



ON THE STUDY OF THE CHEMICAL COMPOSITION OF COMMON PEACH (*PERSICA VULGARIS* MILL.)

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KEYWORDS

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acids, essential oil,
amygdalin, furocoumarin.

ABSTRACT

This work presents the results of the analysis of literature data to determine the bioactive substances in the composition of common peach (Persica vulgaris Mill.). Based on the results of the analysis of literature data, it was determined that the fruits and leaves of common peach contain biologically active substances (flavonoids, polysaccharides, amino acids, vitamins, organic acids, essential oil, amygdalin, furocoumarin).

ODDIY SHAFTOLI (*PERSICA VULGARIS* MILL.) KIMYOVIY TARKIBINI O'RGANISHGA DOIR

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ABSTRACT

*Ushbu ishda oddiy shaftoli (Persica vulgaris Mill.) tarkibidagi
biofaol moddalarni aniqlashda adabiyotlar ma'lumotlarni tahlil*

KEYWORDS

Oddiy shaftoli, flavonoidlar, polisaxaridlar, aminokislotalar, vitaminlar, organik kislotalar, efir moyi, amigdalın, furokumarin.

qilish natijalari keltirilgan. Adabiyotlar ma'lumotlari tahlil natijasi asosida oddiy shaftoli mevalari va barglarining tarkibida biologik faol moddalari (flavonoidlar, polisaxaridlar, aminokislotalar, vitaminlar, organik kislotalar, efir moyi, amigdalın, furokumarin) borligi aniqlangan.

KIRISH. Bugungi kunda dunyoda farmatsevtika sanoatining keng miqiyosida rivojlanishi uchun foydali va tarkibi kam o'rganilgan dorivor o'simliklarning turlaridan samarali dori vositalari va biologik faol qo'shimchalar ishlab chiqarish orqali mahalliy bozorning assortimentini kengaytirishga katta e'tibor qaratilmoqda. Bu borada keng farmakologik ta'sirga ega bo'lgan oddiy shaftoli (*Persica vulgaris Mill.*) o'simligi olimlar e'tiborini tortadi.

TADQIQOT MAQSADI. Oddiy shaftoli (*Persica vulgaris Mill.*) tarkibidagi biofaol moddalarni aniqlashda adabiyotlar ma'lumotlarni tahlil qilish.

MUHOKAMA. Tadqiqot materiallari ochiq matbuotda chop etilgan mahalliy va xorijiy mualliflarning maqolalaridagi ma'lumotlarni tahlil qilish va ularni umumlashtirish.

Oddiy shaftoli (*Persica vulgaris Mill.*) (sinonimi: *Amygdalus persica L.*; *Prunus persica Stokes*; *P.persica var. vulgaris Maxim.*; *P.persica var. densa Makino*) madaniyatga kiritilgan qadim zamonlardan beri ma'lum bo'lgan mevali daraxt. 4000 yil oldin Xitoyning qadimiy madaniyati O'rta Osiyo va Eronga kirib keldi. Hozirda u yovvoyi holda tabiatda uchramaydi [1].

Oddiy shaftoli (*Persica vulgaris Mill.*) barglari o'simligi shifobaxsh xususiyatlarni o'zida jamlagan bo'lib, uning tarkibida bir qator biologik faol moddalar bor.

Shaftoli mevalari tarkibida 15-20 % qand (saxaroza, fruktoza, glyukoza), organik kislotalar (olma, limon, askorbin, vino, xin), pektin moddalar, karotinoidlar, flavonoidlar, fenol kislotalar, tokoferol atsetat, B guruh vitaminlar majmuasi, tuzlardan K, Fe, Zn, makro-va mikroelementlarning mavjudligi terapevtik hamda profilaktik ahamiyatga ega [2, 3, 4].

Shaftoli urug'lari tarkibida (57%) yog', amigdalın glikozidi, efir moyi, β -sitosterin, palmitin va olein kislotalari borligi adabiyot manbalarida keltirilgan. Urug'dan olingan yog' tarkibida 12.981.0 % linolein kislota, 9.97 % palmitin kislota, 4.82 % linol kislota, 3.58 mg begen kislota, 2.16% araxis kislota mavjud. Meva qobig'ida flavonoidlar va mineral elementlar mavjud bo'lib, daraxtning qobig'ida esa persikozid hamda korigenin aniqlangan [5, 6].

Rossiyalik olim L.V.Ivantsova (Perm davlat farmatsevtika akademiyasi, RF, 2020) oddiy shaftoli barglarining tarkibida flavonoidlar (kversetin, apigenin, rutin, kemferol), karotinoid, vitamin C, makro-va mikroelementlari, taninlar borligini aniqladi [7, 8].

