



CERTIFICATE OF ANALYSIS (COA)

REFINED SUNFLOWER OIL (RAFİNE AYÇİÇEK YAĞI)

Product Category
Brand

Sunflower Oil
SIRMA

Parameter	Specification Limit	Analysis Value	Result
Free acidity (oleic acid)(% m/m)	≤ 0,3	0,1	✓
Moisture and volatile matter(% m/m)	≤ 0,2	0,02	✓
Peroxide value(meq O ₂ /kg)	≤ 10	0,55	✓
Iodine Value(Wijs)	94-141	125,2	✓
Colour (Red)(5 1/4")	0,6-1,4	1,10	✓
Soap(m/m)	≤ 0,005	0,00	✓

Fatty acid composition (Total Methyl esters) (%m/m)	Specification Limit	Analysis Value	Result
Lauric acid (C12:0)	≤ 0,1	0,00	✓
Myristic acid (C14:0)	≤ 1,0	0,09	✓
Palmitic acid(C16:0)	5,0-7,6	6,81	✓
Palmitoleic acid(C16:1)	≤ 0,3	0,20	✓
Heptadecanoic acid (C17:0)	≤ 0,2	0,03	✓
Heptadecenoic acid (C17:1)	≤ 0,1	0,04	✓
Stearic acid (C18:0)	2,7-6,5	3,42	✓
Oleic acid(C18:1)	14,0-43	32,72	✓
Linoleic acid (C18:2)	45-74,0	55,31	✓
Linolenic acid(C18:3)	≤ 0,3	0,12	✓
Arachidic acid (C20:0)	0,1-0,5	0,27	✓
Gadoleic/Eicosenoic acid (C20:1)	≤ 0,3	0,21	✓
Behenic acid (C22:0)	0,3-1,5	0,74	✓
Lignoseric acid (C24:0)	≤ 0,5	0,00	✓

Sterol Composition (% total sterols)	Specification Limit	Analysis Value	Result
Cholesterol	≤ 0,7	0,18	✓
Brassicasterol	≤ 0,2	0,04	✓
Campesterol	6,5-13,0	7,70	✓
Stigmasterol	6,0-13,0	8,16	✓
β-Sitosterol	50-70	52,61	✓
Δ-5 Avenasterol	≤ 6,9	4,13	✓
Δ-7 Stigmastenol	6,5-24,0	15,65	✓
Δ-7 Avenasterol	3,0-7,5	5,14	✓

The product complies with the specified limits.

Approved by Quality Control Supervisor