

Supplementary Materials

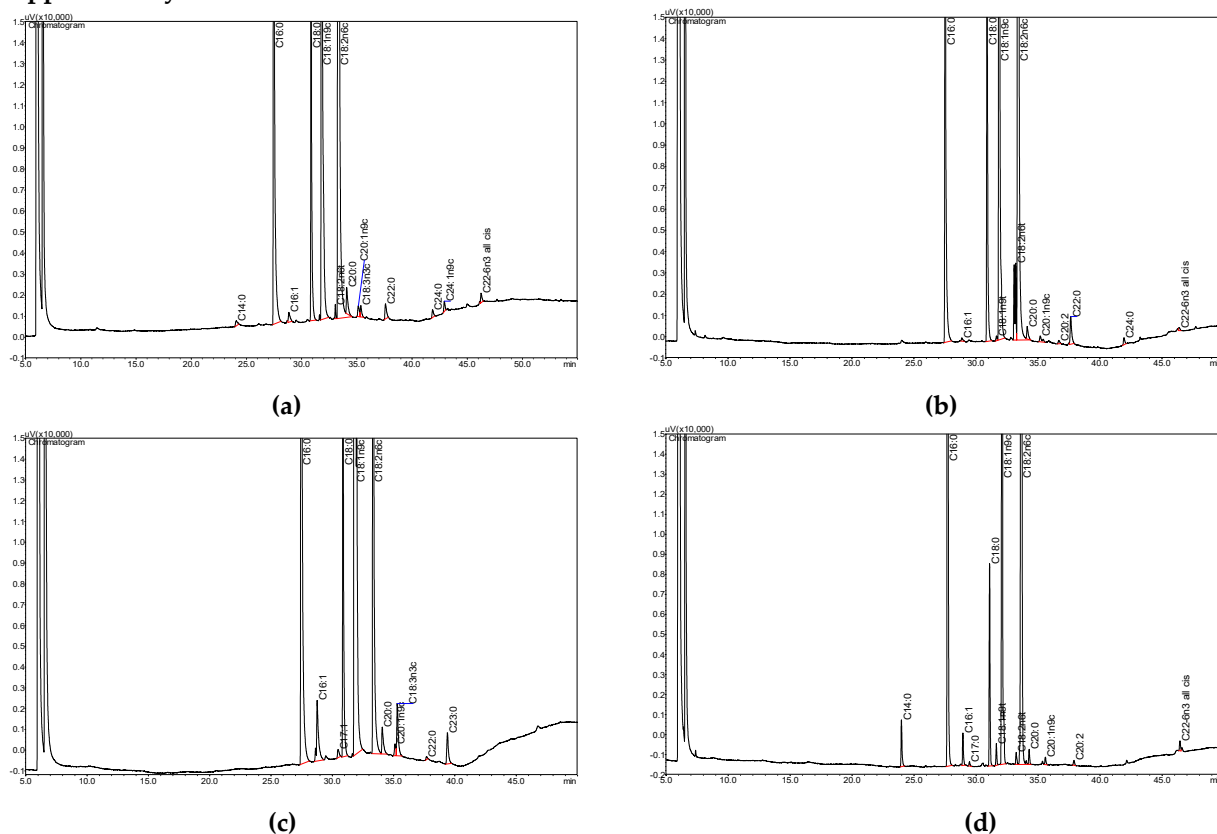


Figure S1. GC chromatogram of the separate FA of some of the vegetable oils analyzed: (a) safflower; (b) sunflower; (c) linseed; (d) cottonseed. These were analyzed on a high-polarity capillary column CP-Sil 2560. The column's temperature was programmed as follows: 100°C (5 min), 40°C/min to 210°C (8 min) and 10°C/min to 240°C (16.5 min). All chromatograms are presented with the same scale for both the x- and y-axes.

