



## Nitrate ku jira Ceelka Biyaha

Nitrate waa macdan si dabiici ah u dhacda sidoo kalena ka timaada ilo badan oo bini'aadamku sameeyo. Nitrate waxay ku jirtaa harooyinka, webiyada, iyo biyaha dhulka hoose ee Minnesota qaarkood. Marka Nitrate-ka laga helo biyaha dhulka hoostiisa ee Minnesota, badanaa waa heerar aad u hooseeya. Si kastaba ha ahaatee, qaar ka mid ah biyaha dhulka hoostiisa ku jira waxay leeyihiin xaddi nitrate ah oo keena khatar caafimaad - gaar ahaan u keena dhallaanka. Ma dhadhamin kartid, ma arki kartid, mana urin kartid nitrate ku jira biyahaaga.

## Heerarka badbaado leh

Biyaha la cabbo oo ay ku badan yihiin nitrate-ka (oo lagu cabiray sida nitrate-nitrogen) oo ka hooseeya 10 milligaraam oo nitrate ah halkii litir oo biyo ah (mg/L) ayaa loo arkaa inay badbaado u yihiin qof kasta oo qoyskaaga ah. Halbeega biyaha la cabbo ee ay Wakaalada Ilaalinta Deegaanka u dejisay Nitrate-ka ku jiri kara biyaha dadweynuhu waa 10 mg/L.

## Khatarta caafimaadka

In ay jirkaaga gasho nitrate badan wuxuu saameyn karaa sida dhiiggu u qaado ogsijiinta wuxuuna keeni karaa methemoglobinemia (sidoo kale loo yaqaan cilladda ilmaha buluuga ah). Dhallaanka masaasada lagu quudiyo ee jira lix bilood wax ka hooseeya ayaa ugu jira halis sarraysa in ay qaadaan methemoglobinemia. Methemoglobinemia waxay sababi kartaa maqaarku inuu noqdo midab buluug ah, haddii aan la daweyn, waxay keeni kartaa jirro halis ah ama dhimasho. Ka baro wax badan oo ku saabsan sababta dhallaanku ay khatar sarraysa ugu jiraan ([Biyaha Badbaadada u ah Cabitaanka Ilmahaaga](http://www.health.state.mn.us/communities/environment/water/wells/waterquality/safebaby.html)) [Safe Drinking Water for your Baby](http://www.health.state.mn.us/communities/environment/water/wells/waterquality/safebaby.html) ([www.health.state.mn.us/communities/environment/water/wells/waterquality/safebaby.html](http://www.health.state.mn.us/communities/environment/water/wells/waterquality/safebaby.html)) (kaliya waxaa lagu heli karaa Ingiriisi iyo Isbaanish wakhtigan)).

Xaaladahan soo socdaa ayaa waxay sidoo kale dadka gelin karaan khatar sare oo ah inay ku dhacaan methemoglobinemia nitrate-ku uu keeno: dhiig-yaraan, cudurrada wadnaha iyo xididdada dhiiga, cudurrada sambabada, sepsis, in ay qofka ka yaraan glucose-6-phosphate-dehydrogenase iyo dhibaatooyinka dheefshiid qaarkood.

Dhawaan uun baa caddaymo saynis ay soo baxeen si loo qiimeeyo saamaynta caafimaad ee ay dadka qaangaadhka ah u keenaan biyaha la cabbo ee ay nitrate ku badan tahay. Aqoon sii kordhaya ayaa tilmaamaya in uu jiro xiriir ka dhexeeya soo gaarista nitrate/nitrite iyo saamaynaha kale ee caafimaadka sida garaaca wadnaha oo kordha, lallabbo, madax-xanuun, iyo calool xanuun. Daraasadaha qaar ayaa sidoo kale soo jeedinaya khatarta sii korodha ee kansarka, gaar ahaan kansarka caloosha, oo la xiriirta soo gaarista nitrate-ka ee cuntada, laakiin weli ma jiro fikrad cilmi ah oo la isku raacsanyahay oo ku saabsan su'aashan.

