



# Hungarian National Institute for Food and Nutrition Science

Founded in 1949

Head of institute: Dr. med. habil. Éva Martos Executive Medical Director

## Food Chemistry Analysis Department

### Food Chemistry Analysis Laboratory

A testing laboratory accredited by the Hungarian National Accreditation Board (NAT) under No. NAT-1-1382/2012.  
ID number: ME-02-08-1-13

## Test Report

National Institute for Food and Nutrition Science  
(OÉTI) ID number: 3293/2013

Date: 24.10.2013

Name and address of client: AKA Kft.  
Erkel Ferenc u. 2/a, H-7773 Villány, Hungary

Sample ID number	Description of sample	Manufacturer
1123	GERE Grape Seed Oil 250 ml	AKA Kft.
1124	GERE Ground Grape Seeds and Skins 150 g	AKA Kft.

Receipt of samples: 01.10.2013  
Testing dates: 01.10.2013 – 24.10.2013

### Test results

Sample No.	Tested characteristic	Test method	Measurement results	Tolerance
1123	Moisture and volatile matter	MSZ EN ISO 662:2001 Chapter 8	0.13 g/100 g	0.03 g/100 g
	Fatty acid composition	MSZ ISO 5508:1992	see attached	±1 abs.%
	saturated fatty acid content		11.09%	
	unsaturated fatty acid content		10.6 g/ 100g of 88.91%	
	Total polyphenols	ÉLK 4.050:2011*	85.3 g/100 g of	-
Energy content	Calculation	879.8 kcal/100 g 3695 kJ/100 g	-	

*Test results only apply to the sample tested.  
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The laboratory accepts any complaints from the above-specified client within 8 days.*

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Sample No.	Tested characteristic	Test method	Measurement results	Tolerance
1124	Proteins	ÉLK 4.008:2002	17.97 g/100 g	±5 rel.%
	Carbohydrates	ÉLK 4.010:2002	7.7 g/100 g	±10 rel.%
	Total polyphenols	ÉLK 4.050:2011	7479 mg/100 g	±10 rel.%
	Energy content	Calculation	184.1 kcal/100 g 774 kJ/100 g	-
	Fat	MSZ ISO 1443:2002	9.1 g/100 g	±0.5 abs.%
	Fatty acid composition	MSZ ISO 5508:1992	see attached	±1 abs.%
	saturated fatty acid content		15.62 % 1.36 g/100 g of	
	unsaturated fatty acid content		84.38% 7.37 g/100 g of	
	Ca content	MSZ EN 15505:2008	728 mg/100 g	±15 rel.%
	K content	AAS**	1539,6 mg/100 g	±15 rel.%
	Na content	MSZ EN 15505:2008	1.50 mg/100 g	±15 rel.%

**Comment:** \*cannot be determined using the given measurement method  
 \*\*non-accredited method

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Fatty acid composition of sample No. 1123

			% of total fatty acids	mg/100 g of product
saturated fatty acids:	C4:0	butyric acid	<0.02	<99
	C6:0	caproic acid	<0.02	<99
	C8:0	caprylic acid	<0.02	<99
	C10:0	capric acid	<0.02	<99
	C11:0		<0.02	<99
	C12:0	lauric acid	<0.02	<99
	C13:0		<0.02	<99
	C14:0	myristic acid	<0.02	<99
	C15:0	pentadecanoic acid	<0.02	<99
	C16:0	palmitic acid	6.99	6704
	C17:0	heptadecanoic acid	<0.02	<99
	C18:0	stearic acid	4.1	3932
	C20:0	arachidic acid	<0.02	<99
	C21:0	heneicosylic acid	<0.02	<99
	C22:0	behenic acid	<0.02	<99
	C24:0	lignoceric acid	<0.02	<99
monounsaturated fatty acids:	C14:1	myristoleic acid	<0.02	<99
	C15:1	pentadecenoic acid	<0.02	<99
	C16:1	palmitoleic acid	<0.02	<99
	C17:1	heptadecenoic acid	<0.02	<99
	C18:1n9t*	elaidic acid	<0.02	<99
	C18:1n11t*	trans-vaccenic acid	<0.02	<99
	C18:1n9c	oleic acid	13.35	12803
	C18:1n7c		<0.02	<99
	C18:1n11c	cis-vaccenic acid	<0.02	<99
	C20:1n9	gadoleic acid	<0.02	<99
	C22:1	erucic acid	<0.02	<99
C24:1	tetracosanoic acid	<0.02	<99	

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Fatty acid composition of sample No. 1124\* (cont.)

			% of total fatty acids	mg/100 g of product
polyunsaturated fatty acids:	C16:2	hexadecadienoic	<0.02	<2
	C16:3	hexadecatrienoic	<0.02	<2
	C18:2 t9,t12*		<0.02	<2
	C18:2 c9,t12*		<0.02	<2
	C18:2 t9,c12*		<0.02	<2
	C18:2n6c	linoleic acid	66.5	5809
	C18:3n6c	$\gamma$ -linolenic acid	<0.02	<2
	C18:3 t9,t12,t15*		<0.02	<2
	C18:3 t9,t12,c15*		<0.02	<2
	C18:3 t9,c12,t15*		<0.02	<2
	C18:3 c9,t12,t15*		<0.02	<2
	C18:3 c9,c12,t15*		<0.02	<2
	C18:3 c9,t12,c15*		<0.02	<2
	C18:3 t9,c12,c15*		<0.02	<2
	C18:3n3c	$\alpha$ -linolenic acid	0.62	54
	C20:2	eicosadienoic	<0.02	<2
	C20:3n6		<0.02	<2
	C20:3n3	eicosatrienoic	<0.02	<2
	C18:4n3	eicosatetraenoic	<0.02	<2
	C20:4n6	arachidonic acid	<0.02	<2
C20:4n3		<0.02	<2	
C22:2	docosadienoic	<0.02	<2	
C20:5n3	eicosapentaenoic	<0.02	<2	
C22:5n3	docosapentaenoic	<0.02	<2	
C22:6n-3	docosaheptaenoic	<0.02	<2	
Other		<0.02	<2	
Total saturated fatty acids:			15.62	1365
Total monounsaturated fatty acids:			17.26	1508
Total polyunsaturated fatty acids:			67.12	5864
Other:			<0.02	<2
out of the fatty acids, total trans-fatty acids (those marked with *):			<0.02	<2

Limit of detection: 0,02%

[illegible signature, stamp of the National Institute for Food and Nutrition Science]  
Head of Laboratory

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**Clause of the Translation Agency:**

Caliban Translation Agency certifies that the six-page (6) English language translation coincides in every detail with the annexed copy of the original Hungarian document.

\* The number of the sample is corrected by the translator.

Pécs, 21<sup>st</sup> March 2017

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Gyöngyi Penyvesi  
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