SFA
USFA
MUFA
PUFA
omega-6
omega-3
PUFA/SFA
omega-6/omega-3

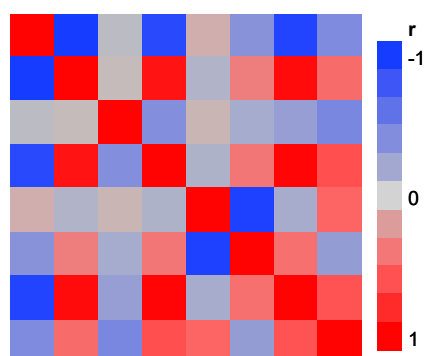
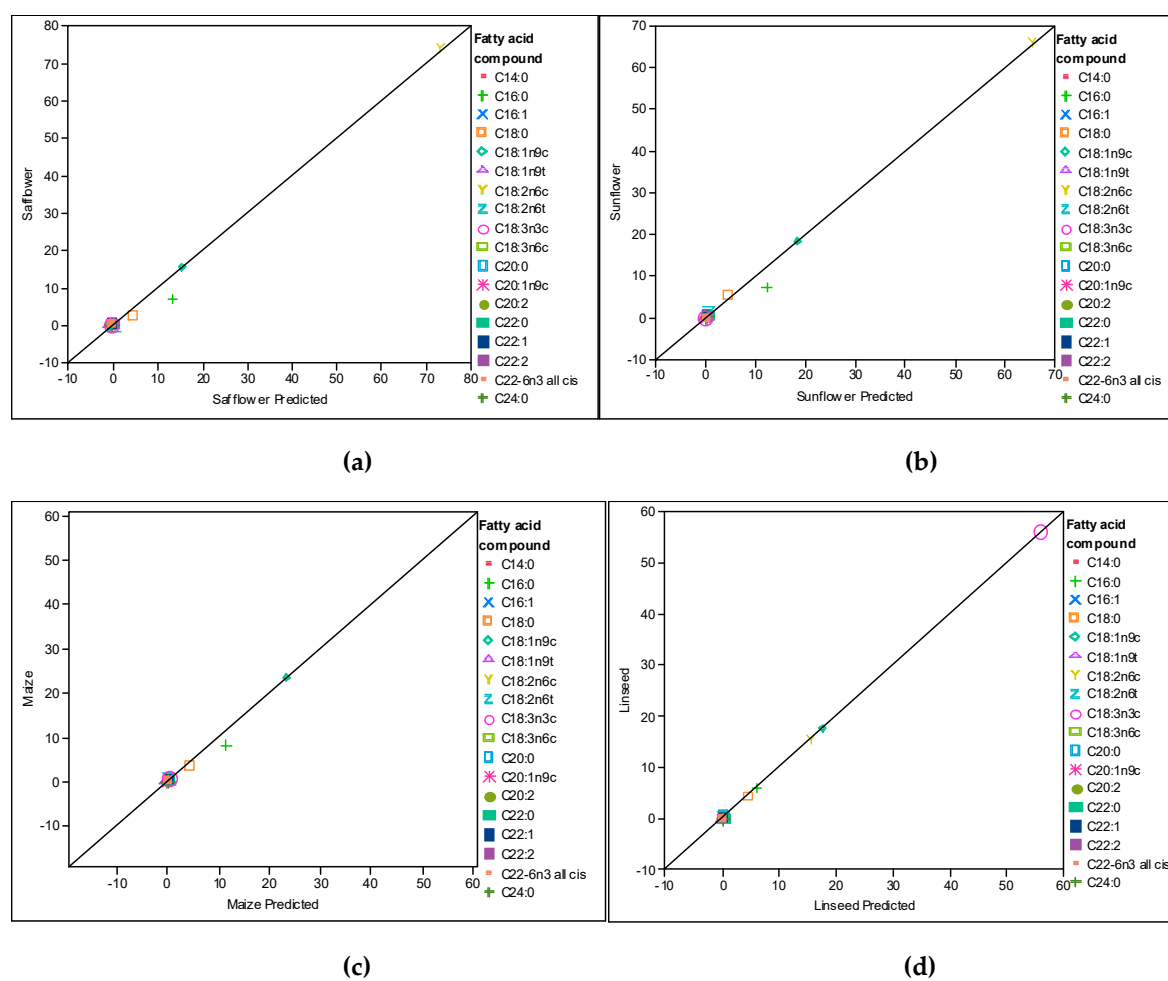


