

Certificate of Analysis

Heritage Golden Oils LLC

3077 St. Rt. 25

Millersburg Pennsylvania 17061 United States

Sample Name:	Cod Liver Oil 6172025	Eurofins Sample:	15484826
Project ID	HERIT_GO_O-20250703-0002	Receipt Date	11-Jul-2025
PO Number	07_6172025	Receipt Condition	Ambient temperature
Lot Number	6 17 2025	Login Date	03-Jul-2025
Sample Serving Size	8 fl oz	Date Started	14-Jul-2025
Description	oil	Sampled	Sample results apply as received
	liquid amber oil	Online Order	901-2025-E058079

Analysis	Result
Fatty Acids Calculated as Triglycerides	
Saturated Fatty Acids (Acid Form)	12.3 %
Total Cis Unsaturated Fatty Acids (Acid Form)	58.0 %
Monounsaturated Fatty Acids (Acid Form)	33.6 %
Polyunsaturated Fatty Acids (Acid Form)	24.4 %
Trans Fatty Acids (Acid Form)	0.598 %
Omega 3 Fatty Acids	23.0 %
Omega 6 Fatty Acids	2.30 %
Omega 7 Fatty Acids	16.4 %
Omega 9 Fatty Acids	18.3 %
Total Fatty Acids	74.0 %
4:0 Butyric	<0.070 %
6:0 Caproic	<0.070 %
8:0 Caprylic	<0.070 %
10:0 Capric	<0.070 %
12:0 Lauric	<0.070 %
14:0 Myristic	2.74 %
14:1 Myristoleic	0.095 %
15:0 Pentadecanoic	0.238 %
15:1 Pentadecenoic	<0.070 %
16:0 Palmitic	7.95 %
16:1 Palmitoleic	8.73 %
17:0 Heptadecanoic	0.115 %
17:1 Heptadecenoic	<0.070 %
18:0 Stearic	1.91 %
9c 18:1 Oleic	14.2 %
18:2 Linoleic	0.761 %
18:3 Gamma Linolenic	0.084 %
18:3 Alpha Linolenic	0.253 %
18:4 Octadecatetraenoic	0.799 %
20:0 Arachidic	<0.070 %
20:1 Eicosenoic	3.25 %
20:2 Eicosadienoic	0.288 %

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Analysis	Result
Fatty Acids Calculated as Triglycerides	
20:3 Eicosatrienoic (n3)	0.075 %
20:3 Homogamma Linolenic (n6)	<0.070 %
20:4 Arachidonic (n3)	0.430 %
20:4 Arachidonic (n6)	0.767 %
20:5 Eicosapentaenoic	9.99 %
21:5 Heneicosapentaenoic	0.459 %
22:0 Behenic	<0.070 %
22:1 Erucic	0.490 %
22:2 Docosadienoic	0.074 %
22:3 Docosatrienoic	<0.070 %
22:4 Docosatetraenoic	0.155 %
22:5 Docosapentaenoic (n3)	1.77 %
22:5 Docosapentaenoic (n6)	0.171 %
22:6 Docosahexaenoic	9.27 %
24:0 Lignoceric	<0.070 %
24:1 Nervonic	0.353 %
Total 18:1 trans	0.262 %
Total 18:1 cis	22.2 %
Total 18:2 trans	0.081 %
Total 18:3 trans	0.282 %
Vitamin A as Retinol	
Vitamin A from Retinol	2640 IU/g
Vitamin A from Retinol	804 mcg RAE/g
Vitamin D by LCMS	
Total Vitamin D3	112 IU/g
Total Vitamin D2	<0.0400 IU/g
Vitamin D2	<0.0400 IU/g
Previtamin D3	18.0 IU/g
Vitamin D3	93.7 IU/g

Method References	Testing Location
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Method References

Testing Location

Fatty Acids Calculated as Triglycerides (FALT_S)

Food Integrity Innovation-Madison

6304 Ronald Reagan Ave Madison, WI 53704 USA

Official Method No. 996.06, Official Methods of Analysis of the AOAC INTERNATIONAL (modified), 19th Ed., AOAC INTERNATIONAL: Gaithersburg, Maryland (2012).

Official Methods and Recommended Practices of the AOCS, Official methods Ce 2b-11 (2011), Ce 1h-05 (2009), Ce 1j-07 (2013), Ce 2-66 (2009), The American Oil Chemists' Society, Champaign, IL (modified).

Vitamin A as Retinol (VALC_S)

Food Integrity Innovation-Madison

6304 Ronald Reagan Ave Madison, WI 53704 USA

Official Methods of Analysis of AOAC International, Methods 992.04, 992.06, and 2001.13, AOAC INTERNATIONAL, Gaithersburg, MD, USA (modified).

Vitamin D by LCMS (VDMS_S)

Food Integrity Innovation-Madison

6304 Ronald Reagan Ave Madison, WI 53704 USA

Official Methods of Analysis of AOAC INTERNATIONAL, Current Ed., Method 2011.11, AOAC INTERNATIONAL, Gaithersburg, MD, USA, (Modified)

Huang, M., Laluzerne, P., Winters, D., Sullivan, D., "Measurement of Vitamin D in Foods and Nutritional Supplements by Liquid Chromatography/Tandem Mass Spectrometry," *Journal of AOAC International*, Volume (92). No. 5:1327-1335 (2009).

Testing Location(s)

Released on Behalf of Eurofins by

Food Integrity Innovation-Madison

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