Si aad wax badan uga barato nitrate iyo methemoglobinemia, waxaad arki kartaa ama soo dejisan kartaa xaashida macluumaadka ee [Nitrate iyo Methemoglobinemia \[PDF\]](#) ([www.health.state.mn.us/communities/environment/water/docs/contaminants/nitratmethemog.pdf](http://www.health.state.mn.us/communities/environment/water/docs/contaminants/nitratmethemog.pdf)) (kaliya ayaa la heli karaa Ingiriisi wakhtigan).

## Baar/tijaabi biyaha ceelkaaga

**Nitrate ha laga baaro sanad walba. Waa in aad sidoo kale biyaha ceelkaaga ka baartaan nitrate haddii aad qorshaynayso in aad uur qaado ama haddii dhallaan ay isticmaali doonaan biyaha.**

Adiga ayaa mas'uul ka ah inaad ilaaliso badbaadada biyaha ceelkaaga oo aad tijaabiso marka loo baahdo. MDH waxay ku talinaysaa inaad isticmaasho shaybaare la aqoonsan yahay in ay baaritaan ku sameeyaan biyahaaga. La xiriir shaybaar la aqoonsan yahay si aad u hesho weel muunad lagu qaado iyo tilmaamo, ama weydiiso adeegyada deegaanka degmadaada ama caafimaadka dadweynaha in ay bixiyaan adeegyada shaybaarka. [Shaybaarada La aqoonsan yahay ee Minnesota ee Aqbala Muunadaha ay mulkiilayaashu kasoo qaadaan Ceelka Gaarka loo leeyahay](#) [PDF]

([www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/labmap.pdf](http://www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/labmap.pdf)) (keliya waxaa lagu heli karaa Ingiriisiga wakhtigan).

Macluumaad dheeraad ah ka eeg [Baaritaanka Ceelka, Natiijooyinka, iyo Fursadaha](#)

([www.health.state.mn.us/communities/environment/water/wells/waterquality/tipsom.html](http://www.health.state.mn.us/communities/environment/water/wells/waterquality/tipsom.html)).

## Ilaali caafimaadkaaga!

Ka baar biyaha ceelkaaga:



Tijaabintu waxay u sii muhiimsan tahay haddii carruurta yaryari ay cabbaan biyaha.

MDH waxa laga yaabaa inay kugula taliso inaad ka baarto wasakhooyin dheeraad ah iyadoo ku salaysan meesha aad ku nooshahay.

## Ka hortagga wasakhowga

- **Ka fogee ilaha ay ka timaado Nitrate-ku ceelkaaga.** Ilaha waxaa ka mid noqon kara bacriminta, hababka taangiga suuliga/septic-ga, iyo saxarada xoolaha.
- **Ceelkaaga ka qoda meel ammaan ah.** Eeg [Websaydka daryeelista/ilaalinta Ceelkaaga si aad u hesho talooyin](#) ([www.health.state.mn.us/communities/environment/water/wells/construction/protect.html](http://www.health.state.mn.us/communities/environment/water/wells/construction/protect.html)) (kaliya waxa lagu heli karaa Ingiriisi wakhtigan)
- **Si joogto ah uga baar ceelkaaga in uu burbur soo gaaraay.** La xiriir qandaraasle ceel oo shati leh haddii ceelkaaga dhaawac soo gaaray ([Diiwaanka Ceel qodayaasha Qandaraaslaha ah](#)) ([Licensed/Registered Well and Boring Contractor Directory](#)) ([www.health.state.mn.us/communities/environment/water/wells/lwc/index.html](http://www.health.state.mn.us/communities/environment/water/wells/lwc/index.html)) (kaliya waxaa lagu heli karaa Ingiriisiga wakhtigan).

## Ceelasha u nugul Nitrate-ka

- Ceelal gaaban
- Ceelasha biyo-mareennada ciidda tamuuxa ah.
- Ceelasha la qoday ee leh lingaxa aan biyaha celinayn.
- Ceelasha leh daboolka ama qalabka lingaxa ee dhaawacan ama daadinaya.

