- Overview
- Problem
- ¢ "EA"
- Why Now?

EA-Free Solutions



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# PlastiPure<sup>®</sup>, Inc.

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# Company Overview



PlastiPure<sup>®</sup> is the preeminent developer & provider of safer plastics that are free of harmful chemicals that have estrogenic activity (EA)

- Company
  - Founded in 2000 by Dr. George Bittner
  - Breakthrough technology for producing EA-Free plastics & consumer products
  - 3 Patents (1 issued, 2 pending) for producing EA-free plastics
  - First EA-Free product line launched in April 2008



- Products & Solutions
  - EA testing provided through partnered sister company, CertiChem<sup>®</sup>
  - Licensing sharing advanced formulations, methods, & expertise to allow our clients to produce EA-Free plastics
  - EA-Free raw materials providing resins, additives, & processing aids sold as drop-ins with no retooling costs
  - EA-Free finished goods supplying completed plastic products made to customers specifications
  - Customized IP solutions PlastiPure<sup>®</sup> expertise used to develop unique products through client partnership

The Problem

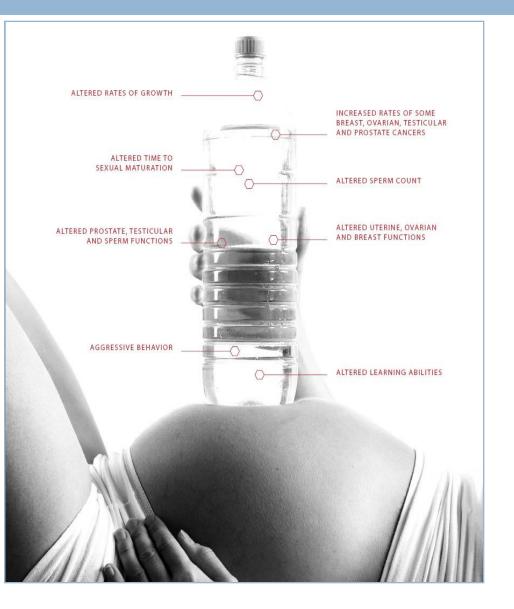
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Almost all modern plastics leach dangerous chemicals having Estrogenic Activity (EA)

- Ingesting EA adversely affects:
  - Reproductive functions
  - Growth, obesity, cancer rates
  - Behaviors
- BPA (or Phthalate) free products are not the solution
  - BPA is the most widely publicized chemical having EA in modern plastics
  - BPA-Free plastics still leach many other chemicals having EA

## Only PlastiPure<sup>®</sup> has EA-Free products & solutions



What is "EA"?

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- Scientists have discovered that thousands of chemicals used to make plastics can trigger a hormonal response
- The largest percentage of these endocrine disruptors are chemicals that exhibit estrogenic activity (EA)
- Although estrogens occur naturally in the body, studies show that health problems occur when chemicals are ingested that mimic or block the actions of these female sex hormones.
- EA-related health problems are more pronounced in pregnant women, infants, & children
- Release of these chemicals often increases during common-use stresses such as exposure to microwave radiation, sunlight & heat

### **EA** versus BPA

- Bisphenol A (BPA) is one chemical of thousands that have EA & which are released from almost all plastics
- BPA-free plastic products do not eliminate the estrogenic activity from plastic
- Individual chemical replacement & "marketing slogans" will never provide an EA-free health solution
- Furthermore, chemicals substituted for BPA can exhibit more total estrogenic activity than BPA itself



The new symbol for safer plastics. Look for it on your bottles & packaging





- □ Science supporting endocrine disruptors is now well-established
- Increased media interest, consumer awareness, & market demand
- Consumer interest groups have educated the public to the risks posed by plastic products & have increased pressure on retailers & legislators
- Legislation enacted & pending in USA, Canada, & European Union
- Class-action lawsuits focused on unsafe plastics are becoming more prevalent & driving immediate change
- Temporary solution of BPA-Free plastics is short-term "band-aid" & not a real solution for much larger health issues
- Comprehensive solution versus single chemical substitution has allowed
  PlastiPure® to develop a completely EA-Free solution
- PlastiPure® exclusive solutions are easy & inexpensive to implement



- The key to providing EA-Free products is to ensure an EA-Free plastics channel
- Chemicals causing estrogenic activity cannot be introduced anywhere in the supply chain

Resin "flake" Resin "pellets" Conversion

- After manufactured goods have been certified as free of EA by PlastiPure®, ongoing oversight & testing ensure that the product line stays "clean"
- PlastiPure® uses its exclusive patented technology to address all steps in the plastics supply chain

# PlastiPure® Solution MethodologyHow do consumersIdentify where EA issues exist for clients by using our IP & state-of-the-art testsHow do consumersRecommend advanced formulations & process solutions that fit each clientProvide flexible options for implementing solutions ranging from providing end<br/>products, raw materials (i.e. resins) &/or IP (i.e. formulations & methods)How do consumers<br/>know that their<br/>plastic is safe?Develop custom formulations exclusively for a client's competitive advantage or<br/>nonexclusively for a client wanting to share revenue from the formulationHow do consumers<br/>know that their<br/>plastic is safe?