

Table S2 Phytochemical compounds determined within Ferulinae members in Iran (with chemical formula) inferred from Table S1.

Compound name	Type	Formula
Flavouring Agent		
(Aromatic compound)		
1,15-hexadecadinene		C ₁₆ H ₃₀
10-epi- γ -eudesmol		C ₁₅ H ₂₆ O
2-methyloctane	Alkanes	CH ₃ (CH ₂) ₅ CH(CH ₃) ₂
cauferoside		C ₃₀ H ₄₀ O ₁₀
citronellyl acetate		C ₁₂ H ₂₂ O ₂
exo-fenchyl acetate		C ₁₂ H ₂₀ O ₂
Farnesiferol A		C ₂₄ H ₃₀ O ₄
ferolin		C ₂₂ H ₃₀ O ₄
feropodin		C ₁₅ H ₂₀ O ₂
Ferulin		C ₁₅ H ₁₆ O ₃
ferutin		C ₂₀ H ₂₆ O ₅
geranyl propionate		C ₁₃ H ₂₂ O ₂
isobornyl acetate		C ₁₂ H ₂₀ O ₂
naphthalene	benzenoid polycyclic aromatic hydrocarbon	C ₁₀ H ₈
nonanal		C ₉ H ₁₈ O
nonane	linear alkane	C ₉ H ₂₀
norinone	bicyclic ketone	C ₉ H ₁₄ O
α -D- xylofuranoside, methyl 2,5-di-o-methyl-		C ₈ H ₁₆ O ₅
α -terpinyl n-pentanoate		
α - Terpinyl pentanoate		C ₁₅ H ₂₆ O ₂
Coumarins		
conferol acetate		C ₂₆ H ₃₂ O ₅
Conferone		C ₂₄ H ₂₈ O ₄
cumarin		C ₉ H ₆ O ₂
farnesiferone A		
Iso-pimpinellin	dimethylpsoralen	C ₁₃ H ₁₀ O ₅
Osthol		C ₁₅ H ₁₆ O ₃
Disulfide		
(E)-1-propenyl sec-butyl disulfide		C ₇ H ₁₄ S ₂
(E)-sec-Butyl propenyl disulfide		
(Z)-sec-Butyl propenyl disulfide		C ₇ H ₁₄ S ₂
1-methylpropyl-(1E)-disulfide		C ₇ H ₁₄ S ₂
(=E)-sec-Butyl propenyl disulfide)		
1-methylpropyl-(1Z)-disulfide		C ₇ H ₁₄ S ₂
disulphane		F ₂ S ₂
methylpropyl (1Z)-disulfide		C ₇ H ₁₄ S ₂
Hexadecanoic acid	fatty acid	C ₁₆ H ₃₂ O ₂
geranyl isovalerate	fatty alcohol esters	C ₁₅ H ₂₆ O ₂
Tetradecanal	fatty aldehyde	C ₁₄ H ₂₈ O
hexadecanal	fatty aldehyde	C ₁₆ H ₃₂ O
Flavonoide		
astragalin	flavanoide	C ₂₁ H ₂₀ O ₁₁
cirsiliol	dimethoxyflavone	C ₁₇ H ₁₄ O ₇
eupatorin	trimethoxyflavone	C ₁₈ H ₁₆ O ₇
luteolin	flavone	C ₁₅ H ₁₀ O ₆
nepetin	O-methylated flavone	C ₁₆ H ₁₂ O ₇
quercetin	flavonoid	C ₁₅ H ₁₀ O ₇
rutin	bioflavonoid	C ₂₇ H ₃₀ O ₁₆
salvigenin	flavonoid	C ₁₈ H ₁₆ O ₆
scoparone	flavonoid	C ₁₁ H ₁₀ O ₄
Furocoumarin		
badrakemin		C ₂₆ H ₃₂ O ₆
badrakemin acetate		C ₂₆ H ₃₂ O ₅
badrakemone		C ₂₄ H ₂₈ O ₄
opoferzin	guaianolide	C ₂₀ H ₂₂ O ₅
caffeic acid	hydroxycinnamic acid	C ₉ H ₈ O ₄
p-coumaric acid	hydroxyl phenyl group	C ₉ H ₈ O ₃

