

An Education on Single-Serve Solutions

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The rise of single-serve

- More than 1 out of every 4 North American households own single-serve brewers such as the Keurig brand*
- Single-serve coffee makers are now in the #1 selling houseware appliance*
- Single-serve coffee category grew 32% in 2014 to \$4B U.S.*
- Life cycle analysis shows single-serve environmentally friendlier than drip coffee (less coffee waste, less water, less energy) – and reduced raw coffee demand because of single-serve efficiency**/**

HOWEVER

- 10 billion plastic single-serve cups went to landfill in 2014 (this would stretch around the world 11 times) and consumer concerns is mounting

* data from National Coffee Association annual Drinking Trends report

** data from Quantis life cycle analysis study, commissioned by PAC, Packaging Consortium

*** "Coffee Revolution is Just Too Efficient for Hurting Farmers", Bloomberg News, April 16, 2015 AND "Americans are drinking less coffee, one K-Cup at a time", Reuters, June 22, 2015



- Coffee brands recognize consumer concerns
- Promoting three different approaches to consumers:
 - Recyclable
 - Biodegradable
 - 100% compostable



Recyclable

STREAM: Recycling through blue bin programs, depot systems or corporate programs

CERTIFICATION: Use of the Mobius Recycling Loop to signal potential recyclability

PROS:

- Well established programs in North America with good household penetration and consumer adherence
- May avoid landfill if processed by a facility that can handle that size and type of plastic and if clean and uncontaminated enough

CONS:

- Consumers must separate the hot coffee grounds, filter and lid from each K-cup before washing it and putting any recyclable plastic part in a recycling bin
- Municipal recycling operations cannot usually process small items like K-cups. They typically fall through the sorting screens and are not sent to landfill
- Most K-cups contain a mix of non-recyclable plastics that are not accepted now because of their processing and contamination challenges





Biodegradable

STREAM: Waste

CERTIFICATION: None. Biodegradation simply means something breaks down due to the effects of biological agents such as bacteria or fungi under the right conditions but there are no commonly-accepted definitions or criteria of “biodegradable” for waste management purposes

TIME TO BREAK DOWN: Varies greatly from decades to centuries

PROS:

- Parts of some pods can degrade if enough water, oxygen and microbes are present

CONS:

- No waste stream benefits because biodegradable pods are still part of regular garbage and go to landfill
- “biodegradable” pods typically include plastic components that don't degrade
- No standards/certification for biodegradable single serve pod claims
- Landfills do not provide the water, oxygen or light needed for biodegradation
- Pods in landfills essentially get “mummified” and can take centuries to break down





10-year old “mummified” carrots found in landfill



Compostable

STREAM: Municipal composting through organic waste “green bin” programs

CERTIFICATION: BPI (Biodegradable Products Institute) certifies a product after standardized testing proves the product has met ASTM D6400 and/or ASTM D6868 and then licenses the use of its “certified compostable” logo

TIME TO BREAK DOWN: Pods typically disintegrate in four to six weeks in commercial composting



Compostable

PROS:

- Simple and convenient for consumers – put used pods directly into kitchen organic waste collectors / green bins (where accepted)
- Canadian composting rates exceed 60% and >50% of population has access to curbside collection services
- Consumers do not have to take apart or wash the pod before disposal
- Designed to keep pods out of landfills or recycling waste stream and put nutrient-rich coffee back into organic waste stream
- Returns valuable nutrients to soil (coffee grounds are great for compost)
- Meets recognized standards for industrial composting

CONS:

- Local rules vary on what is accepted for organic waste collection services



Certification

BIODEGRADABLE ≠ COMPOSTABLE

Why is Certification so Important?

- Certification of compostable products helps reduce confusion and skepticism about claims that products/manufacturers often make
- Products that are 100% compostable have to meet specific certification processes, which do not exist to support biodegradable claims

Who Are the Independent Bodies Involved in Certification of Compostability?

- BPI (Biodegradable Products Institute) certifies a product after standardized testing proves the product has met ASTM D6400 and/or ASTM D6868
- ASTM (American Society for Testing Materials) is an international standards organization that develops technical standards for products and processes
- ASTM develops the standards, but BPI is the certifying body that ensures these standards are met

How Can I Tell if Something is Certified 100% Compostable?

- Products that have been certified as meeting ASTM D6400 and/or ASTM D6868 use the logo below to provide assurance of compostability



COMPOSTABLE
IN INDUSTRIAL FACILITIES





BIODEGRADABLE ≠ COMPOSTABLE

The real world of municipal waste processing

Diverting Waste from Landfill is a Big Challenge

- One key challenge for waste disposal is contamination
- Contamination can happen when something:
 - Contains multiple parts such as the plastic, foil and coffee in a traditional single-serve coffee pod
 - Has different kinds of a similar product mixed together such as different plastics
- **Items causing contamination are sorted out of the system and go to landfill**
- **100% compostable pods are designed to work in municipal composting systems**
- Another key challenge is **efficiency**
- Recycling facilities are typically designed to focus on products that can be more easily processed and have markets
 - Items that are small are sorted out because they are more likely to cause contamination problems and are not efficient to process
 - Items that are not easily identified as part of a specific waste stream are sorted out so the stream can be managed better
- **100% compostable pods are designed to be easily recognized by composting processors**



PürPod100™



- On track to be the first certified 100% compostable single-serve coffee pod this summer
- Testing with municipalities and with compost manufacturers in Canada and the U.S. to cover full range of industrial composting technologies and processes
- Unique brown ring uses "chaff" left over from Club Coffee's own coffee roasting process
- On track to be on shelves in U.S. and Canada in late 2015







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