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ANDIZ O'SIMLIGINING KIMYOVIY TARKIBI VA TIBBIYOTDA QO'LLANILISHI

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Annotatsiya: Andiz (Inula) – qoqidoshlar oilasiga mansub ko'p yillik o'tlar turkumi haqida keltirilgan. O'zbekistonda va dunyoda dorivor o'simliklarni biologik faol moddalar tarkibini o'rganishga ham katta e'tibor berilmoqda, chunki inson tanasidagi gormonlar, vitaminlar, aminokislotalar, fermentlar bilan bog'liq bo'lgan optimal miqdori va nisbati fiziologik jarayonlarning normal o'tishini ta'minlaydi va ularning yetishmasligi inson tanasida turli xil patologik jarayonlarning rivojlanishiga sabab bo'lishi mumkin

Kalit so'zlar: Inula helenium L., Inula grandis, inulin, saponinlar, alkaloidlar, smola, digidroadantolakton, fridelin, fitomelan, polienlar, stigiasterin, psevdoinulin.

Hozirgi kunda juda ko'p miqdordagi yuqori samarali sintetik dorilar mavjudligiga qaramay, dorivor mahsulotlarning arsenalida dorivor o'simliklarning

o'rni va ahamiyati doimiy ravishda oshib bormoqda. Buning sababi shundaki, sintetik yaratilgan ko'plab dorilar organizmga nojo'ya ta'sir qiladi, bu nafaqat chastotada balki idiosinkrazik allergik reaksiyalari og'ir ko'rinishda ham o'tadi [1]. Shuning uchun fitopreparatlari arsenalining ko'payishi alohida ahamiyatga ega, tibbiyotda allaqachon ishlatilgan o'simlik dorivor preparatlari ta'sir doirasini kengaytirish bilan bir qatorda, kam o'rganilgan o'simliklarning biologik faol birikmalarining farmakologik faolligini izlash va o'rganish muhim [2]. Keyingi o'n yilliklarda, O'zbekistonda va dunyoda dorivor o'simliklarni biologik faol moddalar tarkibini o'rganishga ham katta e'tibor berilmoqda, chunki inson tanasidagi gormonlar, vitaminlar, aminokislotalar, fermentlar bilan bog'liq bo'lgan optimal miqdori va nisbati fiziologik jarayonlarning normal o'tishini ta'minlaydi va ularning yetishmasligi inson tanasida turli xil patologik jarayonlarning rivojlanishiga sabab bo'lishi mumkin [3].

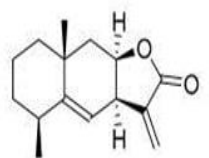
Qora andizning yer ustki qismi tarkibida 1-3% efir moyi, 44% gacha inulin va boshqa uglevodlar, saponinlar, 0,16% alkaloidlar, smola, bo'yoq va boshqa biologik faol moddalar bor. Andizning ildizpoyalari va ildizlarida efir moyi (1-3%), saponinlar, smola, shilimshiq va achchiq moddalar (oxirgisi barglarda ham uchraydi) mavjud. Efir moyining asosiy komponenti izoalantolakton aralashmasi bo'lgan alantolaktondir. Ularning aralashmasi ilgari gelenin deb nomlangan. Bundan tashqari, o'simlik ildizlaridan digidroadantolakton, fridelin, dammaradienilatsetat, dammaradienol, fitomelan, tez tarqaladigan polienlar va boshqa atsetilen birikmalar, shuningdek, stigiasterin, ko'p miqdorda inulin va psevdoinulin ajratilgan.

Qora andiz preparatlari va efir moyi yallig'lanishga qarshi, antiseptik va gijja xaydovchi (ayniqsa efir moyi tarkibidagi allantolakton va izoallantolakton birikmalari) ta'sirga ega.

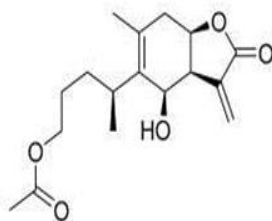
Tabobatda andizning boshqa turlari ham qo'llaniladi. Sariq andiz deb nomlanuvchi turi diyorimizda keng tarqagan.

Sariq andiz (Девясил крупный) – *Inula grandis* Schrenk va Britaniya andizi (Девясил британский) – *Inula Britannica* L. turlari yuqorida ko'rsatilgan kasalliklarni davolashda qora andiz bilan bir qatorda ishlatiladi.

