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 September 17, 2008.

Title: Topical Pain Relief Products

Description: Products that can be balms, creams and other topical treatments used for the relief of muscle, joint, headache, and nerve pain, as well as sprains, bruises, swelling, and other aches

Companies Supplying Item: 30 companies supplying Topical Pain Reliefs 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 Topical Pain Reliefs:

- United Soybean Board
- National Corn Growers Association
- American Massage Therapy Association
- IDEA Health & Fitness Association

Commercially Available Products Identified: Of the companies identified, 48 Topical Pain Relief 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 11 Topical Pain Relief.

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

- No Results

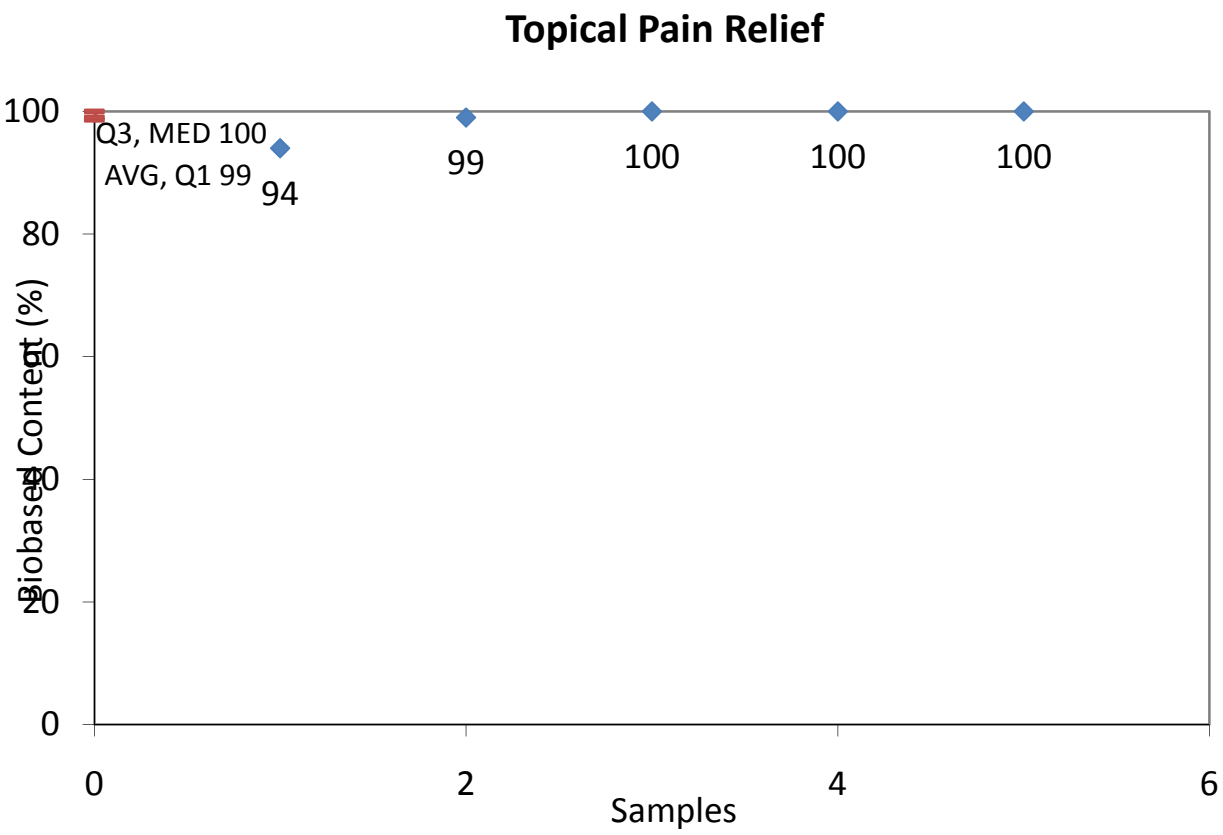
Samples Tested for Biobased Content: 5 samples of Topical Pain Relief have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

Biobased Content Data: Results from biobased content testing of Topical Pain Relief indicate a range of content percentages from 94% minimum to 100% maximum biobased content as defined by ASTM D 6866-04. 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 2 Topical Pain Relief have been submitted to NIST for BEES analysis.

BEES Analysis: The life-cycle costs of the submitted Topical Pain Relief range from $88.00 minimum to $156.99 maximum per usage unit. The environmental scores range from 0.0052 minimum to 0.0081 maximum. A detailed summary of the BEES results is included as Appendix B.