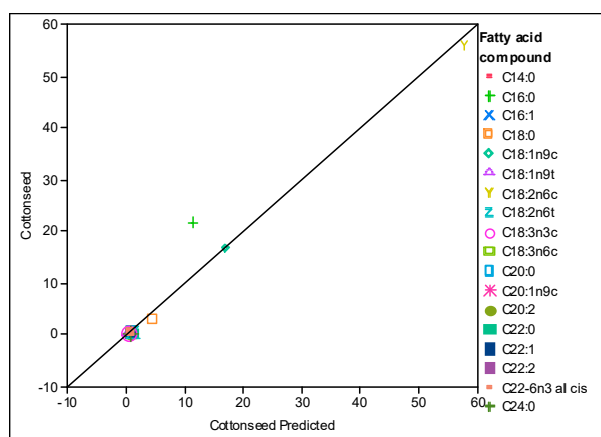
Figure S2. Correlations between the main fatty acids ratios. Correlations were performed by identifying the Pearson's correlation coefficient. Red indicates a positive correlation, and blue indicates a negative correlation.

Table S1. ANN error functions calculated prediction parameters.

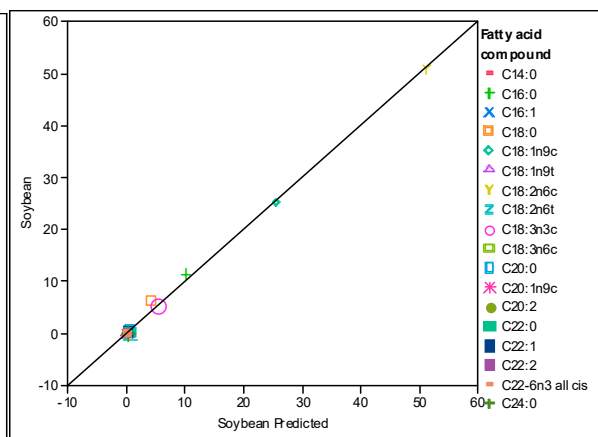
Oil type	SSE	RMSE	SSE Scaled	RMSE Scaled	R
Safflower	43,298785133	1,75862741	0,1401448936	0,10005173	0,9918
Sunflower	25,163980416	1,34068161	0,1002972796	0,08464096	0,9941
Maize	10,291662602	0,85739067	0,0441678814	0,05616804	0,9974
Linseed	0,043363827	0,05565444	0,0002313123	0,00406476	0,9999
Cottonseed	121,03989546	2,94035828	0,616715174	0,2098835	0,9637
Soybean	7,9760124813	0,75479479	0,0470736677	0,05798625	0,9972
Rapeseed	0,6911841631	0,22219428	0,0027505597	0,01401672	0,9998

SSE, sum of squared errors; RMSE, root mean square error; R, regression coefficient;

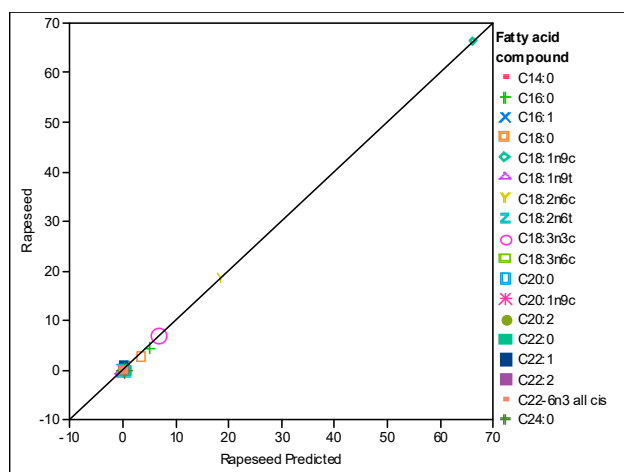




(e)

