

Hmoov txhuas tooj hlau Manganese hauv cov dej haus

Hmoov txhuas tooj hlau Manganese tshwm sim yam thas mab xaj hauv cov pob zeb thiab cov av thoob plaws hauv lub xeev Minnesota thiab feem ntau nrhiav pom hauv Minnesota cov av thiab saum npoo dej. Koj lub cev kuj yuav tsum muaj ib co hmoov txhuas tooj hlau Manganese kom thiaj li noj qab nyob zoo, tabsis yog muaj ntau dhau kuj yuav muaj kev phom sij taus.

Kev phom sij rau kev noj qab haus huv

Cov menyuam haus dej thiab neeg laus es haus cov dej muaj txhuas tooj hlau Manganese siab mus ntev ntev kuj yuav muaj teeb meem rau kev cim xeeb, zaum kom taus es mloog, thiab tswj kom sawv tau tus yees. Cov menyuam mos ab (menyuam mos ab muaj hnuv nyooq qis tshaj ib xyoos) tej zaum kuj muaj teeb meem kawm tau ntawv thiab muaj teeb meem rau tus cwj pwm yog tias haus cov dej muaj txhuas tooj hlau Manganese ntau nyob rau hauv.

Yuav tiv thaiv koj tus kheej thiab koj tsev neeg lis cas

Lub tuam tsev Minnesota Department of Health (MDH) tsim ib daim ntawv cob qhia kom paub tias muaj cov khes mis siab npaum cas kom thiaj li ceev tau cov dej hauv koj lub tsev es haus kom puaj phais. Vim tias daim ntawv yog daim cob qhia (guidance values), cov dej tso ntawm tsoom fwv los tsis tas kom cov dej yuav tsum poob rau qhov es tau teev tseg, thiab tej co yeej tsis poob rau qhov es tau teev tseg.

- Yog tias koj muaj ib tug menyuam mos ab es haus cov dej ntawm tus kais dej los yog siv cov dej ntawm tus kais dej tov mis, qhov theem es muaj cov txhuas tooj hlau Manganese nyob hauv koj cov dej kom puaj phais yog 100 micrograms txhuas tooj hlau Manganese tauj ib liter dej ($\mu\text{g}/\text{L}$)* los yog tsawg dua.
- Yog tias koj muaj ib tug menyuam mos ab es yeej tsis haus cov dej ntawm tus kais dej los yog siv cov dej ntawm tus kais dej tov mis, qhov theem es muaj cov txhuas tooj hlau Manganese nyob hauv koj cov dej kom puaj phais yog 300 $\mu\text{g}/\text{L}$ los yog tsawg dua.

- Yog tias txhua tus nyob hauv koj lub tsev muaj hnuv nyooq siab tshaj ib xyoo, qhov puaj phais ntawm cov dej muaj cov txhuas tooj hlau Manganese li 300 $\mu\text{g}/\text{L}$ los yog tsawg dua.

Haus cov dej es muaj txhuas tooj hlau Manganese siab tshaj li MDH theem es cob qhia kuj yuav phom sij muaj mob rau koj qhov kev noj qab nyob zoo tabsis yog siv da dej hauv lub dab los yog da saum tus kais dej los ces yeej tsis ua rau muaj mob. Cov txhuas tooj hlau Manganese nyob hauv koj cov dej kuj yuav tsuas rau cov khaub ncaws koj ntxhua, ua rau cov kav dej txaij tej thaj, thiab ua rau koj cov dej tsis zoo, tsw phem, tsis qab. Cov txhuas tooj hlau Manganese kuj ua rau muaj tej tee xim kas fes dub tsawm tsawv los yog xim dub lo rau koj lub dab tso quav, tus kais dej da, lub dab da dej, los yog lub dab ntxuav tais diav.

Tib txoj hauv kev kom paub seb koj cov dej haus muaj Cov txhuas tooj hlau Manganese siab npaum cas hauv koj cov dej haus yog tiv tauj qhov chaw tso dej tuaj rau ib zej tsoom siv los yog kuaj koj cov dej ntawm tus kais dej. Tag nrho cov kev kuaj dej yuav tsum tau ua tiav lug los ntawm qhov chaw muaj daim ntawv pov thawj kuaj dej. Tiv tauj ib lub chaw es muaj ntaub ntawv pov thawj kom tau lub thawv thiab cov ntaub ntawv cob qhia kom paub kuaj, los yog nug koj lub zos county es pab rau faim kev noj qab haus huv rau pej zeem seb lawv puas muaj kev pab kuaj cov qhov dej khawb (*saib "Search for Accredited Laboratories"*).