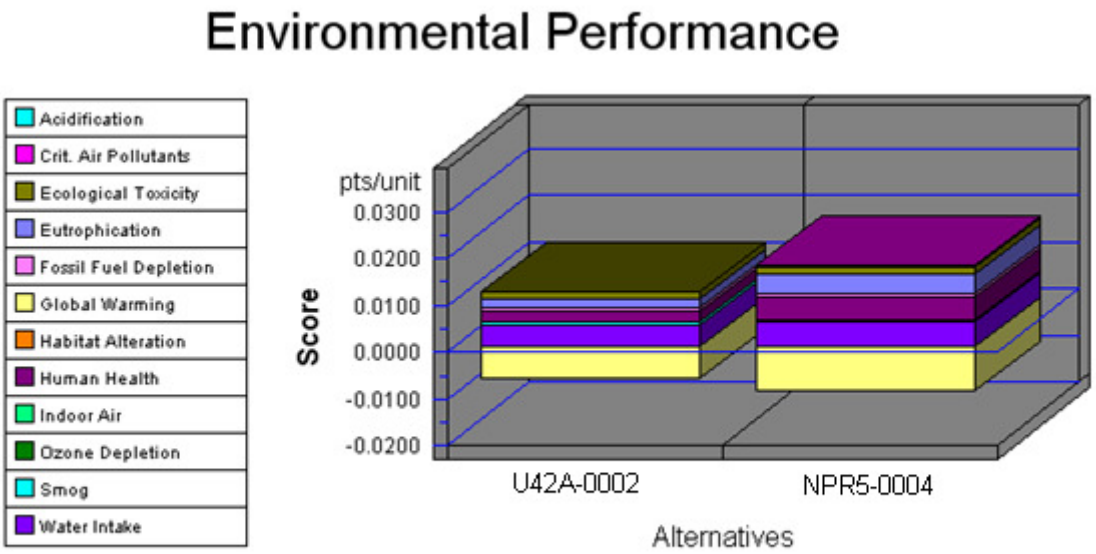
Appendix A - Biobased Content Data



	Company	Product	C14	BEES
1	Q5ON	Q5ON-0018	94	
2	Q5ON	Q5ON-0023	99	
3	Q5ON	Q5ON-0024	100	
4	NPR5	NPR5-0004	100	Yes
5	U42A	U42A-0002	100	Yes

Appendix B - BEES Analysis Results

Functional Unit: 1 kg of product



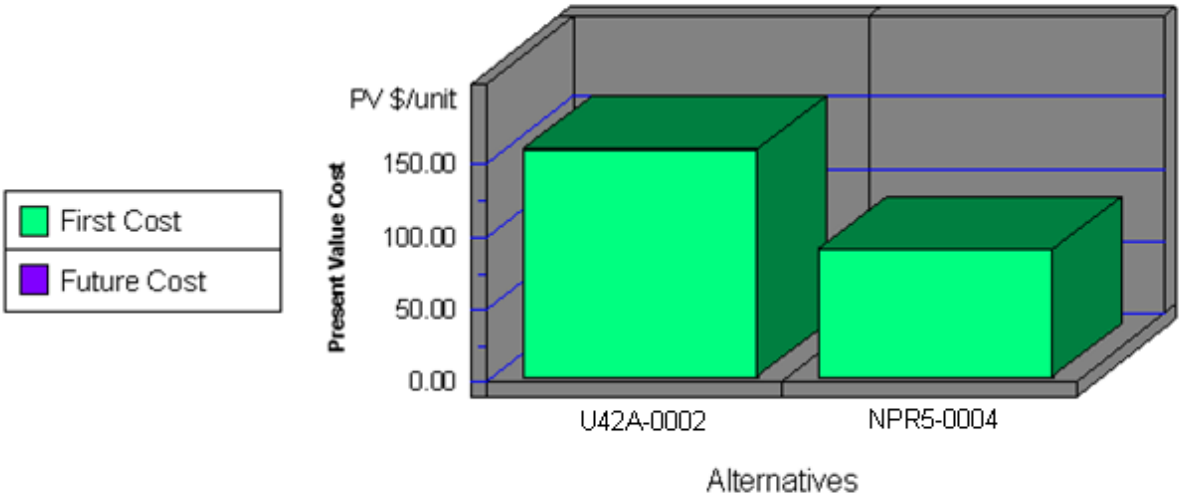
Note: Lower values are better

Category	U42A-0002	NPR5-0004
Acidification--3%	0.0000	0.0000
Crit. Air Pollutants--9%	0.0001	0.0002
Ecolog. Toxicity--7%	0.0016	0.0018
Eutrophication--6%	0.0019	0.0039
Fossil Fuel Depl.--10%	0.0006	0.0007
Global Warming--29%	-0.0067	-0.0093
Habitat Alteration--6%	0.0000	0.0000
Human Health--13%	0.0024	0.0050
Indoor Air--3%	0.0000	0.0000
Ozone Depletion--2%	0.0000	0.0000
Smog--4%	0.0006	0.0006
Water Intake--8%	0.0047	0.0052
Sum	0.0052	0.0081

