

Certificate of Analysis



Grail Formula B.V.

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Sample Identification

Sample Name	Fox04 10 mg
Batch Number	GF-FOX10-B241
Date Published	2026-09-20 13:01

Results for LYO-0833

Peptides	Result	Unit	Uncertainty	Acceptable Range
FOXO4-DRI Assay Peptide Screening 0.1% TFA	12.20	mg	[± 0.06]	
FOXO4-DRI Purity Peptide Screening 0.1% TFA	99.7	%	[± 0.5]	
FOXO4-DRI Identification by Spectrum (FTIR) Peptide Screening 0.1% TFA	964		[± 5]	
FOXO4-DRI Identification by RT Peptide Screening 0.1% TFA	0.996		[± 0.005]	
Microbiology	Result	Unit	Uncertainty	Acceptable Range
Total Aerobic Microbial Count USP <61>/Eur. Ph. 2.6.12. Plate Count Method	0	CFU/g	[±]	
Total Yeast and Mold Count USP <61>/Eur. Ph. 2.6.12. Plate Count Method	0	CFU/g	[±]	
Bacterial Endotoxin Chromogenic USP<85>/ Eur. Ph. 2.6.14. Bacterial Endotoxin Chromogenic Test	< 0.001	EU/mg		
Elemental Impurities	Result	Unit	Uncertainty	Acceptable Range
Arsenic Elemental Impurities screening USP (232) / Ph. Eur. 5.20 / 2.4.20	< 0.001	ppm		
Cadmium Elemental Impurities screening USP (232) / Ph. Eur. 5.20 / 2.4.20	< 0.001	ppm		
Quicksilver Elemental Impurities screening USP (232) / Ph. Eur. 5.20 / 2.4.20	< 0.001	ppm		
Lead Elemental Impurities screening USP (232) / Ph. Eur. 5.20 / 2.4.20	< 0.001	ppm		
Nickel Elemental Impurities screening USP (232) / Ph. Eur. 5.20 / 2.4.20	< 0.001	ppm		
Vanadium Elemental Impurities screening USP (232) / Ph. Eur. 5.20 / 2.4.20	< 0.001	ppm		
Cobalt Elemental Impurities screening USP (232) / Ph. Eur. 5.20 / 2.4.20	< 0.001	ppm		
Mass Spectrometry	Result	Unit	Uncertainty	Acceptable Range
Molecular Ion Mass Identification (MS Deconvolution) Mass Spectrometry Identity	5358	Da	[± 1]	

	Method Specification		
Determination of identity, content and purity of FOX O4 DRI			
<i>Document number</i> FOX DRI_008_2026	<i>Superseded document</i> -	<i>Number of pages</i> 4	

1. Content Assessment

1.1. Instrumentation

Module	Name	Serial Number
System Controller	Shimadzu CBM-40 Lite	L221226351398
Degassing Unit	Shimadzu DGU-403	NA
Pump	Shimadzu LC-40B XR	L22146350580
Autosampler	Shimadzu SIL-40C XR	L22216351622
Colum Thermostat	Shimadzu CTO-40S	L22236351602
PDA Detector	Shimadzu SPD-M40	L22276352808
SQ MS Detector	Shimadzu LCMS-2050	O12476200760

1.2. Chromatographic conditions

Chromatographic conditions	
Eluent A	0.1% DFA in Water (HPLC, Gradient Grade)
Eluent B	0.1% DFA in Acetonitrile (HPLC, Gradient Grade)
Flow rate	0.8 mL/min
Program	Gradient elution
Injection volume	2 µL
Colum Temperature	60°C
Column	Waters XSelect CSH C18, 100x2.1mm 2.5µm
Detection wavelength	280nm

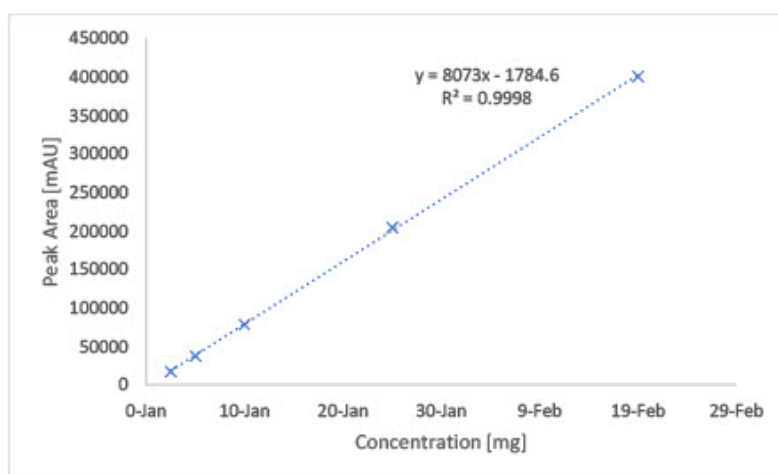
Gradient Program		
Time [min]	A [%]	B [%]
1	98	2
13.99	35	65
14	5	95
15	5	95
15.01	98	2
19	end	

1.3. Sample preparation

Whole amount of container was dissolved in 2mL of water (LCMS Grade). 100 µL of sample was transferred to HPLC vial and diluted by 900 µL water (LCMS Grade) and submitted for analysis.

