

## Proposed Item for Biobased Designation

The following biobased product information has been collected to support item designation by USDA for the BioPreferred Program. This summary reflects data available as of June 11, 2009.

**Title:** Animal Cleaning Products

**Description:** Products intended to clean, condition, or remove substances from animal hair or other parts of the animal.

**Companies Supplying Item:** 85 companies supplying Animal Cleaning Products have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

**Industry Associations Investigated:** The following industry associations have been investigated for member companies supplying Animal Cleaning Products:

- American Animal Medical Association
- American Pet Products Manufacturers Association
- American Veterinary Medical Association
- National Corn Growers Association
- Pet Industry Association of Australia
- United Soybean Board Association
- World Wide Pet Industry Association

**Commercially Available Products Identified:** Of the companies identified, 370 Animal Cleaning Products are commercially available on the market.

**Product Information Collected:** Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 13 Animal Cleaning Products.

**Industry Performance Standards:** Product information submitted by biobased manufacturers and suppliers indicate that have typically been tested to the following industry standards:

- EPA FIFRA 25b Minimum Risk Pesticide Exempt

**Samples Tested for Biobased Content:** 6 samples of Animal Cleaning Products have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866.

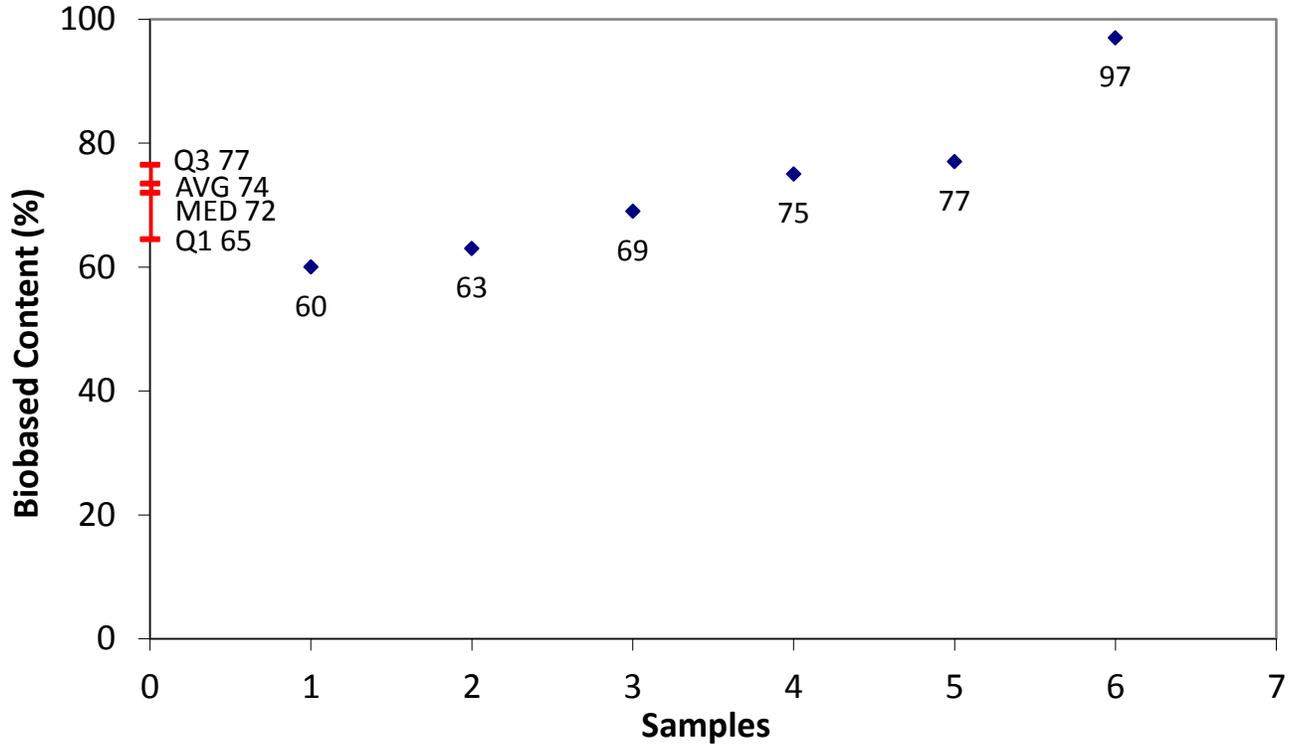
**Biobased Content Data:** Results from biobased content testing of Animal Cleaning Products indicate a range of content percentages from 60% minimum to 97% maximum biobased content as defined by ASTM D6866. A detailed distribution of biobased content levels is included as Appendix A.