Topical Pain Relief			
Impacts	Units	U42A-0002	NPR5-0004
Acidification	millimoles H^+ equivalents	9.81E+02	1.27E+03
Criteria Air Polutants	microDALYs	2.50E-01	3.95E-01
Ecotoxicity	g 2,4-D equivalents	1.82E+01	2.11E+01
Eutrophication	g N equivalents	6.07E+00	1.25E+01
Fossil Fuel Depletion	MJ surplus energy	2.18E+00	2.39E+00
Global Warming	g CO_2 equivalents	-5.93E+03	-8.24E+03
Habitat Alteration	T&E count	0.00E+00	0.00E+00
Human Health--Cancer	g C_6H_6 equivalents	1.49E+00	3.18E+00
Human Health--NonCancer	g C_7H_8 equivalents	3.48E+03	5.70E+03
Indoor Air Quality	g TVOCs	0.00E+00	0.00E+00
Ozone Depletion	g CFC-11 equivalents	3.44E-05	9.79E-05
Smog	g NO_x equivalents	2.18E+01	2.17E+01
Water Intake	liters of water	3.15E+02	3.45E+02
Functional Unit	----------	1 kg of product	

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 chloroflourocarbon-11 equivalents; Smog: grams of nitrogen oxide equivalents; and Water Intake: liters of water.

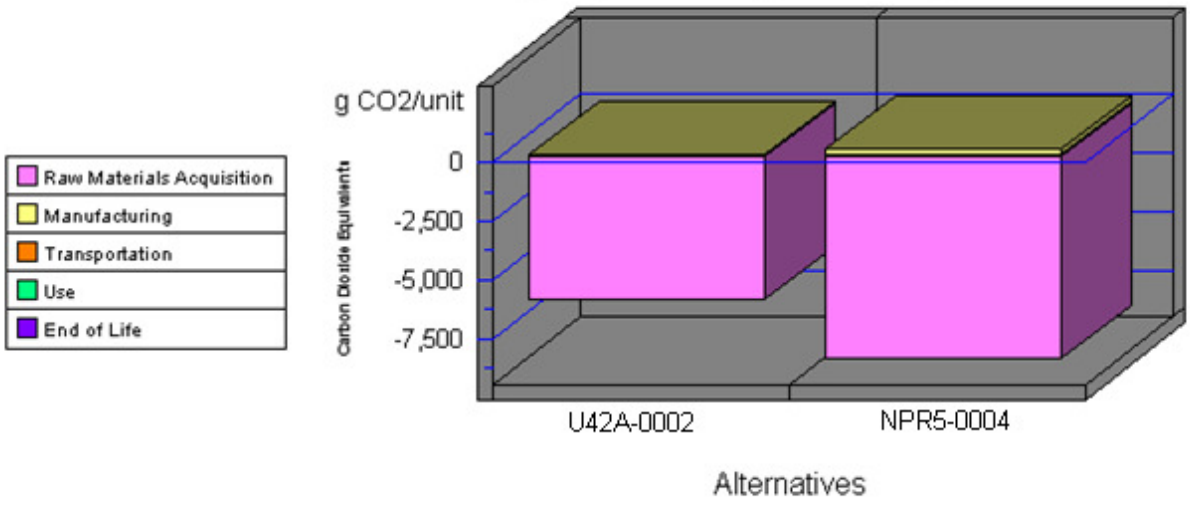
Economic Performance*



Category	U42A-0002	NPR5-0004
First Cost	156.99	88.00
Future Cost-- 3.0%	0.00	0.00
Sum	156.99	88.00

