



Aluminium in drinking water

Many people know that aluminum can be found in water – but how many know that it can also come from such sources as tea and indigestion tablets? In fact where aluminium is present in water, it represents only three to four per cent of the average person's total intake. But why is aluminium found in drinking water, and more importantly, is it safe?

Aluminium is widely present in the soil and so may be found in some untreated sources of drinking water. This naturally occurring aluminium may be removed by carefully controlled processes at water treatment works. Since 1989 there has been an enormous modernisation programme at our treatment works which has now been completed. This included new processes as well as other improvements.

Aluminium compounds are also used to remove impurities at water treatment works, and are particularly useful in reducing the colour, cloudiness and bacterial content of water before the final stages of treatment and disinfection. A very small amount of aluminium can be added in the treatment process and a very small "residual" amount may stay in the water supply. In order to keep the amount of aluminium remaining in the treated water at a level well below the permitted standard of 200 microgrammes per litre, the Company has installed equipment to improve and control the treatment process. We always ensure that the aluminium levels are kept as low as possible.

Iron based treatment chemicals can perform the same job as aluminium compounds and are already successfully used at many large treatment works in Wales, from which nearly a third of the Company's total output of treated water is produced. However, many of the remaining works either do not have raw water which is suitable for treatment with iron, or do not have the appropriate treatment equipment available.

The legal standard for aluminium in drinking water has been set at 200 microgrammes per litre. In 1989 the Department of the Environment produced the "Drinking Water dŵr Health Report" which advised that following concern about the possible link between aluminium in water and Alzheimers disease, there was no need to change "current good practice regarding the use of aluminium compounds". The report also said that the current levels of aluminium in water supplies did not pose a health risk. It was stated that in area where the water supplies exceeded the aluminium standard of 200 microgrammes per litre, the "intake of aluminium from water would still be lower than the average intake from food, and well within the limit established for the intake from all sources by the World Health Organisation/Food and Agriculture Joint Expert Committee on Food Additives".

The Company is committed to minimising the use of aluminium compounds in water treatment and therefore the aluminium content of drinking water. Research into this subject is continuing and any developments are regularly reviewed by medical advisors.

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You can also visit the Drinking Water Inspectorate website at dwi.gov.uk



Alwminiwm mewn dŵr yfed

Mae llawer o bobl yn gwybod fod alwminiwm yn gallu bod yn bresennol mewn dŵr – ond faint sy'n gwybod ei fod hefyd yn gallu dod o bethau megis te a thabledi? Yn wir, ble mae alwminiwm yn bresennol mewn dŵr, mae'n cynrychioli dim ond 3 i 4% o'r lefel mewn person cyfartalog. Ond pam yw alwminiwm yn bresennol mewn dŵr yfed ac yn fwy pwysig, a yw'n ddiogel?

Mae alwminiwm i'w weld yn rheolaidd mewn pridd ac felly gall fod yn bresennol mewn dŵr sydd heb ei drin. Gellir gwaredu'r alwminiwm yma drwy gyfrwng prosesau gofalus mewn gweithfeydd trin dŵr. Ers 1989, mae Dŵr Cymru wedi cynnal rhaglen enfawr i ddiweddarau ei weithfeydd trin dŵr.

Cwblhawyd y rhaglen erbyn hyn, gan gyflwyno prosesau newydd a gwelliannau eraill. Yn ogystal, defnyddir cyfansoddion alwminiwm i waredu amhureddau mewn gweithfeydd trin dŵr ac maent yn helpu i ostwng lefelau lliw, cymyledd a bacteria mewn dŵr cyn y prosesau trin a diheintio olaf.

Gellir ychwanegu olion alwminiwm yn ystod y prosesau trin dŵr a gall cyfran weddilliol aros yn y cyflenwad dŵr. Er mwyn cadw'r lefelau'n sylweddol is na'r safon o 200 microgram per litr, mae Dŵr Cymru wedi gosod offer i wella a rheoli'r prosesau hyn yn otomatig. Bydd Dŵr Cymru bob amser yn cadw lefelau alwminiwm mor isel â phosibl.

Mae cemegau trin yn seiliedig ar haearn yn gallu gwneud yr un gwaith â chyfansoddion alwminiwm ac eisoes yn cael eu defnyddio mewn llawer o'n gweithfeydd trin dŵr, sy'n darparu oddeutu treian o ddŵr y cwmni. Fodd bynnag, nid yw dŵr craidd nifer o'r gweithfeydd eraill yn addas i'w drin gyda haearn, neu nid yw'r offer addas ar gael.

Y safon gyfredol ar gyfer alwminiwm mewn dŵr yfed yw 200 microgram per litr. Yn 1989 awgrymodd Adran yr Amgylchedd yn "Dŵr Yfed dŵr Adroddiad Iechyd" dŵr mewn ymateb i bryderon am gysylltiad rhwng alwminiwm mewn dŵr a chlefyd Alzheimer dŵr nad oedd angen newid "yr arferion da cyfredol o ran defnydd o gyfansoddion alwminiwm". Ychwanegodd nad oedd y lefelau alwminiwm cyfredol mewn dŵr yfed yn peryglu iechyd pobl. Hyd yn oed mewn ardal ble roedd lefel alwminiwm y cyflenwad dŵr yn uwch na'r safon o 200 microgram per litr, byddai'r "gyfran o alwminiwm yn y dŵr yn dal yn is na'r gyfran gyfartalog mewn bwyd, ac yn llawer is na'r terfyn o bob ffynhonnell a bennwyd gan y WHO/Cydbwyllgor Bwyd ac Amaeth Arbenigol ar Ychwanegion Bwyd".

Mae Dŵr Cymru wedi ymrwymo i isafu'r defnydd o gyfansoddion alwminiwm wrth drin dŵr ynghyd â'r lefelau cyffredinol o fewn dŵr yfed. Mae ymchwil yn parhau, gydag ymgynghorwyr meddygol yn adolygu datblygiadau yn rheolaidd.

Angen cyngor neu wybodaeth?



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