## Wax ka qabata wasakhowga

Biyaha la cabbo ee leh heerarka nitrate-ka ka sarreeya 10 mg/L waxay sababi karaan dhibaatooyin caafimaad oo degdeg ah. Haddii Nitrate-ka laga helo biyahaaga iyadoo ah xaddi ka sarreeya 10 mg/L, raac tillaabooyinkan:

- Ka hel biyahaaga la cabbo meel kale oo badbaado ah, sida biyaha caagadaha.
- Hubi in dhallaanka lix bilood ka yar aanay cabbin biyaha ceelka.
- Ha isku dayin inaad biyaha ka karkariso nitrate-ka. Karkarintu waxay ka dhigi doontaa nitrate-ka in uu sii bato.
- Qandaraasle shati haysta baaritaan ha ku sameeyo ceelkaaga.
- Raadi oo ka saar ilo kasta oo suurtagal ah oo keenaya wasakhowga Nitrate-ka. [Websaydka Daryeelista/ilaalinta Ceelkaaga](#) ([www.health.state.mn.us/communities/environment/water/wells/construction/protect.html](http://www.health.state.mn.us/communities/environment/water/wells/construction/protect.html)) (kaliya waxaa lagu heli karaa Ingiriisi wakhtigan) ayaa kaa caawin karta inaad aqoonsato ilaha ay tahay in aad hubiso.

Ku daaweynta biyaha gurigu sidoo kale waa ikhtiyaar. Xataa marka lagu daweynayo biyaha guriga, MDH waxa ay ku talinaysaa in dhallaanka kayar lix bilood aanay cabin biyaha (taxaddar badbaado leh haddii ay daawaynta biyuhu ay guuldaraysato). Kahor inta aan laga daaweynin Nitrate-ka, MDH waxa ay kugu dhiiri galinaysaa in aad marka hore isku daydo in aad ka takhalusto ilaha meesha ay Nitrate-ku ka imanayso ee ku jira hantidaada oo aad si fiican u baarto oo dib u hagaajiso.

Ka eeg [Websaydka Daawaynta Biyaha Guriga](#)

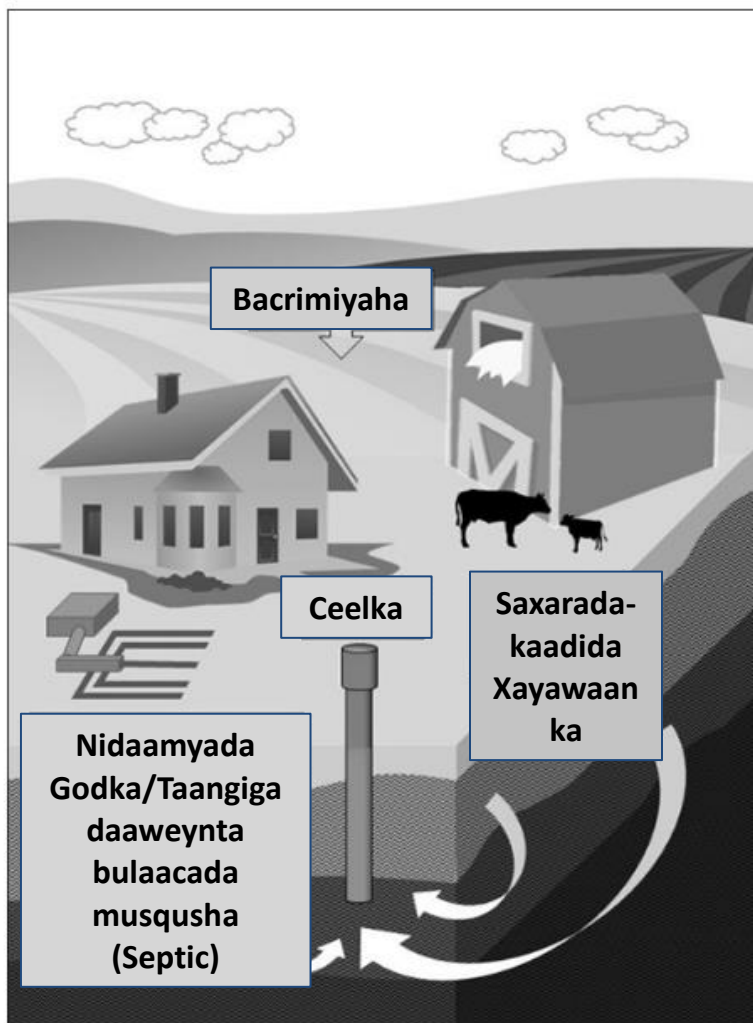
([www.health.state.mn.us/communities/environment/water/factsheet/hometreatment.html](http://www.health.state.mn.us/communities/environment/water/factsheet/hometreatment.html))