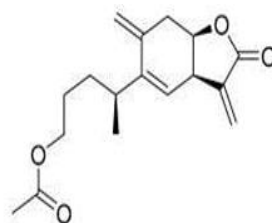
Sariq andizning tashqi ko'rinishi: turli shakldagi uzun, yo'g'on ildiz va qisqa, yo'g'on hamda kuya boshli ildizpoyalardan iborat. Ildiz va ildizpoyasi 2— 20sm uzunlikda, 1-3 sm yo'g'onlikda bo'lib, usti burishgan, kulrang-ko'ng'ir tusli po'stloq bilan qoplangan. O'simlikning ichi sarg'ishroq efir moyi turadigan yaltiroq qo'ng'ir rangli joylari bor. O'simlik mo'rt, ko'ndalangiga tekis sinmaydi. Ildiz va ildizpoya o'ziga xos xushbuy, kuchli xid hamda achchiqroq va o'tkir mazaga ega. Sariq andizning yer ostki organlari tarkibida 2,20-3,17% efir moyi (asosiy qismi allantolaktonlar), 2-20% qandlar, 12-32% inulin, 5,68-13,71% smolalar, 20,4-30,1% efir moyi mavjud.



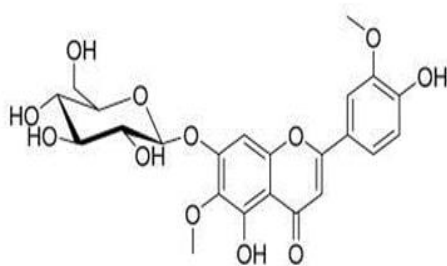
Alantolactone (11)



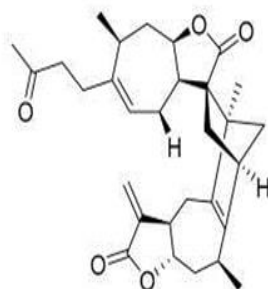
1-O-Acetylbritannilactone (12)



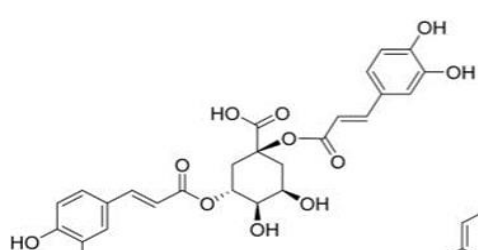
1-O-Acetyl-4 α H-1,10-seco-eudesma-5(6),10(14),11(13)-trien-12,8 β -olide (13)



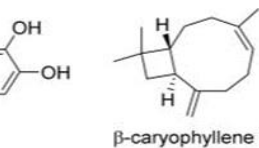
Jaceoside (14)



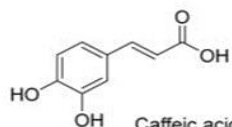
Inulajaponicolide C (15)



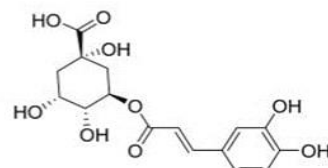
1,3-Dicaffeoylquinic acid (1)



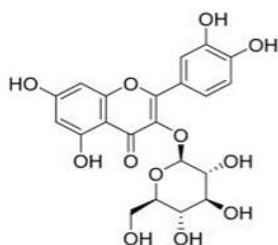
β -caryophyllene (2)



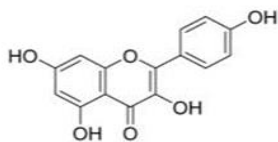
Caffeic acid (3)



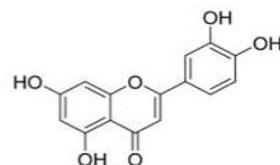
Chlorogenic acid (4)



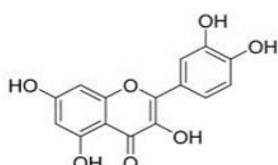
Isoquercitrin (5)



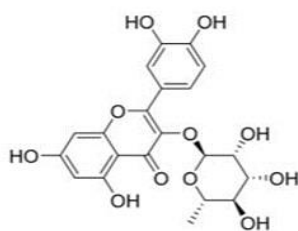
Kaempferol (6)



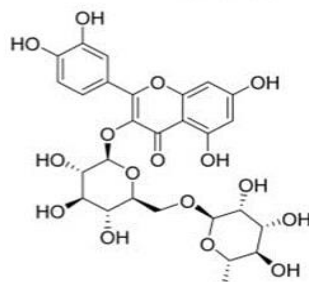
Luteolin (7)



Quercetin (8)



Quercitrin (9)



Rutin (10)

Bargida yana flavonoidlar, xromonlar, saponinlar, alkaloidlar, sirka va benzoat kislotalar uchraydi. Sariq andizning hamma organlaridan grandilin, ivalin, grandin, iganin va boshqa seskviterpen laktonlar ajratib olingan. Efir moyi tez ko'tuvchi kristall massa bo'lib, o'ziga xos xid va mazaga ega. Efir moyiniig kristall qismi — gelenin uchta selinan tipidagi seskviterpen laktonlarning (alantolakton, izoalantolakton va

digidroalantolakton) aralashmasidan iborat. Efir moyi tarkibida gelenindan tashqari, oz miqdorda alantol va proazulen ham bor.