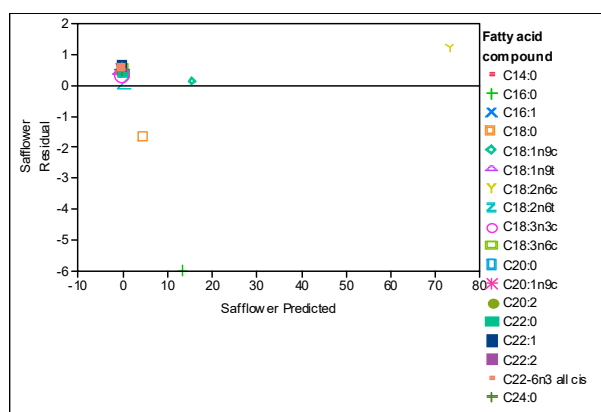


(f)

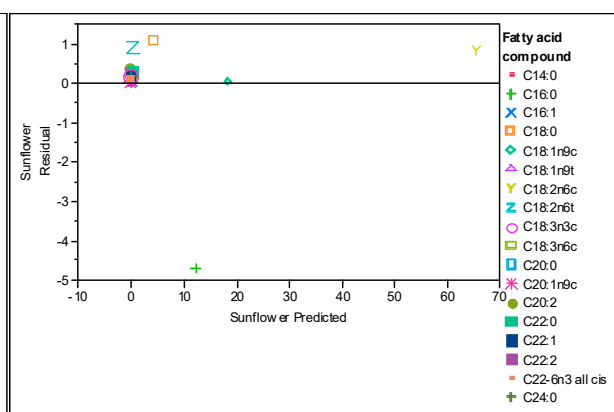


(g)

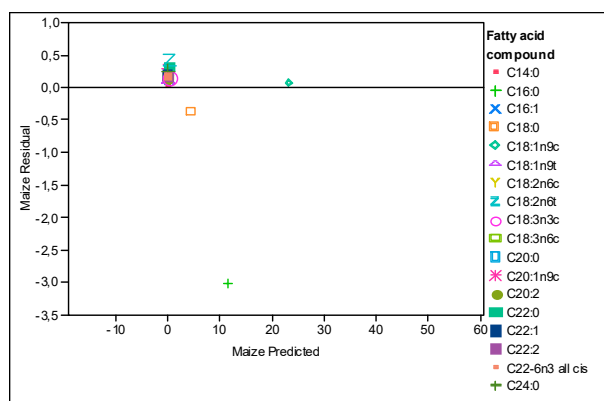
Figure S3. The predictive capability plot for FA composition of vegetable oil, such as (a) safflower; (b) sunflower; (c) maize; (d) linseed; (e) cottonseed; (f) soybean; (g) rapeseed oils.



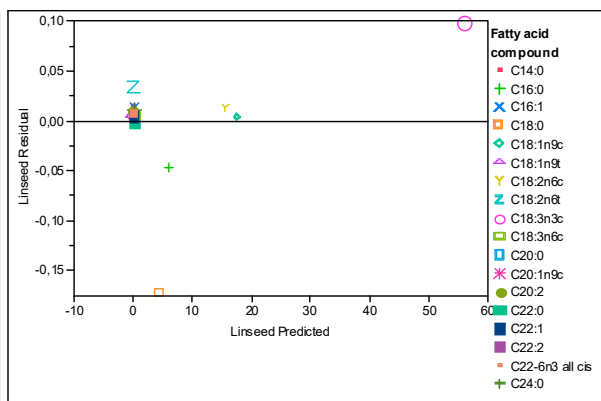
(a)