(kaliya waxa lagu heli karaa Ingiriisi wakhtigan) ama la xiriir MDH wixii hagiis ah.

## Sida ay Nitrate u soo gashp biyaha dhulka hoostiisa

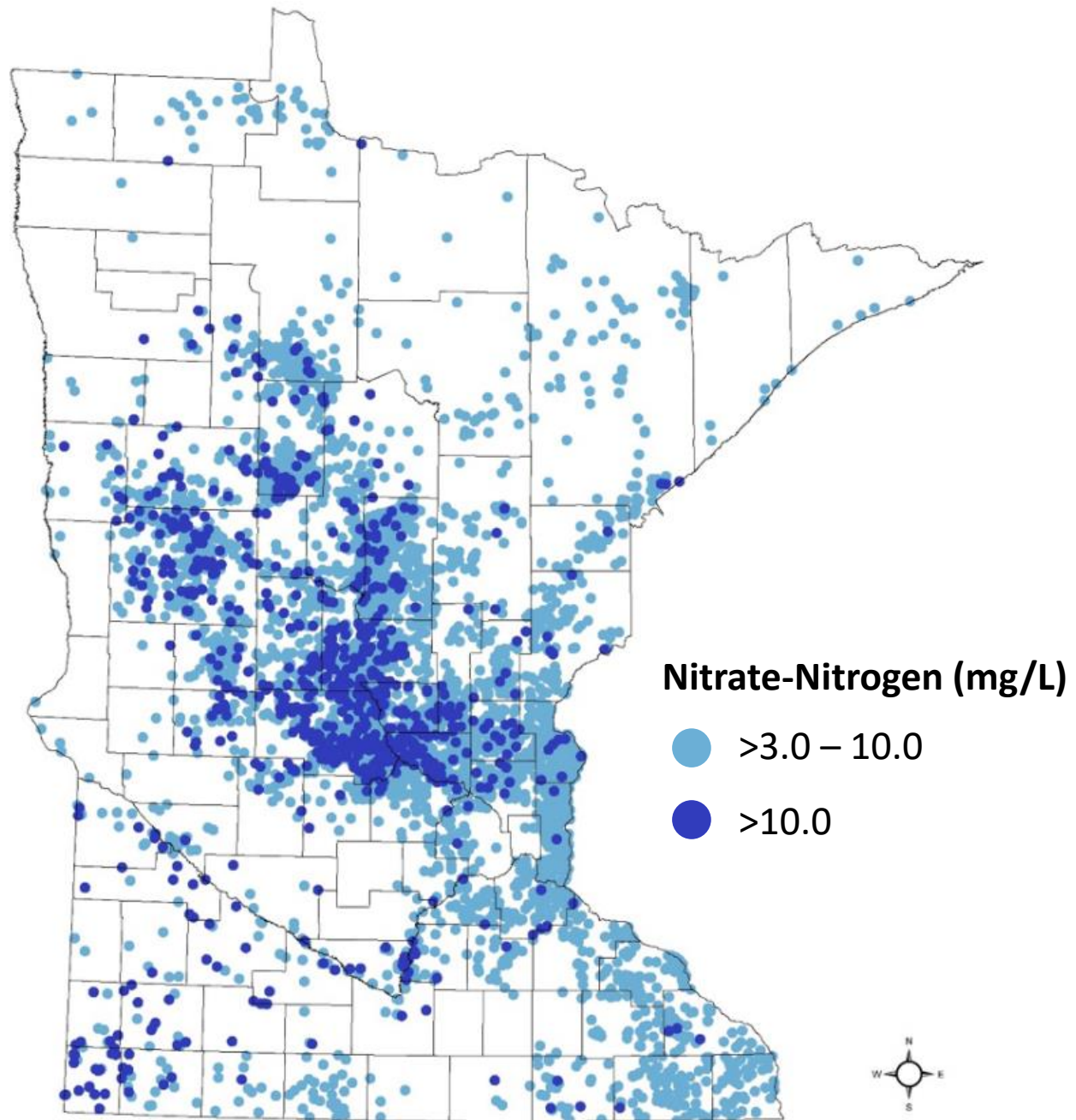
Nitrate-ku waxay si dabiici ah ugu jirtaa iyadoo heerar badbaado iyo caafimaad leh ah cuntooyinka qaarkood (sida isbinaajka iyo karootada) waxayna ka timaaddaa hababka dabiiciga ah, sida qurunka dhirta. Nitrate-ku waxa uu ku jiraa bacrimiye badan oo loo isticmaalo deyrarka, koorsooyinka golf-ka, iyo dalagyada. Ilaha kale ee Nitrate-ka ay ka timaado waxaa ka mid ah biyaha ka imaanaya habka bulaacadaha iyo digada xoolaha.