1.4. Calibration curve

Calibration curve detail	
Quantitative method	External Standard
Calibration Type	Linear
Number of calibration points	5
Force through Zero	Enabled
Weighting Method	None



2. Purity assessment

2.1 Instrumentation

Module	Name	Serial Number
System Controller	Shimadzu CBM-40 Lite	L221226351398
Degassing Unit	Shimadzu DGU-403	NA
Pump	Shimadzu LC-40B XR	L22146350580
Autosampler	Shimadzu SIL-40C XR	L22216351622
Colum Thermostat	Shimadzu CTO-40S	L22236351602
PDA Detector	Shimadzu SPD-M40	L22276352808
SQ MS Detector	Shimadzu LCMS-2050	O12476200760

2.2 Chromatographic conditions

Chromatographic conditions	
Eluent A	0.1% DFA in Water (HPLC, Gradient Grade)
Eluent B	0.1% DFA in Acetonitrile (HPLC, Gradient Grade)
Flow rate	0.8 mL/min
Program	Gradient elution
Injection volume	2 µL
Colum Temperature	60°C
Column	Waters XSelect CSH C18, 100x2.1mm 2.5µm
Detection wavelength	225nm

Gradient Program		
Time [min]	A [%]	B [%]
1	98	2
13.99	35	65
14	5	95
15	5	95
15.01	98	2
19	end	

2.3 Purity assesment

Purity of compound assesed by area normalization method, comparing area of each peak to sum of area of all peaks detected at wavelenght of 225 nm.

3. Identity Assessment

3.1 Instrumentation

Module	Name	Serial Number
System Controller	Shimadzu CBM-40 Lite	L221226351398
Degassing Unit	Shimadzu DGU-403	NA
Pump	Shimadzu LC-40B XR	L22146350580
Autosampler	Shimadzu SIL-40C XR	L22216351622
Column Thermostat	Shimadzu CTO-40S	L22236351602
PDA Detector	Shimadzu SPD-M40	L22276352808
SQ MS Detector	Shimadzu LCMS-2050	O12476200760

3.2 Chromatographic conditions

Chromatographic conditions	
Eluent A	0.1% DFA in Water (HPLC, Gradient Grade)
Eluent B	0.1% DFA in Acetonitrile (HPLC, Gradient Grade)
Flow rate	0.8 mL/min
Program	Gradient elution
Injection volume	2 µL
Column Temperature	60°C
Column	Waters XSelect CSH C18, 100x2.1mm 2.5µm
Detection	MS 220-2000 Da

Gradient Program		
Time [min]	A [%]	B [%]
1	98	2
13.99	35	65
14	5	95
15	5	95
15.01	98	2
19	end	

3.3 Molecular Ion Mass evaluation

Molecular ion mass was determined by deconvolution of multiply charged ESI-MS spectra to calculate the average neutral (zero-charge) molecular mass by equation:

$$M(\text{neutral}) = (z_i((mz_i) - H)) - ME$$

Where:

mz_i - Measured mass of charged particle

z_i - charge

H - proton mass (1.0076 Da)

