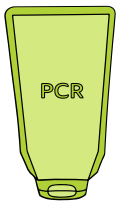
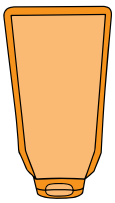
STREAMLINED LIFE CYCLE ASSESSMENT* HUMMUS PACKAGING CASE STUDY

HUMMUS PACKAGE COMPARISON

Hummus is a popular dip often packaged in a PET plastic tub. This Life Cycle Assessment study with a cradle-to-grave boundary evaluated a popular hummus brand in a 17 oz PET plastic tub vs the premade STANDCAP Pouch, an eco-friendly inverted flexible pouch.



PCR STANDCAP

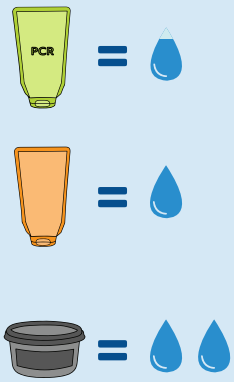


STANDCAP

LARGE PET PLASTIC TUB

Water Consumption

Water use for the premade STANDCAP Pouch is nearly a **62.3%** reduction versus the rigid tub, with nearly **67.3%** reduction when using PCR content. This is driven by the lighter weight as well as less water needed for the laminating and extrusion process than thermoforming for the rigid tubs.



Greenhouse Gas Emissions

The premade STANDCAP Pouch results in a reduction of GHG emissions **(-46.8%)** and the premade STANDCAP Pouch with PCR coming in with a reduction of **49.8%** than that of the 17 oz rigid plastic tub.

Fossil Fuel Consumption

Fossil Fuel use shows that both the premade STANDCAP Pouch and the 17oz. version of the hummus tub are very similar and result in about the same amount of fossil fuel consumption. However, the use of PCR reduced the premade STANDCAP Pouch fossil fuel use by an additional **7%**.

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*All environmental impact metrics were developed using the streamlined life cycle assessment tool, EcoImpact-COMPASS®

END OF USE SUMMARY

SOURCE REDUCTION BENEFITS

According to the U.S. EPA Waste Hierarchy, the most preferred method for waste management is source reduction and reuse.

A major benefit of flexible packaging is the high product-to-package ratio that it offers.

RECOVERY BENEFITS

PCR STANDCAP

1x
amount of material ending up as municipal solid waste

STANDCAP

1x
amount of material ending up as municipal solid waste

LARGE PET PLASTIC TUB

1.1x
amount of material ending up as municipal solid waste

High product-to-package ratio:

95.1% Product weight | **4.9%** Package weight

95.1% Product weight | **4.9%** Package weight

Low product-to-package ratio:ratio:

93.9% Product weight | **6.1%** Package weight

While many multi-material flexible packages are not yet recovered and recycled in any significant amount, they still result in a substantial reduction in the amount of material sent to landfill versus other types of packaging.

The premade STANDCAP Pouch has slight advantages in percent of product weight compared to the 17 oz rigid PET tub (95.1% vs. 93.9%) and the amount of material discarded (50,996g vs. 57,420g for 1,000 kg of hummus) when considering current U.S. recycling rates.

IMPLICATIONS

The results of this scenario show that the premade STANDCAP Pouch results in lower impacts across a wide range of environmental metrics including water use, greenhouse gas emissions, and material discarded. The inclusion of PCR drives all of environmental indicators lower – fossil fuel, greenhouse gas emissions and water use.

FORMAT	FOSSIL FUEL CONSUMPTION (MJ-EQUIV)	GHG EMISSIONS (KG-CO^2 EQUIV)	WATER CONSUMPTION (L)	PRODUCT-TO-PACKAGE RATIO (%)	PKG LANDFILLED (G)/1,000 KG HUMMUS)
PCR STANDCAP POUCH	1.21 (-40.3%)	.05907 (-49.8%)	16.68 (-67.3%)	19.6:1 (95.1% : 4.9%)	50,996 (-11.2%)
STANDARD STANDCAP POUCH	1.34 (-33.5%)	.06253 (-46.8%)	19.24 (-62.3%)	19.6:1 (95.1% : 4.9%)	50,996 (-11.2%)
LARGE PET PLASTIC TUB	1.36	.07977	34.39	15.4:1	57,420 (-32.4%)

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For more information and methodologies of assessments, please visit ***www.flexpack.org*** *or* ***www.glenroy.com*** *to download Glenroy's "A Streamlined Life Cycle Assessment Comparison for the Glenroy Premade STANDCAP Pouch in the Sauces and Personal Care Market versus Rigid Packaging Options" report and refer to pages 35-39..*