**Products Submitted for BEES Analysis:** Life-cycle cost and environmental effect data for 1 Animal Cleaning Products have been submitted to NIST for BEES analysis.

**BEES Analysis:** The life-cycle cost of the submitted **Animal Cleaning Products** is \$19.00 per usage unit. The environmental score is 0.0563. A detailed summary of the BEES results is included as Appendix B.

## Appendix A - Biobased Content Data

### Animal Cleaning Products

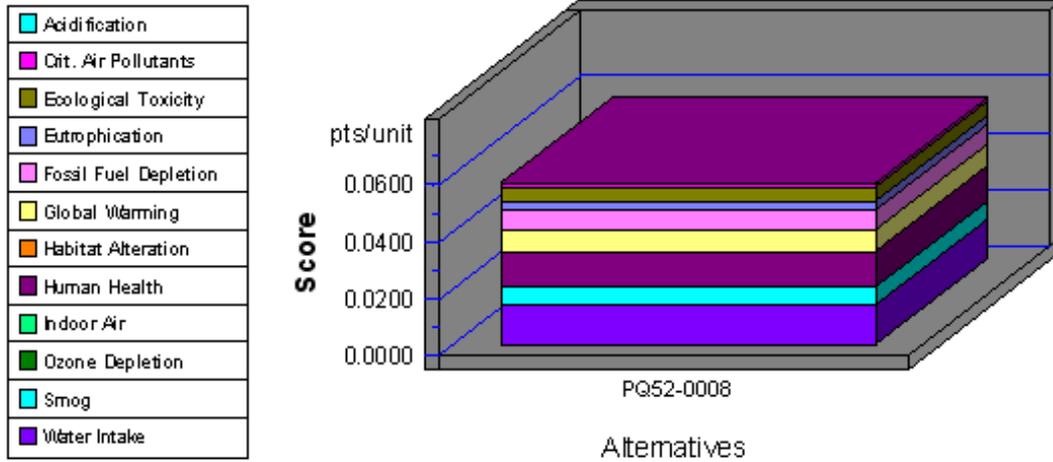


	Company	Product	C14	BEES
1	PQ52	PQ52-0008	60	Yes
2	TNCZ	TNCZ-0004	63	
3	TNCZ	TNCZ-0006	69	
4	G3C4	G3C4-0001	75	
5	ULHI	ULHI-0048	77	
6	TNCZ	TNCZ-0005	97	

## Appendix B - BEES Analysis Results

Functional Unit: 1 gallon of diluted product

### Environmental Performance

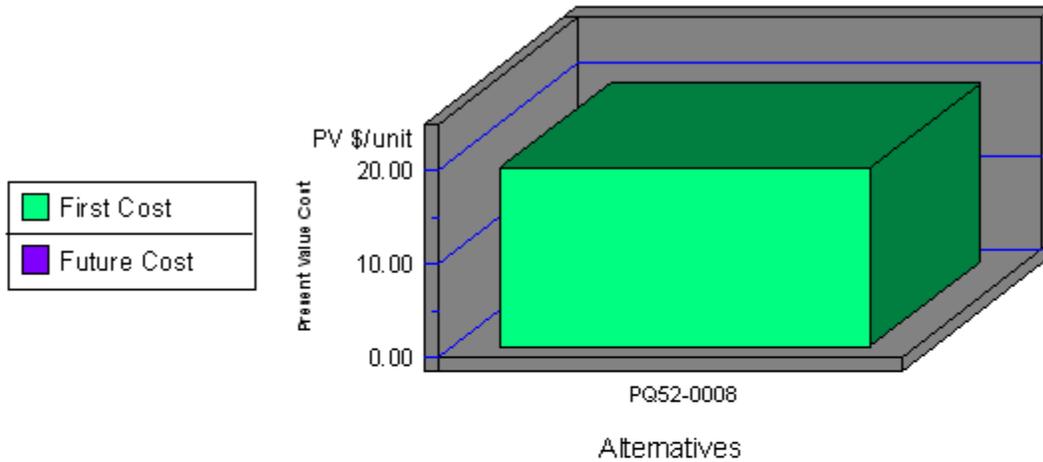


**Note: Lower values are better**

Category	PQ52-0008
Acidification--3%	0.0000
Crit. Air Pollutants--9%	0.0010
Ecolog. Toxicity--7%	0.0051
Eutrophication--6%	0.0031
Fossil Fuel Depl.--10%	0.0070
Global Warming--29%	0.0072
Habitat Alteration--6%	0.0000
Human Health--13%	0.0123
Indoor Air--3%	0.0000
Ozone Depletion--2%	0.0000
Smog--4%	0.0064
Water Intake--8%	0.0142
<b>Sum</b>	<b>0.0563</b>

