently proved itself as eco-friendly, cost effective, and pleasant to use for employees at a large insurance company in Michigan. This company implemented environmentally sustainable practices throughout their corporate offices and decided to replace their regular plastic cutlery in their dining facilities with plastic cutlery. Initially, the brand they tried was a plant starch (PSM) material based cutlery. However, they immediately encountered several problems with the starch-based cutlery.

### The Problem

Employees complained that the PSM cutlery was flimsy, softened in hot foods and liquids, had an undesirable smell, and became tacky when wet. Furthermore, the utensils were not cost effective since employees used an average of 2-3 forks or spoons per meal because they needed to replace a utensil that had melted or broken. The customer was also disappointed to find out that the cutlery was not fully biodegradable since it is made of a combination of starch and traditional plastic such as polypropylene. They decided to look for a better alternative to the starch based cutlery.

### The Solution

In their search for a better alternative, they discovered Natur-Ware® biobased and compostable cutlery. Natur-Ware® cutlery is made from resin that meets the U.S. standard of ASTM D6400 for compostable plastics. Natur-Ware® cutlery looks and feels better than traditional plastic cutlery made of polypropylene or polystyrene, but is fully biodegradable. Most notably it is bio-based and made of a renewable, non-GMO, non-food plant-based natural polymer. The Natur-Ware® cutlery is heat resistant up to 190°F, while corn based and potato-starch based cutlery typically softens at 130°F. Users reported, "The Natur-Ware® cutlery doesn't melt in hot foods, is strong enough to cut steak, and generally feels very sturdy in use. Plus unlike the potato-starch based cutlery, the Natur-Ware® cutlery does not have an undesirable smell."

Another advantage of the Natur-Ware® cutlery is its cost effectiveness. Natur-Ware® cutlery is competitively priced in comparison to PLA and PSM based cutlery. Its durability also saves costs over other biobased cutlery because the starch based cutlery often broke or bent during a meal requiring multiple utensils. The operations manager at the company summarized their experience with the new cutlery by saying, "All of our employees use the Natur-Ware® cutlery daily and everyone is very satisfied with the product."

### Solution Story Summary

<b>Problem</b>	Very poor user experience with starch based (PSM) cutlery <ul style="list-style-type: none"><li>• Flimsy and overly flexible resulting in multiple utensils needed per meal</li><li>• Heat sensitive</li><li>• Undesirable smell and taste</li><li>• Tacky when wet</li><li>• Not fully biodegradable</li></ul>
<b>Solution</b>	Adopted fully biodegradable and biobased Natur-Ware® cutlery
<b>Benefits</b>	Look and feel of traditional plastic cutlery with the benefit of complete biodegradability <ul style="list-style-type: none"><li>• Compostable per the ASTM D6400 standard</li><li>• Cost effective—Sturdy and heat resistant properties resulted in 66% usage reduction</li><li>• Easy to procure</li><li>• Made of GMO-free, annually renewable plant-based natural polymer</li><li>• Biobased per the ASTM D6866 standard</li></ul>



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