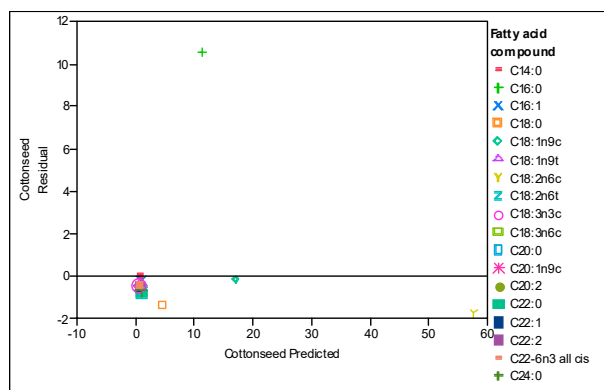
(b)



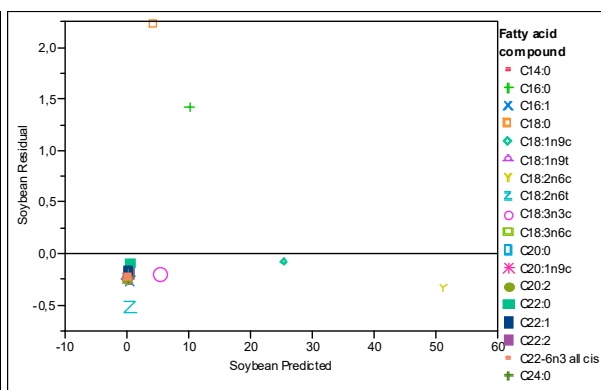
(c)



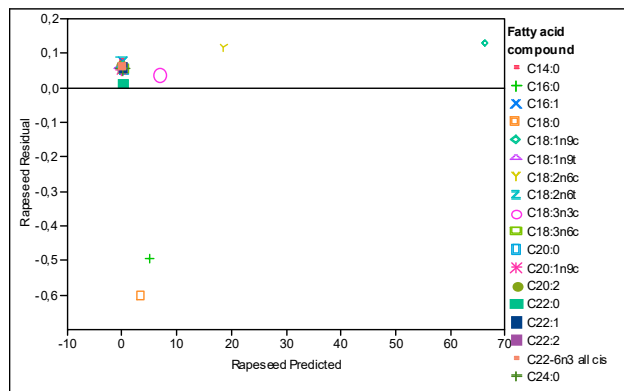
(d)



(e)

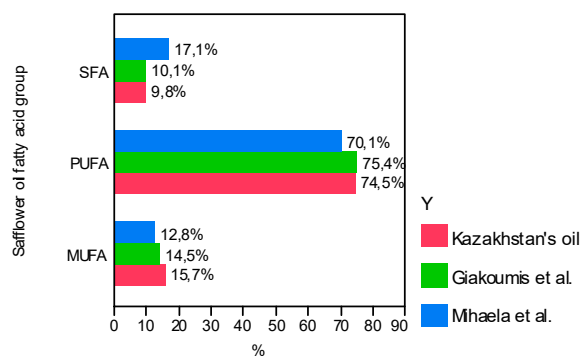


(f)

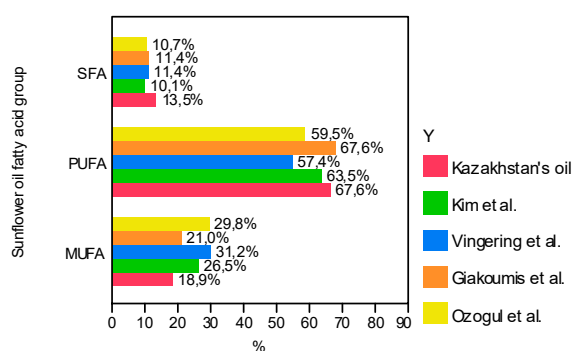


(g)

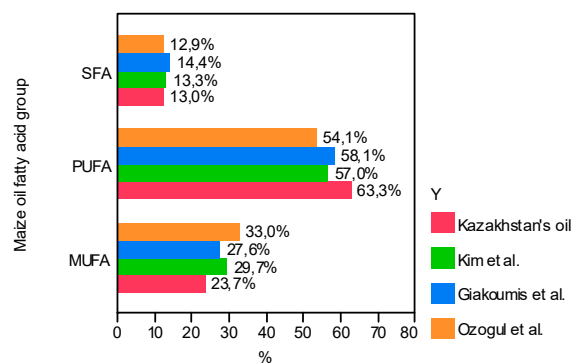
Figure S4. Predictive residual plot for FA composition of vegetable oil, such as (a) safflower; (b) sunflower; (c) maize; (d) linseed; (e) cottonseed; (f) soybean; (g) rapeseed oils.