Yog tias koj muaj ib lub cuab yeej hauv tsev es tua cov kab mob rau koj cov dej, lub cuab yeej nov kuj yuav lim thiab txo tau cov txhuas tooj hlau Manganese hauv cov dej koj haus (saib cov cuab yeej hauv tsev es tua cov kab mob rau koj cov dej: Qhov es siv cov cuab yeej kom paub ntau dua). MDH thiab lub zos Dakota County tau soj ntsuam ib qho kev kawm thaum xyoo 2016 thaib nrhiav pom tias lub cuab yeej water softeners yog txoj hauv kev pab tau zoo kom lim thiab txo tau cov txhuas tooj hlau Manganese hauv cov dej koj haus (saib Kev

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Kawm txog Cov Qhov Dej Khawb thiab Kom Paub txog cov menyuam mos ab qhov es yuav raug hu ua The Wells and Increased Infant Sensitivity and Exposure (WIISE) Study).

*Ib microgram tauj ib liter ($\mu\text{g/L}$) ntau ib yam li 1 feem tauj ib billion.

Yog tias koj muaj ib lub qhov dej khawb ntawm koj tus kheej

Tej co dej hauv Minnesota cov av yeej xeeb txawm muaj cov txhuas tooj hlau Manganese siab tshaj li qhov es tau teev tseg los ntawm lub tuam tsev MDH daim ntawv cob qhia. Koj yuav tsum tau kuaj koj cov dej haus seb puas muaj cov txhuas tooj hlau Manganese, tshwj xeeb yog tias cov menyuam mos ab haus cov dej ntawm tus kais dej. Koj yog tus lav phib xaub ceev kom koj cov dej hauv koj lub qhov dej khawb kom puaj phais thiab kuaj cov dej thaum twg yog tsum nyog.

Yog tias koj siv cov dej es tsoom fwm tso tuaj rau koj

Cov dej tso ntawm tsoom fwm los rau ib zej tsoom siv tej zaum kuj kuaj xyuas seb puas muaj cov txhuas tooj hlau Manganese, tabsis lawv tsis tas kuaj los tau. Koj yeej tiv tauj tau rau koj qhov chaw tso dej ntawm tsoom fwm los rau ib zej tsoom siv kom paub seb lawv puas kuaj xyuas seb puas muaj cov txhuas tooj hlau Manganese, koj yeej teem tau thiab them rau ib lub chaw es muaj ntawv pov thawj tuaj kuaj koj cov dej. Nco ntsoov tias qee hom cuab yeej siv lim thiab tua cov kab mob ntawm cov dej hauv koj lub tsev tej zaum yeej ua tau rau cov txhuas tooj hlau Manganese kom qis thaum tso ntawm tus kais dej zoo tshaj li qhov es tsoom fwm kuaj pom.

Qhia txog qhov keeb kwm

Cov txhuas tooj hlau Manganese tshwm sim yam thas mab xaj hauv cov pob zeb thiab av thiab yeej nrhiav pom nyob hauv cov dej, cov zaub mov, thiab saum huab cua. Koj lub cev yuav tsum muaj ib cov txhuas tooj hlau Manganese kom thiaj li muaj kev noj qab nyob zoo. Qhov es xav kom yuav tsum noj tej yam kom muaj cov txhuas tooj hlau Manganese txhua hnuv ntau npaum cas mas nyob ntawm tus neeg ntawd lub hnuv nyoog thiab yog poj niam los yog txiv neej.

Qhov es xav kom yuav tsum noj tej yam kom muaj cov txhuas tooj hlau Manganese txhua hnuv rau cov menyuam muaj hnuv nyoog siab tshaj yim xyoo thiab cov neeg laus yog noj ntau li 1,900 txog 2,600 μg tauj ib hnuv. Cov menyuam mos ab yuav tsum noj ntau li 600 μg los yog tsawg dua ntawm cov txhuas tooj hlau Manganese tauj ib hnuv.

Cov txhuas tooj hlau Manganese es noj ntau npaum cas kom muaj txiaj ntsim rau ib tug neeg twg kuj yuav ua rau muaj kev phom sij rau lwm tus. Cov neeg laus thiab cov menyuam yaus yeej tau cov txhuas tooj hlau Manganese txaus los ntawm niam cov kua mis, cov zaub mov, los yog cov hmoov mis nyuj (formula). Cov zaub mov feem ntau muaj cov txhuas tooj hlau Manganese ntau dua li cov dej; txawm li ntawd los, muaj ntau hom zaub mov es thav kom cov txhuas tooj hlau Manganese txhob nkag rau los rau koj lub cev. Dej mas tsis zoo li cov zaub mov, yog li koj lub cev nqus tau cov txhuas tooj hlau Manganese yooj yim dua los ntawm cov dej.

Txhuas tooj hlau Manganese hauv Minnesota cov dej

Cov txhuas tooj hlau Manganese tshwm sim yam thas mab xaj ntawm cov dej nyob hauv av thoob plaws hauv lub xeev Minnesota. Raws li kev tshawb kawm ntawm MDH, cov dej hauv av nyob rau qab teb sab hnuv tuaj hauv xeev Minnesota muaj cov txhuas tooj hlau Manganese qis dua (qis tshaj 50 $\mu\text{g/L}$). Qab teb sab hnuv poob hauv xeev Minnesota mas muaj cov txhuas tooj hlau Manganese siab dua – tej co muaj siab tshaj 1,000 $\mu\text{g/L}$. Kuj tsis paub tseeb txog lwm qhov chaw hauv lub xeev.