M.O.Denisova (Pyatigorsk tibbiyot farmatsevtika instituti, RF, 2020) tomonidan Qrimda yetishtirilgan shaftoli barglarining tarkibida Hidroksodolchin kislotalardan xlorogen, qaxva, dikafeoilxin va p-kumar kislotalar, flavonoidlardan kempferol, kempferol 3-galaktozid, kempferol 3-rutinozid, kempferol 3-glyukozid, kversetin, kversetin 3-D-glyukozid, kversetin 3-rutinozid, izoramnetin glyukozid, polisaxaridlar, organik kislotalar, taninlar, kumarinlar, efir moyi, aminokislotalar, makro-va mikroelementlar borligini adabiyotlar ma'lumotlarni tahlil qilib keltirilgan [9].

I.Yu.Mamatova, I.R.Asqarov, M.X.Mamaraxmonovlar (Andijon davlat universiteti, 2020) tomonidan shaftoli barglari va gullari ekstraktidan flavonoidlar va taninlarni mikroblarga qarshi ta'siri solishtirib aniqlangan [10].

E.S.Mostafa, A.Maher, D.A.Mostafa, S.S Gad., M.A.M.Nawwar, N.Swilam, (October University for Modern Sciences and Arts, Egypt, 2021) tomonidan shaftoli barglarining ekstraktidan kempferol 3-O-b-4C1-(600-O-3,4-digidroksifenilatsetil glyukopiranozidni birinchi marta ajratib olingan [11]. Rossiyalik olimlar A.B.Savenkova, N.V.Nesterova (I.M.Sechenov nomidagi davlat tibbiyot universiteti, RF, 2019) adabiyotlarni tahlil qilish natijasida shaftoli barglari tarkibida organik kislotalar (olma, vino, hin, limon) va flavonoidlar, vitamin C, karotinoidlar, K, Fe, Zn tuzlari mavjudligi haqida ma'lumotlar keltirilgan[5].

Shaftoli asosida bir qator biologik faol qo'shimchalar ishlab chiqilgan. Jumladan, G.M.Safonova va E.A.Dunyashevalar (RF, 2020) tarafidan BFQ (folia Persica, herbae Euphrasia officinalis) ishlab chiqilgan bo'lib, uning tarkibida flavonoidlar, taninlar, kumarinlar, fenilkarbon kislotalar aniqlangan [12].

Tojikistonda o'sadigan shaftoli barglarini fitokimyoviy va farmakologik ta'siri o'rganilib ularning tarkibida organik kislotalar, oksikarbon kislotalar, kumarinlar, flavonoidlar va saponinlar aniqlangan. Tarkibidagi fenol birikmalari yig'indisi kondensatsiyalanuvchi oshlovchi moddalarga nisbatan spektrofotometriya usulda tahlil qilingan [13].

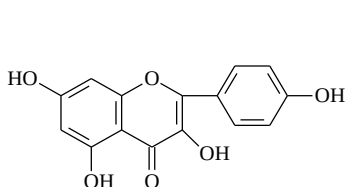
Hindistonda o'sadigan (2017) shaftoli bargining tarkibidagi efir moyi tahlil qilinib, uning asosiy komponenti benzaldehid (63.1–98.3%) dan iboratligi (ayniqsa yomg'irli kunlarda ko'payishi) isbotlangan [15].

R.B.Karabaeva, A.A.Ibragimov, O.M. Nazarovlar (Farg'ona davlat universiteti, 2020) Farg'ona viloyatida o'suvchi shaftoli bargi va mag'zining kimyoviy birikmalari o'rganilgan hamda nektarin mag'iz moyi bilan boyitilgan kompozitsiyalar ishlab chiqilgan [14,15].

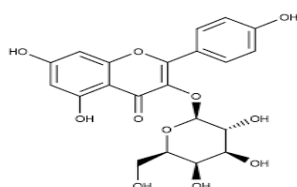
Shuningdek, olimlar tomonidan Rossiya Federatsiyasi (RF: K, Sa, Su, Zn, Na, Mg, Al, Si, P, S, K, Ca, Ti, Mn, Fe, Ni, Pb, Mo, Sn, Ba), va Tojikiston Respublikasida (TR: K, Na, Ca, P, Mg, Si, Fe, Mn, Al, Pb, Sr, Zn, Ni, Mo, Cu, Co, Cd, As, Hg) o'sgan shaftoli bargi tarkibidagi makro-va mikroelementlari aniqlangan [7, 9,13].