Heerarka nitrate-ka dabiiciga ah ee biyaha dhulka hoostiisa ee Minnesota aad bay u hooseeyaan (in ka yar 3 milligram litirkiiba [mg/L]). Si kastaba ha ahaatee, halka ay ka timaado Nitrate-ku sida bacriminta, wasakhda xayawaanka, ama bulaacada aadanaha ayaa waxay ku urursan yihiin meelaha u dhow dhulka dushiisa, Nitrate-ku waxa laga yaabaa inuu hoos ugu dhaco oo uu wasakheeyo biyaha dhulka hoostiisa ah ku jira. Heerarka sare ee Nitrate-ka ee biyuhu waxay noqon karaan natiijada qulqulka daadka ama ka soo daadashada carrada bacrinsan, biyaha wasakhda ah, meelaha qashinka lagu daadiyo, meelaha xoolaha lagu quudiyo, nidaamka septic-ga, ama bulaacada magaalada. Way adkaan kartaa in la tilmaamo halka Nitrate-ka ku jira biyaha la cabbo uu ka yimid sababtoo ah waxaa jira meelo badan oo suurtagal ah.



## Nitrate ku jira biyaha Minnesota

Qiyaastii boqolkiiba 4 ceelasha cusub waxay leeyihiin xajmiyada heerar nitrate-ka oo ka sarreeya 3 mg/L Minnesota. Iyadoo 3 mg/L uu ka yar yahay heerka EPA, waxay sheegaysaa in nitrate ka yimid ilo bani'aadamku sameeyay ay wasakheeyeen biyaha heerkuna uu kordhi karo wakhti kadib.



Heerarka inta badan ee ka sarreeya 3 mg/L waxay ku yaalaan bartamaha iyo koonfurta bari ee Minnesota. Heerarka ka sarreeya 10 mg/L waxay inta badan ku yaalaan bartamaha iyo koonfur-galbeed ee Minnesota.

Waxda Beeraha ee Minnesota Barnaamijka Baarita ee Magaaladu waxay ogaatay in wax ka badan 10 boqolkiiba ceelasha gaarka loo leeyahay ee laga soo qaaday qaar ka mid ah magaalooyinka koonfur-galbeed, koonfur-bari, bartamaha, iyo waqooyi-bartamaha Minnesota ay leeyihiin heerar Nitrate ah oo ka sarreeya 10 mg/L. Wax badan ka baro [Barnaamijka baarista ee Township Testing Program](http://www.mda.state.mn.us/township-testing-program) (www.mda.state.mn.us/township-testing-program) (kaliya waxaa lagu heli karaa Ingiriisiga wakhtigan).