Txawm tias cov dej tsoom fwm tso tuaj rau ib zej tsoom haus tsis tas kom yuav tsum tau kuaj seb puas muaj cov txhuas tooj hlau Manganese, tej co dej tsoom fwm tso tuaj rau ib zej tsoom haus kuj kuaj seb puas muaj cov txhuas tooj hlau Manganese ua ntej los yog tom qab siv tshuaj tua cov kab mob hauv cov dej tag. Raws cov kev kuaj tag thiab tua kab mob tag, MDH kwv yees tias ntau li 90 percent ntawm cov pej xeev hauv lub xeev Minnesota siv cov dej tsoom fwm tso tuaj rau ib zej tsoom haus taus txais cov dej muaj cov txhuas tooj hlau Manganese qis li 100 $\mu\text{g/L}$. Ntau npaum li 3 percent ntawm cov pej xeev hauv lub xeev Minnesota siv cov

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dej tsoom fwm tso tuaj rau ib zej tsoom haus tau txais cov dej muaj cov txhuas tooj hlau Manganese qis li 300 µg/L. Nws yog ib qho tseem ceeb kom nco ntsoov tias qee hom cuab yeej siv lim thiab tua cov kab mob ntawm cov dej hauv koj lub tsev tej zaum yeej ua tau rau cov txhuas tooj hlau Manganese kom qis thiab poob rau theem es haus puaj pais.

Yam dabtsi es MDH ua

MDH muaj ib daim ntawv cob qhia txog kev noj qab haus huv rau cov txhuas tooj hlau Manganese nyob hauv cov dej (saib lub rooj ntawv hu ua *Human Health-Based Water Guidance Table*) MDH khaws cov ntaub ntawv data thiab tshawb xyuas seb qhov es muaj cov txhuas tooj hlau Manganese no tshwm sim qhov twg hauv lub xeev Minnesota cov dej (saib qhov kev *ntsuam xyuas cov txhuas tooj hlau Manganese no tshwm sim qhov twg hauv lub xeev Minnesota cov dej hauv av*) MDH kuj koom nrog pawg neeg Minnesota Ground Water Association kom tsim tau cov ntawv sau qhia tawm txog cov txhuas tooj hlau Manganese hu ua *cov txhuas tooj hlau Manganese hauv lub xeev Minnesota cov dej hauv av*.

Lwm pawg neeg ho ua dabtsi?

Cov neeg tshawb fawb hauv lub tsev kawm ntawv qib siab University of Minnesota tau txais ib pob nyiaj kom los soj qab txog kev phom sij rau cov menyuam mos ab los ntawm cov dej es haus es muaj cov txhuas tooj hlau Manganese.

Cov ntaub ntawv qhia

- [Tua Kab Mob ntawm Cov Dej Siv Hauv Tsev \(Home Water Treatment\)](http://www.health.state.mn.us/communities/environment/water/factsheet/hometreatment) (www.health.state.mn.us/communities/environment/water/factsheet/hometreatment)
- [Lub Rooj Ntawv hu ua Human Health-Based water Guidance Table](https://www.health.state.mn.us/communities/environment/risk/guidance/gw/table.html) (<https://www.health.state.mn.us/communities/environment/risk/guidance/gw/table.html>)
- [Kuaj Minnesota cov Dej Hauv Av seb Puas Muaj txhuas tooj hlau Manganese \(Initial Assessment of Manganese](#)

[in Minnesota Groundwater \(PDF\)](#) (www.health.state.mn.us/communities/environment/water/docs/swp/mnreport.pdf)

- [Txhuas tooj hlau Manganese ntawm Minnesota cov Dej Hauv Av \(Manganese in Minnesota's Groundwaters \(PDF\)\)](#) (www.mgwa.org/documents/whitepapers/01_manganese/Manganese_in_Minnesotas_Groundwaters.pdf)
- [Phom sij rau cov menyuam mos ab los ntawm txhuas tooj hlau Manganese hauv cov dej haus \(Risks to infants from manganese in drinking water\)](https://consortium.umn.edu/risks-infants-manganese-drinking-water) (<https://consortium.umn.edu/risks-infants-manganese-drinking-water>)
- [Tshawb nrhiav cov chaw muaj daim ntawv pov thawj kuaj dej hu ua \(Search for Accredited Laboratories\)](http://www.health.state.mn.us/labsearch) (www.health.state.mn.us/labsearch)
- [Kev Kawm txog Cov Qhov Dej Khawb thiab Kom Paub txog cov menyuam mos ab qhov es yuav raug hu ua \(The Wells and Increased Infant Sensitivity and Exposure \(WIISE\) Study \(PDF\)\)](http://www.health.state.mn.us/communities/environment/risk/docs/studies/wiisereport.pdf) (www.health.state.mn.us/communities/environment/risk/docs/studies/wiisereport.pdf)

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Muaj lus nug txog kev noj qab nyob zoo, thov tiv tauj chav kuaj mob Health Risk Assessment Unit ntawm 651-201-4899, health.risk@state.mn.us

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