Adabiyot ma'lumotlariga ko'ra, oddiy shaftoli barglarining kimyoviy tarkibi quyidagi birikmalar bilan ifodalanadi:

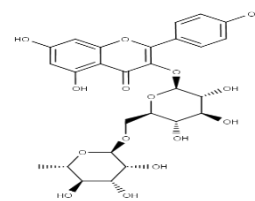
Flavonoidlar. Kempferol (1), kempferol 3-galaktozid (2), kempferol 3-rutinozid (3), kempferol 3-glyukozid (4), kversetin (5), kversetin 3-D-glyukozid (6), kversetin 3-rutinozid (7), izoramnetin glyukozid (8), rutin (9), naringenin (10) [5,7,8, 9, 10,11,12].



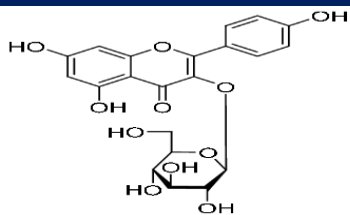
kempferol(1)



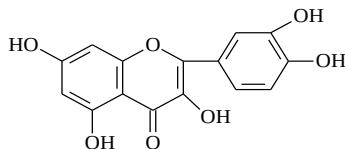
kempferol 3-galaktozid(2)



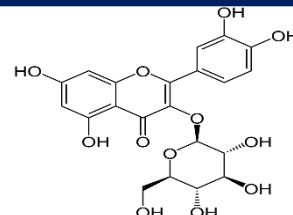
kempferol 3-rutinozid(3)



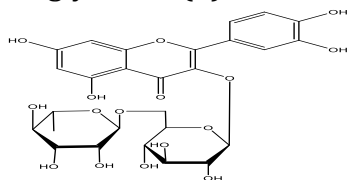
kempferol 3-glyukozid (4)



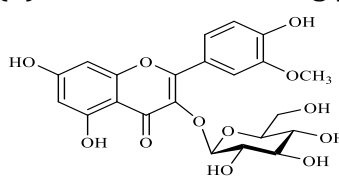
kversetin (5)



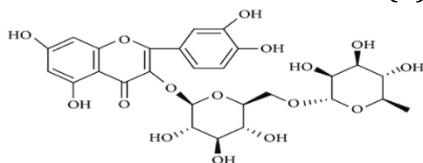
kversetin 3-D-glyukozid (6)



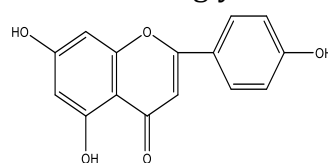
kversetin 3-rutinozid (7)



izoramnetin glyukozid (8)

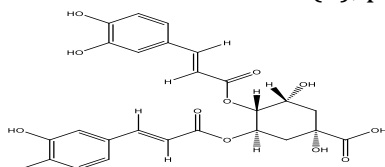


rutin (9)

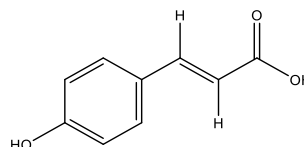


naringenin (10)

Gidroksodolchin kislota. Dikafooilxin (1), p-kumar kislota (2) [9]

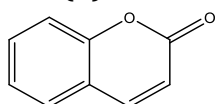


dikafooilxin kislota (1)

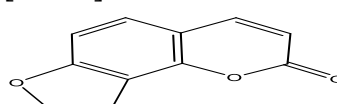


p-kumar kislota (2)

Kumarin. Kumarin (1), 7,8-furokumarin (2) [7, 9, 8].

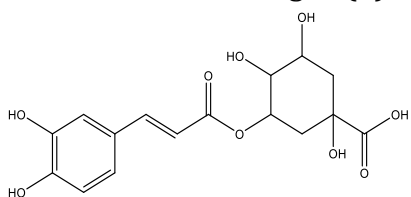


kumarin (1)

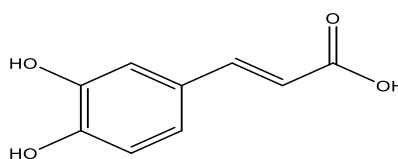


7,8-furokumarin (2)

Fenolkarbon kislota. Xlorogen (1) va qahva kislotalari (2) [7, 9, 12].

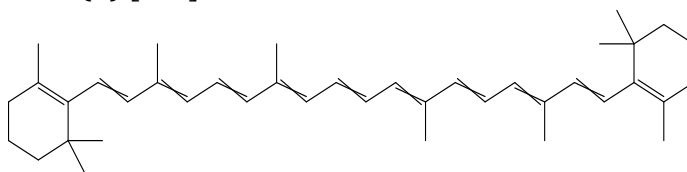


xlorogen kislota (1)



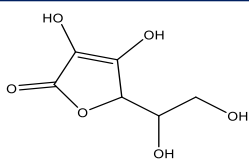
qahva kislotalari (2)

Karotinoidlar. β -karotin (1) [7, 9].