## Biyaha ceelkayga miyaan ka baaraa wax aan Nitrate ahayn?

Haa. Ilaha dabiiciga ah iyo hawlaha bani'aadamka labaduba waxay wasakhayn karaan biyaha ceelka waxayna sababi karaan saamayn caafimaad oo muddo gaaban ama mid dheer. Tijaabinta biyaha ceelkaagu waa habka kaliya ee loogu ogaan karo inta badan wasakhooyinka caadiga ah ee ku jira biyaha dhulka hoose ee Minnesota; ma dhadhamin kartid, ma arki kartid, mana urin kartid inta badan wasakheeyayaasha. Waxda Caafimaadka ee Minnesota waxay ku talinaysaa in laga baaro:

- **Bakteeriyada Coliform sannad kasta** iyo wakhti kasta oo biyuhu isbeddelaan dhadhanka, urta, ama muuqaalka. Bakteeriyada Coliform waxay tilmaami kartaa in jeermiska cudurada keena ay ku jiraan biyahaaga.  
[Eeg ka Badbaadida Bakteeriyada ku jirta Biyaha Ceelka](http://www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/bacteriasom.pdf)  
(www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/bacteriasom.pdf).
- **Arsenik ugu yaraan hal mar.** Qiyaastii 40 boqolkiiba ceelasha Minnesota waxaa biyaha ku jira arsenik. Cabitaanka biyaha leh arsenik muddo dheer waxay gacan ka geysan karaan hoos u dhaca garaadka carruurta iyo kordhinta khatarta kansarka, sonkorowga, cudurrada wadnaha, iyo dhibaatooyinka maqaarka ee dadka waaweyn.  
[Eeg Arsenik ku jirta Biyaha Ceelka](http://www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/arsenicson.pdf)  
(www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/arsenicson.pdf).
- **Sunta rasaasta ugu yaraan hal mar.** Ceelka iyo nidaamka biyuhu waxay yeelan karaan qaybo ay ku jiraan liidh/sunta rasaastu, oo liidh/sunta rasaastu waxay geli kartaa biyaha la cabbo. Sunta rasaastu waxay dhaawici kartaa maskaxda, kelyaha, iyo habdhiska dareenka. Sunta rasaastu waxa kale oo ay hoos u dhigi kartaa korriinka ama waxa ay sababi kartaa dhibaatooyinka waxbarashada, hab dhaqanka, iyo maqalka.  
[Ka eeg Liidhka/Sunta Rasaasta ee ku jirta Biyaha Ceelka](http://www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/leadsom.pdf)  
(www.health.state.mn.us/communities/environment/water/docs/wells/waterquality/leadsom.pdf)
- **Manganiis ka hor inta uusan ilmuhu cabin biyaha.** Heerarka sareeya ee manganiis ayaa waxay sababi karaan dhibaatooyinka dhanka xusuusta, dareenka, iyo xirfadaha dhaqdhaqaaqa muruqyada. Waxaa kale oo ay dhallaanka iyo carruurta u keeni kartaa dhibaatooyinka waxbarashada iyo hab dhaqanka.  
[Ka eeg Manganiis-ka ku jirta Biyaha la cabbo](http://www.health.state.mn.us/communities/environment/water/contaminants/manganese.html)  
(www.health.state.mn.us/communities/environment/water/contaminants/manganese.html) (kaliya waxaa lagu heli karaa Ingiriisi wakhtigan).

Wasakheeyeyaasha kale ayaa mararka qaarkood ku jira goobaha biyaha ee gaarka loo leeyahay, laakiin in ka yar wasakheeyeyaasha kor ku taxan. Tixgeli in aad ka baartaan:

- **Isku-dhafka Kiimikooyinka Dabiiciga ah ee Sida Fudud Hawada u Raaca** haddii ceelku u dhow yahay haamaha shidaalka ama goob ganacsi ama warshadeed.
- **Kiimikooyinka beeraha ee sida caadiga ah looga isticmaalo aagga** haddii ceelku gaaban yahay oo u dhow yahay beeraha laga beero dalaga ama meelaha lagu maamulo kiimikooyinka beeraha ama uu ku yaal aagga juqraafiga nugul (sida dhagax nuuradeed jajaban).
- **Fluoride** haddii carruurta ama dhallinyaradu ay cabbaan biyaha.

Si aad macluumaadkan ugu hesho qaab kale, soo wac 651-201-4600.  
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