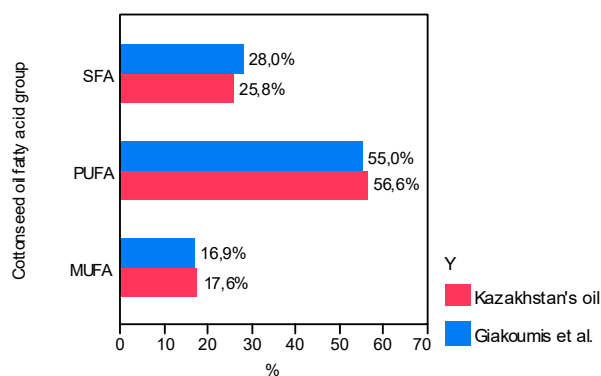
(a)



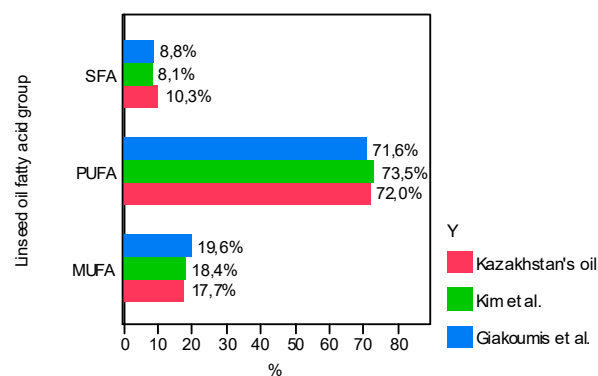
(b)



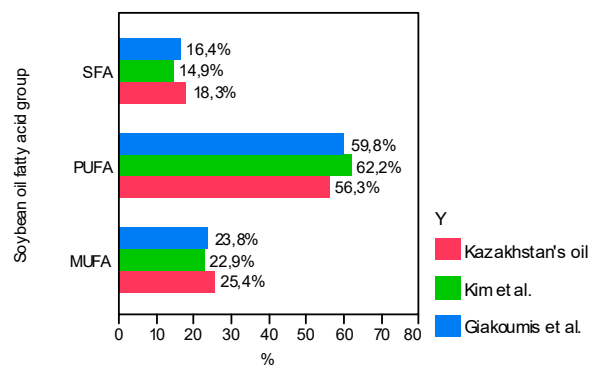
(c)



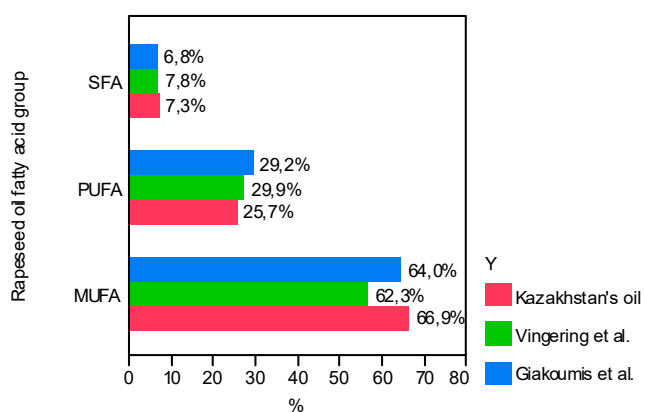
(d)



(e)



(f)



(g)

Figure S5. Average values of the SFA, MUFA and PUFA groups (percentage of total FA) in the vegetable oils from different sources, such as (a) safflower; (b) sunflower; (c) maize; (d) linseed; (e) cottonseed; (f) soybean; (g) rapeseed oils.