Animal Cleaning Products		
Impacts	Units	PQ52-0008
Acidification	millimoles H <sup>+</sup> equivalents	8.72E+03
Criteria Air Polutants	microDALYs	2.05E+00
Ecotoxicity	g 2,4-D equivalents	5.90E+01
Eutrophication	g N equivalents	9.85E+00
Fossil Fuel Depletion	MJ surplus energy	2.48E+01
Global Warming	g CO <sub>2</sub> equivalents	6.37E+03
Habitat Alteration	T&E count	0.00E+00
Human Health--Cancer	g C <sub>6</sub> H <sub>6</sub> equivalents	7.84E+00
Human Health--NonCancer	g C <sub>7</sub> H <sub>8</sub> equivalents	1.07E+04
Indoor Air Quality	g TVOCs	0.00E+00
Ozone Depletion	g CFC-11 equivalents	5.66E-05
Smog	g NO <sub>x</sub> equivalents	2.42E+02
Water Intake	liters of water	9.42E+02
Functional Unit	-----	1 gallon of diluted product
<p>1 Following are more complete descriptions of units: Acidification: millimoles of hydrogen ion equivalents; Criteria Air Pollutants: micro Disability-Adjusted Life Years; Ecological Toxicity: grams of 2,4-dichlorophenoxy-acetic acid equivalents; Eutrophication: grams of nitrogen equivalents; Fossil Fuel Depletion: megajoules of surplus energy; Global Warming: grams of carbon dioxide equivalents; Habitat Alteration: threatened and endangered species count; Human Health-Cancer: grams of benzene equivalents; Human Health-NonCancer: grams of toluene equivalents; Indoor Air Quality: grams of Total Volatile Organic Compounds; Ozone Depletion: grams of chloroflouorocarbon-11 equivalents; Smog: grams of nitrogen oxide equivalents; and Water Intake: liters of water.</p>		

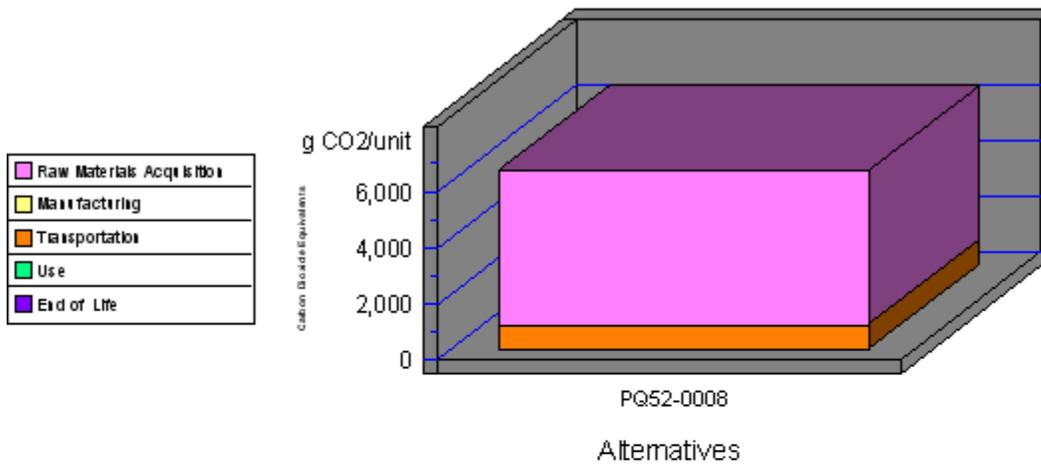
# Economic Performance



Category	PQ52-0008
First Cost	19.00
Future Cost- 3.0%	0.00
<b>Sum</b>	19.00

\*This is a consumable product. Therefore, future costs are not calculated.