Monoterpenes

(E)- β -ocimene		$C_{10}H_{16}$
(Z)- β -ocimene		$C_{10}H_{16}$
allo-ocimene		$C_{10}H_{16}$
auraptene	monoterpene coumarin ether	$C_{19}H_{22}O_3$
bornyl acetate	monoterpene ester	$C_{12}H_{20}O_2$
Camphene	monoterpene bicyclic	$C_{10}H_{16}$
Carvone		$C_{10}H_{14}O$
cis- β -ocimene		$C_{10}H_{16}$
citronellol	monoterpenoid acyclic	$C_{10}H_{20}O$
Endo fenchyl acetate	monoterpenoids bicyclic	$C_{12}H_{20}O_2$
Eucalyptol		$C_{10}H_{18}O$
Geranyl acetate		$C_{12}H_{20}O_2$
iso-sylvestrene		$C_{10}H_{16}$
limonene	monoterpene cyclic	$C_{10}H_{16}$
Linalool	terpene alcohol	$C_{10}H_{18}O$
myrcene		$C_{10}H_{16}$
β -myrcene		
myrtenol	monoterpenoids bicyclic	$C_{10}H_{16}O$
p-cymen-9-ol		$C_{10}H_{14}O$
p-cymene	alkylbenzene	$C_{10}H_{14}$
pinocarveol		$C_{10}H_{16}O$
sabinene		$C_{10}H_{16}$
sabinene		
terpinene		$C_{10}H_{16}$
α -Terpinene		
β -Terpinene		
γ -Terpinene		
δ -terpinene		
terpinolene		$C_{10}H_{16}$
thymol methyl ether		$C_{11}H_{16}O$
trans-isolimonene		$C_{10}H_{16}$
trans-pinocarveol	monoterpenoids bicyclic	$C_{10}H_{16}O$
trans-sabinol	monoterpenoids bicyclic	$C_{10}H_{16}O$
trans-verbenaol	monoterpene alcohols bicyclic	$C_{10}H_{16}O$
α -phellandrene	monoterpene cyclic	$C_{10}H_{16}$
α -fenchene		$C_{10}H_{16}$
α -terpineol	monoterpene alcohol	$C_{10}H_{18}O$
α -terpinyl acetate		$C_{12}H_{20}O_2$
α -thujene		$C_{10}H_{16}$
β -myrcene		$C_{10}H_{16}$
β -ocimene		$C_{10}H_{16}$
β -phellandrene	monoterpenes cyclic	$C_{10}H_{16}$
β -pinene		$C_{10}H_{16}$
α -pinene		
γ -terpinene		$C_{10}H_{16}$
δ -3-carene		$C_{10}H_{16}$
δ -3-Carene		

β -dihydroagrofuran

β -amyrin

Phenolic coumponds

caffeic acid

carvacrol

chlorogenic acid

Elemicine

Farnesiferol B

ferulic acid

gallic acid

Myristicin

p-coumaric acid

phenolic glycoside

thymol

α -asarone

ferutinin

Strols

daucosterol

naphthoquinone**pentacyclic triterpenol**

polyphenol

monoterpenoid phenol

polyphenol

phenylpropene

terpene lactones

polyphenol

ellagitannins (Phenolic acid)

