

Oat Lipid e

DATA PACK



CERAMIDE CONTENT ANALYSIS.....	2
LIPID AND FATTY ACID PROFILE COMPARISON.....	3
ANTIOXIDANT COMPARISON.....	4

QUANTITATIVE ANALYSIS

Ceramide content measurement was undertaken by using the sphingolipid analysis as described by Markham and Jaworski 2007:

Rapid measurement of sphingolipids from *Arabidopsis thaliana* by reversed-phase high-performance liquid chromatography coupled to electrospray ionization tandem mass spectrometry. Rapid Commun. Mass Spectrom. 21: 1304–1314.

RESULTS

The results indicate an average total ceramide content in Oat Lipid e of 1.49% of total lipids. Analysis of the ceramide species showed the following fractions:

Type	Skin Identical Ceramides Including Isomers	Skin Identical Ceramides Including Isomers and Analogs
NS	3.1%	23.3%
NP	35.1%	35.1%
EOH	6.3%	26.6%
AS	5.6%	11.9%
AP	3.2%	3.2%

Lipid and Fatty Acid Profile Comparison

OIL COMPARISON

An analysis of the Lipid and Fatty Acid Profiles of some of the most commonly used cosmetic oils was undertaken and then compared to that of Oat Lipid E.

RESULTS

The results show that oat Lipid e is unique amongst the oils tested for containing a polar lipid fraction along with a balanced saturated, monounsaturated and polyunsaturated profile.

	Oat* Lipid e	Almond (Sweet)	Argan Oil	Canola	Daikon Radish Seed	Jojoba Golden	Macadamia Nut	Meadow Foam	Rosehip	Hemp	Wheat Germ	Safflower
Lipid Profile												
Neutral Lipids	90.00	98.6	96.5	97.2	96.4	97.7	98.1	98.8	96.4	95.6	92.4	97.2
Pigmented material	3.62	3.6	2.8	1.2	3.6	3.5	2.8	2.3	1.4	4.4	7.6	1.9
Polar lipids	6.38	0	0	0	0	0	0	0	0	0	0	0
Fatty Acid Profile												
Total Saturated	16.84	9.69	18.62	8.79	10.82	1.34	18.24	1.19	6.32	10.7	18.24	11.38
Total Mono-unsaturated	43.85	64.73	52	54.53	68.72	97.96	76.83	80.8	15.1	14.71	14.31	15.35
Total Poly-unsaturated	39.32	25.58	29.38	36.7	20.45	0.71	4.93	18.01	78.58	74.59	67.45	73.28

OIL COMPARISON

An analysis of the antioxidant content of some of the most commonly used cosmetic oils was undertaken and then compared to that of Oat Lipid E.

RESULTS

The results show that Oat lipid e contains potent natural antioxidants, including the tocotrienols, tocopherols, together with the alkyl phenolates, which are known to be as effective an antioxidant as Butylated hydroxytoluene (BHT).

	Tocotrienol **					Tocopherol **				
	Alpha	beta	gamma	delta	total	Alpha	beta	gamma	delta	total
Oat® Lipid e	379	25	56	17	477	131	18	2	2	153
Wheatgerm	2.5	8.2	0.24	-	11	191	65	tr	0.55	257
Coconut	3	0.17	0.64	0.1	4	0.2	tr	0.12	-	0.32
Corn	0.94	tr	1.1	0.26	2	18	1.1	44	2.2	65
Sesame	tr	-	0.34	-	tr	7.9	0.41	36	1.2	46
Walnut	tr	-	0.17	tr	tr	6.6	-	39	4.6	50
Linseed	-	-	-	-	-	1.2	tr	52	0.95	54
Sunflower	0.11	-	tr	0.27	tr	59	2.4	1.4	0.27	63
Rapeseed	-	-	-	-	-	24	tr	39	0.98	64
Camelina	-	-	-	-	-	3.8	0.09	72	1.3	77

** These typical levels of naturally occurring molecules may vary between batches.