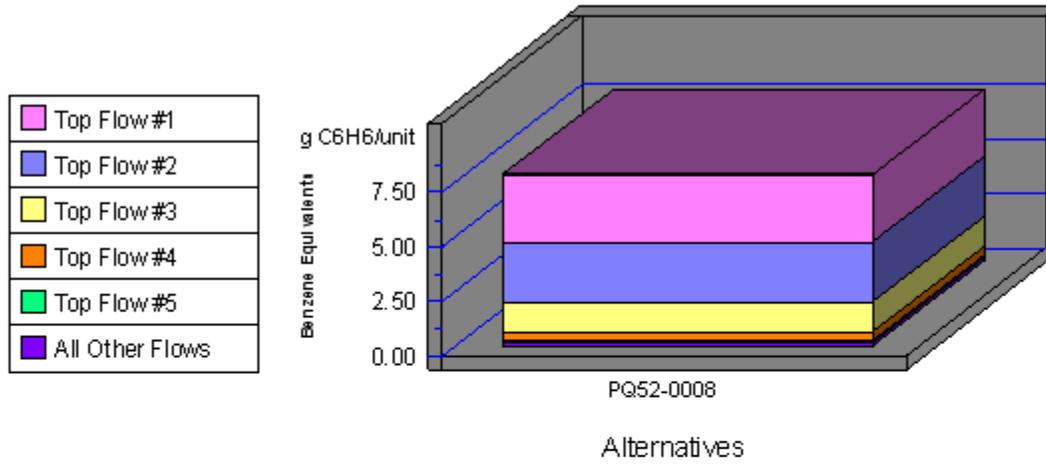
## Global Warming by Life-Cycle Stage



**Note: Lower values are better**

Category	PQ52-0008
1. Raw Materials	5432
2. Manufacturing	0
3. Transportation	934
4. Use	0
5. End of Life	0
<b>Sum</b>	<b>6365</b>

## Human Health Cancer by Sorted Flows\*

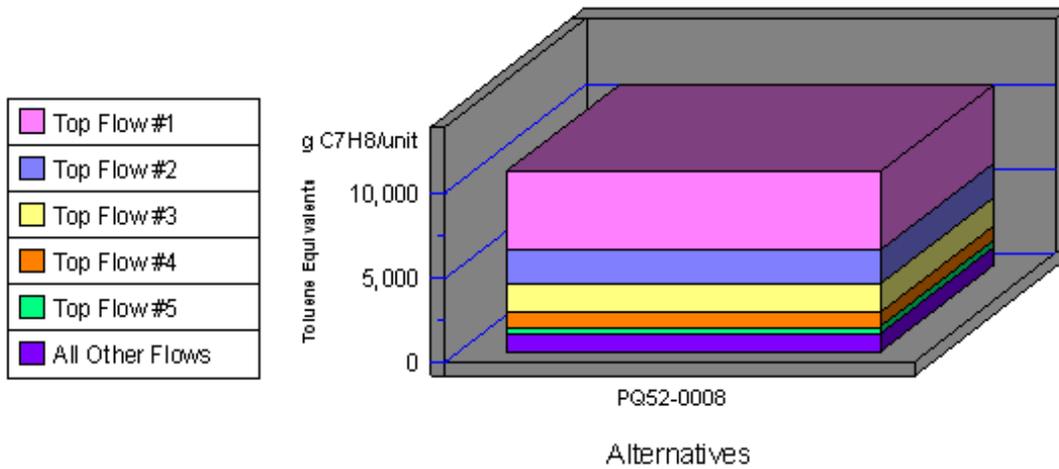


**Note: Lower values are better**

Category	PQ52-0008
Cancer-(w) Arsenic (As3+)	3.07
Cancer-(w) Phenol (C6H5OH)	2.75
Cancer-(a) Dioxins (unspecifc)	1.35
Cancer-(a) Arsenic (As)	0.42
Cancer-(a) Ethylene Oxide	0.05
All Others	0.20
<b>Sum</b>	<b>7.84</b>

\*Sorted by five topmost flows for worst-scoring product

## Human Health Noncancer by Sorted Flows\*



**Note: Lower values are better**

Category	PQ52-0008
Noncancer--(a) Mercury (Hg)	4,706.25
Noncancer--(w) Barium (Ba++)	1,933.17
Noncancer--(a) Dioxins (unspeci	1,701.30
Noncancer--(w) Lead (Pb++ ,	847.00
Noncancer--(w) Mercury (Hg+ ,	361.52
All Others	1,145.71
<b>Sum</b>	<b>10,694.94</b>

\*Sorted by five topmost flows for worst-scoring product