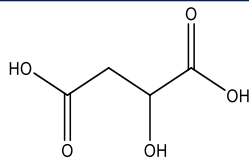


β -karotin (1)

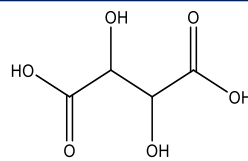
Organik kislotalar. Askorbin (vitamin C) (1), olma (2), tartarat (vino) (3), xin (4) va limon kislotalari (5) [5,9,31].



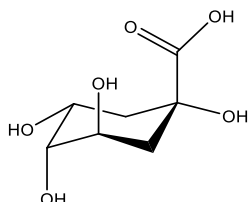
askorbin kislota (1)



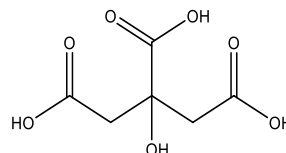
olma kislota (2)



tartarat (vino) kislota (3)

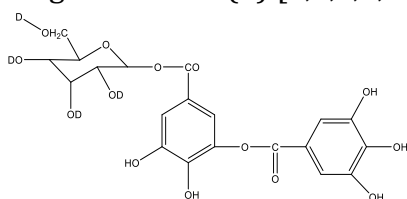


xin kislota (4)

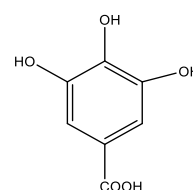


limon kislota (5)

Taninlar. Tanin (1) va gall kislota (2) [5,7,8,9,10,12].

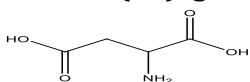


tanin (1)

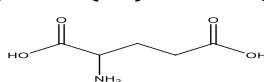


gall kislota (2)

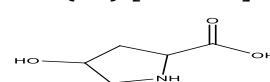
Aminokislotalar. Aspartik kislota (1), glutamin kislota (2), 4-gidroksiprolin (3), asparagin (4), glutamin (5), serin (6), arginin (7), glitsin (8), treonin (9), alanin (10), prolin (11), γ -aminobutan kislota (12), valin (13), metionin (14), izoleytsin (15), leytsin (16), fenilalanin (17), monoetanolin (18), gistidin (19), lizin (20), sistein (21), tirozin (22) [9,13,17].



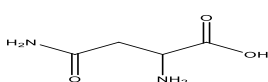
aspartik kislota (1)



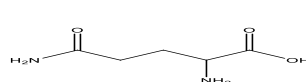
glutamin kislota (2)



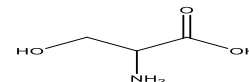
4-gidroksiprolin (3)



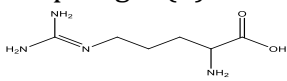
asparagin (4)



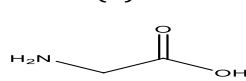
glutamin (5)



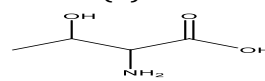
serin (6)



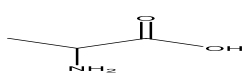
arginin (7)



glitsin (8)



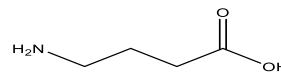
treonin (9)



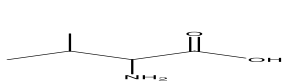
alanin (10)



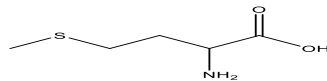
prolin (11)



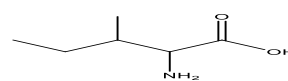
γ -aminobutan kislota (12)



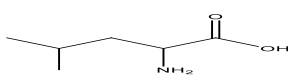
valin (13)



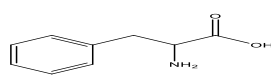
metionin (14)



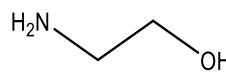
izoleytsin (15)



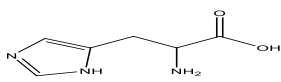
leytsin (16)



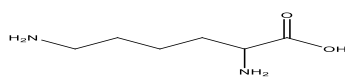
fenilalanin (17)



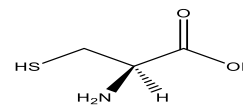
monoetanolin (18)



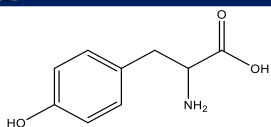
gistidin (19)



lizin (20)



sistein (21)



tirozin (22)

XULOSA

Oddiy shaftoli xomashyosi tarkibi biologik faol birikmalarga boy bo'lib, kelajakda yangi dori vositalari yoki biologik faol qo'shimchalarni ishlab chiqarish uchun istiqbolli manba sifatida foydalanish mumkinligini alohida qayd qilish mumkin.

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