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

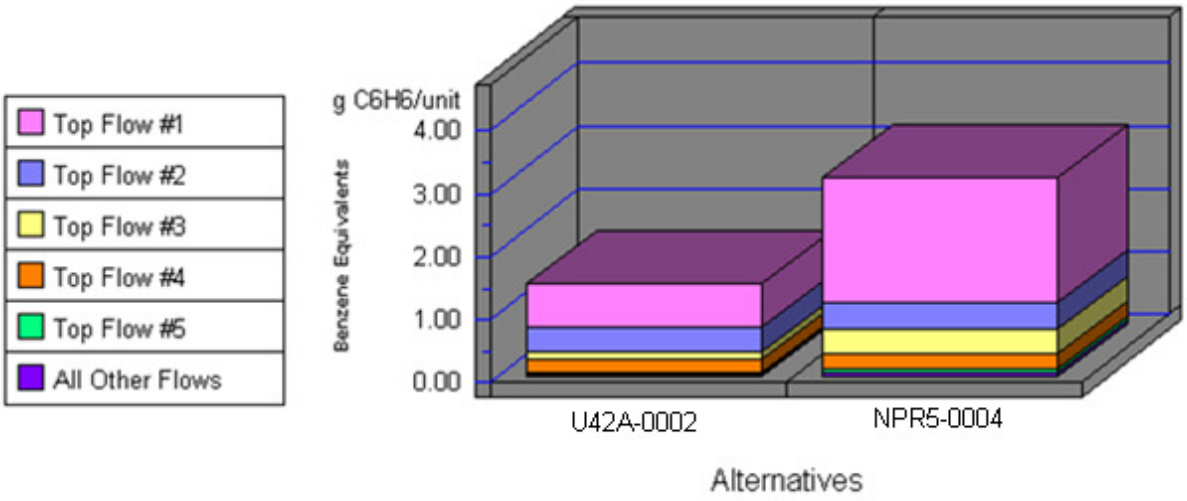
Global Warming by Life-Cycle Stage



Note: Lower values are better

Category	U42A-0002	NPR5-0004
1. Raw Materials	-6065	-8616
2. Manufacturing	111	275
3. Transportation	20	97
4. Use	0	0
5. End of Life	0	0
Sum	-5934	-8244

Human Health Cancer by Sorted Flows*

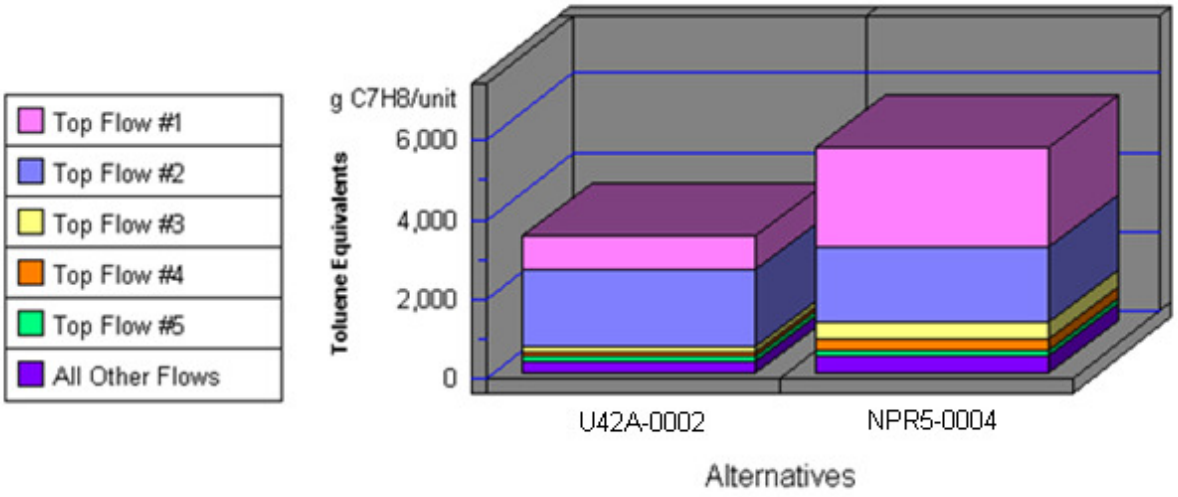


Note: Lower values are better

Category	U42A-0002	NPR5-0004
Cancer--(a) Dioxins (unspecifie	0.68	1.99
Cancer--(w) Arsenic (As3+, As5+	0.42	0.43
Cancer--(a) Arsenic (As)	0.11	0.39
Cancer--(w) Phenol (C6H5OH)	0.22	0.24
Cancer--(a) Carbon Tetrachlorid	0.03	0.07
All Others	0.04	0.06
Sum	1.49	3.18

*Sorted by five topmost flows for worst-scoring product

Human Health Noncancer by Sorted Flows*



Note: Lower values are better

Category	U42A-0002	NPR5-0004
Noncancer--(a) Dioxins (unspeci	858.68	2,506.39
Noncancer--(w) Mercury (Hg+, Hg	1,947.55	1,872.76
Noncancer--(a) Mercury (Hg)	126.60	455.36
Noncancer--(a) Lead (Pb)	78.98	261.59
Noncancer--(w) Barium (Ba++)	152.80	136.35
All Others	311.30	463.77
Sum	3,475.90	5,696.23

*Sorted by five topmost flows for worst-scoring product