

## Biodegradable Bioplastics with Tailored Properties

### Patent Status

US provisional  
62/128,736 filed

### License Status

Available for license

### Contact

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### Opportunity

- Biodegradable plastics with a variety of properties based on the desired application
- Materials contain low-cost fillers, such as dried distillers grain, perennial grasses or coffee chaff at inclusion rates up to 50%
- Bioplastic consists of a binary or ternary polymer blend and a binary or ternary compatibilizer

### Example – rings for biodegradable coffee pods.

Club Coffee is finalizing launch plans for the world's first fully compostable coffee pod to meet municipal organic waste standards.



Both performance and price is achievable.

	Tensile strength (MPa)	Tensile Modulus (GPa)	Elongation at break (%)	Flexural strength (MPa)	Flexural modulus (GPa)	Impact Strength (J/m)	MFI (g/10min)	HDT (°C)
Ex 1	30.3	1520	7.3	45.6	1530	129	9.0	81
Ex 2	32.8	2580	3.1	54.2	2780	69	5.4	110
Ex 3	26.8	1330	5.6	40.0	1380	93	10.0	96
Ex 4	19.0	1300	11.0	35.9	1310	93	21.2	56
Ex 5	31.9	1180	14.0	40.8	1330	69	13.1	75

### Keywords

- biodegradable • plastic • PBAT • PLA • PBS • PHA • PCL
- distillers grains • DDG • packaging • compostable •