phenylpropene

polyphenol

phenolic glycoside

monoterpenoid phenol

phenylpropanoid

phytoestrogen

phytosterol

$C_{30}H_{50}O$

$C_{10}H_{14}O$

$C_{16}H_{18}O_9$

$C_{12}H_{16}O_3$

$C_{24}H_{30}O_4$

$C_7H_6O_5$

$C_{11}H_{12}O_3$

$C_{10}H_{14}O$

$C_{12}H_{16}O_3$

$C_{22}H_{30}O_4$

$C_{35}H_{60}O_6$

phytosterol glycosides	Phytosterol glycosides	
β -sitosterol	phytosterols	$C_{29}H_{50}O$
Stigmasterol	unsaturated phytosterol	$C_{29}H_{48}O$
Sesquiterpenes		
(E)-caryophyllene	sesquiterpene bicyclic	$C_{15}H_{24}$
(E)-nerolidol	sesquiterpene alcohol	$C_{15}H_{26}O$
7-epi- γ -eudesmol	sesquiterpenoid carbobicyclic	$C_{15}H_{26}O$
aristolone		$C_{15}H_{22}O$
bicyclogermacrene	sesquiterpenoids isolepidozane	$C_{15}H_{24}$
bornyl angelate		$C_{15}H_{24}O_2$
Bulnesol	sesquiterpenoid guaiane	$C_{15}H_{26}O$
Carotol	sesquiterpene alcohol	$C_{15}H_{26}O$
caryophyllene oxide		$C_{15}H_{24}O$
chimganidin		$C_{23}H_{32}O_5$
dehydro-sesquicineole	sesquiterpenes	$C_{15}H_{24}O$
epi- α -cadinol	sesquiterpenoid alcohol	$C_{15}H_{26}O$
epi- α -muurolol	sesquiterpenoid	$C_{15}H_{26}O$
Epi- γ -eudesmol	eudesmane sesquiterpenoid	$C_{15}H_{26}O$
Eremophilene		$C_{15}H_{24}$
germacrene D		$C_{15}H_{24}$
germacrene D-4-ol	sesquiterpenoid	$C_{15}H_{26}O$
Germacrene B	sesquiterpenoid	$C_{15}H_{24}$
glubolol	sesquiterpenoid	$C_{15}H_{26}O$
Guaiol	sesquiterpenoid alcohol	$C_{15}H_{26}O$
guaioyl acetate	sesquiterpenoid	$C_{17}H_{28}O_2$
Hinesol	sesquiterpenoid	$C_{15}H_{26}O$
humulane esters	Sesquiterpenoids	
isolongifolene	sesquiterpenoid	$C_{15}H_{24}$
kariferin	Sesquiterpene alcohols, guaiane esters	
kariferinin	Sesquiterpene alcohols, guaiane esters	
longiborneol		$C_{15}H_{26}O$
spathulenol	sesquiterpenoid tricyclic	$C_{15}H_{24}O$
Valerianol	sesquiterpenoid	$C_{15}H_{26}O$
α -bisabolol	sesquiterpene alcohol monocyclic	$C_{15}H_{26}O$
α -cadinol	sesquiterpenoid alcohol	$C_{15}H_{26}O$
α -eudesmol	sesquiterpenoid	$C_{15}H_{26}O$
α -gurjunene		$C_{15}H_{24}$
α -muurolol	sesquiterpenoid alcohol	$C_{15}H_{26}O$
α -ylangene	sesquiterpenoid	$C_{15}H_{24}$
β -bisabolene		$C_{15}H_{24}$
β -caryophyllene	sesquiterpene bicyclic	$C_{15}H_{24}$
β -chamigrene		$C_{15}H_{24}$
β -elemene		$C_{15}H_{24}$
β -eudesmol	sesquiterpenoid carbobicyclic	$C_{15}H_{26}O$
β -himachalene	sesquiterpenoid lippifoliane	$C_{15}H_{24}$
γ -elemene		$C_{15}H_{24}$
δ -cadinene	sesquiterpene bicyclic	$C_{15}H_{24}$
Sesquiterpene coumarins		
Asacoumarin A		$C_{24}H_{30}O_5$
Asacoumarin B		$C_{24}H_{30}O_5$
assafoetidin		$C_{24}H_{30}O_4$
Assafoetidinol A		
Assafoetidinol B		
conferol		$C_{24}H_{30}O_4$
Epi-conferdione		$C_{24}H_{26}O_5$
epi-samarcandin		$C_{24}H_{32}O_5$
epi-samarcandin acetate		
ethyl galbanate		$C_{11}H_{18}O_3$
farnesiferol C		
farnesiferone B		
fekrynol acetate		$C_{26}H_{34}O_5$
ferilin		$C_{24}H_{30}O_4$
Feselol		$C_{24}H_{30}O_4$
flabellilobin A		
flabellilobin B		
franesiferol A		$C_{24}H_{30}O_4$
franesiferol B		$C_{24}H_{30}O_4$

franesiferol C		$C_{24}H_{30}O_4$
galbanic acid		$C_{24}H_{30}O_5$
gummosin		
gumoside A		$C_{35}H_{48}O_{14}$
gumoside B		$C_{30}H_{40}O_{10}$
isosamarcandin		$C_{29}H_{38}O_6$
kamololol		$C_{24}H_{30}O_5$
kamololol acetate		
Karatavicinol A		$C_{24}H_{32}O_5$
Lehmferin		$C_{24}H_{30}O_4$
ligupersin A		$C_{24}H_{28}O_5$
methyl galbanate		$C_{25}H_{32}O_5$
microlobin		$C_{26}H_{32}O_6$
persicaosides A		
persicaosides A-D		
szowitsiacoumarin A		
szowitsiacoumarin B		
tadshiferin		
umbelliferone		
Umbelliprenin		$C_{24}H_{30}O_3$
Sesquiterpene lactones		
Copaene	sesquiterpenes tricyclic	$C_{15}H_{24}$
Diversolidides A-G		
feruhodin B		
feruhodin A		
ferulidin		$C_{15}H_{18}O_4$
guaianolide		
isobadkhyisin		
oopodin		$C_{20}H_{26}O_4$
opoferdin		
semopodin		
Cardenolide	steroid	$C_{23}H_{34}O_2$
Sulfur containing compounds		
2-ethylthiopyridine	monosulfide	C_7H_9NS
Foetithiophene A	monosulfide	$C_8H_{10}O_2S$
Foetithiophene B	monosulfide	$C_8H_{10}O_2S$
2,3,4-trimethylthiophene = Thiophene, 2,3,4-trimethyl	monosulfide	$C_7H_{10}S$
2,3,4,5-tetramethylthiophene		
2,5-diethylthiophene = Thiophene, 2,5-diethyl	monosulfide	$C_8H_{12}S$
foetisulfide D	Tetrasulfide	$C_8H_{14}S_4$
foetisulfide A		
foetisulfide B		
foetisulfide C		
foetithiophene A		
foetithiophene B		
dimethyl trisulphide	trisulfide	$C_2H_6S_3$
foetisulfide C	trisulfide	$C_8H_{16}O_2S_3$
foetisulfide A	trisulfide	$C_8H_{16}OS_3$
Terpenoid coumarins		
ferocaulicin		$C_{26}H_{30}O_6$
microlobidene		$C_{24}H_{30}O_4$