ME - mass error

Analysis Report

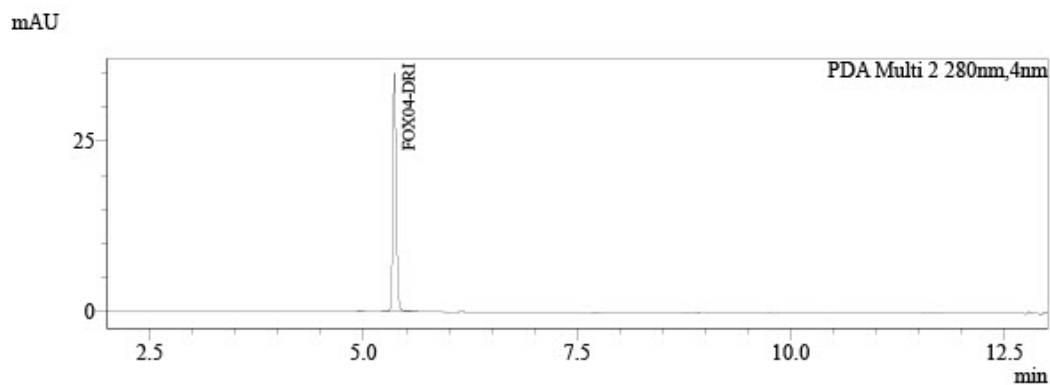
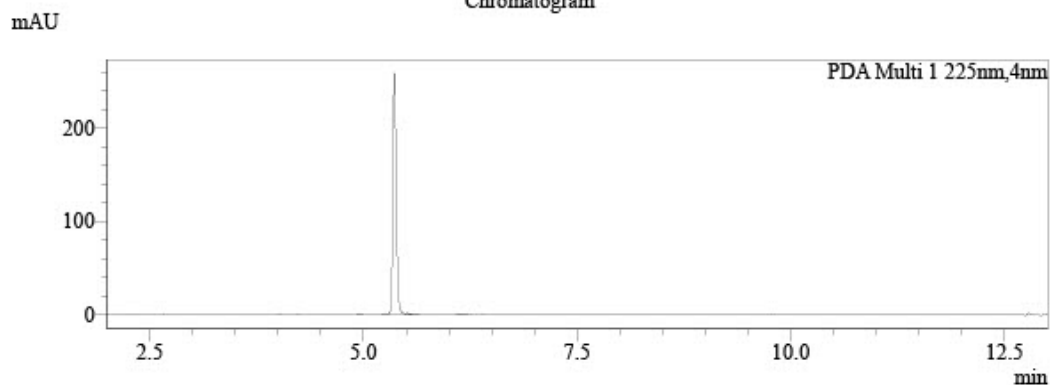


Analysis of quantity of active ingredient by UHPLC with MS detection

Sample Information

Injection Volume : 2
Data File : LYO-0833__007.lcd
Method File : Peptide Screening_DFA_Group G.lcm
Date Acquired : 9/10/2026 2:26:55 PM

Chromatogram



Peak Table

PDA Ch1 225nm

Peak#	Name	Ret. Time	Area	Area%	Conc.	Unit
1		4.956	436	0.060	0.000	
2		5.361	720809	99.664	0.000	
3		5.516	1335	0.185	0.000	
4		6.150	661	0.091	0.000	
Total			723241	100.000		

Peak Table

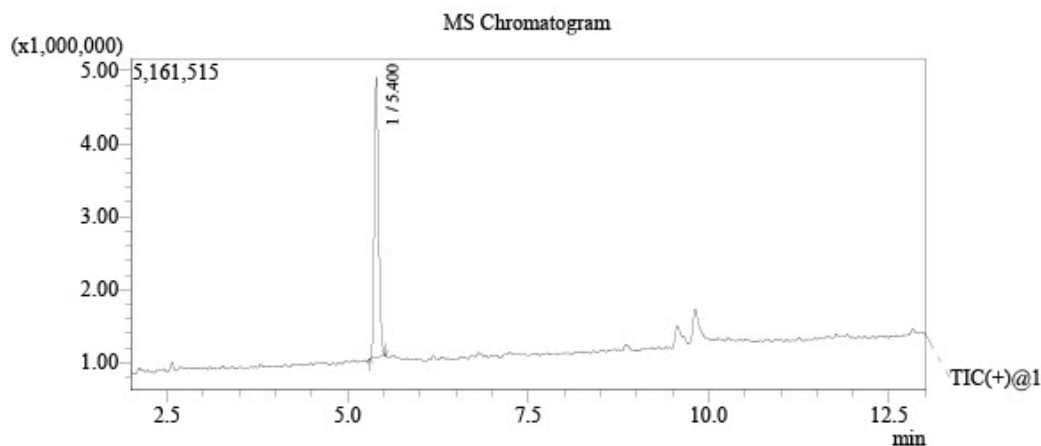
PDA Ch2 280nm

Peak#	Name	Ret. Time	Area	Area%	Conc.	Unit
1		4.955	85	0.087	0.000	
2	FOX04-DRI	5.361	96733	99.787	12.203	mg
3		5.515	122	0.126	0.000	
Total			96940	100.000		