Qo'llanilishi: Qora andiz preparati balg'am ko'chiruvchi dori sifatida hamda me'da va ichak kasalliklarida ishlatiladi. Efir moyi antiseptik, gijja xaydash xususiyatiga va yallig'lanishga qarshi ta'sirga ega. Uning gijja xaydash xususiyati tarkibida santoninga o'xshash ta'sir etuvchi moddalar — alantolaktonlar borligiga bog'liq. Qora andiz ildizpoya va ildizidan allantoin dorivor preparati olingan. Allantoin mahsulotning seskviterpenlarining yig'indisi bo'lib, yallig'lanishga qarshi, qon tomirlarini mustaxkamlovchi va antiseptik ta'sirga ega hamda me'da yara kasalligida yaraning bitishini tezlatadi. Bu preparat kuniga 3—4 marta bitta tabletkadan me'da va un ikki barmoq, ichak yara kasalligini davolash uchun iste'mol qilinadi. Dorivor preparati. damlama, allantoin (tabletkada xolida).

1-jadval

O'simlik qismlaridagi makro va mikroelementlar (%) da

O'simlik hom ashyosi	makro va mikroelementlar (%) da							
	Ca	K	Na	Fe	Cu	Zn	Mn	Cr
	10 ⁻¹	10 ⁻¹	10 ⁻²	10 ⁻²	10 ⁻³	10 ⁻³	10 ⁻³	10 ⁻⁴
Qora andiz ildizlari	23,2	8,1	2,2	9,0	1,1	4,2	2,8	9,4
Sariq andiz ildizlari	25,3	8,7	3,1	8,0	0,6	3,3	2,1	4,2

Bundan tashqari gul g'unchasi va uning preparatlari dumaloq gijjalar (ayniqsa, askaridalar) ni haydash uchun ishlatiladi. Mahsulotdan olingan efir moyi – darminol bakteritsid ta'sirga ega, u antiseptik dori sifatida hamda bod, nevralgiya va boshqa kasalliklarni davolashda qo'llaniladi. Efir moyidan olingan gvayazulen yallig'lanishga qarshi kuchli ta'sir ko'rsatadi. Shuning uchun bronxial astma, bod, ekzema va boshqa kasalliklarni hamda rentgen nuri ta'sirida kuygan joylarni davolashda ishlatiladi.

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ANDIZ (INULA L) VA UNI YETISHTIRISH TEXNOLOGIYASI

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Annotatsiya: Andiz (Inula) – qoqidoshlar oilasiga mansub ko'p yillik o'tlar turkumi haqida keltirilgan. O'zbekistonda va dunyoda dorivor o'simliklarni biologik faol moddalar tarkibini o'rganishga ham katta e'tibor berilmoqda, chunki inson tanasidagi gormonlar, vitaminlar, aminokislotalar, fermentlar bilan bog'liq bo'lgan optimal miqdori va nisbati fiziologik jarayonlarning normal o'tishini ta'minlaydi va ularning yetishmasligi inson tanasida turli xil patologik jarayonlarning rivojlanishiga sabab bo'lishi mumkin

Kalit so'zlar: Qora andiz, ellipsimon yoki cho'ziq tuxumsimon, allontolakton va izoallaktolakton, efir moyi.

Qora andiz - Inula helenuim L. – Asteraceae oilasiga mansub, ko'p yillik boyi 100-150sm ga yetadigan o't o'simlik. Poyasi bitta yoki bir nechta, tik o'suvchi, sertuk, yuqori qismi shoxlangan. Ildiz oldi bargi uzun bandli, yirik ellipsimon yoki cho'ziq tuxumsimon, barg plastinkasi tishsimon qirrali bo'lib, yuqori tomoni siyrak va qattiq tukli, pastki tomoni esa yumshoq, sertuk . Poyaning yuqori qismidagi barglari bandsiz pastdagilari esa qisqa bandi bilan poyada ketma-ket o'rnavchil. [1] Gullari tilla rangda bo'lib, savatchaga to'plangan. Savatchalar poya va shoxlarning yuqori qismida qalqonsimon yoki shingilsimon gul to'plamini tashkil etadi. Savatchaning chetidagi gullari sariq tishsimon, o'rtadagilari ham sariq, tukli naychasimon. Gullarning kosacha bargi tukka aylanib ketgan, mevasi cho'ziq to'rt qirrali, jigarrang yoki qo'ng'ir pista.