Analysis Report

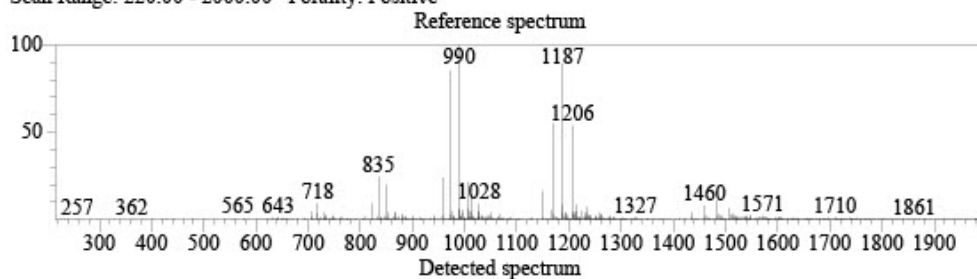


Identification of active ingredient by UHPLC Mass Spectrometry

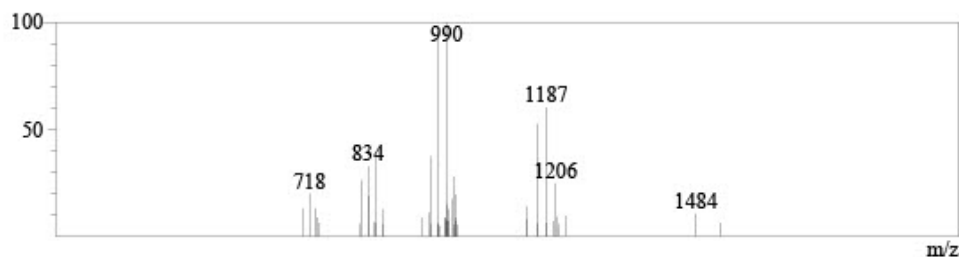


Library Search

Base Peak: 990(321221)
Scan Range: 220.00 - 2000.00 Polarity: Positive



Library: Peptide Screening DFA.lib
Formula: C₂₂₈H₃₈₈N₈₆O₆₄ CAS: 246055-10-9 Mol.Weight: 5358(0!)=
Compound Name: FOX04-DRI



Endotoxin Determination Report

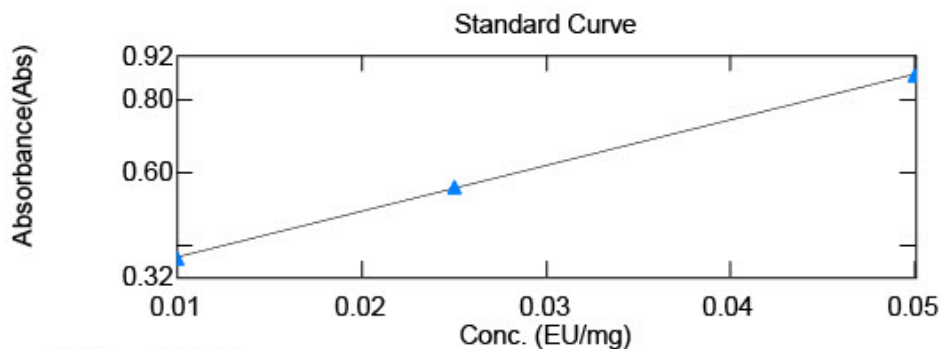


File Information

Filename: C:\UVVis-Data\Data\File_260908_140209.vqud
Date/Time: 09/08/2026 02:49:05 PM

Instrument Information

Instrument Type: UV-1900 Series
Model (S/N): UV-1900i (A12536253123)



$$y = 12.4756x + 0.244725$$
$$r^2 = 0.99983$$

	Sample Name	Conc	Raw_WL545.0	Dilution Rate
1	LYO-0796	1.165	0.6079	40.00
2	LYO-0797	-0.177	0.1345	20.00
3	LYO-0798	4.918	0.8582	100.00
4	LYO-0799	0.017	0.2555	20.00
5	LYO-0800	-0.240	0.0947	20.00
6	LYO-0801	-0.278	0.0715	20.00
7	LYO-0802	5.386	0.5807	200.00
8	LYO-0803	-0.250	0.0888	20.00
9	LYO-0804	1.360	0.6688	40.00
10	LYO-0805	-0.253	0.0872	20.00
11	LYO-0806	-0.241	0.0945	20.00
12	LYO-0807	0.052	0.2775	20.00
13	LYO-0816	-0.137	0.1591	20.00
14	LYO-0818	-0.155	0.1483	20.00
15	LYO-0820	-0.257	0.0843	20.00
16	LYO-0822	-0.283	0.0679	20.00
17	LYO-0824	-0.979	0.1226	100.00
18	LYO-0832	2.564	0.5646	100.00
19	LYO-0833	-0.181	0.1320	20.00
20	LYO-0834	0.248	0.3992	20.00

	Sample Name	Conc	Raw_WL545.0	Dilution Rate
21	LYO-0835	-0.209	0.1142	20.00
22	LYO-0836	0.030	0.2636	20.00
23	LIQ-0069	-0.012	0.0947	1.00

Responsibles



Mr. Ján Galbavý
CEO

Analysis results relate only to the samples tested.

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